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Allowable Sale Quantity (ASQ) of Timber as a Focal Point in National Forest Management

ABSTRACT

Various national forest stakeholders disagree as to the definition and interpretation of the term Allowable Sale Quantity (ASQ) in national forest planning and management. The ASQ has been widely interpreted as a 'target', 'goal', 'quota', or 'ceiling' by various groups and individuals, both inside and outside the United States Forest Service. This paper presents two differing perspectives on ASQ, as a 'ceiling' and as a 'duty'. In the absence of clear, decisive judicial interpretation, the task of reconciling the two viewpoints has fallen on the Forest Service, as the implementing agency, and on Congress through its Forest Service oversight and appropriation responsibilities. Congressional timber targets and forest plan ASQs are shown to be distinctly different concepts, but in practice the distinction is often unclear, even among Forest Service field employees. While the ASQ was intended to represent a harvest level based on the physical, biological, and environmental capacity of suitable timberland, forest planners' data and models are capable of providing only an imprecise estimate of ASQ. We suggest that the forest planning process should be flexible enough to expedite amendment of forest plans to adjust ASQ levels, with appropriate public input, to realistic and sustainable levels for land and resource management.

INTRODUCTION

The ASQ is a stormy figure. . . . [A] great debate is raging within the Forest Service about the place of the ASQ in forest planning . . . [T]his

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issue goes to the very heart of the debate over national forest conservation today.¹

The latest experiment in national forest management planning has gone on for 15 years. This attempt at centralized, rational, comprehensive planning has its supporters and its critics. Amendments made by the National Forest Management Act of 1976 (NFMA)² to the Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA)³ required the development of an elaborate planning process that generates some useful information and impressively large documents. However, the substantive content of the national forest management planning experiment now seems to have been reduced to a single number: the allowable sale quantity (ASQ) of timber that each national forest is able to provide over the 10 to 15 year planning period. The RPA/NFMA planning process is flawed because the ASQ is determined and interpreted inconsistently. We describe the problem and suggest that, given the experience implementing the first round of forest plans under the NFMA, the planning process can be improved by creating a means to expedite amendment of forest plan ASQs to sustainable levels.

Various stakeholders in national forest management disagree as to the definition and interpretation of the term *Allowable Sale Quantity* (ASQ), also known as the "annual allowable cut." ASQ has been widely interpreted as a 'target', 'goal', 'quota', or 'ceiling' by various groups and individuals, both inside and outside the United States Forest Service. Part of the confusion stems from the two contexts in which ASQ arises: 1) as a bottom-up, resource-based derivative of the national forest management planning process for the 120 individual forest planning units in the National Forest System; or 2) as a top-down target in the federal budget process that guides funding levels for management of the entire 191 million acre National Forest System.

This paper discusses the misunderstanding that surrounds the term ASQ and, more generally, the process of setting Forest Service timber 'targets', 'quotas', or 'goals'—interpretations with which the ASQ has been identified in the past. This topic will be approached by examining the role of the ASQ in the national forest management planning process and by delineating the relationship between Congressional timber 'targets' and the ASQ.

1. T. Ribe, *To ASQ or Not to ASQ: Timber Targets vs. Environmental Protection*, 2 Inner Voice 1 (1990). Ribe was editor of the Inner Voice, a publication of the Association of Forest Service Employees for Environmental Ethics (AFSEEE).

2. 16 U.S.C. §§ 1600-1614 (1988) [hereinafter NFMA].

3. 16 U.S.C. §§ 1600-1610 (1974), as amended by National Forest Management Act of 1976, 16 U.S.C. §§ 1600-1614 (1988) [hereinafter RPA].

THE ASQ AND NATIONAL FOREST MANAGEMENT PLANNING

Forest managers have become marionettes, dancing at the end of forest plan strings. They must implement the plans as written or stand in violation of the law.⁴

A Legal Perspective

The allowable sale quantity (ASQ) is formally defined in Forest Service regulations as:

The quantity of timber that may be sold from the area of suitable land covered by the forest plan for a time period specified by the plan [usually ten years]. This quantity is usually expressed on an annual basis as the 'average annual allowable sale quantity.'⁵

The ASQ for a national forest is established through an extensive and complex national forest planning process pursuant to the Forest and Rangeland Renewable Resource Planning Act of 1974 (RPA), as amended by the National Forest Management Act of 1976 (NFMA).⁶ Under the RPA, a comprehensive inventory of resource supply and demand, called an Assessment, is prepared by the Forest Service at ten year intervals.

The most recent Assessment indicated that 41 percent of the nation's softwood timber inventory is in the national forests. This inventory provides approximately 18 percent of the nation's softwood timber harvests. Coincidentally, the national forests represent eighteen percent of the nation's forested area.⁷

Under the RPA, a Program is prepared at five year intervals in response to the needs identified in the Assessment. The Program establishes budget targets and output goals for each resource program and is accompanied by a presidential Statement of Policy. Congress can accept, reject, or modify the Program and Statement of Policy. Annual budget proposals to Congress must indicate where funding levels differ from budget goals in the Program and justify the differences. In addition, the Forest Service must prepare an annual report to Congress describing program accomplishments and the extent to which RPA Program goals have been achieved.

The NFMA controls land-use planning at the individual national forest level and requires the preparation of a forest plan for each na-

4. R. Behan, *The RPA/NFMA: A Solution to a Nonexistent Problem*, 15 *Western Wildlands* 32 (1990).

5. 36 C.F.R. § 219.3 (1992).

