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**The Unfulfilled Promise of an End to Timber
Dominance on the Tongass: Forest Service
Implementation of the Tongass Timber Reform Act**

by

Steven A. Daugherty

Originally published in ENVIRONMENTAL LAW
24 ENVTL. L. 1573 (1994)

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COMMENTS

THE UNFULFILLED PROMISE OF AN END TO TIMBER DOMINANCE ON THE TONGASS: FOREST SERVICE IMPLEMENTATION OF THE TONGASS TIMBER REFORM ACT

BY
STEVEN A. DAUGHERTY*

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* J.D. and Certificate in Environmental and Natural Resources Law 1993, Northwestern School of Law of Lewis and Clark College; B.A. Environmental Studies/Sociology 1989, Whitman College. Special thanks to the Rocky Mountain Mineral Law Foundation whose generous Joe Rudd Scholarship allowed me to take the time necessary to pursue this project, to the Southeast Alaska Conservation Council (SEACC) for assistance in obtaining documents and information, and to Professor Michael Blumm for his comments and criticisms of an earlier draft of this paper.

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I. INTRODUCTION

With nearly seventeen million acres, the Tongass is the nation's largest national forest.¹ It consists of rugged mountains, over a thousand islands, and nearly 11,000 miles of shoreline.² With 10.4 million acres of land which would qualify to be designated as wilderness,³ the Tongass is also the most breathtaking and

1. U.S. FOREST SERVICE, U.S. DEP'T OF AGRICULTURE, TONGASS LAND MANAGEMENT PLAN REVISION SUPPLEMENT TO THE DRAFT ENVIRONMENTAL IMPACT STATEMENT, PROPOSED REVISED FOREST PLAN 1-3 (1991) [hereinafter TLMP SDEIS FOREST PLAN]. However, only one-third of the forest is considered productive forest land and only 4% of the Tongass contains high volume old-growth. See also 136 CONG. REC. S7743 (daily ed. June 12, 1990) (statement of Sen. Wirth); DAVID KATZ, ASSOCIATION OF FOREST SERVICE EMPLOYEES FOR ENVIRONMENTAL ETHICS, TONGASS AT THE CROSSROADS: FOREST SERVICE MISMANAGEMENT IN THE WAKE OF THE TONGASS TIMBER REFORM ACT 4 (1993) [hereinafter TONGASS AT THE CROSSROADS].

2. TLMP SDEIS FOREST PLAN, *supra* note 1, at 1-3.

3. *Id.* at 1-6. Currently approximately 5.7 million acres are designated as wilderness, U.S. FOREST SERVICE, U.S. DEP'T OF AGRICULTURE, TONGASS LAND MANAGEMENT PLAN REVISION SUPPLEMENT TO THE DRAFT ENVIRONMENTAL IMPACT STATEMENT 3-459 (1991) [hereinafter TLMP REVISION SDEIS], however, approximately 70% of the designated wilderness is rock, ice, muskeg, and non-productive.

pristine national forest.⁴ Its rich rainforest ecosystem⁵ supports a diversity of wildlife and fish,⁶ which provide resources to support southeast Alaska's valuable commercial salmon fishery,⁷ a growing tourism industry,⁸ and a traditional subsistence lifestyle in its many small communities.⁹

tive scrub forest. *See, e.g., id.* at 3-461; *see also* S. REP. NO. 261, 101st Cong., 2d Sess. 30 (1990), *reprinted in* 1990 U.S.C.C.A.N. 6232, 6258 (citing views of Sens. Metzenbaum and Bradley).

4. *See* ROBERT G. KETCHUM & CAREY D. KETCHUM, *THE TONGASS: ALASKA'S VANISHING RAINFOREST* (1987) (photographs and descriptions of the Tongass).

5. Precipitation generally ranges from 100 to 200 inches annually. LOWELL H. SURING ET AL., *A STRATEGY FOR MAINTAINING WELL-DISTRIBUTED, VIABLE POPULATIONS OF WILDLIFE ASSOCIATED WITH OLD-GROWTH FORESTS IN SOUTHEAST ALASKA: REPORT OF AN INTERAGENCY COMMITTEE 5* (April 1992 Review Draft) [hereinafter VPC REPORT]. In May of 1993, a final review draft of the VPC Report was released. However, because a great deal of relevant information and comparisons of management strategies were not included in the May 1993 draft, all citations in this paper are made to the draft of April 1992.

6. Among these are 275 bird species, 73 mammal species, and 8 species of amphibians and reptiles. *Id.* at 5. Further, 37 freshwater and anadromous species are found in the many streams and lakes of southeast Alaska, and 36 species of marine invertebrates are commonly found in the near-freshwater environment. U.S. FOREST SERVICE, U.S. DEP'T OF AGRICULTURE, *ANALYSIS OF THE MANAGEMENT SITUATION: TONGASS NATIONAL FOREST LAND AND RESOURCE MANAGEMENT PLAN REVISION 3-73* (1990) [hereinafter TLMP ANALYSIS]. Among the fish are all five species of Pacific salmon. *Id.* at 3-7. The streams of the Tongass are responsible for 80% to 90% of southeast Alaska's catch of these species. *See id.* at 3-79 (estimating 80% of commercial catch); S. REP. NO. 261, *supra* note 3, at 26 (estimating 90%).

7. *See, e.g.,* TLMP REVISION SDEIS, *supra* note 3, at 3-64 fig. 3-4, 3-65 fig. 3-5 (showing size and value of salmon catch). *See also id.* at 3-605 fig. 3-261 (indicating that commercial fishing provides more than 4,100 jobs in southeast Alaska).

8. *E.g.,* Letter from Paul C. Rusanowski, Director, Alaska Department of Governmental Coordination, Office of Management and Budget, to Michael A. Barton, Regional Forester, U.S. Forest Service, U.S. Department of Agriculture 14 (Dec. 6, 1991) (setting forth Alaska's position on TLMP REVISION SDEIS, *supra* note 3, and noting that tourism contributed over \$43 million to the region's economy in 1989 and that it was increasing at a rate of about five percent compounded annually); *see also* U.S. FOREST SERVICE, U.S. DEP'T OF AGRICULTURE, *STATUS OF THE TONGASS NATIONAL FOREST 1991 REPORT 2-7 tbl. 2.3* (July 1993) [hereinafter 1991 706(B) REPORT] (showing growth in tourism indicators).

9. *See, e.g.,* TLMP REVISION SDEIS, *supra* note 3, at 3-639 fig. 3-67, 3-370 fig. 3-68 (tables illustrating amounts and types of subsistence consumption in rural areas of southeast Alaska).

Unfortunately, the Tongass is also known as the nation's most mismanaged national forest.¹⁰ Even though timber production on the Tongass has been economically unsound and environmentally destructive,¹¹ the Tongass historically has been managed on a "timber first" basis,¹² driven primarily by several long-term logging contracts¹³ and, in the recent past, by measures protecting the timber industry that were included in the Alaska National Interest Lands Conservation Act of 1980 (ANILCA).¹⁴ The Forest

10. See, e.g., H.R. REP. NO. 84, 101st Cong., 1st Sess., pt. 1, at 13 (1989) (citing the Tongass as "the most egregious example of below cost timber sales in the National Forest System").

11. E.g., THE WILDERNESS SOCIETY, THE ALASKA LANDS ACT: A BROKEN PROMISE 41-43 (1990) [hereinafter BROKEN PROMISE]; Jim Grode, Comment, *The Tongass Timber Reform Act: A Step Towards Rational Management of the Forest*, 62 U. COLO. L. REV. 873, 879-81 (1991).

12. See, e.g., H.R. REP. NO. 84, pt. 1, *supra* note 10, at 20-21; See also S. REP. NO. 261, *supra* note 3, at 9, *reprinted in* 1990 U.S.C.C.A.N. 6232, 6237 (stating that U.S. Forest Service and Congress put timber resource above other resources in Tongass).

13. The Forest Service began entering into long-term contracts in the 1950s and eventually entered into four contracts. However, a Wrangell area contract was cut short and sold to Alaska Lumber and Pulp Corporation (now Alaska Pulp Corporation) (APC) after the purchaser failed to build a pulp mill. A Juneau area contract was cancelled by agreement between the purchaser and the Forest Service. Until recently, two long-term contracts remained, one with the Ketchikan Pulp Company (KPC) (8.25 billion board feet) scheduled to expire in 2004, and one with APC (5.0 billion board feet) which was scheduled to expire in 2011. The APC contract was terminated on April 14, 1994 as the result of APC's breach of contract when it shut down its Sitka pulp mill in September of 1993. See H.R. REP. NO. 84, pt. 1, *supra* note 10, at 6; Letter from Michael Barton, Regional Forester, U.S. Forest Service, U.S. Department of Agriculture, to George Woodbury, Vice President, APC (Apr. 14, 1994); ALASKA REGION, U.S. FOREST SERVICE, U.S. DEP'T OF AGRICULTURE, U.S. FOREST SERVICE TERMINATES LONG-TERM CONTRACT WITH ALASKA PULP (Apr. 14, 1994) (press release announcing contract termination) (on file with author). The Forest Service has argued that these contracts established minimum harvest levels and that the agency was precluded from consideration of alternatives that involve lower levels of harvest. See, e.g., *City of Tenakee Springs v. Clough*, 915 F.2d 1308, 1312 (9th Cir. 1990) (granting preliminary injunction and remanding the case because the Forest Service failed to discuss or evaluate the consequences of terminating, suspending, or amending the long-term contract, and failed to evaluate cumulative impacts on subsistence).

14. Pub. L. No. 96-487, 94 Stat. 2371, 2420 (1980) (codified at 16 U.S.C. § 539d (1988)), *amended by* Pub. L. No. 101-626, tit. I, 104 Stat. 4426, 4426-27 (1990) (codified at 16 U.S.C. §§ 539d, 539e (Supp. V 1993)). ANILCA designated approximately 5.4 million acres of wilderness in the Tongass, see Pub. L. No.

Service has frequently been criticized for ignoring costs, dismissing negative impacts of timber operations on other resources and activities, and attempting to perpetuate the "fantasy that no matter how much of the Tongass is harvested—no adverse impacts whatsoever occur for fisheries, recreation or subsistence."¹⁵ In 1990, Congress responded to these imbalances in the management of the nation's largest national forest by enacting the Tongass Timber Reform Act (TTRA).¹⁶

The TTRA calls for substantial changes in forest management in the Tongass,¹⁷ provides additional protection of some forest land through protective land use designations,¹⁸ and requires unilateral contract modifications to reduce the competitive advantage of the long-term contract holders and to bring the long-term contracts into compliance with environmental laws and regulations.¹⁹

96-487, 94 Stat. 2371, 2418-19 (1980), but these wilderness lands consisted primarily of rock, ice, scrub timber, and marginal forest lands. S. REP. NO. 261, *supra* note 3, at 30, *reprinted in* 1990 U.S.C.C.A.N. 6232, 6258 (views of Sens. Metznerbaum and Bradley).

15. 136 CONG. REC. H12,833 (daily ed. Oct. 26, 1990) (statement of Rep. Miller). *See also* H.R. REP. NO. 84, *supra* note 10, at 27.

16. Pub. L. No. 101-626, 104 Stat. 4426 (1990) (codified at 16 U.S.C. §§ 539d, 539e (Supp. V 1993)). *See also* *Glossing Over the Truth About the Tongass National Forest: Hearing Before the Environment, Energy, and Natural Resources Subcomm. of the House Comm. on Government Operations*, 101st Cong., 2d Sess. (1990) [hereinafter *Glossing Over*] (providing an informative background on some of the problems that led to the TTRA).

17. 16 U.S.C. §§ 539d, 539e (Supp. V 1993).

18. The TTRA allocated 12 new areas, totalling approximately 722,482 acres, to Land Use Designation II (LUD II), and designated six new areas, totalling approximately 296,080 acres, as wilderness. Pub. L. No. 101-626, §§ 201, 202, 104 Stat. 4426, 4428-30 (1990) (§ 202 has been codified at 16 U.S.C. § 1132 (Supp. V 1993); § 201 has not been codified). LUD II lands are to be managed in a generally roadless state to retain wildland character; commercial timber harvesting is prohibited, but limited development for habitat improvement or primitive recreation facilities is allowed, and timber salvage and road-building may also occur under limited circumstances. *See* U.S. FOREST SERVICE, U.S. DEPT OF AGRICULTURE, TONGASS LAND MANAGEMENT PLAN 8-9 (as amended 1985-86) [hereinafter 1986 TLMP]. TTRA "legislated LUD II areas" are to be managed under the 1986 TLMP description. Pub. L. No. 101-626, § 201, 104 Stat. 4426, 4428 (not codified). Areas designated as wilderness by the TTRA are to be managed as components of the National Wilderness Preservation System under the Wilderness Act of 1964, 16 U.S.C. §§ 1131-1136 (1988 & Supp. V 1993). Pub. L. No. 101-626, § 202, 104 Stat. 4426, 4429 (codified at 16 U.S.C. § 1132 note (Supp. V 1993)).

19. Pub. L. No. 101-626, tit. III, 104 Stat. 4426, 4430-32 (1990) (not codi-

The TTRA also requires the Forest Service to conduct numerous studies and to prepare reports that assess the effects of the TTRA on forest management and recommend further measures to improve the management of the Tongass.²⁰ In addition, the General Accounting Office (GAO) must audit the Forest Service's implementation of the TTRA's contract modification requirements.²¹

The TTRA culminated years of intense congressional concern over the management of the Tongass,²² and is a compromise measure between the House and the Senate. The House sought to eliminate mandated harvest levels, cancel the long-term Tongass timber contracts, designate more wilderness, increase fisheries protection, and apply all the requirements of the National Forest Management Act (NFMA)²³ to the Tongass.²⁴ The Senate, while supporting the goal of improved forest management and the end of timber dominance, wanted to enact less extensive reforms to minimize harms to local logging economies in southeast Alaska.²⁵ During the legislative process, many members of Congress expressed concern that some of the compromise measures might be inadequate to protect the scenic qualities and fish and wildlife populations of the Tongass.²⁶ The House based its support of the

fied).

20. See *id.* §§ 203, 301(e) (not codified); see also 16 U.S.C. §§ 539d note, 539e(a), 539e note (Supp. V 1993).

21. *Id.* § 301(g). Congress gave the General Accounting Office only 30 days after Forest Service completion of contract modifications in which to perform its audit. *Id.* Even though the GAO found significant shortfalls in the Forest Service's implementation of the unilateral contract modifications, see *infra* part IV, several conservation groups argue that the time line imposed on the GAO did not allow an adequate critique to be made, and that the GAO was overly deferential to Forest Service interpretations of the TTRA. See, e.g., Letter from Robert E. Lindekugel, Southeast Alaska Conservation Council et. al., to J. Dexter Peach, Assistant Comptroller General, General Accounting Office (Apr. 17, 1991). Another GAO audit on the implementation of the TTRA is currently in progress.

22. See, e.g., 135 CONG. REC. H3685 (daily ed. July 13, 1989) (statement of Rep. Udall).

23. Pub. L. No. 94-588, 90 Stat. 2949 (1976) (codified as amended at 16 U.S.C. §§ 1600-1614 (1988)) (amending the Forest and Rangeland Renewable Resources Planning Act of 1974, Pub. L. No. 93-378, 88 Stat. 476 (1974)).

24. See H.R. REP. NO. 84, pts. 1, 2, *supra* note 10.

25. See S. REP. NO. 261, *supra* note 3, reprinted in 1990 U.S.C.C.A.N. 6232. See also H.R. CONF. REP. NO. 931, 101st Cong., 2d Sess. (1990), reprinted in 1990 U.S.C.C.A.N. 6267.

26. See, e.g., S. REP. NO. 261, *supra* note 3, at 30-34, reprinted in 1990

final compromise language on its intention to monitor the implementation of the TTRA to make sure the Act achieves its goals.²⁷ However, because Congress was anxious to put the troublesome Tongass issue behind it,²⁸ Representative Miller, the manager of the bill in the House of Representatives and one of the chief proponents of more extensive change, stated that Congress did not intend to revisit the issue "provided that the spirit and the intent of this legislation is carried out."²⁹

Now, over three years after Congress enacted the TTRA, this article examines the question of whether, and to what extent, the spirit and intent of the TTRA has been carried out. Early indications are that the Forest Service has not only completely failed to embrace the spirit of the TTRA,³⁰ but also has fallen short of the express requirements of the Act.³¹ Further, the Forest Service has proposed increases in the Tongass timber harvest even though

U.S.C.C.A.N. 6232, 6258-61 (statements of Sens. Metzenbaum, Bradley, and Wirth).

27. See 136 CONG. REC. H12,837 (daily ed. Oct. 26, 1990) (statement of Rep. Vento).

28. Management of the Tongass is complicated by the extremely high level of federal ownership of land in southeast Alaska (95% is federally owned, 80% is within the Tongass National Forest), and despite strong support of reform by many residents of southeast Alaska, the Alaska congressional delegation has portrayed reform measures as unwarranted outside interference with Alaska's opportunities for development. See, e.g., 136 CONG. REC. H12,835-36 (daily ed. Oct. 26, 1990) (statement of Rep. Young).

29. 136 CONG. REC. H12,836 (daily ed. Oct. 26, 1990).

30. See, e.g., TONGASS AT THE CROSSROADS, *supra* note 1; CHRIS FINCH ET AL., SOUTHEAST ALASKA CONSERVATION COUNCIL, DEFENDING THE PROMISE OF TONGASS REFORM (1992) [hereinafter DEFENDING THE PROMISE]; U.S. FOREST SERVICE, U.S. DEPT OF AGRICULTURE, TIMBER SALE CONTRACT: ALASKA PULP CORP. CONTRACT NO. 12-11-010-1545, § B0.61(b) (Feb. 27, 1991) (mandating three year timber supply backlog).

31. See, e.g., U.S. GENERAL ACCOUNTING OFFICE, PUB. NO. GAO/RCED-91-133, TONGASS NATIONAL FOREST: CONTRACTUAL MODIFICATION REQUIREMENTS OF THE TONGASS TIMBER REFORM ACT 6, 18-21 (1991) (contractual modifications on purchaser road credits insufficient); KAREN WOOD, SOUTHEAST ALASKA CONSERVATION COUNCIL, U.S.D.A. FOREST SERVICE MONITORING AND BEST MANAGEMENT PRACTICE IMPLEMENTATION PERFORMANCE ON THE 1989-94 OPERATING PERIOD FOR THE KETCHIKAN PULP COMPANY LONG-TERM SALE AREA (Final Draft Report 1992) (failure to implement riparian buffers and BMPs); STEPHEN WRIGHT, SOUTHEAST ALASKA CONSERVATION COUNCIL, 1992 BEST MANAGEMENT PRACTICE PERFORMANCE REPORT ON THE 1989-94 OPERATING PERIOD FOR THE KETCHIKAN PULP COMPANY LONG-TERM SALE AREA (1993).

forest supervisors believe current harvests are already above sustainable yield levels³² and the Tongass appears to be losing more money than ever before.³³ This article explores the implementation of the TTRA by presenting the major provisions of the TTRA, discussing the pre-TTRA problems behind each provision, and exploring changes in Forest Service actions, attitudes, procedures, and objectives in the wake of the TTRA.

Part II of this article presents a short background summary of the geography and economy of southeast Alaska and the historical actions of Congress and the Forest Service which created the demand for the TTRA. Part III explores the forest management provisions of Title I of the TTRA and the Forest Service's response to the TTRA's multiple-use mandate. Part IV discusses the unilateral contract modifications required by Title III of the TTRA and the Forest Service's interpretation and implementation of these modifications. Part V provides an overview of the additional protection afforded to the fish and wildlife of the Tongass as a result of the wilderness and Land Use Designation II (LUD II)³⁴ designations made in Title II of the TTRA. Part VI concludes by recommending that Congress revisit the issue of Tongass management and, in order to achieve the goals of the TTRA, enact further legislation more closely resembling that originally proposed by the House of Representatives.

32. See TLMP REVISION SDEIS, *supra* note 3, at 3-325 tbl. 3-114, 3-366 tbl. 3-133 (showing that average net sawlog volume harvested 1980-1990 was 304 million board feet (MMBF), but the proposed Allowable Sale Quantity (ASQ) is 418 MMBF net sawlog). See also Memorandum from Steven A. Brink, Tongass Plan Revision Team Leader, U.S. Forest Service, U.S. Department of Agriculture, to Ketchikan Forest Supervisor 2 (Oct. 15, 1991) (stating that the forest supervisor's estimate of attainable ASQ was 273 MMBF); TONGASS AT THE CROSSROADS, *supra* note 1, at 7-10 (discussing unrealistic sustained yield levels in Tongass timber plans).

33. See RANDAL O'TOOLE, CASCADE HOLISTIC ECONOMIC CONSULTANTS, CHEC RESEARCH PAPER NUMBER 27, THE \$64 MILLION QUESTION: HOW TAXPAYERS PAY PULPMILLS TO CLEARCUT THE TONGASS NATIONAL FOREST 1, 3, 28 tbl. 17 (1993) [hereinafter \$64 MILLION QUESTION] (showing losses of \$64.1 million dollars in 1992, \$34.1 million in 1991, and \$28.8 million in 1990).

34. See *supra* note 18 (explaining meaning of LUD II designation).

II. BACKGROUND OF TONGASS MANAGEMENT

The Tongass has many unique geographical and physical characteristics; management of the forest has been shaped by those characteristics as well as by Forest Service and congressional efforts to build a timber economy in southeast Alaska. Current issues surrounding the management of the Tongass are largely shaped by the physical and economic setting in which they occur, the historical actions which have shaped the economy of the region, and the management problems which created the demand for the TTRA.

A. Characteristics of the Tongass Landbase

President Theodore Roosevelt created the Tongass National Forest (Tongass) by presidential proclamation in 1907.³⁵ It encompasses the majority of southeast Alaska,³⁶ an area approximately 500 miles long and 120 miles wide that is recognizable on a map as Alaska's "panhandle."³⁷ Precipitation in the Tongass is extremely high with some areas avergaing as much as 222 inches of precipitation per year.³⁸ and contains rugged mountains, numerous islands, several glaciers, thousands of miles of shoreline, and the northern extension of the temperate coastal rainforest of the Pacific Northwest.³⁹

Although the Tongass encompasses nearly seventeen million acres, only fifty-nine percent of it (approximately ten million acres) is forested land.⁴⁰ Of this forested land, the Forest Service classifies just 5.7 million acres, or approximately thirty-four percent of the total forest, as "productive forest."⁴¹ The Forest Ser-

35. H.R. REP. NO. 84, pt. 1, *supra* note 10, at 5. See TLMP ANALYSIS, *supra* note 6, at 1-3.

36. See *id.* at 2-1 (nearly 80% of southeast Alaska within the Tongass).

37. See *id.* at 1-3, 1-4.

38. THE WILDERNESS SOCIETY, AMERICA'S VANISHING RAIN FOREST: A REPORT ON FEDERAL TIMBER MANAGEMENT IN SOUTHEAST ALASKA 15 (1986) [hereinafter VANISHING RAIN FOREST].

39. *Id.* See also *supra* notes 1-4 and accompanying text.

40. TLMP ANALYSIS, *supra* note 6, at 3-224.

41. *Id.* at 3-421. "Productive forest lands" are lands capable of producing more than 20 cubic feet of usable wood fiber per year. *Id.* at 3-420. This generally includes stands with greater than eight thousand board feet (mbf) per

vice classifies eighty-seven percent (8,641,000 acres) of the forested land of the Tongass as "old-growth,"⁴² but forty-one percent of the old-growth—over 3.5 million acres—is considered unproductive.⁴³ The high-volume stands of old-growth, which are the most biologically important and commercially attractive, make up only eleven percent of 5.05 million acres of productive old-growth, which is only about three percent of the Tongass's total acreage.⁴⁴ Between 1954 and 1990,⁴⁵ intensive harvesting of high-volume old-growth resulted in a thirty-nine percent reduction in high volume old-growth stands⁴⁶ without significantly affecting lower volume old-growth stands.⁴⁷ About seven percent of the total pro-

acre. U.S. FOREST SERVICE, U.S. DEPT OF AGRICULTURE, TONGASS LAND MANAGEMENT REVISION DRAFT ENVIRONMENTAL IMPACT STATEMENT 3-394 (June 1990) [hereinafter TLMP REVISION DEIS]. It should be noted that stands of eight mbf per acre are basically scrub timber and muskeg, with low value for either harvest or wildlife habitat. See *Glossing Over*, *supra* note 16, at 39 (statement of David A. Anderson, Southeast Alaska Regional Supervisor, Alaska Department of Fish and Game). The terms "productive forest lands" and "commercial forest lands" (CFL) are sometimes used interchangeably. See, e.g., TLMP ANALYSIS, *supra* note 6, at 3-420, 3-421, 3-425. The terms should not be interchanged, however, because CFL refers to land that is both productive and tentatively available for harvest. See TLMP REVISION SDEIS, *supra* note 3, at 7-5, 7-31.

42. TLMP ANALYSIS, *supra* note 6, at 3-224; TLMP REVISION SDEIS, *supra* note 3, at 3-163.

43. TLMP REVISION SDEIS, *supra* note 3, at 3-163. Unproductive old-growth thus represents 21% of the total acreage of the Tongass. *Id.* at 3-164.

44. See *id.* at 3-163. There are only 89,363 acres of the highest volume timber, Strata D (also known as volume class seven), containing over 50,000 board feet (mbf) per acre, and 471,883 acres of the next highest volume timber, Strata C (also known as volume class six), containing over 30 mbf per acre. *Id.* at 3-161, 3-163. Seventy-eight percent of the highest volume old-growth and 70% of the second highest volume class occurs in low elevation areas (below 800 feet). *Id.* at 3-165. See also *Glossing Over*, *supra* note 16, at 39 (statement of David A. Anderson, Southeast Alaska Regional Supervisor, Alaska Department of Fish and Game) (noting importance of high-volume stands for both harvest and habitat); VPC REPORT, *supra* note 5, at 7 (noting importance for wildlife of rare, highly-productive low-elevation old-growth).

45. The Forest Service frequently uses 1954, the year in which intensive harvesting on the Tongass began under the first of the long-term contracts, see VANISHING RAIN FOREST, *supra* note 38, at 33 fig. 2, as the baseline for determination of cumulative environmental effects of timber harvesting. See, e.g., TLMP REVISION SDEIS, *supra* note 3, at 3-170 tbl. 3-60, 3-541 tbl. 3-206.

46. TLMP REVISION SDEIS, *supra* note 3, at 3-170.

47. See *id.* (showing 100% of 1954 levels of Strata A and Strata B old-growth remaining in 1990). Strata A, also known as volume class four, contains eight to 20 mbf per acre, and Strata B, also known as volume class five, con-

ductive old-growth of the Tongass was harvested between 1954 and 1990,⁴⁸ consisting almost entirely of high volume old-growth.

B. *The Economy of Southeast Alaska*

The Forest Service began plans to develop a pulp-based timber industry in southeast Alaska in 1910, but it took over forty years for the agency to create a timber economy in the region.⁴⁹ During the 1940s, the gold mining and salmon fishing economies of southeast Alaska collapsed. At the same time, World War II and the start of the Cold War increased the strategic importance of populating Alaska.⁵⁰ In response to increased pressure to develop the economy of the region,⁵¹ Congress passed the Tongass Timber Act of 1947,⁵² authorizing the Forest Service to enter into timber sale contracts, despite aboriginal claims to the land.⁵³ These factors, combined with a post-World War II housing boom, encouraged the government to establish a timber pulp industry in southeast Alaska during the 1950s.⁵⁴

In 1951, under the authority granted by the Tongass Timber Act, the Forest Service entered into a contract with the Ketchikan Pulp Company (KPC). The contract obligated the agency to sell an estimated 8.25 billion board feet of timber to KPC at low rates in exchange for the construction and operation of a pulp mill.⁵⁵ In

tains 20 to 30 mbf per acre. *Id.* at 3-161.

48. *See id.* at 2-54 tbl. 2-13 n.1; VPC REPORT, *supra* note 5, at 6.

49. VANISHING RAIN FOREST, *supra* note 38, at 28-31.

50. *Id.* at 29-30.

51. *See id.* at 30-31.

52. H.R.J. Res. 205, 80th Cong., 1st Sess., Pub. L. No. 80-385, 61 Stat. 920 (1947) (not codified).

53. *Id.* at 920-21; VANISHING RAIN FOREST, *supra* note 38, at 31 (timber receipts were to be held until title was settled). In 1959, the court of claims determined that land taken by the United States to form the Tongass had been subject to valid aboriginal claims. *Tlingit and Haida Indians of Alaska v. United States*, 177 F. Supp. 452 (Ct. Cl. 1959). However, the amount of compensation was not settled until 1968. *See Tlingit and Haida Indians of Alaska v. United States*, 389 F.2d 778 (Ct. Cl. 1968) (awarding \$7.5 million). Other Alaskan aboriginal claims to lands, and to hunting and fishing rights, were not extinguished until the passage of the Alaska Native Claims Settlement Act of 1971 (ANCSA), Pub. L. No. 92-203, § 4(b), 85 Stat. 689 (1971) (codified at 43 U.S.C. § 1603(b) (1988)).

54. VANISHING RAIN FOREST, *supra* note 38, at 29-31.

55. *Id.* at 34; *see also* SOUTHEAST ALASKA CONSERVATION COUNCIL, THE CEN-

1957, the Forest Service signed a similar contract with Alaska Pulp Corporation (APC) calling for five billion board feet of timber.⁵⁶ Eventually, four contracts were executed, but only the contracts with APC and KPC have been in effect during the period since the enactment of the TTRA in 1990.⁵⁷ The pulp mills brought year-round employment to southeast Alaska and quickly became a key component of the region's economy.⁵⁸ Timber is still important today, although the region's economy is more diversified than in the past. Government is now the largest employer in southeast Alaska,⁵⁹ but both the commercial fishing and timber industries remain substantial sources of employment,⁶⁰ and tourism and

TRAL PRINCE OF WALES (CPOW) FINAL ENVIRONMENTAL IMPACT STATEMENT AND RECORD OF DECISION: NOTICE OF APPEAL AND STATEMENT OF REASONS 15 (Sept. 21, 1993) (arguing that the Forest Service's rigid interpretation of timber volume requirement in the KPC contract is erroneous because the contract only intended to provide enough timber to meet the daily capacity of mills with fixed capacities and never intended to set a specific timber volume requirement) (on file with author).

56. U.S. FOREST SERVICE, U.S. DEP'T OF AGRICULTURE, TIMBER SALE CONTRACT: ALASKA PULP CORP., INC., CONTRACT NO. 12-11-010-1545 (1956, as amended July 1990).

57. On April 14, 1994, the Forest Service terminated the APC contract. Termination resulted from APC's September 1993 indefinite suspension of operations at its Sitka pulp mill. In January of 1993, the Forest Service notified APC that the mill closure put APC in violation of the terms of its long-term contract, and that further timber volume would not be provided unless a plan to reopen the pulp mill or a similar wood products facility was approved by the Forest Service. Letter from Michael A. Barton, Regional Forester, U.S. Forest Service, U.S. Department of Agriculture, to George Woodbury, Vice President, APC (Apr. 14, 1994). However, the Forest Service allowed logging of existing contract offerings to continue in order to supply APC's sawmill in Wrangell. See David Whitney, *Timber Contract in Peril Sitka Mill Closure May Void Log Deal*, ANCHORAGE DAILY NEWS, Sept. 29, 1993, at A1; David Katz, *APC Seeks New Sweetheart Deal: Sitka Pulp Mill to Close; APC Logging to Continue Full Speed*, THE RAVENCALL, Autumn 1993, at 4. In February of 1994, the Forest Service granted APC a 60-day extension during which harvest was allowed to continue under the long-term contract. See Margaret Bauman & Tim Bradner, *Forest Service Extends Alaska Pulp Log Contract*, ALASKA J. OF COM., Feb. 28, 1994. However, when APC had failed to develop a suitable timetable for reopening or replacing its Sitka pulp mill at the end of that period, the Forest Service terminated APC's long-term contract. *Sitka Woes Could Help Small Mills*, JUNEAU EMPIRE, Apr. 26, 1994, at A1, A8.

58. VANISHING RAIN FOREST, *supra* note 38, at 19 tbl. 2, 36.

59. *Id.* at 19 tbl. 2 (government provided 38.1% of total employment in 1983).

60. TLMP REVISION SDEIS, *supra* note 3, at 3-602 tbl. 3-257, 3-603 tbl. 3-

mining are also important and rapidly growing sectors of the economy.⁶¹

Congress recognized the importance of the timber industry in 1980 when it passed ANILCA,⁶² which attempted to compensate for reductions in the timber base due to wilderness designations and native land selections by subsidizing intensive forest management and allowing high harvest levels.⁶³ ANILCA provided at least \$40 million annually to the Forest Service "to maintain the timber supply . . . to dependent industry at a rate of four billion five hundred million foot board measure per decade."⁶⁴ Further, ANILCA exempted the Tongass from the provisions of section 6(k) of the National Forest Management Act of 1976 (NFMA),⁶⁵ which requires the Forest Service to remove lands from the timber base that are not physically, economically, or otherwise suitable for timber production.⁶⁶

C. *The Wake of ANILCA*

As might be expected,⁶⁷ the Forest Service interpreted

258 (in 1988, timber directly supplied 3,341 jobs and commercial fishing supplied 3,500 jobs).

61. *Id.* at 3-604 tbl. 3-260, 3-605 tbl. 3-261 (in 1988, tourism directly supplied 2,750 jobs and mining supported 600 jobs). Mining increased from 170 jobs in 1980 and tourism from 2,100. *Id.* See also 1991 706(B) REPORT, *supra* note 8 (showing Alaska's estimates of growth of tourism).

62. See, e.g., S. REP. NO. 413, 96th Cong., 2d Sess. 225-30 (1980), *reprinted in* 1980 U.S.C.C.A.N. 5070, 5169-74.

63. See, e.g., *id.* at 228-29, *reprinted in* 1980 U.S.C.C.A.N. 5070, 5172-73.

64. Pub. L. No. 96-487, 94 Stat. 2371, 2420 (1980) (codified at 16 U.S.C. § 539d (1988)), *amended by* Tongass Timber Reform Act, Pub. L. No. 101-626, tit. I, §§ 101-103, 104 Stat. 4426, 4426-27 (1990). ANILCA thus provided for the continuation of harvest at 1975-1977 harvest levels, but at levels lower than the 1970-1977 average harvest level of 520 million board feet per year. See S. REP. NO. 413, *supra* note 62, at 228-29, *reprinted in* 1980 U.S.C.C.A.N. 5070, 5172-73.

65. Pub. L. No. 96-487, § 705(a), 94 Stat. 2371, 2420 (1980) (codified at 16 U.S.C. § 539d(a) (1988)), *amended by* Tongass Timber Reform Act, Pub. L. No. 101-626, tit. I, §§ 101-103, 104 Stat. 4426, 4427 (1990) (codified as amended at 16 U.S.C. § 539e(b) (Supp. V 1993)).

66. National Forest Management Act of 1976 § 6(k), 16 U.S.C. § 1604(k) (1988).

67. Principles of agency capture teach that the Forest Service, after years of regulating and cooperating with the timber industry in Alaska, will attempt to protect the interests of the timber industry in any situation in which it perceives ambiguity as to the requirements imposed upon it. See Donald T.

ANILCA's timber supply provisions as an absolute mandate to supply at least 450 million board feet (MMBF) of timber for sale each year, regardless of market demand.⁶⁸ At one point, the Office of General Counsel for the Department of Agriculture went so far as to state that in order to satisfy ANILCA's volume requirements, the harvest must be economically feasible for the timber companies.⁶⁹ As a result, in the years between 1980 and 1988, the Forest Service offered over 450 MMBF of timber per year despite a decline in the pulp market, which resulted in actual average harvests of only 285 MMBF.⁷⁰ The Forest Service continued to supply timber to the timber companies even though this allowed the companies to build up huge backlogs of uncut timber and to "highgrade" by focusing their cutting on the most valuable and highest volume timber stands.⁷¹ These timber offerings resulted in sales at a fraction of the costs of sale preparation⁷² and involved considerable

Hornstein, *Lessons From Federal Pesticide Regulation on the Paradigms and Politics of Environmental Law Reform*, 10 YALE J. ON REG. 369, 410 (1993) (explaining basic concept of agency capture as outgrowth of Mancur Olson's economic theory of collective action); Douglas O. Heiken, *The Pacific Yew and Taxol: Federal Management of an Emerging Resource*, 7 J. ENVTL. L. & LITIG. 175, 246 (1992) (citing Michael Axline's *Laws of Administrative Physics*).

68. See H.R. REP. NO. 84, pt. 1, *supra* note 10, at 11. Furthermore, the Forest Service interpreted the volume requirement to be "net sawlog," excluding lower grade "utility volume," which is only suitable for pulp, from the volume calculation. *Id.* at 11 n.13; see also VANISHING RAIN FOREST, *supra* note 38, at 97-101.

69. See VANISHING RAIN FOREST, *supra* note 38, at 100-101. The Forest Service later retreated from the position that harvest must be economically feasible. See U.S. GENERAL ACCOUNTING OFFICE, TONGASS NATIONAL FOREST: TIMBER PROVISION OF THE ALASKA LANDS ACT NEEDS CLARIFICATION 34 (1988).

70. H.R. REP. NO. 84, pt. 1, *supra* note 10, at 11. There were times during this period in which the market was so bad that the Forest Service stated that timber operators would have lost money on timber even if the Forest Service had delivered the timber to the mills. See *id.* at 18 (citing MANAGEMENT OF THE TONGASS NATIONAL FOREST, Oversight Hearing, 99th Cong., 2d Sess., Serial No. 99-26, 475, 476 (May 8 & 9, 1986)).

71. *Id.* at 12 (in 1986 the backlog was 1.4 billion board feet). The contracts did not require the harvesting of all of the volume contained in a timber sale during a contract period despite the fact that stumpage rates were based on appraisals which averaged the values of the low and high value timber contained in a sale. Therefore, by accruing backlogs of less desirable timber through the end of a contract period, the timber companies were able to purchase valuable high volume at stumpage rates significantly lower than for a sale not containing timber of lower value. See *id.* at 47.

72. *Id.* at 13 (between 1982 and 1988 the Tongass timber program expend-

Forest Service expenditures, primarily for road building, which would have been unnecessary if the agency had made available only the actual volume that was harvested.⁷³ These below-cost sales produced numerous accusations that while the United States was loudly condemning tropical rainforest deforestation, it was engaging in equivalent senseless deforestation in its own forests.⁷⁴ This public response was a major factor behind the enactment of the TTRA.⁷⁵

Despite the Forest Service's efforts to stimulate the timber industry, it failed to meet ANILCA's goal of maintaining timber industry employment levels: during the mid-1980s, timber employment levels fell dramatically.⁷⁶ By 1988, employment in the timber industry rebounded,⁷⁷ but native corporation timber harvests were a primary factor behind the increase,⁷⁸ and these private harvests are not occurring at sustainable levels.⁷⁹ However, the Forest Service predicts that timber-related jobs will continue to be a principal base of the economy of southeast Alaska during the 1990s.⁸⁰

ed \$386 million while receiving only \$32 million, of which only \$3.9 million was actual revenue, and \$22.4 million was in the form of purchaser road credits).