6. 16 U.S.C. §§ 1600-1614 (1988), amending 16 U.S.C. §§ 1600-1610 (1974).

7. R. Haynes, *An Analysis of the Timber Situation in the United States: 1989-2040* (USDA, Forest Service General Technical Rep. RM-199, 1990).

tional forest.⁸ The forest plan is to be developed using an interdisciplinary team with public involvement through the National Environmental Policy Act (NEPA) process.⁹ The forest plan then prescribes allowable land uses for the next 10 to 15 years until it is revised or amended.¹⁰ The forest plan results in an allocation of lands to different management areas. Each management area emphasizes particular resource values and uses. A national forest plan may thus be likened to a comprehensive zoning plan with regulations that guide future allowable uses.

In addition to guiding the interdisciplinary development of a forest plan under public scrutiny, the NFMA and its related regulations call for the forest planning process to identify lands 'suitable' for timber harvesting.¹¹ The forest plan also establishes the timber resource sale schedule based on available timber from the pool of suitable lands.¹² The timber sale schedule shows the "quantity of timber planned for sale by time period from an area of suitable land covered by a forest plan."¹³

In general, Forest Service timber management planning consists of three elements: (1) the determination of land that is suitable for timber management; (2) the calculation of the amount of timber that can be considered for harvest; and (3) the determination of the appropriate harvest and regeneration methods.¹⁴ The ASQ is calculated from the amount of suitable land for timber management within a planning area.

The suitability of land for timber management is to be determined considering both physical and economic criteria. Specifically, the NFMA requires a forest planning process to identify lands that "are not suited for timber production, considering physical, economic, and other pertinent factors"¹⁵ Suitability requirements are expressed as constraints on timber management. For example, timber harvesting is only to occur on lands where: (1) "soil, slope, or other watershed conditions will not be irreversibly damaged",¹⁶ (2) the "lands can be adequately restocked within five years after harvest",¹⁷ (3) water quality and fish habitat are protected,¹⁸ and (4) the harvesting system is

8. 16 U.S.C. § 1604(a) (1988).

9. *Id.* § 1604(b)-(g).

10. 36 C.F.R. § 219.10 (f)-(g) (1992).

11. 16 U.S.C. § 1604 (g)(3)(E) (1988); 36 C.F.R. § 219.14 (1992).

12. *See* 16 U.S.C. § 1604(e)(2) (1988); 36 C.F.R. § 219.16 (1992).

13. 36 C.F.R. § 219.3 (1992).

14. C. Wilkinson & H.M. Anderson, *Land and Resource Planning in the National Forests* 120 (1987).

15. 16 U.S.C. § 1604(k) (1988).

16. 42 U.S.C. § 1604 (g)(3)(E)(i) (1988).

17. 42 U.S.C. § 1604 (g)(3)(E)(ii) (1988).

18. 16 U.S.C. § 1604 (g)(3)(E)(iii) (1988).

not selected primarily on economic grounds.¹⁹ Also excluded from the suitable or allowable cut base are lands not 'available' due to wilderness or wilderness-study designation.²⁰ Economic factors (i.e., economic feasibility) are to be considered as part of the timber suitability requirement, but the NFMA and its associated regulations do not establish strict economic guidelines.²¹ The Forest Service is constrained by a "rule of reason" when considering uneconomical timber sales, but it retains administrative flexibility in weighing the costs and benefits of proposed timber sales on economically marginal forest lands.²²

The primary factors used to calculate the ASQ for a particular forest are the volume of timber and the rotation period of timber from the suitable lands. The Forest Service has used several formulas in the past to calculate the ASQ.²³ In general, the ASQ is determined by dividing the standing volume of timber on suitable lands by the rotation period.²⁴ For example, a forest with a volume of 100 million board feet (mmbf) with a rotation period of fifty years would have an ASQ of two million board feet. Thus, the ASQ will increase with either an increase in timber volume, or a decrease in the rotation period.

The rotation period is determined by the culmination of mean annual increment of growth (CMAI). The CMAI is defined as the age in years at which the annual rate of tree growth peaks and after which the rate of the growth levels off or declines. The NFMA requires that stands must "generally" have reached the CMAI before they are harvested.²⁵ The Forest Service interprets "generally" to mean within roughly 95 percent of the CMAI.²⁶

ASQs are guided by two other NFMA requirements: (1) non-declining even flow (NDEF), and (2) earned harvest effect (EHE) or al-

19. 16 U.S.C. § 1604(g)(3)(E)(iv) (1988).

20. Wilkinson & Anderson, *supra* note 14, at 121.

21. *Id.* at 169.

22. *Id.* at 170.

23. See generally Wilkinson & Anderson, *supra* note 15, at 123-24. During the early 1900s, the Forest Service used the Von Mantel formula which originated in Europe ($Y = 2 G/R$; where Y = growth or harvestable yield in existing forest (ASQ); G = growing stock in existing forest; and R = rotation age). See, e.g., L. Davis & K. N. Johnson, *Forest Management* (1987). But in recognition of differences between the forests in Europe (young managed stands, fast growth rates) and western North America (slow growth rates, old-growth stands), the Forest Service adopted other formulas that provided for orderly harvest of old-growth on an even-flow, sustained-yield basis. Continued reliance on the Von Mantel formula would have caused harvest levels to far exceed growth rates in the United States. The Forest Service now uses a formula similar to the Von Mantel formula ($LTSY = V/R$; where $LTSY$ = long-term sustained yield; V = volume of intermediate and final harvests of future managed stands; and R = rotation age).