73. See *id.* at 13-14 (GAO estimated that between 1981 and 1986 the Forest Service unnecessarily expended \$131 million).

74. See, e.g., 136 CONG. REC. S7743 (daily ed. June 12, 1990) (statement of Sen. Wirth); Julia Levin, Note, *A Comparison of Forestry Law in the United States and Brazil as They Promote Deforestation in Southeastern Alaska and the Amazon Basin*, 14 HASTINGS INT'L & COMP. L. REV. 1017 (1991); Doug Bandow, *Uncle Sam and the Timber Business*, CHI. TRIB., Nov. 15, 1989, at C25.

75. See, e.g., H.R. REP. NO. 84, pt. 1, *supra* note 10, at 13-14.

76. *Id.* at 10; see TLMP REVISION SDEIS, *supra* note 3, at 3-602 tbl. 3-257.

77. See TLMP REVISION SDEIS, *supra* note 3, at 3-602 tbl. 3-257.

78. See H.R. REP. NO. 84, pt. 1, *supra* note 10, at 12. Timber from native lands is usually not processed in Alaska, but is instead exported "in the round" because it is not subject to the primary processing requirements which apply to timber from national forest lands. See *id.*

79. See TLMP REVISION SDEIS, *supra* note 3, at 3-609. The Forest Service expects timber harvest from state and private land to decline by approximately 64% during the 1990s. *Id.*

80. The Forest Service estimates that the most restrictive alternative proposed in the TLMP revision process will generate almost \$150 million of income per year, only slightly less than it estimates will be generated by commercial fishing. *Id.* at 3-613. The Forest Service predicts that timber will be the single largest contributor to the economy of the region under all other

III. FOREST MANAGEMENT REFORMS OF THE TTRA

Congress intended the TTRA to reduce the economic waste that had resulted from ANILCA's timber supply provisions as well as to bring an end to "timber dominance" of the Tongass. To accomplish these purposes, the TTRA first eliminated ANILCA's timber supply and automatic appropriations clause, replaced it with the normal appropriations process, and directed the Forest Service to attempt to meet market demand "to the extent consistent with providing for the multiple use and sustained yield of all renewable forest resources."⁸¹ Second, the TTRA eliminated ANILCA's exemption of the Tongass from the requirements of section 6(k) of the National Forest Management Act (NFMA)⁸² and subjected Tongass management to all the provisions of section 6(k) except the consideration of economic factors.⁸³ Third, the TTRA amended ANILCA to prohibit timber harvesting within buffer zones of at least 100 feet around all anadromous fish streams (Class I streams)⁸⁴ and streams supporting resident fish populations (Class II streams)⁸⁵ which flow directly into Class I streams. Furthermore, the TTRA required the use of best management practices (BMPs)⁸⁶ around streams not requiring

alternatives. *Id.*

81. 16 U.S.C. § 539d(a) (Supp. V 1993).

82. 16 U.S.C. § 1604(k) (1988) (requiring the identification and removal of lands unsuitable for timber production from the timber base).

83. 16 U.S.C. § 539d(d) (Supp. V 1993).

84. A "Class I stream" is a stream that contains habitat for anadromous or adfluvial fish. *See* U.S. FOREST SERVICE, U.S. DEP'T OF AGRICULTURE, AQUATIC HABITAT MANAGEMENT HANDBOOK § 61.1 (FSH 2609.24) (1986) [hereinafter AQUATIC HABITAT MANAGEMENT HANDBOOK].

85. "Class II streams" are streams without anadromous fish habitat which contain resident fish populations with low sport fisheries values. *See id.*

86. "BMPs" are:

land management methods, measures, or practices intended to minimize or reduce water pollution including but not limited to, structural and nonstructural controls, operation and maintenance procedures, other requirements and scheduling and distribution of activities BMP's are selected on the basis of site specific conditions that reflect natural background conditions and political, social, economic, and technical feasibility.

U.S. FOREST SERVICE, U.S. DEP'T OF AGRICULTURE, SOIL AND WATER CONSERVATION HANDBOOK ch. 10-Zero at 5-2 (FSH 2509.22) (1991) [hereinafter SOIL AND WATER HANDBOOK].

buffers.⁸⁷ These provisions and their implementation are discussed below.

A. Market Demand, Multiple Use, and Sustained Yield

Critics saw ANILCA's mandated harvest level and its guaranteed funding for the Tongass as major contributors to the Forest Service's bias favoring timber harvest at the expense of other values.⁸⁸ According to a House Report, one of the primary purposes of the TTRA was to "create a more appropriate balance between timber harvesting and other uses of the natural resources" of the Tongass.⁸⁹ In order to accomplish this goal, section 101 of the TTRA deletes section 705(a) of ANILCA and replaces it with a new provision:

Subject to appropriations, other applicable law, and the requirements of the National Forest Management Act of 1976 . . . except as provided in subsection (d) of this section, the Secretary shall, to the extent consistent with providing for the multiple use and sustained yield of all renewable forest resources, seek to provide a supply of timber from the Tongass National Forest which (1) meets the annual market demand for timber from such forest and (2) meets the market demand from such forest for each planning cycle.⁹⁰

Congress intended this provision to force the Forest Service to put other forest resources, such as fish and wildlife, on a par with timber production and to ensure that commercial, recreational, and subsistence uses in the Tongass were maintained.⁹¹ However, due to the Senate's concern for maintaining local economies in

87. 16 U.S.C. § 539d(e) (Supp. V 1993).

88. See, e.g., S. REP. NO. 261, *supra* note 3, at 8-9, *reprinted in* 1990 U.S.C.C.A.N. 6232, 6235-37.

89. H.R. REP. NO. 84, pt. 1, *supra* note 10, at 4. The Senate Report recognized a similar goal of seeking "to improve management of the Tongass by balancing the commodity and non-commodity resources of the forest in a manner which will not harm nor destabilize the local economy." S. REP. NO. 261, *supra* note 3, at 9, *reprinted in* 1990 U.S.C.C.A.N. 6232, 6237.

90. 16 U.S.C. § 539d(a) (Supp. V 1993). Section 705(a) previously had directed the Forest Service to maintain a timber supply of 4.5 billion board feet per decade. See 16 U.S.C. § 539d(a) (1988).

91. See H.R. CONF. REP. NO. 931, *supra* note 25, at 13-14, *reprinted in* 1990 U.S.C.C.A.N. 6267, 6267-68; 136 CONG. REC. H12,833 (daily ed. Oct. 26, 1990) (statement of Rep. Miller).

southeast Alaska,⁹² Congress also imposed a requirement that the Forest Service seek to meet market demand. This requirement could be interpreted as conflicting with the objective of ending timber dominance of the Tongass,⁹³ particularly when market demand is not recognized as a relationship between price and quantity. A partial exemption from NFMA,⁹⁴ discussed below, compounded the dangers that the market demand provision poses to ending timber dominance.

B. Identification of Unsuitable Lands

Section 102 of the TTRA eliminated ANILCA's total exemption of the Tongass from section 6(k) of NFMA,⁹⁵ which requires the Forest Service to identify and withdraw lands that are physically, economically, or otherwise unsuitable for timber production.⁹⁶ Instead, the TTRA contains a partial exemption stating that the Forest Service "need not consider economic factors in the identification of lands not suited for timber production."⁹⁷ This provision, although more protective of other forest resources than the original ANILCA provision, appears to allow the Forest Service to continue its tradition of below-cost Tongass timber sales.⁹⁸

92. See S. REP. NO. 261, *supra* note 3, at 9, reprinted in 1990 U.S.C.C.A.N. 6232, 6237.

93. See *id.* at 32 (statement of Sen. Wirth noting that no other forest has a direction to seek to meet market demand). The final timber supply language contained in TTRA did not coincide with that of the Senate Bill. Instead, language was inserted to qualify the Forest Service's obligation to seek to meet market demand only "to the extent consistent with providing for the multiple use and sustained yield of all renewable forest resources." Compare *id.* at 1 with H.R. CONF. REP. NO. 931 at 1-2, 13, reprinted in 1990 U.S.C.C.A.N. 6267.

94. 16 U.S.C. § 539d(d) (Supp. V 1993) (exemption from requirement of consideration of economic factors in identification of lands unsuitable for timber production).

95. 16 U.S.C. § 539d(d) (Supp. V 1993).

96. 16 U.S.C. § 1604(k) (1988).

97. 16 U.S.C. § 539d(d) (Supp. V 1993).

98. See S. REP. NO. 261, *supra* note 3, at 32-33, reprinted in 1990 U.S.C.C.A.N. 6232, 6259-60 (statement of Sen. Wirth noting that the Tongass has lost more money through its timber program than any other forest and that no other forest enjoys a similar exemption). However, since the high volume, low elevation timber stands which are the most ecologically significant are also the most economical to harvest, see *supra* note 44, the exception may be ecologically beneficial to some extent, at least in the absence of a reduction in harvest volume.

However, a House Report states that the purpose of this exemption was "to give the Forest Service some flexibility in harvesting marginal timber stands."⁹⁹ It was not intended to relieve the Forest Service from considering economic factors in other areas of land management planning in the Tongass.¹⁰⁰

C. Fishery Protection

Protection of southeast Alaska's valuable commercial, recreational, and subsistence salmon fisheries is a goal of the TTRA. In order to achieve this goal, section 103 of the TTRA added the following provision to ANILCA:

In order to assure protection of riparian habitat, the Secretary shall maintain a buffer zone of no less than one hundred feet in width on each side of all Class I streams in the Tongass National Forest, and on those Class II streams which flow directly into a Class I Stream, within which commercial timber harvesting shall be prohibited . . . [t]he Secretary shall use best management practices . . . to assure the protection of riparian habitat on streams or portions of streams not protected by such buffer zones.¹⁰¹

Section 103 of the TTRA also requires the Forest Service to conduct a study and prepare a report for Congress exploring whether standardized riparian management practices are needed for federal, state, and private lands within the Tongass.¹⁰² Further, section 104 of the TTRA amended section 706 of ANILCA,¹⁰³ instructing

99. S. REP. NO. 261, *supra* note 3, at 11, *reprinted in* 1990 U.S.C.C.A.N. 6232, 6238.

100. *See* H.R. CONF. REP. NO. 931, *supra* note 25, at 14, *reprinted in* 1990 U.S.C.C.A.N. 6267, 6268.

101. 16 U.S.C. § 539d(e) (Supp. V 1993). The buffer requirement was supported by the National Marine Fisheries Service (NMFS), largely because it would provide a basic and easily enforceable level of protection which could not be undermined through Forest Service incompetence or discretionary actions. *See* S. REP. NO. 261, *supra* note 3, at 29, *reprinted in* 1990 U.S.C.C.A.N. 6232, 6257 (statement of Dr. James Brooks). At the time the TTRA became law, a United States District Court had determined that plaintiffs, who had challenged the Forest Service decision to use "highly variable streamside management," were likely to succeed on the merits and had granted a preliminary injunction against the Forest Service. *See* *Stein v. Barton*, 740 F. Supp. 743 (D. Alaska 1990).

102. 16 U.S.C. § 539d (Supp. V 1993).

103. Pub. L. No. 96-487, 94 Stat. 2371, 2420-21 (1980) (codified at 16 U.S.C.

the Forest Service, when preparing its semiannual reports on the status of the Tongass National Forest, to consult with the southeast Alaska commercial fishing industry and consider "the impact of timber management on subsistence resources, wildlife, and fisheries habitats."¹⁰⁴

D. Implementation of Forest Management Reforms

The forest management provisions of the TTRA reduce Forest Service discretion, attempt to change traditional Forest Service priorities, and are potentially detrimental to the fiscal stability of some Forest Service operations that have been dependent on continued subsidies. As a result, one might expect the Forest Service to be less than enthusiastic in fulfilling the Act's requirements. Unfortunately, an examination of Forest Service actions in the wake of the TTRA supports the conclusion that the Forest Service has not only resisted the spirit of the TTRA at every opportunity, but has also failed to satisfy even the letter of the Act.¹⁰⁵

§ 539e (1988)), amended by Tongass Timber Reform Act, Pub. L. No. 101-626, § 104, 104 Stat. 4426, 4427 (1990) (codified as amended at 16 U.S.C. § 539e(b) (Supp. V 1993)).

104. 16 U.S.C. § 539e(b)(5) (Supp. V 1993). ANILCA previously imposed a more limited duty to evaluate the impacts of wilderness designations on the timber, fishing, and tourism industries, and to discuss measures instituted by the Forest Service to protect fish and wildlife. Consultation was already required with the state of Alaska, affected Native corporations, the southeast Alaska timber industry, Southeast Alaska Conservation Council (SEACC), and the Alaska Land Use Council. See Pub. L. No. 96-487, § 706, 94 Stat. 2371, 2420-21 (1980) (codified at 16 U.S.C. § 539e (1988)). The Forest Service did not complete the report due in 1991 until July of 1993, see 1991 706(B) REPORT, *supra* note 8, and the final report looked more like a public relations brochure than a substantive analysis of the impacts of Tongass management. See SEACC, COMMENTS ON FOREST SERVICE'S SECTION 706(B) REPORT FOR FISCAL YEAR 1991 (Apr. 22, 1993) (accusing the Forest Service of inaccuracy and of failing to address many significant issues) (on file with author).

105. In 1992, SEACC released a report criticizing the Forest Service's implementation of the TTRA. See DEFENDING THE PROMISE, *supra* note 30. Unfortunately, the observations and accusations made in that report appear to be accurate and unchanged.

1. Seeking to Meet Market Demand

Section 101 of the TTRA has caused little change in Forest Service policy and actions. The Forest Service appears to have embraced the "seek to . . . [meet] . . . market demand" provision as a direct substitute for a mandated harvest level, while completely discounting the preceding statutory modifier, "to the extent consistent with providing for the multiple use and sustained yield of all renewable forest resources."¹⁰⁶ This problem is exacerbated by the fact that while "market demand" is a function of price,¹⁰⁷ the Forest Service does not include all the costs of timber production in its determination of sale prices.¹⁰⁸ Further, the Forest Service appears to operate under the assumption that market demand on the Tongass is not a function of price,¹⁰⁹ but is

106. See, e.g., U.S. FOREST SERVICE, U.S. DEP'T OF AGRICULTURE, SOUTHEAST CHICHAGOF PROJECT AREA FINAL ENVIRONMENTAL IMPACT STATEMENT: ALASKA PULP CORPORATION LONG-TERM TIMBER SALE CONTRACT ch. 4 at 152 (1992) [hereinafter SOUTHEAST CHICHAGOF FEIS]; U.S. FOREST SERVICE, U.S. DEP'T OF AGRICULTURE, NORTH REVILLA DRAFT ENVIRONMENTAL IMPACT STATEMENT: KETCHIKAN PULP COMPANY LONG-TERM TIMBER SALE CONTRACT ch. 3 at 224 (1992) [hereinafter NORTH REVILLA DEIS]. Both of these documents use an expected market demand of around 400 MMBF per year as a basis for arguing that displacement of subsistence is necessary, but fail to address the requirement of consistency with multiple use and sustained yield of other forest resources. SOUTHEAST CHICHAGOF FEIS ch. 4 at 151-52.

107. See EDWIN MANSFIELD, PRINCIPLES OF MICROECONOMICS 40-43, A37 (5th ed. 1986). Where timber is sold for less than the cost of providing it, the Forest Service is not meeting "market demand" but is instead saturating the market. See RANDAL O'TOOLE, CASCADE HOLISTIC ECONOMIC CONSULTANTS, REVIEW OF THE SUPPLEMENT TO THE DRAFT REVISED TONGASS LAND MANAGEMENT PLAN 15 (1991) [hereinafter CHEC SDEIS REVIEW].

108. Compare \$64 MILLION QUESTION, *supra* note 33, at 2-3, 22-27 (indicating that timber prices need to more than triple in order for the Tongass Timber program to break even, and indicating that approximately 60% of the Tongass budget is spent on the timber program) with TLMP REVISION SDEIS, *supra* note 3, at B-382 to B-385 (showing estimated forest budgets with total expenditures of more than twice the amount of revenues on all proposed management alternatives, but at the same time showing timber program expenditures as well under 40% of the forest budget and indicating that timber revenues are near or slightly above timber expenditures). See also CHEC SDEIS REVIEW, *supra* note 107, at 2-6 (indicating that net timber returns will be negative under all of the Forest Service management alternatives because the Forest Service overestimated revenues, underestimated and ignored costs, and counted purchaser road credits as a revenue while not counting road construction as a cost).

109. See CHEC SDEIS REVIEW, *supra* note 107, at 14-16. CHEC points out

instead determined by the volume necessary to meet the long-term contract requirements and supply independent mills operating under short-term contracts.¹¹⁰ As a result, timber production continues to be the dominating consideration in the management of the Tongass. In fact, the Forest Service is currently proposing harvest levels considerably higher than the average harvest levels of the 1980s.¹¹¹

The Forest Service continues to dismiss evidence of adverse effects of timber harvesting on other resources, and Representative Miller's statement criticizing the pre-TTRA draft of Tongass

that the Forest Service projections are based on consumption studies and that the cost of offering the agency's proposed ASQ of 418 MMBF could only be met at stumpage values of \$190 per thousand board feet (mbf). *Id.* at 16. Between 1989 and 1992 the average price paid for timber on the Tongass was only \$66 per mbf, and in 1992 it was only \$35 per mbf (this includes purchaser road credits; actual cash paid in 1992 by long-term contract holders averaged under two dollars per mbf). See \$64 MILLION QUESTION, *supra* note 33, at 2, 29. CHEC cites the demand study used by the Forest Service as stating that "no explicit reference is made to prices . . . because planned timber harvests from public lands generally do not depend on prices." CHEC SDEIS REVIEW, *supra* note 107, at 14. See also DAVID J. BROOKS & RICHARD W. HAYNES, U.S. FOREST SERVICE, U.S. DEPT OF AGRICULTURE, TIMBER PRODUCTS OUTPUT AND TIMBER HARVESTS IN ALASKA: PROJECTIONS 1989-2010, at 3 (1990) (unpublished manuscript, on file with the U.S. Forest Service Regional Office in Juneau, Alaska).

110. See, e.g., NORTH REVILLA DEIS, *supra* note 106, ch. 3 at 224; SOUTH-EAST CHICHAGOF FEIS, *supra* note 106, ch. 4 at 151-52 (seeking to meet market demand near 400 MMBF per year from 1990 to 2010). See also TLMP REVISION SDEIS, *supra* note 3, at 3-328, 3-330, 3-337 (showing historical harvests and indicating that 202 MMBF per year is needed to complete the KPC contract, 118 MMBF for the APC contract, and that between 1980 and 1990, 88 MMBF was the average annual harvest under the short-term contracts). In recent years some of the larger independent mills have shut down. KATHLEEN S. MORSE, U.S. FOREST SERVICE, U.S. DEPT OF AGRICULTURE, TIMBER SUPPLY AND DEMAND IN SOUTHEAST ALASKA, FISCAL YEAR 1993 (DRAFT 706(A) REPORT) 10 (1994). In 1993, the short-term sale program sold only 45 MMBF and harvested only 55 MMBF. *Id.* at app. A, tbl. A-2.

111. Compare TLMP REVISION SDEIS, *supra* note 3, at 3-325 tbl. 3-114 with 3-366 tbl. 3-133 (average net sawlog volume harvested 1980-1990 was 304 MMBF, but the proposed Allowable Sale Quantity (ASQ) in the Forest Service's preferred alternative is 418 MMBF net sawlog and in its timber emphasis the alternative is 471.5 MMBF.). The least timber intensive alternative proposed in the SDEIS involves a first decade ASQ of 298 MMBF, 117 MMBF more than the 181 MMBF ASQ used as the least intensive alternative in the pre-TTRA DEIS. Compare *id.* at 2-25 with TLMP REVISION DEIS, *supra* note 41, at 2-72.

Land Management Plan Revision as a perpetuation of Forest Service fantasy¹¹² seems fully applicable to the Forest Service's post-TTRA supplement to the draft revision.¹¹³ Even the State of Alaska, while supporting timber harvest levels even greater than those proposed by the Forest Service,¹¹⁴ claimed that the Forest Service's evaluation of impacts on other forest resources is inadequate:

The SDEIS understates the adverse effects of all proposed alternatives on sport and subsistence hunters and anglers, commercial guides and outfitters, and commercial fishermen [who] are dependent on fish and wildlife resources.¹¹⁵

Among other problems, the state also noted that the Forest Service inadequately assessed the water quality impacts of timber harvest,¹¹⁶ understated the demand for wildlife resources,¹¹⁷ and underestimated the effects of timber harvest on wildlife.¹¹⁸

The Forest Service's consideration of an extremely narrow range of alternatives in its supplement to the draft revision of the TLMP is evidence of the agency's continued management emphasis on timber production. The least timber-intensive alternative proposed by the Forest Service in the supplement is an ASQ of 298 MMBF, which roughly maintains pre-TTRA levels of harvest.¹¹⁹ The agency's most timber-intensive alternative proposes an ASQ of 472 MMBF. The timber volume of the agency's least-intensive alternative, therefore, represents only thirty-seven per-

112. See *supra* note 15 and accompanying text.

113. TLMP REVISION SDEIS, *supra* note 3, at 2-62 (fish habitat capabilities identical across all alternatives); *id.* at 2-65 (income from commercial fishing, sport fishing, and big game hunting constant across all alternatives).

114. The state of Alaska has requested additional analysis of an alternative allowing the Tongass to meet mill capacity through an ASQ of 520 MMBF. Letter from Paul C. Rusanowski, Director, Division of Governmental Coordination, Office of Management and Budget, to Michael A. Barton, Regional Forester, U.S. Forest Service, U.S. Department of Agriculture 2 (Dec. 6, 1991) (setting forth Alaska's position on TLMP REVISION SDEIS, *supra* note 3).

115. *Id.* at 3.

116. *Id.* at 21-23.

117. *Id.* at 18.

118. *Id.* at 18-19.

119. The average volume of timber harvested between 1980 and 1990 was 304 MMBF. See *supra* note 111.

cent less harvest than its most timber-intensive alternative.¹²⁰ Every alternative considered by the Forest Service provides sufficient volume to satisfy the long-term timber contracts.¹²¹ The least timber-intensive proposal would reduce remaining high volume old-growth to forty-seven percent of 1954 levels, while the most timber-intensive proposal would reduce remaining high volume old-growth to thirty-eight percent of 1954 levels.¹²² Further, the 298 MMBF ASQ proposed in the Forest Service's least timber-intensive proposal is sixty-four percent higher than the 181 MMBF ASQ that had served as the agency's least timber-intensive alternative prior to the enactment of the TTRA.¹²³

Several environmental impact statements from post-TTRA timber sales also reveal the continued timber dominance of the Tongass. The Forest Service continues to allow contract volume requirements to drive its proposed actions,¹²⁴ and the range of alternatives involving harvest that the agency considers is conse-

120. See TLMP REVISION SDEIS, *supra* note 3, at 2-62. This is a much narrower range of alternatives than were presented by the Forest Service prior to the enactment of the TTRA. See also *supra* note 111.

121. THE IRLAND GROUP, ASSESSMENT OF ADEQUACY OF TIMBER SUPPLY AND ANALYSIS OF POTENTIAL EFFECTS OF ELIMINATING THE LONG-TERM TIMBER SALE CONTRACT AREAS: TONGASS NATIONAL FOREST 30 (Dec. 18, 1991) (consultant's report to Forest Service estimating ASQ of 271 MMBF necessary to meet long-term contract requirements).

122. TLMP REVISION SDEIS, *supra* note 3, at 2-54 tbl. 2-13. By 1990 high-volume old-growth had already been reduced to 60% of 1954 levels. The planning horizon for which cumulative effects were predicted is 150 years, but most of the reduction would occur during the first 50 years of the plan. After 50 years only 44% to 51% of high volume old-growth would remain. Reductions in total old-growth would be less severe than the reductions in high-volume old-growth, but the range of alternatives is similar. Seventy-seven percent of the 1954 level of total old-growth would remain after 150 years in the least intensive alternative, and 67% would remain in the most intensive alternative. *Id.*

123. See *supra* note 111. The least timber intensive alternative proposed would also involve an 86 mile per year increase in construction of new roads over 1988-1990 levels. See CHEC SDEIS REVIEW, *supra* note 107, at 4. This alternative would involve over 135 miles of new road construction per year for the next two decades. TLMP REVISION SDEIS, *supra* note 3, at 2-56 tbl. 2-17.

124. See, e.g., SOUTHEAST CHICHAGOF FEIS, *supra* note 106, ch. 4 at 5 app. A (providing explanation of why lower volumes not considered); NORTH REVILLA DEIS, *supra* note 106, ch. 1 at 6, ch. 2 at 4 (stating that alternatives that would not meet purpose and need of supplying approximately 200 MMBF contract volume not considered).

quently very narrow.¹²⁵ Further, the Forest Service is attempting to use ANILCA's original 4.5 MMBF requirement to justify continued reductions in subsistence wildlife resources under the "market demand" provisions of the TTRA.¹²⁶ The Forest Service's treatment of Sitka black-tailed deer is one of the most extreme examples.

Sitka black-tailed deer are an important subsistence resource in southeast Alaska,¹²⁷ constituting twenty-one percent of the total subsistence harvest and ninety-six percent of the subsistence land mammal harvest.¹²⁸ Combined subsistence and general hunter demand for deer already exceeds the habitat capability of the Tongass.¹²⁹ Despite the importance of deer, the Forest Service's preferred alternative for the Tongass calls for a forest-wide reduction in deer habitat, from ninety-three percent of its 1954 level in 1990, to seventy-seven percent in 2040, and sixty-eight percent in 2140.¹³⁰ In the central Prince of Wales area, deer habitat will be reduced to only sixty-four percent of 1954 levels by 2004, and will be further reduced to thirty-three percent of 1954 levels by 2140.¹³¹ As a result, many areas of the forest will not be able to

125. See, e.g., SOUTHEAST CHICHAGOF FEIS, *supra* note 106, ch. 2 at 42 (range of 104.5 to 137.4 MMBF); NORTH REVILLA DEIS, *supra* note 106, ch. 2 at 12 (174 MMBF to 260 MMBF).

126. See, e.g., TLMP REVISION SDEIS, *supra* note 3, at 3-764; NORTH REVILLA DEIS, *supra* note 106, ch. 3 at 224 (arguing that Congress had already considered the importance of subsistence when it imposed the 450 MMBF requirement and that the market demand provision of the TTRA had replaced this with a 400 MMBF mandate).

127. See FEDERAL SUBSISTENCE BOARD, SUBSISTENCE MANAGEMENT FOR FEDERAL PUBLIC LANDS IN ALASKA FINAL ENVIRONMENTAL IMPACT STATEMENT III-B-8 to III-B-10 (1992) [hereinafter SUBSISTENCE MANAGEMENT FEIS]. A "subsistence use" includes the "customary and traditional uses by rural Alaska residents of wild, renewable resources for direct personal or family consumption as food, shelter, fuel, clothing, tools, or transportation." *Id.* at Glossary.

128. *Id.* See also TLMP REVISION SDEIS, *supra* note 3, at 3-642.

129. TLMP REVISION SDEIS, *supra* note 3, at 3-580, 3-581.

130. *Id.* at 3-541. The least timber intensive alternative proposed in the SDEIS involves a habitat capability reduction to 83% of 1954 levels in the fifth decade and to 76% in the fifteenth decade. *Id.*

131. U.S. FOREST SERVICE, U.S. DEP'T OF AGRICULTURE, PUB. NO. R10-MB-229A, CENTRAL PRINCE OF WALES FINAL ENVIRONMENTAL IMPACT STATEMENT: KETCHIKAN PULP COMPANY LONG-TERM TIMBER SALE CONTRACT 3-175, 3-176 (1993) [hereinafter CENTRAL PRINCE OF WALES FEIS]. Other species are expected to fare even worse. By 2004, habitat capability will be reduced by 63% from 1954 levels for the hairy woodpecker and 73% for the brown creeper. *Id.* By 2140

meet subsistence demand within five decades.¹³² Under ANILCA's subsistence preference provisions,¹³³ significant restrictions on subsistence hunting and total prohibitions on non-subsistence deer hunting on the Tongass are foreseeable.¹³⁴

While the Forest Service has a long tradition of ignoring non-timber impacts of timber harvest on the Tongass,¹³⁵ it is now clear that the agency is failing even to give adequate consideration to long-term impacts on the timber industry itself. Proposed plans for timber production from the Tongass rely on rapid harvest over the next two decades of the most valuable and most accessible areas of the forest to cover the costs of building roads for the harvest of marginal timber in latter decades.¹³⁶ Forest Supervi-

only 12% of 1954 hairy woodpecker habitat capability will exist and only eight percent of 1954 brown creeper habitat capability will remain. *Id.*; see also U.S. FOREST SERVICE, U.S. DEP'T OF AGRICULTURE, CENTRAL PRINCE OF WALES DRAFT ENVIRONMENTAL IMPACT STATEMENT: KETCHIKAN PULP COMPANY LONG-TERM TIMBER SALE CONTRACT 3-131 (1992) [hereinafter CENTRAL PRINCE OF WALES DEIS] (showing even less optimistic estimates for wildlife habitat capability).

132. See, e.g., TLMP REVISION SDEIS, *supra* note 3, at 3-659 to 3-756; see also THOMAS S. WALDO, SIERRA CLUB LEGAL DEFENSE FUND, ET AL., CANCELLATION OF LONG-TERM TIMBER SALE CONTRACTS ON THE TONGASS NATIONAL FOREST: A LEGAL ANALYSIS OF GOVERNMENTAL AUTHORITY AND POTENTIAL LIABILITY 11-14 (Nov. 16, 1993) (a white paper to the Clinton Administration by SCLDF, NRDC, and SEACC discussing subsistence restrictions resulting from long-term contracts).

133. 16 U.S.C. §§ 3111-3126 (1988).

134. Significant restrictions and closures to hunters who do not qualify under federal subsistence regulations have already occurred in some parts of the Tongass. See Wayne Heimer, *Complications Resulting From "Dual Management" of Sitka Black-Tailed Deer in Southeastern Alaska* 4-9 (1993), in ALASKA DEP'T OF FISH AND GAME, REPORT ON DUAL STATE AND FEDERAL MANAGEMENT OF FISH AND WILDLIFE HARVESTS; EXAMPLES OF PROBLEMS AND RELATED ISSUES (June 1993). These restrictions have occurred despite the fact that the state of Alaska feels that they are not yet biologically justified, *id.* at 8, and have produced accusations that the Forest Service is using restrictions on non-rural users to displace hunters in advance of proposed habitat destruction and to temporarily conceal adverse effects of clearcutting on subsistence. See, e.g., Letter from Molly Kemp, Tenakee Springs Natural Resources Advisory Committee, to Don Pegues, Kadashan Bay Corporation (Jan. 5, 1993) (on file with author).

135. See, e.g., *supra* note 15 and accompanying text.

136. See CHEC SDEIS REVIEW, *supra* note 107, at 4-9 (showing over 40% of highest volume class and over 50% of second highest volume class cut in first two decades and illustrating Forest Service management strategy by figures 3-

sors have estimated that attainable ASQ on the Tongass is only 273 MMBF,¹³⁷ or about ninety percent of average 1980-1990 harvest levels,¹³⁸ and just sixty-five percent of the Forest Service's proposed harvest level under its preferred alternative.¹³⁹ A study commissioned by the Forest Service also noted that estimates of ASQ in forest plans are unlikely to be achievable.¹⁴⁰ Much of the timber relied upon for harvest in later decades may never be harvestable economically. It is likely that the ASQ will be reduced by the removal of timber stands classified as isolated,¹⁴¹ low volume, or difficult operability,¹⁴² from the timber base.¹⁴³ Further, even if the ASQs proposed by the Forest Service were achievable, they would still result in a significant decline in timber flow from the forest in future decades because the agency has planned for sustained yield in terms of cubic feet, not board feet.¹⁴⁴

Declines in timber flow will be particularly high in areas of

7). See also IRLAND GROUP, *supra* note 121, at 253 fig. 56 (showing average net revenue per acre and number of acres harvested through next 16 decades under alternative C of the TLMP Revision SDEIS).

137. See Memorandum from Steven A. Brink, Tongass Plan Revision Team Leader, U.S. Forest Service, U.S. Department of Agriculture, to Ketchikan Forest Supervisor 2 (Oct. 15, 1991).

138. See TLMP REVISION SDEIS, *supra* note 3, at 3-325 tbl. 3-114 (average net sawlog volume harvested 1980-1990 was 304 million board feet (MMBF)).

139. *Id.* at 2-56 tbl. 2-16 (alternative P calls for ASQ of 418 MMBF).

140. Irland Group, *supra* note 121, at 30, 46.

141. A stand is considered to be "isolated" if a helicopter is generally necessary to get the trees from stump to landing. TMLP REVISION SDEIS, *supra* note 3, at 3-346.

142. A stand is considered to be of "difficult operability" if a long span skyline is generally necessary to get the trees from stump to landing. *Id.*

143. IRLAND GROUP, *supra* note 121, at 47, 252-253 (present plans maintainable only by "borrowing cut potential from the future," declining harvest expected after two to three decades, and "sharply deteriorating economics" after the fifth decade). See also CHEC SDEIS REVIEW, *supra* note 107, at iii (projecting 42% decline in average timber values after the first two decades).

144. See TLMP REVISION SDEIS, *supra* note 3, at 2-62 tbl. 2-23 (decline apparent by comparison of first and fifth decade board foot ASQ's although cubic foot ASQ remains constant). This discrepancy is due to differences in the way timber volume is calculated. The cubic foot measure is based on total fiber volume while the board foot measure, which is the measure used for timber sales on the Tongass, is based on potential lumber volume. When small trees are cut, the percentage of volume usable for lumber production is much lower than when large old-growth trees are cut. CHEC SDEIS REVIEW, *supra* note 107, at 11.

the forest which have been dominated by contract requirements. The Forest Service has forecast that when the KPC long-term contract expires in 2004, with fifty years remaining in the rotation,¹⁴⁵ approximately seventy-five percent of the currently available sawtimber in the central Prince of Wales area will have been harvested.¹⁴⁶ This will result in a decline in ASQ for the project area from approximately fifty MMBF to a maximum of ten to sixteen MMBF for the next fifty years, producing significant declines in employment and disruption of local communities.¹⁴⁷ A dramatic

145. A "rotation" is "[t]he planned number of years between the formation or the regeneration of a crop or stand of trees and its final cutting at a specified stage of maturity." TLMP REVISION DEIS, *supra* note 41, at 7-18. The Forest Service prescribes a rotation age of approximately 100 years for timber production on the Tongass. *Id.* at 3-403.

146. *See* CENTRAL PRINCE OF WALES DEIS, *supra* note 131, at 3-103. The final EIS for the Central Prince of Wales Area indicates that only 51% of available sawtimber will be harvested by 2004, *see* CENTRAL PRINCE OF WALES FEIS, *supra* note 131, at 3-141, but this less dramatic figure is deceptive because it was achieved by including timber in 60,175 acres which had previously been deferred from consideration for harvest because of problems such as "unstable soils and oversteepened slopes, poor probability for regeneration, very low volume per acre, non-viable economics due to isolation, not suitable for harvest because of concentrations of streams requiring protection, and too small to form a logical harvest unit." *Id.* at 3-106. The Prince of Wales area has seen higher concentrations of harvest than other areas of the forest because of its high proportion of productive and high volume old-growth. *See*, TLMP REVISION SDEIS, *supra* note 3, at 3-165 tbl. 3-58 (showing acres of timber by strata and ecological province); *id.* at Timber Type Map (showing timber types and second growth areas across the Tongass). It is sometimes referred to as the "bread basket of the Tongass." *See also* CENTRAL PRINCE OF WALES DEIS, *supra* note 131, at 3-82 (showing that more than 20% of available timber in this area is in volume classes six and seven).

147. CENTRAL PRINCE OF WALES DEIS, *supra* note 131, at 2-32, 3-103. *See also*, TONGASS AT THE CROSSROADS, *supra* note 1, at 8-9. Further, the numbers forecast by the Forest Service may prove to be optimistic. William Shoaf, the Interdisciplinary Team Leader for the Central Prince of Wales Project has alleged that the Forest Service is exaggerating the amount of timber which can legally be cut from the project area in order to support current timber harvest levels. According to Shoaf, site-specific studies conducted by this interdisciplinary team show that 44% to 78% of the land in the Prince of Wales sale area is actually harvestable while Forest Service plans rely on 99.8% harvestability. Shoaf further alleges that he was instructed to intentionally exclude information from the Central Prince of Wales FEIS. Letter from Thomas Devine and Jeffrey Ruch, The Government Accountability Project (Counsel for William Shoaf), to Don D. Julio, Disclosure Unit Coordinator, Office of Special Counsel 2 (1993) [hereinafter Shoaf Disclosure] (on file with author); *see also* Stacey

decline from approximately twenty-two MMBF per year to eight MMBF per year can also be expected for the North Revilla project for fifty years after the expiration of the KPC contract.¹⁴⁸

The above examples illustrate that, as interpreted by the Forest Service, the market demand provisions of TTRA section 101 are a mandate for continued timber dominance. The Forest Service has treated as mere surplusage¹⁴⁹ language Congress intended to be a condition precedent to the duty to seek to meet market demand,¹⁵⁰ while embracing the market demand provision as a direct substitute for the timber supply provision of the original ANILCA legislation.¹⁵¹

2. *Shrinking Buffers and BMP Failures*

Because of the definite nature of the standards for buffers imposed by section 103 of the TTRA,¹⁵² the Forest Service has responded more directly to section 103 than to section 101 of the TTRA, and this section of the Act has resulted in observable changes in forest management practices. However, section 103 is also subject to Forest Service interpretation and implementation, and it appears the Forest Service has chosen to interpret the stat-

Joyce, *Timber Study On Way: Tongass Logging Problems Alleged*, ANCHORAGE DAILY NEWS, Aug. 31, 1993, at B1; Cheri Brooks, *Enough is Enough!—A Tongass Timber Beast Puts His Foot Down*, INNER VOICE Sept./Oct., 1993, at 6-7.

148. TONGASS AT THE CROSSROADS, *supra* note 1, at 9.

149. It is against the basic canons of statutory interpretation to treat any part of a statute as surplusage. *See, e.g.*, *Mountain States Tel. and Tel. Co. v. Pueblo of Santa Ana*, 472 U.S. 237, 249 (1985); NORMAN J. SINGER, *STATUTES AND STATUTORY CONSTRUCTION* § 46.06 (5th ed. 1992). It would be particularly inappropriate to ignore the language here because the same paragraph had previously explicitly subjected the Tongass to the requirements of NFMA and other applicable law which would independently impose similar, but more general, duties. *See, e.g.*, 16 U.S.C. § 1604(g)(3)(B) (provide for diversity in order to meet overall multiple use objectives); *id.* § 1604(g)(3)(F)(v) (cuts to be "carried out in a manner consistent with protection of soil, watershed, fish, wildlife, recreation, and esthetic resources"). In order to give meaning to the specific language of the statute, it must be interpreted to impose a more demanding level of consideration to other renewable forest resources than that imposed by the more general statutes.

150. *See supra* text accompanying note 106.

151. *See, e.g.*, *supra* note 126 and accompanying text.