24. A rotation period is the planned number of years between the formation of a forest crop and its final cutting at a specified stage of maturity.

25. 16 U.S.C. § 1604(m)(1) (1988).

26. Forest Service Manual § 2413.21 (1984).

lowable cut effect (ACE). Theoretically, non-declining even flow policy provides for a continuous flow of timber in perpetuity—that is, no more timber may be sold now than can be sold at any time in the future. Non-declining even-flow policy differs from even-flow policy in that it considers the potential change in harvest levels resulting from the conversion of unmanaged or old-growth forests to managed or second-growth forests. The NFMA requires NDEF as a general rule unless departures are needed to meet “overall multiple-use objectives”.²⁷ The EHE or ACE²⁸ refers to an increase in the ASQ owing to projected increases in future volumes of timber resulting from intensive management techniques. Depending on forest conditions, future growth rates of trees can be increased substantially above natural rates through practices as restocking, thinning, and brush control. While NDEF policy represents a conservative influence on anticipated harvest levels, the EHE is a more speculative component of projected timber harvest levels because drought, insect infestation, and other natural occurrences can reduce tree growth rates. In addition, the EHE is premised on the willingness of Congress to appropriate sufficient funds for long-term intensive management.

The NFMA conditionally allows for the earned harvest effect if (1) intensive management practices, such as thinning or reforestation with improved genetic stock, justify increased harvest levels in accordance with the Multiple-Use Sustained-Yield Act of 1960; and (2) these harvest levels are decreased at the end of each planning period if intensive management practices cannot be successfully implemented or insufficient funds are received to continue planned management practices.²⁹

ASQ Interpreted as a “Ceiling”

Given that the Forest Service must manage for multiple and often conflicting resource uses, the agency generally interprets the ASQ as a “ceiling” on harvest levels from national forests. This interpretation is consistent with the wording “may be sold” and “allowable” (as opposed to “required”) in the legal definition of ASQ in Forest Service regulations.³⁰ Legal scholars Charles F. Wilkinson and H. Michael Anderson describe the ASQ as a ceiling for timber harvest levels.

The Forest Service has always placed a *ceiling* on each national forest’s annual timber sales from the suitable land base in order to in-

27. 16 U.S.C. § 1611 (a) (1988).

28. The terms *earned harvest effect* (EHE) and *allowable cut effect* (ACE) are synonyms and may be used interchangeably. See generally D. Schweitzer et al., *Allowable Cut Effect*, 70 J. Forestry 415 (1972).

29. 16 U.S.C. § 1604 (g)(3)(D) (1988).

30. See 36 C.F.R. § 219.3 (1992).

sure a perpetual sustained yield of timber. This ceiling is called the harvest level, the annual allowable cut, or the allowable sale quantity (ASQ).³¹

The courts have yet to specifically interpret the definition of ASQ. A Wyoming District Court held that pre-NFMA timber management plans do not establish specific timber-sale levels.³² In that case, the court opined that the target set forth in the pre-NFMA timber management plan for the Bridger-Teton National Forest represented the *maximum* amount of timber which may be cut³³ and that the pre-NFMA timber management plan "is a policy statement which lacks the force of law."³⁴ Furthermore, the court stated that "Congress delegated to the Forest Service discretion to balance the use of [all forest] resources"³⁵ and that "[o]rdering the Forest Service to make timber available for harvest without considering all relevant factors would frustrate the intent of Congress."³⁶ Without explicitly using the term "ceiling," the court's opinion that the pre-NFMA timber management plans were a maximum level and that the agency should retain discretion over the exact amount of timber that would actually be harvested indicates a legal interpretation that the pre-NFMA plan established a ceiling, not a specific required sale-level.

More recently, a Georgia District Court ruled that implementation of a policy to protect the endangered red-cockaded woodpecker by modifying harvest methods within three-quarters of a mile of red-cockaded woodpecker colonies did not constitute a significant change in the forest plans.³⁷ In so ruling, the court specifically stated that the lowering of timber outputs by implementing red-cockaded woodpecker protection actions does not require a plan amendment because the allowable sale quantity (ASQ) is merely a ceiling:

It is clear . . . that no entitlement to timber exists. *See*, 36 C.F.R. §§ 219.3, 219.16. Plain logic also makes clear that implementation which lowers outputs is not a significant amendment, or indeed any amendment, to the Allowable Sale Quantity set forth in the [Land Resource Management Planning Handbook], which is merely a ceiling.³⁸

31. Wilkinson & Anderson, *supra* note 14, at 122 (emphasis added).

32. Intermountain Forest Indus. Ass'n v. Lyng, 683 F. Supp. 1330, 1340-42 (D. Wyo. 1988).

33. *Id.* at 1340.

34. *Id.*

35. *Id.* at 1344 (16 U.S.C. § 1600(1), (2), (6) (1988)).

36. Lyng, 683 F.Supp. at 1344.

37. Southern Timber Purchasers Council v. Alcock, 779 F. Supp. 1353 (N.D. Ga. 1991).

38. *Id.* at 1361 n.7 (citing 36 C.F.R. § 219.3, 219.16).