152. 16 U.S.C. § 539d(e) (Supp. V 1993).

utory requirements narrowly and enforce them laxly. As a result, the Forest Service has fallen short of section 103's buffer and BMP requirements, and has clearly failed to carry out the TTRA.

The buffer and BMP requirements of the TTRA were formally incorporated into the Tongass Land Management Plan in February 1991.¹⁵³ These 1991 plan amendments satisfied the statutory requirements of section 103 by requiring buffers of at least 100 feet on each side of all Class I streams and on Class II streams flowing directly into Class I streams, and by requiring use of BMPs for streams not subject to the buffer requirement.¹⁵⁴ However, subsequent Forest Service interpretations of the buffer requirement and inadequate enforcement have eroded the protection promised by the plan amendments.

The protection offered by the TTRA's mandatory buffers was dramatically reduced within a month of the 1991 amendment by a supplement to the Forest Service Manual.¹⁵⁵ This supplement narrowed the buffer requirements of the TTRA by directing buffers to be measured by "slope distance,"¹⁵⁶ even though the agency continued to define riparian management areas, which require special attention under NFMA regulations,¹⁵⁷ to include a

153. U.S. FOREST SERVICE, U.S. DEPT OF AGRICULTURE, TONGASS LAND MANAGEMENT PLAN AMENDMENT 1 (Feb. 4, 1991).

154. *Id.*

155. See U.S. FOREST SERVICE, U.S. DEPT OF AGRICULTURE, FOREST SERVICE MANUAL, TITLE 2500 - WATERSHED AND AIR MANAGEMENT: REGION 10 SUPPLEMENT NO. 2500-91-1 (effective Feb. 26, 1991) [hereinafter FOREST SERVICE MANUAL]. The Forest Service Manual is a massive multi-volume document which provides legal and policy guidelines issued at both the National and Regional level. These policies and guidelines are in turn reflected in more detailed Forest Service Handbooks which are used by field personnel as guides for performance of specific functions. See generally 36 C.F.R. §§ 200, 216 (1993) (providing overview of Forest Service directive system). See also GLEN O. ROBINSON, THE FOREST SERVICE: A STUDY IN PUBLIC LAND MANAGEMENT 37-39 (1975).

156. FOREST SERVICE MANUAL, *supra* note 155, § 2526.03(1).

157. See 36 C.F.R. § 219.27(e) (1992) (requiring added consideration for land around perennial streams, lakes, and other bodies of water "for approximately 100 feet"). This regulation implements a section of NFMA which requires the Forest Service to "insure that timber will be harvested from National Forest System Lands only where . . . protection is provided for streams, stream banks, shorelines, lakes, wetlands, and other bodies of water from detrimental changes in water temperatures, blockages of water courses, and deposits of sediment, where harvests are likely to seriously and adversely affect water conditions or fish habitat." 16 U.S.C. § 1604(g)(3)(E)(iii).

minimum of 100 "horizontal feet."¹⁵⁸ The difference between horizontal measurement and slope measurement can be extremely large. For example, on a sixty-degree slope, a 100-foot slope distance buffer would be only fifty horizontal feet. Thus, the Forest Service's decision to use slope distance may greatly reduce fish habitat protection, given the generally steep terrain of the Tongass.¹⁵⁹

Congress intended the TTRA's buffers to serve as the minimum level of protection that the Forest Service could provide for fish habitat.¹⁶⁰ Although the Forest Service has the option of offering additional protection through buffer expansion or through buffering of Class II and III streams,¹⁶¹ the agency appears to believe that implementing TTRA's minimum buffer requirements will ensure that no significant or measurable impacts to fish habitat will occur.¹⁶² Thus, the Forest Service is proposing that only limited additional protection be offered through site specific prescrip-

158. FOREST SERVICE MANUAL, *supra* note 155, § 2526.05(6).

159. See VANISHING RAIN FOREST, *supra* note 38, at 142 (describing topography of the region). The Forest Service acknowledges that under proposed management standards, "moderate and high gradient channels with steep sideslopes would have some risk of bank disturbance and . . . a decline in large woody debris recruitment" in addition to "some risk of catastrophic blowdown." TLMP REVISION SDEIS, *supra* note 3, at 3-113. Logging on slopes of greater than 75% gradient is not uncommon on the Tongass. See, e.g., Letter from Paul C. Rusanowski, Director, Alaska Division of Governmental Coordination, to David Rittenhouse, Forest Supervisor, Ketchikan Area, U.S. Forest Service, U.S. Department of Agriculture 15 (Dec. 22, 1993) (on file with author) (noting that 16% of the logging for a three-year Central Prince of Wales (CPOW) offering would occur on slopes of over 75% percent gradient). Incident to the coastal zone management consistency determination for the CPOW sale, in December of 1993, the Forest Service signed an agreement with the state of Alaska to ensure that future stream buffers "will not be less than 100 feet measured horizontally." Letter of Agreement between the State of Alaska Resource Commissioners and the United States Forest Service, Alaska Region regarding the Central Prince of Wales Timber Sale 2 (signed by Michael Barton, Regional Forester, U.S. Forest Service, U.S. Department of Agriculture, Dec. 27, 1993) (on file with author) (although the agreement pertains primarily to the CPOW sale, the buffer agreement appears to be forest-wide because it refers the CPOW area separately and states that with respect to CPOW, the Forest Service will "ensure that the intent of this requirement is met").

160. See 16 U.S.C. § 539d(e) (Supp. V 1993) ("shall maintain a buffer zone of no less than one hundred feet").

161. TLMP REVISION SDEIS, *supra* note 3, at 3-88.

162. *Id.* at 3-96.

tions based on stream class and characteristics.¹⁶³

The dangers of the Forest Service's nearly exclusive reliance on the minimum requirements of TTRA are compounded because the agency has failed to obtain adequate compliance with TTRA buffer and BMP requirements. Both the state of Alaska¹⁶⁴ and the Southeast Alaska Conservation Council¹⁶⁵ have identified numerous implementation problems, indicating that the Forest Service's reliance on TTRA buffers and BMPs to meet water quality and fish habitat protection objectives is inadequate.¹⁶⁶ These problems include failure to correctly identify stream classes,¹⁶⁷ failure to

163. *See id.* app. I-12 to I-20 (fish habitat and water quality LUDs including some measures in riparian areas beyond those specifically required by the TTRA); TLMP SDEIS FOREST PLAN, *supra* note 1, at 3-180 to 3-205 (discussing stream and lake protection management prescriptions). NFMA regulations call for special management of riparian areas, *see* 36 C.F.R. § 219.27(e) (1993), and these areas may extend beyond TTRA buffers, *see supra* note 158 and accompanying text, requiring additional measures beyond those specified in the TTRA.

164. *See, e.g.*, Letter from Doug Redburn, Chief, Water Quality Management, Alaska Department of Environmental Conservation, to Bill Edwards, Director, Division of Lands Minerals and Watershed, Region 10, U.S. Forest Service, U.S. Department of Agriculture 7 (Feb. 25, 1993) (on file with author) (response to Region 10 Monitoring Reports); Letter from Richard Reed, Regional Supervisor, Alaska Department of Fish and Game, to Dave Rittenhouse, Forest Supervisor, Ketchikan Area, U.S. Forest Service, U.S. Department of Agriculture 2 (Sept. 23, 1992) (on file with author) (regarding field inspections); Letter from James Ferguson, Program Coordinator, Forest Practices, Alaska Department of Environmental Conservation, to Distribution List (Jan. 14, 1993) (on file with author) (regarding 1992 BMP monitoring trip reports).

165. *See, e.g.*, WOOD, *supra* note 31; WRIGHT, *supra* note 31.

166. *See, e.g.*, Memorandum from Dick Stokes, Regional Supervisor, Alaska Department of Environmental Conservation, to Steve Jacoby, Project Analyst, Alaska Division of Governmental Coordination 2 (Nov. 1, 1991) (on file with author) (comments on TLMP Revision SDEIS, expressing concern over inadequate BMP implementation and stating that reliance on BMPs is misleading if those BMPs are not fully implemented).

167. *See, e.g.*, Memorandum from Anne Archie, District Ranger, U.S. Forest Service, U.S. Department of Agriculture, to Forest Supervisor 1-2 (Dec. 10, 1992) (on file with author) (TTRA buffer monitoring report indicating that stream designated as Class III because no fish were trapped by Forest Service biologists was later discovered to contain Dolly Varden char during a spot check by biologists from the Alaska Department of Fish and Game). *See also* ERIC JOHNSTON & JERRY WARD, SUMMARY DESCRIPTIONS FOR INDIVIDUAL STREAMS 6 (attached to Archie letter *supra* describing the misidentification of the stream).

provide adequate culverts or culvert maintenance on roads that cross streams,¹⁶⁸ failure to provide 100 feet of buffer even using slope distance measurement,¹⁶⁹ failure to expand buffers or lay out sales so as to provide windfirmness,¹⁷⁰ and failure to enforce unit BMPs prohibiting yarding and felling across streams.¹⁷¹

The Forest Service is aware of problems with TTRA buffer and BMP implementation, and appears to be making some effort to correct them.¹⁷² However, current monitoring is too limited to allow for statistically valid sampling, and the Forest Service has not yet developed a forest-wide BMP effectiveness monitoring plan.¹⁷³ Despite numerous implementation failures for TTRA

168. *See, e.g.*, Letter from James Ferguson, Program Coordinator, Forest Practices, Alaska Department of Environmental Conservation, to Distribution List 3, 4, 5 (Jan. 14, 1993) (on file with author) (Prince of Wales BMP monitoring for trip of May 4-8, 1992).

169. *See, e.g.*, Letter from Richard Reed, Regional Supervisor, Alaska Department of Fish and Game (ADF&G) to Dave Rittenhouse, Forest Supervisor, Ketchikan Area, U.S. Forest Service, U.S. Department of Agriculture 3 tbl. 1 (Sept. 23, 1992) (ADF&G field inspection results).

170. *See, e.g., id.* at 1 app. A (IDT team recommended buffer widths of over 200 feet because of blowdown potential but actual buffers ranged from 75 to slightly over 100 feet). Trees are "windfirm" if they are "not likely to be blown over by the wind. These are usually trees which have been exposed to the wind throughout their life and have developed a strong root system or trees that are protected from the wind by terrain features." TLMP REVISION SDEIS, *supra* note 3, at 7-37.

171. *See, e.g.*, Letter from James Ferguson, Program Coordinator, Forest Practices, Alaska Department of Environmental Conservation, to Distribution List 5 (Jan. 14, 1993) (on file with author) (Prince of Wales BMP monitoring for trip of May 4-8, 1992).

172. *See, e.g.*, Letter and enclosures from Gary Morrison, Forest Supervisor, U.S. Forest Service, U.S. Department of Agriculture, to Regional Forester, U.S. Forest Service, U.S. Department of Agriculture (Dec. 7, 1992) (on file with author) (1992 Chatham Area BMP Monitoring Report and effectiveness monitoring plan).

173. *See* Letter from Doug Redburn, Chief, Water Quality Management, Alaska Department of Environmental Conservation, to Bill Edwards, Director, Division of Lands, Minerals and Watershed, Region 10, U.S. Forest Service, U.S. Department of Agriculture 5-6 (Feb. 25, 1993) (on file with author) (response to Region 10 Monitoring Reports). Further, the monitoring that is done is inconsistent both between and within regions with different BMPs evaluated at different sites. *See, e.g.*, MIKE KUEHN, U.S. FOREST SERVICE, U.S. DEP'T OF AGRICULTURE, BEST MANAGEMENT PRACTICES IMPLEMENTATION MONITORING REPORT 1992 (Dec. 21, 1992) (tables show BMP ratings by ranger district). *See also* WRIGHT, *supra* note 31, at 16 (of 33 BMPs surveyed, 16 were not monitored in

buffers and BMPs, and despite the lack of a comprehensive monitoring program, Forest Service planning documents and environmental impact statements continue to assure the public that the Forest Service will avoid harm to other resources through TTRA buffer and BMP implementation and monitoring.¹⁷⁴

IV. CONTRACT MODIFICATIONS OF THE TTRA

Congress perceived that the two fifty-year timber contracts with APC and KPC were major causes of Tongass management problems.¹⁷⁵ These long-term contracts, entered into when the Forest Service's primary management objective was to convert old-growth climax stands to new forest as quickly as possible,¹⁷⁶ were not subject to the same standards and procedures as short-term independent timber sales.¹⁷⁷ Congress determined that it was in the national interest to modify the long-term contracts to protect forest resources, enhance the balanced use of resources, and promote fair competition within southeast Alaska's timber industry.¹⁷⁸ In Title III of the TTRA, Congress made a number of unilateral modifications to the two long-term contracts and directed the Secretary of Agriculture to revise the text of the contracts to reflect the changes.¹⁷⁹ Congress also instructed the Forest Service to prepare a report assessing whether it could meet the requirements of NFMA and other applicable laws while providing the timber volumes required by the revised long-term contracts.¹⁸⁰

every area).

174. See, e.g., U.S. FOREST SERVICE, U.S. DEP'T OF AGRICULTURE, ALASKA PULP CORPORATION LONG-TERM TIMBER SALE CONTRACT: SOUTHEAST CHICHAGOF PROJECT AREA FINAL ENVIRONMENTAL IMPACT STATEMENT RECORD OF DECISION 19, 22 (Sept. 1992) [hereinafter SOUTHEAST CHICHAGOF ROD]. See also SOUTHEAST CHICHAGOF FEIS, *supra* note 106, ch. 2 at 46-47 (describing monitoring process).

175. See, e.g., H.R. REP. NO. 84, pt. 1, *supra* note 10, at 6, 7 (1989).

176. See *id.* at 7 (citing a 1958 forest plan).

177. See, e.g., *id.* at 7, 14-17, 20 (major differences included lower prices, lower levels of environmental review, and higher levels of contract holder discretion over where and when to harvest). See also GENERAL ACCOUNTING OFFICE, *supra* note 31, at 2-3.

178. Pub. L. No. 101-626, § 301(b), 104 Stat. 4426, 4430 (1990) (not codified).

179. Pub. L. No. 101-626, § 301, 104 Stat. 4426, 4430-31 (1990) (not codified). Congress also authorized the Forest Service to take other actions necessary to implement the contractual modifications. *Id.* § 301(f).

180. See Pub. L. No. 101-626, § 301(e), 104 Stat. 4426, 4431-32 (1990) (not

*A. Attempted Reform Through
Unilateral Contract Modifications*

Congress intended the TTRA's unilateral contract modifications to accomplish a number of objectives on the Tongass. First, the changes were intended to subject the long-term contracts to the same procedures as independent sales under the National Environmental Policy Act of 1969 (NEPA),¹⁸¹ NFMA,¹⁸² and other applicable law.¹⁸³ Second, the modifications were intended to eliminate disproportionate harvesting of old-growth.¹⁸⁴ Third, by requiring substantial harvesting of timber offerings within three years, Congress intended to eliminate the ability of the contract holders to accrue large backlogs of uncut timber.¹⁸⁵ Fourth, Congress intended to place the location, size, and timing of timber harvest in the hands of the Forest Service.¹⁸⁶ Fifth, Congress intended to give the contract holders the ability to reject timber offerings, subject to a requirement that where the Forest Service is able to sell the offering within twelve months, the rejected volume is to be subtracted from the volume required under the appropriate long-term contract.¹⁸⁷ Sixth, by providing that utility logs are to be counted against contract volume, Congress intended to re-

codified) (requiring report, including recommendations, as to the need for reductions in contract volume and an analysis of the effects of eliminating contract areas). Reports intended to meet the requirements of § 301(e) indicate that the Forest Service can meet contract volume requirements while complying with other environmental laws, but that reductions in contract volume should be considered, because meeting contract volume would be likely to result in decreased levels of harvest in future decades and in reduction of independent sale volume during the contract periods. *See, e.g.*, IRLAND GROUP, *supra* note 121, at 2-4, 47-48; U.S. FOREST SERVICE, U.S. DEPT OF AGRICULTURE, EVALUATION OF THE IRLAND GROUP REPORT: PERTAINING TO SEC. 301(E) TONGASS TIMBER REFORM ACT OF 1990 ii (Apr. 1992).

181. 42 U.S.C. §§ 4321-4370d (1988 & Supp. V 1993).

182. Pub. L. No. 94-588, 90 Stat. 2949 (1976) (codified as amended in scattered sections of the U.S.C.).

183. Pub. L. No. 101-626, § 301(c)(1), 104 Stat. 4426, 4430 (1990) (not codified).

184. *Id.* § 301(c)(2).

185. *Id.* § 301(c)(3); H.R. CONF. REP. NO. 931, *supra* note 25, at 18, *reprinted in* 1990 U.S.C.C.A.N. 6267, 6272.

186. Pub. L. No. 101-626, § 301(c)(4), 104 Stat. 4426, 4431 (1990) (not codified).

187. *Id.* § 301(c)(5).

duce the extent of the contract obligations.¹⁸⁸ Seventh, Congress intended to create consistency between the long-term contracts and independent short-term contracts in the areas of purchaser road credits, timber pricing, and economic criteria for timber offerings.¹⁸⁹ Congress directed the Forest Service to implement a total of nine unilateral contract modifications¹⁹⁰ and instructed the agency to take any other necessary action in management of the Tongass in order to achieve the intended goals.¹⁹¹ Together, these changes were expected to protect forest resources, improve forest management, "enhance the balanced use of resources on the forest and promote fair competition within the southeast Alaska timber industry."¹⁹²

B. Implementation of the Unilateral Changes

The Forest Service completed the process of modifying the long-term timber contracts in February 1991.¹⁹³ A General Accounting Office (GAO) report released in March 1991 found that, with one exception, the Forest Service satisfied the contractual modification requirements of the TTRA.¹⁹⁴ However, the GAO also noted that while the Forest Service made significant contractual modifications, the modified contracts failed to specify how the changes would be implemented.¹⁹⁵ The GAO concluded that the degree of success in meeting the objectives of the TTRA would be a function of Forest Service implementation.¹⁹⁶ This section reviews the contractual modifications and their implementation.

188. See *id.* § 301(c)(6).

189. *Id.* § 301(c)(7)-(9).

190. *Id.* § 301(c).

191. See *id.* § 301(f).

192. *Id.* § 301(b).

193. See U.S. FOREST SERVICE, U.S. DEP'T OF AGRICULTURE, TIMBER SALE CONTRACT: ALASKA PULP CORP., CONTRACT NO. 12-11-010-1545 (Feb. 27, 1991) [hereinafter APC 1991 CONTRACT]; U.S. FOREST SERVICE, U.S. DEP'T OF AGRICULTURE, TIMBER SALE CONTRACT: KETCHIKAN PULP & PAPER COMPANY 7/26/51 CONTRACT NO. A10fs-1042 (Feb. 27, 1991) [hereinafter KPC 1991 CONTRACT].

194. See GENERAL ACCOUNTING OFFICE, *supra* note 31, at 4-5. According to the GAO report, the only area in which the Forest Service failed to make the necessary changes was in its treatment of purchaser road credits. *Id.*

195. *Id.* at 5.

196. *Id.* at 6. The GAO is currently conducting another examination of the Forest Service's implementation of the Tongass Timber Reform Act and a report is expected shortly.

1. Consistency with Independent Timber Sale Procedures

The first unilateral contract modification called for by section 301 of the TTRA was to "assure that all timber sale planning, management requirements and environmental assessment procedures regarding the contracts are consistent with procedures for independent national forest timber sales, pursuant to the National Forest Management Act . . . , the National Environmental Policy Act . . . and other applicable laws."¹⁹⁷ This modification was intended to eliminate the disparity between the environmental standards and procedures applied to long-term timber sales and those applied to short-term sales.¹⁹⁸ The primary effect of this provision was to make it clear that site-specific environmental impact statements would be required for future timber offerings under the long-term contracts. The requirements of this modification are primarily procedural, and the Forest Service did not expect them to impact contract volume or economic viability.¹⁹⁹ This provision had a greater impact on the KPC contract than the APC contract because the APC contract already had been modified to bring individual offering areas and timber harvest units into the NEPA process on an annual basis.²⁰⁰ Furthermore, the KPC con-

197. Pub. L. No. 101-626, § 301(c)(1), 104 Stat. 4426, 4430 (1990) (not codified).

198. See H.R. CONF. REP. NO. 931, *supra* note 25, at 18, reprinted in 1990 U.S.C.C.A.N. 6267, 6272.

199. ROBERT A. MAYNARD, U.S. DEP'T OF AGRICULTURE, OFFICE OF GENERAL COUNSEL, ANALYSIS: LONG TERM TIMBER SALE CONTRACT MODIFICATIONS, TONGASS TIMBER REFORM ACT OF 1990, at 8 (Feb. 20, 1991). SEACC argues that the Forest Service made only incremental changes under this section and failed to meet the legislative intent of using the contract modifications to produce consistency between the long-term contracts and independent sales "to the greatest possible degree." See SEACC, CRITIQUE OF THE FOREST SERVICE MODIFICATIONS TO LONG-TERM TIMBER CONTRACTS ON THE TONGASS NATIONAL FOREST IN ALASKA 6-9 (March 15, 1991) [hereinafter SEACC CONTRACT CRITIQUE]. See also H.R. CONF. REP. NO. 931, *supra* note 25, at 18, reprinted in 1990 U.S.C.C.A.N. 6267, 6272 (indicating intended degree of contract consistency).

200. See U.S. FOREST SERVICE, U.S. DEP'T OF AGRICULTURE, TIMBER SALE CONTRACT: ALASKA PULP CORP., INC., CONTRACT NO. 12-11-010-1545 § 7(a)-(e) (July 1990) (on file with author) [hereinafter APC PRE-TTRA CONTRACT]. The contract still called for maintenance of a tentative operating schedule to provide the timber purchaser with a four-year timber supply, but NEPA analysis was included within the schedule instead of being required in advance. See *id.* § 7(b)-(c).

tract still was based primarily on more general five-year operating plans, which did not provide detailed site-specific analysis.²⁰¹

2. *Disproportionate Harvesting of Old-Growth*

The second unilateral contract modification instructed the Forest Service to eliminate the practice of "high-grading" the forest through disproportionate harvesting of rare timber stands containing the highest timber volumes in the Tongass.²⁰² Between 1954 and 1990, harvesting was concentrated almost exclusively in timber stands of over 30,000 board feet per acre (volume class six),²⁰³ and stands of over 50,000 board feet per acre (volume class seven),²⁰⁴ despite the fact that stands of these two volume classes make up only about eleven percent of the productive old-growth in the Tongass.²⁰⁵ These high volume stands are the most profitable stands for harvesting, but also the most biologically important stands in the forest.²⁰⁶

The Forest Service implemented this modification requirement by adding a provision to the long-term contracts which requires harvest management plans to call for returning the timber

201. See H.R. REP. NO. 84, *supra* note 10, at 21.

202. Pub. L. No. 101-626, § 301(c)(2), 104 Stat. 4426, 4430 (1990) (not codified). The TTRA instructed the Forest Service to: "[E]liminate the practice of harvesting a disproportionate amount of old-growth timber by limiting the volume harvested over the rotation in volume classes 6 and 7, as defined in TLMP and supporting documents, so that the proportion of volume harvested in these classes within a contiguous management area does not exceed the proportion of volume currently represented by these classes within the management area." *Id.*

203. There are only 471,883 acres of volume class six (also known as strata C) remaining. TLMP REVISION SDEIS, *supra* note 3, at 3-161, 3-163.

204. There are only 89,363 acres of volume class seven (also known as strata D) remaining. *Id.* at 3-161, 3-163.

205. See *id.* at 3-163. Volume class six and volume class seven stands were each reduced by approximately 39% between 1954 and 1990, and there was no significant harvest of lower volume classes during that time period. See *id.* at 3-170 (showing 61% remaining for both strata C and strata D, and 100% remaining for both strata A (8-20 mbf/acre) and strata B (20-30 mbf/acre)). See also *id.* at 3-161 (explanation of volume classes and strata classes).

206. See, e.g., VPC REPORT, *supra* note 5, at 7 (noting importance of rare, highly productive low elevation old-growth for wildlife); TLMP REVISION SDEIS, *supra* note 3, at 48-49 app. B (noting importance of high-volume old-growth for deer winter habitat).

volume rations to their current ratios by the end of the contract period.²⁰⁷ However, while the statute speaks in terms of "volume classes 6 and 7," the contract provision refers to "volume class 6 and 7." State agencies and public interest groups have argued that volume classes six and seven are distinct and should be tracked individually,²⁰⁸ but the Forest Service has adopted the position that "[f]or purposes of TTRA implementation, volume class 6 and 7 are combined."²⁰⁹ As a result, disproportionate harvest of the extremely rare and biologically important volume class seven stands can continue under the modified contracts.²¹⁰

207. APC 1991 CONTRACT, *supra* note 193, § B0.64; KPC 1991 CONTRACT, *supra* note 193, § B0.64. Individual sales could be allowed to depart from the proportionality requirements if the NEPA documentation and Record of Decision shows that the difference can be made up before expiration of the contract term. U.S. FOREST SERVICE, U.S. DEPT OF AGRICULTURE, SALE PREPARATION HANDBOOK: REGION 10 SUPPLEMENT NO. 2409.18-92-5, § 34.15 (Jan. 15, 1992) (on file with author) [hereinafter SPH SUPP. NO. 2409.18-92-5] (normally departures should be within one-half of one percent of current proportionality). SEACC argues that by failing to require proportionality for each individual timber offering, the Forest Service is allowing high-grading to continue, and that in the last few years of the long-term contracts, the contract holders may choose to terminate their contracts rather than achieve proportionality through harvest of remaining lower volume timber. *See* SEACC CONTRACT CRITIQUE, *supra* note 199, at 10-11, 14.

208. *See, e.g.*, TONGASS AT THE CROSSROADS, *supra* note 1, at 23 (Wildlife Society, Alaska Department of Fish and Game); Notice of Appeal from K. J. Metcalf, representing coalition of organizations and individuals from Sitka, Angoon, and Tenakee, to Michael Barton, Regional Forester, U.S. Forest Service, U.S. Department of Agriculture, 13-14 (Nov. 14, 1992) (on file with author) (raising flaws of Chatham Area's ALASKA PULP CORP. LONG-TERM CONTRACT: SOUTHEAST CHICHAGOF FINAL EIS AND RECORD OF DECISION dated Aug. 27, 1992). *See also* Memorandum from Ron Sommerville, Deputy Commissioner, Alaska Department of Fish and Game, to Paul Rusanowski, Director, Alaska Division of Governmental Coordination 21 (Nov. 6, 1991) (review of TLMP REVISION SDEIS). SEACC also argues that the Forest Service erred by failing to include the term "old-growth" in the contract proportionality requirement, allowing high volume old-growth harvest to be offset by preservation of high volume second growth which is less valuable for both habitat and harvest. *See* SEACC CONTRACT CRITIQUE, *supra* note 199, at 9.

209. SPH SUPP. NO. 2409.18-92-5, *supra* note 207, § 34.13(3).

210. Volume class six stands contain 30 or more mbf per acre while volume class seven contains a minimum of 50 mbf per acre and may yield over 100 mbf per acre. TONGASS AT THE CROSSROADS, *supra* note 1, at 22-23. Volume Class seven makes up just two percent of the suitable timber base and less than one-half of one percent of the Tongass. *Id.* at 23. *See also supra* note 44 and accompanying text.

Further, the Forest Service is applying the required proportionality analysis only to sales within management areas that schedule harvest under the long-term contracts.²¹¹ Forest-wide, Forest Service plans call for future harvesting of approximately thirty-two percent of remaining volume class six stands, and forty-five percent of remaining volume class seven stands, while the lower volume class four and five stands will be reduced by only twenty and twenty-nine percent respectively.²¹² Section 301(c) of the TTRA consists entirely of unilateral contract modifications;²¹³ this provides the Forest Service with some basis for arguing that the proportionality requirement applies only to long-term contract areas, an interpretation that is understandable in light of the agency's longstanding relationship with the timber industry.²¹⁴ However, it is clear that legislative intent is not being carried out.²¹⁵ The agency has ignored both the broad purpose of the contract modifications and the TTRA mandate, which directs the agency to take "such other actions in the management of the forest as may be necessary" to achieve the goals of section

211. See SPH SUPP. NO. 2409.18-92-5, *supra* note 208, § 34.13(1).

212. See TLMP REVISION SDEIS, *supra* note 3, at 3-187 to 3-189 (changes in old-growth acreage for preferred alternative).

213. Pub. L. No. 101-626, § 301(c), 104 Stat. 4426, 4430 (1990) (not codified).

214. See *supra* note 67 and accompanying text.

215. See, e.g., S. REP. NO. 261, *supra* note 3, at 16, *reprinted in* 1990 U.S.C.C.A.N. 6232, 6244 (indicating belief that provision would prohibit disproportionate harvest across the 141 management areas on the Tongass); 136 CONG. REC. H12,834 (daily ed. Oct. 26, 1990) (statement of Congressman Miller indicating that this provision was one of the Act's most important changes to both the contracts and forest management, and that the intent was to prevent harvest of the best timber during the early decades of the timber rotation, spreading harvest of high volume timber over the rotation). The Forest Service is clearly failing to meet this intent. See *supra* note 136 and accompanying text. Further, the general purpose of the contract modifications was to create equity and encourage competition between long-term and short-term contract holders, not to give short-term contracts an advantage. See H.R. CONF. REP. NO. 931, *supra* note 25, at 18, *reprinted in* 1990 U.S.C.C.A.N. 6267, 6272. Ironically, the April 14, 1994 termination of APC's long-term contract, see *supra* note 13, will allow APC to escape the TTRA's prohibition on highgrading. This is particularly disturbing because the Forest Service is discussing the possibility of ten-year contracts with APC. See, e.g., ALASKA REGION, U.S. FOREST SERVICE, U.S. DEPT' OF AGRICULTURE, U.S. FOREST SERVICE TERMINATES LONG-TERM CONTRACT WITH ALASKA PULP (Apr. 14, 1994) (press release announcing contract termination) (on file with author).

301(c).²¹⁶

Problems with the Forest Service's interpretation of the proportionality requirements have been compounded by the method which the agency has used to measure proportionality. The Forest Service has relied on highly inaccurate "timber type maps" based on aerial photographs taken during the 1970s. More often than not, these timber-type maps are proven inaccurate if field verification is attempted.²¹⁷ The agency also has computed proportionality by acreage instead of volume, allowing high-grading through selection of the highest volume acres within a volume class for harvest.²¹⁸ In addition, the Forest Service sometimes has forgotten to calculate inventory volume, instead using the measure by which timber is sold, scale volume,²¹⁹ to determine proportionality.²²⁰ On April 11, 1994, the United States District Court for Alas-

216. See Pub. L. No. 101-626, § 301(f), 104 Stat. 4426, 4432 (1990) (not codified).

217. See, e.g., Memorandum from Bill Wilson, U.S. Forest Service, U.S. Department of Agriculture, Tongass Timber Reform Act Section 301(c)(2) Proportionality Volume Class Discussion 2-4 (Oct. 10, 1991) (indicating that only about 45% of stands are classified correctly, and that about 15% are off by more than one volume class); Memorandum from J.E. Brickell, U.S. Forest Service, U.S. Department of Agriculture, Review of Forest Inventory Methodology and Results, Tongass NF (Oct. 12, 1989); Plaintiffs' Opening Brief, *The Wildlife Society v. Barton*, No. J93-001 Civ. (D. Alaska Apr. 11, 1994) (filed Sept. 24, 1993). See also THE WILDLIFE SOCIETY, STATEMENT OF REASONS FOR APPEAL OF THE RECORD OF DECISION ALASKA PULP CORPORATION, LONG-TERM TIMBER SALE CONTRACT, KELP BAY ENVIRONMENTAL IMPACT STATEMENT 3-6 (Apr. 7, 1992) [hereinafter KELP BAY APPEAL] (pointing out inaccuracy of Kelp Bay EIS which indicated that no volume class seven and only 19 acres of volume class six would be cut; subsequent stand examination by the Wildlife Society revealed 41 cutting units including over 1,731 acres which averaged over 30 mbf, including one 36 acre unit that averaged 54 mbf).

218. See Plaintiffs' Opening Brief at 23-25, *The Wildlife Society v. Barton*, No. J93-001 Civ. (D. Alaska Apr. 11, 1994) (filed Jan. 15, 1993) (pointing out that if the same number of high volume acres were cut in a sale, a cut averaging 33 mbf per acre and a cut averaging 66 mbf per acre would have identical acre proportionality despite the fact that the proportion of high-volume old-growth would be twice as high in the second case). See Complaint For Declaratory Judgment and Injunctive Relief at 9, *The Wildlife Society v. Barton*, No. J93-001 Civ. (D. Alaska Apr. 11, 1994) (filed Jan. 15, 1993).

219. "Scale Volume" is based on 32-foot logs, while inventory volume is based on 16-foot logs; as a result of log taper, scale volume averages only 77% of inventory volume. See Memorandum from Bill Wilson, *supra* note 218, at 5-8.

220. See, e.g., TONGASS AT THE CROSSROADS, *supra* note 1, at 22; KELP BAY

ka held that the Forest Service's reliance on timber-type maps was arbitrary and capricious, and that the agency's use of acres instead of volume to determine proportionality was "contrary to the plain meaning of the statute."²²¹ However, the court did not grant a request for an injunction against continued cutting of high-volume old-growth, but instead granted declaratory relief and remanded the issue to the Forest Service.²²² The Forest Service has not yet announced a new method for determining proportionality, and high-grading remains a substantial concern in the Tongass.

3. Assurance of Harvest Within Three Years

The third unilateral contract modification called for by section 301 of the TTRA was to "assure that all timber offered under each contract be substantially harvested within three years or the Secretary shall withhold further offerings pursuant to each contract, unless harvesting has been delayed by third-party litigation."²²³ This TTRA provision was a response to the long-term contract holders' practice of harvesting only the better quality timber, while accruing large backlogs of uncut lower quality timber.²²⁴ The Forest Service implemented this provision by requiring the cutting of at least seventy-five percent of the timber within an offering area within three operating seasons following the release of a sale, unless the purchaser receives an offering term adjustment.²²⁵ The Southeast Alaska Conservation Council (SEACC) has noted that this provision is potentially subject to

APPEAL, *supra* note 218, at 5-6.

221. *The Wildlife Society v. Barton*, No. J93-001 Civ., slip op. at 18 (D. Alaska Apr. 11, 1994).

222. *Id.* at 18-20.

223. Pub. L. No. 101-626, § 301(c)(3), 104 Stat. 4426, 4431 (1990) (not codified).

224. *See, e.g.*, S. REP. NO. 261, *supra* note 3, at 16 (1990), *reprinted in* 1990 U.S.C.C.A.N. 6232, 6244; H.R. REP. NO. 84, *supra* note 10, at 12.

225. *See, e.g.*, KPC 1991 CONTRACT, *supra* note 193, § B6.36. *See also* GENERAL ACCOUNTING OFFICE, *supra* note 31, at 13-14. Adjustments are allowed under the contracts for delays due to natural disaster, labor disputes, and government interference in addition to third party lawsuits. *See, e.g.*, KPC 1991 CONTRACT, *supra* note 193, § B8.21. The GAO found these adjustments to be acceptable because they were consistent with common provisions of independent timber sale contracts. GENERAL ACCOUNTING OFFICE, *supra* note 31, at 13-14.

abuse which could completely undermine the provision's purpose because the revised contract would allow the contract holders to harvest the most profitable timber, leaving behind up to twenty-five percent of sale, and thus backlog less economical timber indefinitely.²²⁶ The Forest Service also appears to have used this provision as a basis for another contract provision requiring the Forest Service to seek to maintain a three-year current timber supply, although neither the language of the statute nor its legislative history provide any basis for this interpretation.²²⁷

4. Forest Service Selection of Harvest Units

The fourth unilateral contract modification called for by TTRA section 301 was to "assure that the Secretary determines the location and size of sale units and the timing of timber harvests."²²⁸ This provision resulted because under the pre-TTRA contracts, APC was able to participate in joint development of harvest plans,²²⁹ and KPC was able to select its own timber harvest units.²³⁰ Another purpose of this provision was to require the Forest Service to monitor actual harvest areas in order to prevent the contract holders from deviating from plans.²³¹ The Forest Service has implemented this TTRA provision through contract clauses requiring the Forest Service to consult with contract holder and develop offering schedules, which display offering

226. See SEACC CONTRACT CRITIQUE, *supra* note 199, at 14-15. Extensions are allowed under the modified contracts where 75% of the sale has been harvested, and there are no provisions limiting the length of such extensions. See, e.g., KPC 1991 CONTRACT, *supra* note 193, §§ B8.23, B8.231.

227. See, e.g., KPC 1991 CONTRACT, *supra* note 193, § B0.62. Although Forest Service attempts to use the TTRA as justification for increased sale offerings are misplaced, see DEFENDING THE PROMISE, *supra* note 30, at 40 n.41, pre-TTRA long-term timber contracts probably provide a sufficient basis for the timber supply requirement. These earlier contracts initially were based on five-year operating periods, and imposed timber supply requirements of greater than three years. See, e.g., KPC PRE-TTRA CONTRACT, *supra* note 202, § 1(b) (five-year operating period); APC PRE-TTRA CONTRACT, *supra* note 200, § 7(c) (four-year current timber supply requirements).

228. Pub. L. No. 101-626, § 301(c)(4), 104 Stat. 4426, 4431 (1990) (not codified).

229. See APC PRE-TTRA CONTRACT, *supra* note 200, § 7(d).

230. See KPC PRE-TTRA CONTRACT, *supra* note 202, § 1(c).

231. 136 CONG. REC. H12,832, H12,834 (daily ed. Oct. 26, 1990) (statement of Rep. Miller).

areas and proposed timber volumes.²³² The new contract provisions also require confinement of timber harvesting to designated offering areas.²³³ Any changes made to adjust for volume deficits or excesses²³⁴ must be made by the Forest Service and cannot be unilaterally affected by the contract holder.²³⁵ Under the modified contracts, the long-term contract holders may still participate in the harvest site selection process, but the Forest Service retains authority to decide where and when harvesting will occur.²³⁶ Forest Service authority over harvest locations is further strengthened by the next modification required by the TTRA.

5. Provisions for Rejection of Timber

The fifth unilateral contract modification provided:

[A]llow rejection of timber offered under the contracts. Upon rejection of any timber offered, the Secretary may re-offer such timber to any qualified bidder under independent national forest timber sales. If the rejected timber is subsequently sold within 12 months, that amount of timber shall be subtracted from the volume remaining under the appropriate contract.²³⁷

Congress intended this provision to preserve long-term contract holders's ability to reject uneconomical timber while eliminating contract holders' de facto ability to control the selection of timber offerings through the rejection of viable but unattractive offerings.²³⁸ The modified contracts allow the long-term purchaser thirty days within which to reject timber sale offerings.²³⁹ They

232. APC 1991 CONTRACT, *supra* note 193, §§ B0.61, B0.62; KPC 1991 CONTRACT, *supra* note 193, §§ B0.61, B0.62.

233. See KPC 1991 CONTRACT, *supra* note 193, § B2.3.

234. See *id.* § B2.4-B2.42.

235. *Id.* Although unilateral unit expansions by contract holders are prohibited by the new long-term contracts, substantial problems have arisen due to Forest Service expansion of unit boundaries without NEPA analysis. See, e.g., Shoaf Disclosure, *supra* note 147, at 3-6 (alleging violations of NEPA and ANILCA).