ASQ Interpreted as a "Duty"

An alternative interpretation of ASQ as a "duty" rather than a "ceiling" is offered by Thomas R. Lundquist, an attorney representing the interests of the forest products industry.³⁹ He argues that the Forest Service has a "duty" to offer for sale the ASQ and based the argument on sections of the NFMA and its associated regulations that (1) establish a direct relationship between the timber sale schedule quantity and the ASQ; and (2) require that all Forest Service actions be "consistent" with the forest plan.

According to Lundquist, the "NFMA seemingly requires that the forest plan set the timber harvesting level, which must be provided during plan implementation."⁴⁰ The Secretary of Agriculture "shall assure that such [forest] plans . . . determine . . . harvesting levels . . ."⁴¹ The forest plans should reflect proposed and possible actions including "the planned timber sale program . . . necessary to fulfill the plan."⁴²

The Forest Service uses two terms to describe a forest plan's timber output objective: the allowable sale quantity (ASQ), and the sale schedule quantity. The sale schedule is defined as "[t]he quantity of timber planned for sale by time period from an area of suitable land covered by a forest plan."⁴³ The sale schedule provides the allowable sale quantity for the first planning period.⁴⁴ According to Lundquist, in setting these quantities, the Forest Service considers several factors: the forest timber production goals set forth in the regional guide that translates RPA program objectives into timber "resource objectives for each Forest,"⁴⁵ the general principle of non-declining even-flow,⁴⁶ the limitation on harvesting even-aged stands until optimal tree growth has occurred,⁴⁷ and economic factors.⁴⁸

Lundquist's interpretation is based on the view that RPA Program objectives significantly influence, if not dictate, the timber production 'goal' selected in a forest plan. From this perspective, the ASQ may be influenced by factors other than land suitability, timber growth, rotation period, non-declining even flow, culmination of mean annual increment, and earned harvest effect. For example, Lundquist stated

39. T. Lundquist, *Providing the Timber Supply from National Forest Lands*, 5:3 Nat. Resources & Env't 6 (1991).

40. *Id.* at 55.

41. 16 U.S.C. § 1604(e)(2) (1988).

42. 16 U.S.C. § 1604(f)(2) (1988).

43. 36 C.F.R. § 219.3 (1992).

44. 36 C.F.R. §§ 219.3, 219.16, 219.16(b), 219.27(c)(2) (1992).

45. 36 C.F.R. § 219.4(b)(2) (1992).

46. 16 U.S.C. § 1611(a) (1988); 36 C.F.R. § 219.16(a)(1) (1992).

47. 16 U.S.C. § 1604(m)(1) (1988).

48. Lundquist, *supra* note 39, at 8-9.

that "[e]conomic factors comprise the final considerations in setting the ASQ and timber sale schedule quantity. These factors include expected demand for timber in the area, projected timber prices, timber sale-related costs, and community stability."⁴⁹

Lundquist argued that although the ASQ is defined as "the maximum or permissible timber supply level, the timber sale schedule is not."⁵⁰ He cited four NFMA regulations that state that the sale schedule quantity in the forest plan "provides the allowable sale quantity."⁵¹ He argued that these latter regulations "commit the Forest Service to provide the maximum permissible ASQ as the sale schedule quantity during plan implementation" and that the "Forest Service's view that the forest plan does not set any enforceable timber sale level contravenes the plain NFMA language."⁵² He also cited an internal United States Department of Agriculture memorandum that recognized the "obligation of the Forest Service to produce the overall output levels...provided for in its plans" and that forest plans should be "a covenant with the public to produce a set of goals and outputs from the national forests."⁵³

Lundquist argued that the Forest Service has a *duty* (i.e., legal obligation) to offer the timber sale schedule quantity prescribed in the forest plan. In Lundquist's view that quantity must reflect the maximum permissible ASQ. But beyond the legal question of whether the ASQ constitutes a legal obligation, Lundquist argued that national forest planning is meaningless if it does not determine the timber supply. Timber-dependent communities need to know how much timber to expect from national forest lands, which Lundquist calls timber supply:⁵⁴

The Forest Service's detailed timber planning is meaningful only if it determines the timber supply. The Forest Service's view that the forest plan does not determine timber output levels makes its detailed timber planning a waste of money. Additionally, since forest product companies and timber-dependent communities make investments based on the projected timber supply in a forest plan, the Forest Service should honor the plan's commitments.⁵⁵

49. *Id.* at 9.

50. *Id.* at 54-55.

51. *Id.* (quoting 36 C.F.R. §§ 219.3, 219.16, 219.16(b), 219.27(c)(2)).

52. *Id.*

53. *Id.* (citing Memorandum from Assistant Secretary of Agriculture Dunlop on appeal of the 1987 Klamath Timber Sale Schedule at 4 (Oct. 26, 1988)).

54. A precise economic definition of timber supply requires the definition of a price/quantity relationship; i.e., at what prices would various quantities of timber be made available?

55. Lundquist, *supra* note 39, at 55.

Lundquist cited the NFMA provision for forest plan amendment or revision⁵⁶ as a way for the Forest Service to avoid locking into a timber offering level for the life of a forest plan. But even if a forest plan is to be amended or revised based on changed conditions, "NFMA seems to require that timber sale offerings remain 'consistent' with the timber sale schedule quantity stated in the forest plan."⁵⁷

Which View is Correct?

Which of the two different legal interpretations of the ASQ is correct? Is ASQ a ceiling (Wilkinson and Anderson interpretation) or is it a duty or legal obligation (Lundquist interpretation)? The former opinion—ASQ as a ceiling—is consistent with the recent *Southern Timber Purchasers Council v. Alcock* court opinion stating that the "Allowable Sale Quantity set forth in the LRMP . . . is merely a ceiling."⁵⁸ It should be noted, however, that the ASQ interpretation in this court opinion was not directly related to the basic legal questions involved in the case.

In the absence of clear, decisive judicial interpretation, the task of reconciling the two viewpoints has fallen on the Forest Service, as the implementing agency, and on Congress through its Forest Service oversight and appropriation responsibilities. These interpretations have been inconsistent, thus reflecting rather than resolving the conflicting desires of various interest groups for resource outputs from the national forests.

TIMBER TARGETS AND THE ASQ

Some of the confusion over the meaning of the ASQ can be attributed to the ambiguous relationship between national planning (the RPA Program) and local planning (the development of forest plans required by the NFMA). The basic issue is whether local forest plans, which establish the ASQ, need to meet the resource output goals of the RPA program.⁵⁹ Wilkinson and Anderson describe three general theories used to interpret Congressional intent.⁶⁰ First, the 'top-down' theory holds that Congress did not intend for local forest plans to interfere with the achievement of national needs. Second, the 'bottom-up' theory holds that NFMA codified the Forest Service's long tradition of de-

56. 16 U.S.C. § 1604(f)(4)-(5) (1988).

57. Lundquist, *supra* note 39, at 55.

58. *Alcock*, 779 F.Supp. at 1361 n.7.

59. Wilkinson & Anderson, *supra* note 14, at 77.

60. *Id.*

centralized local control over land use decisions. The third theory contends that RPA/NFMA calls for an 'iterative' exchange of information between locally developed forest plans and nationally developed resource management goals.⁶¹

RPA Program Goals and NFMA Plans

The Forest Service's current position on this issue most closely resembles the 'iterative' approach—a fluid, flexible process that incorporates both the top-down and bottom-up approaches.⁶² The national RPA Program objectives are divided up among the nine Forest Service regions. Each region then divides its share of the RPA Program objectives among the various national forests based on their resource capabilities. Each national forest plan must include "at least one *alternative* which responds to and incorporates the tentative RPA Program resource objectives"⁶³ The Forest Service, however, does not consider RPA Program objectives to be binding on the local forest plans.⁶⁴ The chosen alternative need not be the one responding to RPA Program objectives. Wilkinson and Anderson conclude that RPA/NFMA does not require the Forest Service to follow a top-down system of planning. They state that ". . . with respect to the timber resource the legislative history of NFMA indicates that Congress intended harvest levels to be determined by local plans—from the bottom-up rather than from the top-down."⁶⁵

The RPA Program was intended to enhance the Forest Service's ability to achieve long-term Congressional appropriations, but it has not succeeded.⁶⁶ Sample, a forest policy analyst, explained the ineffectiveness of the RPA Program and the federal budget process on national forest planning:

By 1984, the Forest Service tacitly recognized the inefficacy of RPA as a budget tool. With the advent of the first RPA Program in the late 1970s, the Forest Service had directed its field staff to base its budget proposals on the RPA budget targets rather than on an incremental change for the previous years' budget. With the failure of the RPA budget targets to redirect Congressional appropriations to the Forest

61. *Id.* at 78.

62. *Id.*

63. 36 C.F.R. § 219.4(b)(3) (1992) (emphasis added).

64. Wilkinson & Anderson, *supra* note 14, at 80.

65. *Id.* at 90.

66. See generally V. Sample, The Impact of the Federal Budget Process on National Forest Planning (1990); R. Behan, *The RPA/NFMA - Time to Punt*, 79 J. Forestry 806 (1981); J. Ramig, *The Failure of the Federal Forest Planning Process*, 3:4 Nat. Resources & Env't 31 (1989); R. Wolf, *Promises to Keep*, 7 Env'tl. Forum 10 (1990).

Service, this approach was finally abandoned. In essence, the Forest Service had returned to the classic incremental approach to budgeting, abandoning RPA as a means for effectively guiding the budget process toward the achievement of long-term resource management goals.⁶⁷

Sample also noted that the RPA's failure as a tool for shifting funding and program emphasis for on-the-ground management is further indicated by shifts in funding and program emphases (where they did occur) in the opposite direction called for in RPA Programs.⁶⁸ Behan described the RPA process as 'brain-dead' and therefore "virtually irrelevant" to forest planning.⁶⁹

Congressional Timber Targets and RPA

The greatest source of confusion and controversy regarding the ASQ may be timber targets set during the federal budget process. To some individuals, Congressional timber targets have become indistinguishable from forest plan ASQs for the simple reason that, without funding, the Forest Service could not conduct a timber program. Therefore, the argument concludes, Congress sets forest ASQs via the federal budget process. This line of reasoning ignores the fundamental legal and conceptual differences between Congressional timber targets and forest plan ASQs.

If the RPA Program has failed to significantly influence program budget and direction, the same cannot be said of the annual Congressional appropriations process. With the budgeting failure of RPA, the appropriations process has become a forum to make substantive forest policy annually. The determination of timber 'targets' has become an integral part of the appropriations process, with sometimes surprising results. For example, Sample's study tracked the Forest Service's requested annual timber management program budget through the federal budget process. His results showed that in nearly every year examined (1977-1989), the timber sale target assigned by Congress to the Forest Service in the appropriations bill was significantly higher than the agency itself had proposed.⁷⁰ (See Table 1).