236. See GENERAL ACCOUNTING OFFICE, *supra* note 31, at 15.

237. Pub. L. No. 101-626, § 301(c)(5), 104 Stat. 4426, 4431 (1990).

238. See, e.g., S. REP. NO. 261, *supra* note 3, at 16-17, reprinted in 1990 U.S.C.C.A.N. 6232, 6244.

239. APC 1991 CONTRACT, *supra* note 193, § B0.63; KPC 1991 CONTRACT, *supra* note 193, § B0.63.

further require that if a long-term contract holder rejects an offering, the Forest Service may offer the area as an independent timber sale on which the long-term contract holder will not be allowed to bid.²⁴⁰ If such re-offered timber is sold within twelve months, the volume remaining to be supplied under the long-term contract will be reduced by the estimated offering volume.²⁴¹ This provision allows the long-term contract holders to reject timber offerings which they do not feel will be economical, but discourages unnecessary rejection by adding the danger of a reduction in contract volume. However, the provision's benefits may prove illusory because long-term contract offerings may be too large for independent operators to buy.²⁴²

6. *Counting of Utility Logs Against Contract Volume*

The sixth unilateral contract modification called for by section 301 of the TTRA was to "assure that utility logs offered under the contracts shall be counted against contract volume requirements."²⁴³ Prior to the TTRA, the Forest Service did not count utility log²⁴⁴ volume against the contract volume of the APC contract,²⁴⁵ even though the primary purpose of the long-term con-

240. *Id.*

241. *Id.*

242. See SEACC CONTRACT CRITIQUE, *supra* note 199, at 16-17 (indicating that offerings planned under the long-term contracts are two to three times larger than independent sales). Forest Service discretion as to when and if a sale will be offered as an independent sale also has a high potential for undermining the effectiveness of this provision, particularly since the twelve-month period for contract volume reduction is measured from date of rejection, not the date that the new offering is made available. *Id.* at 17.

243. Pub. L. No. 101-626, § 301(c)(6), 104 Stat. 4426, 4431 (1990) (not codified).

244. A "utility" log is a log which does not meet minimum requirements for production of sawtimber but is suitable for the production of pulp. See TLMP SDEIS FOREST PLAN, *supra* note 1, at 7-34.

245. See S. REP. NO. 261, *supra* note 3, at 39 (1990), reprinted in 1990 U.S.C.C.A.N. 6232, 6266 (additional views of Sens. McClure, Burns, Nickles, Murkowski, McConnell, Wallop, and Garn). The Forest Service and KPC already had agreed to a contract amendment to count utility log volume against contract volume. This amendment was part of a 1986 settlement agreement arising from KPC claims against the Forest Service for unilateral contract modifications and from Forest Service claims against APC for antitrust violations. See H.R. REP. NO. 84, pt. 1, *supra* note 10, at 80, 86-88.

tracts was the production of wood pulp, not sawtimber. The decision not to count utility log volume effectively increased the volume the Forest Service was obligated to provide to APC under its long-term contract by about eighteen percent.²⁴⁶ Some members of Congress thought the utility log modification requirement could expose the government to liability for a taking of a portion of the APC contract,²⁴⁷ while others believed the Forest Service had misinterpreted the contract,²⁴⁸ and that utility volume should be counted retroactively as well as prospectively.²⁴⁹

The Forest Service implemented this provision by inserting contract provisions in the KPC contract stating that utility volume would continue to be counted against contract volume,²⁵⁰ and by adding a provision to the APC contract stating that after February 26, 1991, the effective date of the TTRA, utility logs would be counted against other contract volume requirements.²⁵¹ These provisions provided less than some members of Congress expected,²⁵² but they appeared consistent with the prospective nature of the TTRA's other unilateral contract modifications.²⁵³

246. See S. REP. NO. 261, *supra* note 3, at 39, *reprinted in* 1990 U.S.C.C.-A.N. 6232, 6266 (additional views of Sens. McClure, Burns, Nickles, Murkowski, McConnell, Wallop, and Garn).

247. See, e.g., *id.* APC has in fact refused to accept the unilateral contract modifications of the TTRA and has filed suit alleging both Forest Service abuse of discretion and due process violations. See *Alaska Pulp Corporation v. United States*, No. J93-010-CV (D. Alaska, filed June 21, 1993).

248. See, e.g., H.R. REP. NO. 84, pt. 1, *supra* note 10, at 49 (1989) (Reid Brothers review team findings).

249. See 136 CONG. REC. H12,832, H12,834 (daily ed. Oct. 26, 1990) (statement of Rep. Miller).

250. KPC 1991 CONTRACT, *supra* note 193, § B0.3.

251. APC 1991 CONTRACT, *supra* note 193, § B0.33. Based on legislative history indicating that retroactive application of utility log counting had been a separate recommendation from prospective application, the Forest Service determined that the prospective application was more consistent with the Act and its legislative history. See Maynard, *supra* note 199, at 24.

252. See 136 CONG. REC. H12,832, H12,834 (daily ed. Oct. 26, 1990) (statement of Rep. Miller indicating that an accounting would be required for all utility logs delivered to the contract holders in the past).

253. See Pub. L. No. 101-626, § 301(d), 104 Stat. 4426, 4431 (1990) (authorizing continued operation under existing contracts for up to 90 days after enactment of the TTRA).

7. Purchaser Road Credits

The seventh unilateral contract modification called for by section 301 of the TTRA was to "assure that purchaser road credits are provided under the contracts in a manner consistent with independent national forest timber sale procedures."²⁵⁴ Congress intended to make the use of purchaser road credits²⁵⁵ in the long-term contracts consistent with their use in independent short-term contracts.²⁵⁶ According to a statement of Congressman Miller, this provision would end the practice of "banking" purchaser road credits under the long-term contracts, a practice by which the Forest Service allowed the long-term contract holders to use credits that would have been lost under independent contracts because of their shorter durations.²⁵⁷

The Forest Service attempted to implement this provision through minor changes to the purchaser road-credit clauses in the new long-term contracts.²⁵⁸ However, because short-term contracts allowed the carry-over of "ineffective" purchaser road credits until the end of the contract period, the Forest Service did not believe it necessary to eliminate the long-term contract holders' ability to carry over ineffective purchaser road credits across operating periods until the end of the long-term contracts.²⁵⁹ Because banking of purchaser credits under the modified long-term contracts continued, the GAO found that the APC and KPC contracts had not been revised to make the use of purchaser credits substantially similar to their use in independent sales, as Congress

254. Pub. L. No. 101-626, § 301(c)(7), 104 Stat. 4426, 4431 (1990) (not codified).

255. Purchaser road credits are credits earned by a timber purchaser for constructing timber access roads. However, credits are effective only for amounts between a base rate (which must be paid in cash) and the contract price. Credits are "ineffective" and are cancelled if not used by the end of a contract period. See GENERAL ACCOUNTING OFFICE, *supra* note 31, at 18.

256. See, e.g., H.R. CONF. REP. NO. 931, *supra* note 25, at 19, reprinted in 1990 U.S.C.C.A.N. 6267, 6273.

257. 136 CONG. REC. H12,832, H12,834 (daily ed. Oct. 26, 1990).

258. KPC PRE-TTRA CONTRACT, *supra* note 202, § 2(1)-(m); KPC 1991 CONTRACT, *supra* note 193, § B4.2-B4.222.

259. See MAYNARD, *supra* note 199, at 27-28; GENERAL ACCOUNTING OFFICE, *supra* note 31, at 18-19.

intended.²⁶⁰ The Forest Service rejected the GAO analysis and refused to make further changes in its treatment of purchaser road credits under the long-term contracts.²⁶¹ The failure to implement changes in purchaser road credits was also a substantial factor in the Tongass' cash payment of approximately \$9.8 million to purchasers in 1992,²⁶² and was a significant contributor to the forest's overall loss of over \$64 million in 1992.²⁶³

8. Price Consistency with Independent Sales

The eighth unilateral contract modification called for by section 301 of the TTRA was to "assure that the price of timber offered under the contracts shall be adjusted to be comparable with that of independent national forest timber sales, with stumpage rates and profitability criteria comparable to those of independent purchasers in competitive sales."²⁶⁴ Congress intended this modification to eliminate the pricing advantage of the long-term contract holders and to produce prices and pricing procedures consistent with those used in independent timber sales.²⁶⁵ The Forest Service implemented this provision through contract language making the contract prices subject to upward adjustment on a quarterly basis, in order to make them comparable to average rates paid on timber harvested under independent contracts over the most recent rolling four quarters.²⁶⁶ The GAO accepted the

260. See GENERAL ACCOUNTING OFFICE, *supra* note 31, at 18-21.

261. See Letter from Michael A. Barton, Regional Forester, U.S. Forest Service, U.S. Department of Agriculture, to Joseph R. Mehrkens, Executive Director, Southeast Alaska Natural Resources Center (April 11, 1991) (on file with author) (responding to comments on revised long-term contracts).

262. See \$64 MILLION QUESTION, *supra* note 33, at 1, 2, 5 (indicating that the Forest Service paid out \$9.8 million in cash refunds to purchasers with nearly \$9.4 million going to KPC and that the agency gave long-term contract holders \$12.3 million in timber credit).

263. See *id.* at 11 (stating that the Forest Service could have saved \$5.8 million in 1992 if banking of purchaser credits across operating periods had been eliminated).

264. Pub. L. No. 101-626, § 301(c)(8), 104 Stat. 4426, 4431 (1990) (not codified).

265. See, e.g., 136 CONG. REC. H12,832, H12,834 (daily ed. Oct. 26, 1990) (statement of Rep. Miller); S. REP. NO. 261, *supra* note 3, at 5, 17, *reprinted in* 1990 U.S.C.C.A.N. 6232, 6233, 6245.

266. APC 1991 CONTRACT, *supra* note 193, § B3.0-B3.21; KPC 1991 CONTRACT, *supra* note 193, § B3.0-B3.21. See also GENERAL ACCOUNTING OFFICE,

Forest Service modifications as meeting the requirements of the TTRA, but noted that the long-term contract holders might be able to influence independent bid prices because of their dominant position in the Tongass timber market, and thus they might still end up paying less than fully competitive prices.²⁶⁷ The lack of competition on the Tongass also led several conservation groups to criticize the Forest Service's implementation of the comparable pricing requirement of the TTRA.²⁶⁸

9. *Economic Criteria Consistent with Independent Sales*

The final unilateral contract modification called for by section 301 of the TTRA was to assure "that timber offered under the contracts meets economic criteria consistent with that of independent national forest timber sales."²⁶⁹ The Forest Service implemented this provision by removing clauses from the long-term contracts which required Forest Service timber offerings to meet certain profitability criteria which were not required for independent sale offerings.²⁷⁰ The Forest Service's deletion of these terms does not bring about the degree of change envisioned by Representative Miller, who sought to prohibit the Forest Service from supplying contract holders with timber of higher value or quality than that supplied to independent purchasers,²⁷¹ but it

supra note 31, at 22-24.

267. GENERAL ACCOUNTING OFFICE, *supra* note 31, at 24 n.2.

268. *See, e.g.*, SEACC CONTRACT CRITIQUE, *supra* note 199, at 20 (suggesting that use of timber product values outside of the Tongass is the best option available); Letter from Joseph R. Mehrkens, Executive Director, The Southeast Alaska Natural Resources Center to Dick Kasdan, Gus Johanson, & Robert B. Arthur, General Accounting Office, 8-10 (Mar. 11, 1991) (on file with author) (suggesting elimination of price adjustment and rate redetermination mechanisms, combined with a requirement of 100% harvest within three years).

269. Pub. L. No. 101-626, § 301(c)(9), 104 Stat. 4426, 4431 (1990) (not codified).

270. GENERAL ACCOUNTING OFFICE, *supra* note 31, at 25. Prior to the TTRA, the KPC contract provided that the Forest Service would not require the cutting of timber stands which would result in average delivered costs of logs which would place the purchaser in a disadvantageous position to similar operations in the Puget Sound Region, KPC PRE-TTRA CONTRACT, *supra* note 202, § 1(d), and the APC contract had a "mid-market" timber provision which required the Forest Service specify timber for harvest which would provide a profit and risk margin of at least 60% of normal. APC PRE-TTRA CONTRACT, *supra* note 200, § 7(c).

271. *See* 136 CONG. REC. H12,832, H12,834 (daily ed. Oct. 26, 1990) (state-

does remove the contractual basis for such differential treatment.

C. *Effects of Forest Service Implementation*

The Forest Service's implementation of the TTRA contract modification requirements has resulted in positive changes in the management of the Tongass. However, because the Forest Service has not embraced the intent of the TTRA,²⁷² these changes generally fall short of the congressional goals of promoting fair competition, enhancing balanced use of resources, and assuring "that valuable public resources in the Tongass National Forest are protected and wisely managed."²⁷³

Contractual modifications have had a positive influence on Tongass timber management by: 1) requiring site-specific environmental review for projects;²⁷⁴ 2) placing limited constraints on

ment of Rep. Miller). The Forest Service's analysis of the requirements of the TTRA notes that "[m]atching actual quality or value of timber in each long-term and short-term offering is probably impossible, given the variability over area and time, and is not implicit in the statutory language." Maynard, *supra* note 199, at 33.

272. Congress should have been able to anticipate that the Forest Service would resist making more than the minimum changes the statutory language would allow because of the Forest Service's long relationship with the long-term contract holders, *see supra* note 67, previous failures of the agency to make substantial contract modifications in response to congressional prodding, *see* H.R. REP. NO. 84, pt. 1, *supra* note 10, at 7 (response to NFMA regulations), contract holder anti-trust violations, *see id.* at 49-52, 80, 84-88 (Reid Brothers review team recommendations), and because of the danger that the contract holders would assert takings claims against the Forest Service, *see, e.g., id.* at 87-88 (KPC had previously asserted takings claims over other unilateral contract modifications). APC has in fact refused to accept the unilateral contract modifications and asserts that the terms of its pre-TTRA contract are still controlling, *see* Letter from George S. Woodbury, Vice President, APC, to Michael Barton, Regional Forester, U.S. Forest Service, U.S. Department of Agriculture 1 (Oct. 22, 1993) (on file with author), and has filed suit challenging the constitutionality of the contract modifications and alleging that the Forest Service abused its discretion in implementing the modifications. *See* Complaint for Injunctive and Declaratory Relief and for Judicial Review of Administrative Action, *Alaska Pulp Corp. v. United States*, No. J93-010-CV (D. Alaska filed June 21, 1993).

273. *See* Pub. L. No. 101-626, § 301(b), 104 Stat. 4426, 4430 (1990) (not codified).

274. *See supra* part IV.B.1. However, site specific analysis has still been inadequate. *See, e.g.,* Memorandum from Jack Ward Thomas, Chief, U.S. Forest

"high-grading,"²⁷⁵ 3) reducing the ability of the contract holders to build up large backlogs of uncut timber;²⁷⁶ 4) increasing Forest Service control over the timing and location of harvests;²⁷⁷ 5) reducing the volume demands of the APC contract;²⁷⁸ and 6) reducing the economic advantages of the long-term contract holders.²⁷⁹ However, the changes have failed to eliminate competitive advantages resulting from the ability to spread purchaser road credits over a longer contract term,²⁸⁰ and have failed to prevent the Forest Service from carrying on covert high-grading inside long-term contract areas and overt high-grading outside those areas.²⁸¹ Thus, despite the modifications, the Forest Service planning process continues to be driven by the requirements of the long-term contracts,²⁸² and timber sales under the contracts continue to lose money.²⁸³ While contractual modifications have opened the door for greater competition and improved returns to the Treasury,²⁸⁴ they have in no way assured such results.²⁸⁵

Service, U.S. Department of Agriculture, to Regional Forester, Region 10, U.S. Forest Service, U.S. Department of Agriculture (Feb. 3, 1994) (on file with author) (addressing Central Prince of Wales Appeal and stating that several sustainability issues need to be addressed in the revision of the TLMP, and that "future project level environmental analyses and decision documents must be based on information obtained from field reconnaissance.")

275. See *supra* part IV.B.2.

276. See *supra* part IV.B.3.

277. See *supra* part IV.B.4-5.

278. See *supra* part IV.B.6.

279. See *supra* part IV.B.8-9.

280. See *supra* part IV.B.7.

281. See *supra* part IV.B.2.

282. See *supra* note 124, and accompanying text.

283. See generally \$64 MILLION QUESTION, *supra* note 33 (explaining recent losses by the Tongass National Forest).

284. See, e.g., *supra* part IV.B.8-9 (reduction of pricing and sale criteria advantages).

285. One of the fundamental problems impairing competition is that the long-term contract holders have become entrenched as the dominant players on the Tongass because they have been the recipients of the great majority of the timber harvested on the Tongass, see, e.g., H.R. REP. NO. 84, pt. 2, *supra* note 10, at 12 (78% percent in 1987), and they have forced potential competitors out of business. See, e.g., *id.* at 33. See also *Sitka Woes Could Help Small Mills: Pulp Mill Closure May Open Up Timber Supply*, JUNEAU EMPIRE, Apr. 26, 1994, at 1 (noting that more diverse wood products industry may be possible as a result of APC's long-term contract termination).

V. FISH, WILDLIFE, WILDERNESS, AND LUD II:
EFFECTS OF TTRA ADDITIONS

A major goal of the TTRA was to increase the protection of unique and ecologically important areas of the Tongass.²⁸⁶ In order to achieve this goal, the TTRA designated six new areas, totaling approximately 296,080 acres, as wilderness.²⁸⁷ These wilderness areas are to be managed as components of the National Wilderness Preservation System under the Wilderness Act of 1964,²⁸⁸ and are closed to most uses involving development or landscape alteration.²⁸⁹ Further, the TTRA allocated twelve new areas, totaling approximately 722,482 acres, to Land Use Designation II (LUD II).²⁹⁰ LUD II lands are to be managed in a generally roadless state to retain their wild land character.²⁹¹ Commercial timber harvesting is prohibited in LUD II areas, but limited development for habitat improvement or primitive recreation facilities is allowed, and timber salvage and road building may occur under limited circumstances.²⁹²

Forest Service discretion over actions in wilderness and legislated LUD II areas is highly constrained, so these designations can be expected to be generally effective in providing increased protection for fish, wildlife, and the unique areas of the Tongass. However, only fifty-seven percent of the unique and biologically important areas of the Tongass which the House proposed to designate as wilderness were protected in the final TTRA legislation, and seventy-one percent of those acres received only the reduced protection of LUD II designation.²⁹³

286. See, e.g., S. REP. NO. 261, *supra* note 3, at 30-31 (1990), reprinted in 1990 U.S.C.C.A.N. 6232, 6258-69 (statements of Sens. Metzenbaum and Bradley).

287. 16 U.S.C. § 1132 (Supp. V 1993).

288. 16 U.S.C. §§ 1131-1136 (1988 & Supp. V 1993). See 16 U.S.C. § 1132 note (Supp. V 1993).

289. 1986 TLMP, *supra* note 18, at 7-8. Exceptions are allowed for building of roads to access preexisting mining claims, for construction of shelters needed for health and safety reasons, and for fish and wildlife habitat enhancement. *Id.* See also TLMP REVISION SDEIS, *supra* note 3, at 3-463 to 3-464.

290. Pub. L. No. 101-626, § 201, 104 Stat. 4426, 4428-29 (1990) (not codified).

291. See 1986 TLMP, *supra* note 18, at 8.

292. See, e.g., 1986 TLMP, *supra* note 18, at 8-9; H.R. CONF. REP. NO. 931, *supra* note 25, at 16, reprinted in 1990 U.S.C.C.A.N. 6267, 6270.