67. Sample, *supra* note 66, at 219. See also Behan, *supra* note 66, at 802.

68. Sample, *supra* note 66, at 225.

69. Behan, *supra* note , at 32.

70. Sample, *supra* note 66, at 149.

Table 1. Timber harvest levels (billion board ft.) in the proposed budget for the Forest Service, compared with that assigned in the final Appropriations Bill, FY 1977-1989.

Fiscal Year	USFS	USDA	OMB	CONGRESS
1977	*	*	10.4	10.7
1978	9.7	9.7	10.2	12.0
1979	*	11.5	11.5	12.4
1980	10.5	*	11.7	12.2
1981	11.7	11.9	11.9	12.1
1982	*	*	11.9	11.1
1983	8.5	12.3	12.3	11.3
1984	13.1	13.1	11.6	11.7
1985	12.3	12.3	11.2	11.2
1986	11.2	12.2	10.7	11.4
1987	10.9	10.0	10.0	11.2
1988	11.1	11.1	11.1	11.4
1989	11.2	11.2	11.2	11.5

* indicates data not available.

Source: V. Sample, *The Impact of Federal Budget Process on National Forest Planning* 150 (1990).

Forest Service line officers occasionally indicate their carelessness (or perhaps ignorance) in the terms they use when discussing ASQs, reflecting some confusion and perhaps a lack of clear direction within the agency. Apparently, even line officers do not understand that forest plan ASQs and Congressional timber targets are separate and distinct concepts and figures. For example, Forest Service district rangers responded to several open-ended questions in a 1990 survey of agency employees⁷¹ with comments like these:

Congress needs to be supportive of lowering the ASQ. As long as the timber industry has its hands in Congress's back pocket, this type of change will not occur.

My lack of extreme optimism is due to my insecurity with Congress and the ASQ, primarily. I am not confident that they will reduce it (ASQ) due to economic reasons.

ASQ levels are set by budgeting processes intrinsically tied to commodity output levels (i.e. millions of board feet).

71. For an overview of the study and some of its major findings, see G. Brown & C. Harris, *The Forest Service: Toward the New Resource Management Paradigm?*, *Society & Natural Resources* 5 (1992); G. Brown & C. Harris, *The U.S. Forest Service: Changing of the Guard*, 32 *Nat. Res. J.* 449 (1992); G. Brown & C. Harris, *The Implications of Work Force Diversification in the U.S. Forest Service*, 25 *Admin. & Soc'y* 85 (1993).

Although timber 'targets' have become important in the federal budget process, they are different from the ASQ. Historically, Congress has established funding levels for various Forest Service programs. When requesting funding, the Forest Service estimates how much timber can be harvested at various funding levels. Timber 'targets'—volume representations of the amount of timber the agency *will* harvest in each of its regions—are relatively new in the Forest Service budget process. Congress first specified how much timber each region was required to offer for sale each year in 1984.⁷²

The setting of these timber targets has become an important, if not the driving, force behind the Forest Service's budget process. Sample's review of House Interior Appropriations Subcommittee meetings revealed that at least as much attention, if not more, was paid to the setting of timber sale levels as to actual funding for the timber program.⁷³ Similarly, the Senate has devoted considerable attention to timber harvest levels in recent years in its Interior Appropriations Subcommittee.⁷⁴

Congress does recognize, however, the distinction between the funded timber sales program with its volume targets and the ASQs in forest plans. The 1992 fiscal year Senate Interior Appropriations Subcommittee report stated that "the timber sales program *recommended* this year is . . . nearly 10 percent below the allowable sale quantity recommended in the plans nationally."⁷⁵

The Chief of the Forest Service, Dale Robertson also recognizes this distinction. In a letter to Senator Dale Bumpers (D, AR) dated February 5, 1992, he wrote:

The allowable sale quantity is a 10-year sales level expressed in terms of an average annual amount. This volume level is derived under the circumstances that existed when the Forest Plan was finalized. This is the upper level of timber vol-

72. R. O'Toole, 1991 *Forest Service Budget: More Incentives to Overcut the National Forests*, 11 *Forest Watch* 1 (1990).

73. Sample, *supra* note 66, at 147. Sample noted that at times, program funding and timber sale levels have gone in opposite directions. In 1986, the House Interior Appropriations Subcommittee cut back funding by nearly \$60 million while increasing expected timber sale volume from 10.7 billion board feet in the President's Budget to 11.3 billion board feet. Congressional concern with below-cost timber sales resulted in the decreased timber budget, and yet the administration still wanted the Forest Service to increase the amount of timber harvested. Such congressional actions might be an attempt to create greater Forest Service efficiency in the timber program via the budget process.

74. For example, in the appropriation process for fiscal year 1992, the Senate Interior Appropriations Subcommittee continued its practice of including timber sale volumes by Region for the Forest Service. In contrast, the House Interior Appropriations Subcommittee did not include timber sale volumes by Region.

75. S. Rep. No. 122, 102d Cong., 1st Sess. 88 (1991) (emphasis added).

ume available for sale in the first 10 years of the Forest Plan, providing all of the assumptions in the Plan hold true. The annual timber sale offer target may be higher, lower, or equal to the ASQ in any given year and reflects current biological, economic, and social considerations. Therefore, the annual target is often different from the Forest Plan ASQ on a specified National Forest.⁷⁶

NFMA Standards and Guidelines vs. RPA Program Outputs

The timber targets handed down by Congress are technically different than forest plan ASQs. These targets are a source of controversy and reflect an ongoing and persistent tension between 'top-down' and 'bottom-up' forest planning. For example, if Congressional timber targets conflict with actions specified in the forest plans to ensure environmental protection, which should take precedence? A related question is whether the Forest Service should be obligated to harvest its forest plan ASQs if these harvest levels are found to conflict with forest plan standards and guidelines.⁷⁷

The agency perspective seems to be that actions protecting resources outlined in the NFMA standards and guidelines should prevail. Nationwide survey research by Brown and Harris⁷⁸ showed that the majority of Forest Service employees do not believe the agency should ensure that national forest ASQs are harvested. Employees responded to the statement, "The agency should ensure that national forests' ASQs are harvested." Seventy-one percent of 'Line' officers and 63 percent of 'Staff' employees disagreed with this statement. One interpretation of these results suggests that the ASQs established in the forest plans are not viewed by the majority of Forest Service line and staff as hard 'targets', but rather as 'ceilings' for which some agency discretion should be reserved. Another interpretation is that ASQs are estimates based on imperfect data and models of the sustainable quantity of timber that may be sold from a given land area without adversely affecting other resources.

76. Letter from D. Robertson, Chief of the Forest Service, to Sen. D. Bumpers (Feb. 5, 1992).

77. Standards and guidelines can be seen as requirements which preclude or impose limitations on resource management activities generally for the purposes of environmental protection. See 36 C.F.R. § 219.3 (1992). The two terms are often used together and are interchangeable. An example of a recreation standard from the Nez Perce National Forest Plan is to "maintain seasonal access to wilderness portals at Sourdough Peak, Wildhorse Lake, and Moore's Cabin." An example of a timber standard from the same plan is that "clearcutting will not occur adjacent to previously harvested areas that are still considered openings."

78. See generally works cited *supra* note 71.

In 1990, Chief Robertson, attempted to clarify the relationship between program outputs and forest plan standards and guidelines when he said:

There should be no doubt in anyone's mind about which takes precedence if there is a conflict between standards and guidelines and program outputs; we expect every project to be in full compliance with standards and guidelines set forth in Forest plans.⁷⁹

In this statement, Chief Robertson apparently was establishing forest plan standards and guidelines as having precedence over program outputs in situations of conflict. A follow-up letter to a representative of the forest industry confused the issue when Associate Chief Leonard said, "the Forest Service is committed to full implementation of our forest plans. This commitment . . . includes a commitment to offering the full allowable sale quantity (ASQ) during the plan period."⁸⁰ Leonard's statement seems to substantively redefine ASQ as a 'target' rather than just a 'ceiling', and seems to directly contradict what Chief Robertson said only two months previously.

The ambiguous relationship between standards and guidelines, goals and outputs (i.e., timber targets), and the ASQ is also reflected in Congressional actions. The Congressional appropriations process for the fiscal year 1992 Forest Service budget provides a case in point. The Senate Interior Appropriations Subcommittee stated that they expect

the Forest Service to view meeting goals and outputs as *being as important as meeting the various standards and guidelines*. If goals and outputs are found to conflict with standards and guidelines the agency should invoke the forest planning process to remedy the conflict, considering an evaluation of both the assumptions behind the development of the standards and/or guidelines and the outputs in conflict.⁸¹

However, the House Interior Appropriations Subcommittee took a position in apparent conflict with that of the Senate, and stated that

the Committee endorses the approach to forest plan implementation articulated in the Chief's [February 23, 1990] memorandum In this memorandum, the Chief stated that where a conflict exists between meeting forest plan outputs for commodities such as timber and following forest

79. Letter from D. Robertson, Chief of the Forest Service, to Regional Foresters (Feb. 23, 1990), *reprinted in* 2 *Inner Voice* 15 (1990).

80. Letter from G. Leonard, Assoc. Chief of the Forest Service, to J. Riley, Executive Vice President of Intermountain Forest Industry Association (April 1990), *reprinted in* 2 *Inner Voice* 15 (1990).

81. S. Rep. No. 102, 102d Cong., 1st Sess. 87 (1991) (emphasis added).

plan standards and guidelines designated to protect the environment, the standards and guidelines must take precedence. This position is consistent with the intent of the National Forest Management Act, which requires all national forest management activities to be consistent with forest plan goals. Given this position, the Committee notes that *any targets established as a result of the timber sales program funded by the Committee are only targets, and actual timber outputs may be lower when standards and guidelines are applied to timber sales on the ground.*⁸²

House and Senate conferees adopted language consistent with the House report and supportive of the Chief's position. The conference report reiterated the Chief's statement that all projects should be implemented in a manner consistent with forest plan standards and guidelines.⁸³ Conspicuously absent from the conference report language was any mention of timber 'targets' or 'goals'.