293. See H.R. CONF. REP. NO. 931, *supra* note 25, at 17, reprinted in 1990

There is also a danger that the improvements in resource protection provided by the TTRA in these areas may be counterbalanced by Forest Service management activities in other areas of the forest. Land withdrawals from timber production may result in intensified harvest in other areas of the forest, and the Forest Service may attempt to use these congressional protection measures to justify narrowing its consideration of alternatives providing resource protection in non-designated areas. For example, the Forest Service has recently used enactment of the TTRA as the basis for a decision to not include further wilderness areas in the development of a new management plan for the Tongass.²⁹⁴ The agency also has focused on recent sales in areas which Congress considered for wilderness designation but dropped from the final version of the TTRA.²⁹⁵ Further, the Forest Service has released a post-TTRA supplement to its draft environmental impact statement for the revision of the Tongass Land Management Plan which relies on wilderness and other withdrawn lands to provide for wildlife viability.²⁹⁶ An interagency viable population committee evaluated this plan and determined that it provides a lower likelihood of providing viable and well-distributed populations than existing plans and those proposed prior to the enactment of the TTRA.²⁹⁷ Thus, while the TTRA's wilderness and LUD II designations have generally been effective in protecting designated areas, they may not contribute as significantly as might be expected to balanced management of the Tongass.

U.S.C.C.A.N. 6267, 6271.

294. See TLMP REVISION SDEIS, *supra* note 3, at 1-8, 3-466. There is some support for this decision in the legislative history, see 136 CONG. REC. S17,995, S17,996 (daily ed. Oct. 24, 1990) (statements of Sens. Johnston and Murkowski), but there is no statutory language preventing the Forest Service from considering further wilderness and roadless areas in the Tongass.

295. Interview with Buck Lindekugel, SEACC Staff Attorney, in Juneau, Alaska (Feb. 10, 1994) (namely, the East Kuiu, Broadfinger, and Castle River areas).

296. See TLMP REVISION SDEIS, *supra* note 3, at 3-515.

297. See VPC REPORT, *supra* note 5 at 31-34, 55 tbl. 7. The probability was rated as low under the existing TLMP, moderate under the 1990 draft EIS, and very low under the 1991 supplement to the draft EIS. *Id.* at 55 tbl. 7. NFMA regulations require the Forest Service to manage the National Forests to maintain viable and well-distributed populations of "existing native and desired non-native vertebrate species." 36 C.F.R. § 219.19 (1993).

VI. CONCLUSION

The TTRA represented a compromise measure which fell far short of the measures advocated by the House of Representatives.²⁹⁸ The Senate felt that it was possible to achieve more balanced management of the Tongass without taking actions which would have negative repercussions on the local economy in southeast Alaska.²⁹⁹ As a result, the House was unable to achieve its full goals of cancellation of the long-term timber contracts,³⁰⁰ designation of 1.8 million acres of wilderness,³⁰¹ maintenance of 100-foot buffers around all streams with direct influence on fish habitat,³⁰² and complete application of the requirements of section 6(k) of NFMA to the Tongass.³⁰³ Nevertheless, in an attempt to resolve the issue, the proponents of greater reform accepted the TTRA, stating that they would not revisit the issue "provided that the spirit and intent of this legislation is carried out."³⁰⁴ The proponents of more extensive Tongass reform also expressed the intention to closely monitor the implementation of the TTRA to make sure it achieved its goals.³⁰⁵ Three years later, it is clear

298. See *supra* notes 22 to 25 and accompanying text.

299. See, e.g., S. REP. NO. 261, *supra* note 3, at 9, reprinted in 1990 U.S.C.C.A.N. 6232, 6237.

300. See H.R. CONF. REP. NO. 931, *supra* note 25, at 18, reprinted in 1990 U.S.C.C.A.N. 6267, 6272; H.R. REP. NO. 84, pt. 1, *supra* note 10, at 2, 24-26. Instead of cancelling the contracts, Congress enacted unilateral modifications to them. See *supra* part IV.

301. See H.R. CONF. REP. NO. 931, *supra* note 25, at 16-17, reprinted in 1990 U.S.C.C.A.N. 6267, 6271; H.R. REP. NO. 84, pt. 1, *supra* note 10, at 26. Instead of designating 1.8 million acres of wilderness, Congress designated 296,080 acres as wilderness and allocated 722,482 acres to LUD II status. See *supra* part V.

302. See H.R. CONF. REP. NO. 931, *supra* note 25, at 14, reprinted in 1990 U.S.C.C.A.N. 6267, 6268. TTRA protects only anadromous fish streams and resident fish streams flowing directly into anadromous fish streams. *Id.*; see *supra* parts III.C, III.D.2.

303. See H.R. CONF. REP. NO. 931, *supra* note 25, at 14, reprinted in 1990 U.S.C.C.A.N. 6267, 6268; H.R. REP. NO. 84, pt. 1, *supra* note 10, at 22. TTRA subjects the Tongass to § 6(k) of NFMA but provides that the Forest Service need not consider economic factors in the identification of lands unsuitable for timber production. See *supra* part III.B.

304. See 136 CONG. REC. H12,836 (daily ed. Oct. 26, 1990) (statement of Rep. Miller).

305. See 136 CONG. REC. H12,837 (daily ed. Oct. 26, 1990) (statement of

that while the TTRA has resulted in some improvements in forest management, the spirit and intent of the TTRA has not been fully carried out, and the Act has fallen far short of its goals. It is time for Congress and the new administration to revisit the issue of Tongass management.

Unquestionably the TTRA has had important positive effects on the management of the Tongass National Forest. For example, the riparian buffers which resulted from section 101 of the TTRA, even given Forest Service implementation shortfalls,³⁰⁶ represent a significant improvement over past riparian management practices on the Tongass. Also, the contractual modifications of section 301 of the TTRA have greatly increased the Forest Service's control over harvesting activities on the Tongass.³⁰⁷ Further, the Act's designation of wilderness and LUD II lands permanently protects many unique and biologically important areas of the forest.³⁰⁸ If, however, the goal of the Act was truly to end timber dominance³⁰⁹ and create a balance between commodity and noncommodity resources on the Tongass,³¹⁰ the TTRA has not succeeded. The Forest Service continues to discount effects of timber harvest,³¹¹ and the volume requirements of long-term timber contracts continue to drive Forest Service management at the expense of other resources.³¹² The Forest Service has also clearly failed to meet a number of express requirements of the TTRA,³¹³ such as maintenance of riparian buffers of at least 100 feet³¹⁴ and modification of the long-term contracts to make the use of purchaser road credits consistent with their use in short-term sales.³¹⁵

Rep. Vento).

306. See *supra* part III.D.2.

307. See *supra* part IV.B.

308. See *supra* part V.

309. See, e.g., H.R. REP. NO. 84, pt. 1, *supra* note 10, at 4; 136 CONG. REC. H12,832, H12,833 (daily ed. Oct. 26, 1990) (statement of Rep. Miller); *id.* at H12,837 (statement of Rep. Vento).

310. See H.R. REP. NO. 84, pt. 1, *supra* note 10, at 49; S. REP. NO. 261, *supra* note 3, at 9, reprinted in 1990 U.S.C.C.A.N. 6232, 6237.

311. See, e.g., *supra* notes 114-23 and accompanying text.

312. See, e.g., *supra* note 124 and accompanying text.

313. See, e.g., *supra* notes 164-71 and accompanying text.

314. See *supra* notes 166-71 and accompanying text.

315. See *supra* notes 257, 261 and accompanying text.

The Forest Service's inadequate implementation of the TTRA may largely reflect both Congress's reluctance to micro-manage the Tongass³¹⁶ and its resulting failure to impose clear, explicit, and easily enforceable standards for the Forest Service to follow.³¹⁷ While the Forest Service appears to have virtually ignored the fundamental congressional concerns which resulted in the TTRA, including timber dominance and the lack of balance between commodity and noncommodity resources,³¹⁸ it has responded to some degree to all of the explicit statutory provisions of the TTRA. Implementation problems arise primarily from the fact the Forest Service has not been given any incentives for real reform,³¹⁹ and continues to be subject to a great deal of local pressure to supply sufficient timber to continue to support southeast Alaska's timber industry.³²⁰ As a result, the Forest Service has seized upon real and imaginary statutory ambiguities to justify business as usual on the Tongass.³²¹

316. Congress failed to confront the basic problem of incompatibility between a large subsidized timber industry and other uses of the Tongass National Forest. Instead, it passed the problem on to the Forest Service instructing the agency "to the extent consistent with providing for the multiple use and sustained yield of all renewable forest resources, seek to provide a supply of timber . . . which meets the market demand." Pub. L. No. 101-626, § 101, 104 Stat. 4426, 4426 (1990) (codified at 16 U.S.C. § 539d(a) (Supp. V 1993)).

317. While the Forest Service has failed to fully implement some of the explicit requirements of the TTRA, such as the Act's buffer and contract modification requirements, the agency's efforts have been much greater in these areas than where language has been less explicit. Principles of agency capture teach that after years of regulating and cooperating with the timber industry in Alaska, the Forest Service will attempt to protect the interests of the timber industry in any situation in which it perceives ambiguity as to the requirements imposed upon it. *See supra* note 67.

318. *See, e.g.*, H.R. REP. NO. 84, pt. 1, *supra* note 10, at 4; S. REP. NO. 261, *supra* note 3, at 9, *reprinted in* 1990 U.S.C.C.A.N. 6232, 6237; 136 CONG. REC. H12,832, H12,833 (daily ed. Oct. 26, 1990) (statement of Rep. Miller).

319. The Forest Service's budget has continued to revolve around timber production, *see* §64 MILLION QUESTION, *supra* note 33, at 22-25, and Congress has continued to supply funding for high levels of timber harvest. *See, e.g.*, H.R. CONF. REP. NO. 299, 103d Cong., 1st Sess. 42 (1993) (providing funding for harvest of 280 to 420 MMBF). *See also* DEFENDING THE PROMISE, *supra* note 30, at 8 (showing Tongass timber budget 1985-1992).

320. *See, e.g.*, TONGASS AT THE CROSSROADS, *supra* note 1, at 17, 18 (discussing pressure from Alaska Senator Ted Stevens, including requiring weekly reports on timber unit releases).

321. *See, e.g.*, *supra* part IV.B.2 (combining volume classes six and seven and applying proportionality requirement only to contract areas). The situation

Although Forest Service implementation of the TTRA may improve in the future as a result of ongoing investigations and court challenges,³²² as well as changes within the Forest Service administration,³²³ it appears likely that the TTRA's attempt to eliminate timber dominance in the management of the Tongass will fall short unless there is further congressional action. If Congress wants to see the TTRA achieve its purpose of ending timber dominance on the Tongass,³²⁴ then it must make good on statements in the Act's legislative history indicating that Congress would revisit the issue if the TTRA's goals were not achieved.³²⁵ Three years of implementation show that the TTRA's market demand provisions and language exempting the Forest Service from requiring consideration of economic factors in the identification of suitable lands are proving to be significant barriers to balanced management of the Tongass.³²⁶ Further, it is clear that despite

has been further complicated by the fact that Congress continues to send mixed messages to the Forest Service through the appropriations process, and to pass difficult decisions on to the agency. *See, e.g.*, H.R. CONF. REP. NO. 299, *supra* note 319, at 42 (providing funding for House harvest target of 280 MMBF and stating that contingency funds can be used to reach Senate harvest target of 420 MMBF); *id.* at 71-72 (prohibiting the Forest Service from implementing PACFISH in 1994 on the Tongass because of existing buffer requirements and good habitat conditions).

322. A federal whistleblower complaint filed by Bill Shoaf is currently under investigation, *see supra* note 147, a federal district court has found that the Forest Service has not adequately implemented the TTRA's restrictions on highgrading, *The Wildlife Society v. Barton*, No. J93-001 civ. slip op. (D. Alaska Apr. 11, 1994), and several post-TTRA timber sales which are undergoing administrative appeals alleging violations of the TTRA in addition to numerous NEPA violations and violations of ANILCA's subsistence provisions may well end up in the courts. *See, e.g.*, *Central Prince of Wales Timber Sale Appeal* (filed Sept. 22, 1993).

323. In late 1993, Jack Ward Thomas, a Forest Service research biologist, was appointed as the new chief of the Forest Service, *News Flash*, INNER VOICE, Nov./Dec. 1993, at 3, and in April of 1994, Regional Forester, Michael Barton, who has overseen the Tongass since 1984, announced his retirement. Annabel Lund, *Leaving the Desk Behind: Retiring Forester Michael Barton Will Return to the Woods*, JUNEAU EMPIRE, Apr. 29, 1994, at A1.

324. *See, e.g.*, H.R. REP. NO. 84, pt. 1, *supra* note 10, at 4; S. REP. NO. 261, *supra* note 3, at 9, *reprinted in* 1990 U.S.C.C.A.N. 6232, 6237; 136 CONG. REC. H12,832, H12,833 (daily ed. Oct. 26, 1990) (statement of Rep. Miller); *id.* at H12,837 (statement of Rep. Vento).

325. *See* 136 CONG. REC. H12,832, H12,836 (daily ed. Oct. 26, 1990) (statement of Rep. Miller); *id.* at H12,837 (statement of Rep. Vento).

326. *See supra* parts III.A, III.B, III.D.1.

the contractual modifications made by the TTRA, the long-term contracts are continuing to drive forest management.³²⁷

The goals of the TTRA can be achieved either through further legislation or through using the appropriations process to introduce measures requiring the Forest Service to take further action to comply with the letter and spirit of the TTRA.³²⁸ One of the first steps that needs to be taken is the elimination of the TTRA's market demand provisions.³²⁹ In addition, exemption of the Tongass from the consideration of economic factors in the identification of lands not suited for timber production should be eliminated.³³⁰ These two changes would send a strong message to the Forest Service that business as usual can not continue.

Cancellation of the remaining long-term timber contract would be the most efficient way to relieve the Forest Service of one of the strongest pressures it faces to maintain timber dominance. Such an action could potentially be determined to be a taking, for which the United States would be liable.³³¹ However, if cancellation is found to involve a taking, the extent of liability should be limited.³³² Nevertheless, cancellation of the long-term

327. See *supra* part IV.C.

328. Appropriations bills can be major sources of Forest Service policy and direction. See, e.g., H.R. CONF. REP. NO. 299, *supra* note 319, at 71-72 (setting harvest targets and prohibiting the Forest Service from implementing PACFISH in 1994 on the Tongass).

329. 16 U.S.C. § 539d(a) (Supp. V 1993). The Forest Service has been unable or unwilling to recognize the statutory condition precedent to meeting market demand. See *supra* part III.A.

330. 16 U.S.C. § 539d(d) (Supp. V 1993).

331. A contract constitutes property within the meaning of the Fifth Amendment. See, e.g., *Lynch v. United States*, 292 U.S. 571, 579 (1934). However, if it is determined that the contract holders are in material breach of their contracts, cancellation would not be a taking. See H.R. REP. NO. 84, pt. 1, *supra* note 10, at 25-26 (arguing that the contract holders had breached their contracts through antitrust violations and noncompliance with environmental laws); WALDO ET AL., *supra* note 132, 28-29 n.17 (pointing out that both the APC and KPC mills have long and continuing records of noncompliance with the Clean Water Act and the Clean Air Act).

332. "Sovereign act" immunity should apply to limit damages and prevent the United States from being liable for breach of contract. See, e.g., *Hedstrum Lumber Co., Inc. v. United States*, 7 Cl. Ct. 16 (1984) (holding that termination of timber sale contract in response to Boundary Waters Canoe Area Wilderness Act was a sovereign act, and that although just compensation, based on replacement cost of the timber, was required, the government was insulated from

contract could potentially have severe repercussions for several communities in southeast Alaska. Even if Congress decides not to cancel the long-term contract at this time, it should act to prohibit the Forest Service from reviving the APC long-term contract, which was terminated in April, 1994 due to a breach of contract by APC.³³³ Steps should also be taken to ensure that the problems created by the APC fifty-year contract are not revived under the guise of new ten-year contracts.³³⁴ Similarly, Congress and the new Forest Service Administration should act to ensure that the agency does not negotiate new and more favorable terms for the remaining long-term contract holder in response to changing market conditions.³³⁵ Long-term contracts have long been recognized as the major driving force behind Tongass mismanagement,³³⁶ and the existence of such contracts virtually assure that small scale and value added independent timber operations will be unable to succeed on the Tongass.³³⁷

common law damages for breach of contract); Memorandum from The Congressional Research Service of the Library of Congress to the House Committee on Interior and Insular Affairs, Subcommittee on General Oversight and Investigations (Sept. 17, 1987) (on file with author) (indicating that termination of the long-term timber sale would probably not expose the United States to common law damages because of sovereign act immunity, and that although the contract holders were currently receiving timber at a rate 90% lower than in independent timber sales, just compensation for the replacement value of the contract timber should be limited to approximately \$150 million).

333. See *supra* note 13.

334. Although the Forest Service has informed APC that it will have to participate in the independent sale process to gain future supplies of timber, the agency has indicated that it may offer high-volume sales with terms of up to 10 years. See Letter from Michael Barton, Regional Forester, U.S. Forest Service, U.S. Department of Agriculture, to George Woodbury, Vice President, APC (April 14, 1994) (on file with author). Because APC and KPC have virtually eliminated competition on the Tongass, large timber offerings would almost certainly fall into the hands of APC or KPC, quite possibly at stumpage rates not significantly higher than those that existed under the long-term contracts.

335. In September of 1993 APC shut down its pulp mill because of a weak pulp market. The Forest Service warned the company that the indefinite shut-down is a violation of its long-term contract. See *supra* note 57. However, APC may be attempting to negotiate the replacement of the pulp mill with a fiberboard plant. See KATZ, *supra* note 57, at 4; Margaret Bauman, *Alaska Pulp May Produce Fiberboard*, ALASKA J. OF COM., Nov. 29, 1993, at 1.

336. See, e.g., H.R. REP. NO. 84, pt. 1, *supra* note 10, at 7, 25 (1989) (recognizing that NFMA mandated changes in the long-term contracts in 1976, and contract volume requirements prevent the Forest Service from meeting modern conservation standards).

337. Long-term contract holders have a competitive advantage due to as-

Congress and the new Forest Service Administration might also want to consider further wilderness or LUD II designations on the Tongass. However, while these designations are useful for protecting individual areas of the forest, current Forest Service management practices may result in negative consequences for other forest areas.³³⁸ Therefore, land withdrawals should only be used to protect important resource areas, and should not be used as a substitute for further measures to end timber dominance on the Tongass.

When it enacted the TTRA in 1990, Congress sent a clear message to the Forest Service that it did not intend for timber to continue to be the driving force behind Tongass management and provided the agency with a statutory basis for reform. Unfortunately, three years of implementation of the TTRA shows that the Forest Service has failed to use the tools Congress gave it to change its management direction. The agency has carried out neither the letter nor the spirit and intent of the TTRA. As a result, it is time for the new Forest Service Administration to reconsider the course the agency has taken,³³⁹ and for Congress to revisit the issue of Tongass management and impose clearer standards for the Forest Service to follow.

sured supply, relatively stable prices, and favorable contract terms. Further, the majority of the available timber on the Tongass has been required to provide the long-term timber contract volume, making timber unavailable to many small mills and wood products makers. *See, e.g., Sitka Woes Could Help Small Mills: Pulp Mill Closure May Open Up Timber Supply*, JUNEAU EMPIRE, Apr. 26, 1994, at 1, 8.

338. *See supra* part V.

339. Even without termination of the KPC contract, the new administration has the opportunity to change the direction of forest management through fuller implementation of the contract modification requirements of the TTRA as well as through careful consideration of non-commodity resources in the long overdue Tongass Land Management Plan Revision.