The decision not to specify timber targets in the conference report was probably influenced by a letter to Rep. Sidney Yates (D-IL), Chairman of the House Appropriations Subcommittee on Interior and Related Agencies, drafted by Rep. Bruce Vento (D-MN), and signed by 85 other members of the House. The letter stated:

We are deeply concerned about the provision of the bill which regards timber sale levels on National Forests. We believe that the language of the Interior Appropriations bill as passed by the House on June 25 without specified timber sale numbers provides the balanced approach, and that this House language should be maintained during the conference committee action. The damaging Senate provision requires the Forest Service to offer for sale specified volumes of timber on National Forests in every region of the country. In the Pacific Northwest, for example, this mandated level is significantly in excess of what even the Forest Service has recommended to provide protection for the spotted owl and other environmental considerations. This mandate is contrary to the concept of balanced forest management which is sensitive to local economic and environmental concerns and analysis . . . We, therefore, urge the conference committee to retain the relevant forestry section of the House version of the Interior Appropriations Bill during its upcoming deliberations on this measure.⁸⁴

82. H. Rep. No. 116, 102d Cong., 1st Sess. 85-86 (1991) (emphasis added).

83. H.R. Conf. Rep. No. 256, 102d Cong., 1st Sess. 62 (1991).

84. Letter from U.S. Rep. B. Vento (D-MN), Chairman, Subcomm. on National Parks and Public Lands, signed by 85 other members of the House, to U.S. Rep. S. Yates (D-IL), Chairman, Subcomm. on Interior Committee on Appropriations (Oct. 1, 1991).

These concerns reflect a desire not to allow resources to be managed from Capitol Hill. The conference committee chose the House language. The bill managers structured a timber sale program that "allows flexibility in conducting the program."⁸⁵ Contrary to previous years' reports, specific sale volumes were not specified for each region. Instead, a range of volumes was specified for each region with funding allocated based on the high range of the harvest levels. Most significant was the bill managers' recognition that conditions on the ground should determine timber harvest levels. The bill managers acknowledged that basing the program capability on forest conditions and multiple-use conflicts might result in outputs different from those included in the report.

By not setting specific timber targets, the 1992 Interior and Related Agencies Appropriations Act appears to be an attempt to restore some degree of Forest Service flexibility in dealing with potentially controversial national forest management issues. Nonetheless, increasing public pressure to resolve important national forest issues is likely to result in closer Congressional oversight of Forest Service activities. Also predictable is greater scrutiny from the Forest Service's Washington Office of individual national forest programs, especially the timber management program.

Imprecision and Politics in Determining the ASQ

*The national allowable cut number is thus more of a political figure than scientific or legal question.*⁸⁶

A "persistent theme in the critique of the USDA Forest Service land management planning process" is that land management planning, and thus its outputs such as the ASQ, is essentially a political process.⁸⁷ Those who think Forest Service timber harvest levels are too high have focused on the role of politics in the determination of timber targets or output levels at the federal level through the Congressional appropriations process. This focus is understandable given the relatively easy public access to Congressional proceedings and Forest Service records of decision. More difficult to track and measure are the impacts of political pressure on more localized or regional Forest Service decisions such as determining the ASQ in an individual forest plan.

As previously discussed, the ASQ was intended to represent a harvest level based on the physical, biological, and environmental capacity of the suitable timberland within the planning area. However,

85. H.R. Conf. Rep. No. 256, *supra* note 83, at 62.

86. 2 G. Coggins, *Public Natural Resources Law* 20-16 (1993) (Release #5).

87. T. Baltic, et al., *Review of Critiques of the USDA Forest Service Land Management*

although sophisticated, quantitative computer models (i.e., the timber modeling component of FORPLAN) can assist in calculating forest plan ASQs, ASQ levels are simply estimates of some ideal, 'true' capacity of the land for producing timber. With only fairly imprecise data available on the amount of timber on the land during the planning process, planner's models are capable of providing only an imprecise estimate of ASQ. Congressional testimony by contract timber cruisers in the Northern Rocky Mountains supports the view that those estimates were, in some cases, overly optimistic about the actual quantity timber that the forests can provide. Ground truthing indicated that only a portion of the timber estimated to be on the ground was actually there.⁸⁸

In recognition of the imprecision of timber harvest estimates, perhaps planners should provide a range for an estimate rather than a single number, or 'point estimate'. Forest planning teams rarely express the levels of outputs and constraints as estimates that include a statistical standard error or confidence interval indicating a range of possibility. Because forest plans use single point estimates, these become the management decisions and raise issues of trust and reliability in an agency that attempts to project an image of certainty based on technical and scientific expertise. The reality of incomplete knowledge resulting from imprecision suggests that citizens and the judiciary, as well as government decisionmakers, should be cautious in accepting unverified point estimates derived with current models used in timber management planning.

The forest planning process can provide some rough-and-ready estimates for the *range* of amounts of timber that realistically can be harvested on a sustainable basis. Given the Forest Service's traditional 'can-do' commodity-production orientation, one might assume that the original forest-plan ASQs represented the upper limit of that range.

An important related issue is that existing conditions on the ground may change.⁸⁹ As Chief Robertson put it to Senator Dale Bumpers (D-AR):

[C]onditions may change after a Forest Plan is approved, such as the listing of species as threatened or endangered. These changed conditions, that affect the basic assumptions used to derive the ASQ in the Forest Plan, may lead to recalculating the ASQ. This is the reason why Forest Plans are required to have a five-year evaluation. Given the changes

Planning Process 13 (USDA, Forest Service General Technical Rep. RM-170 (1989)).

88. See Sonner, 'Phantom trees' Said to Skew Plans, *Lewiston Morning Tribune*, Feb. 28, 1992.

89. Changed conditions on the ground have been especially important in the Northern Region. The next section includes a discussion of changed conditions and contribution factors for the Lolo National Forest.

that have occurred with the threatened and endangered species in recent years, several Forest Plan ASQs may not be attainable. Annual targets have been reduced to reflect these changes, even though the ASQs in the Forest Plans have not yet been changed.⁹⁰

Whatever the reasons for the agency's failure to attain ASQ harvest levels on various forests, it would appear that Congress intended, through the NFMA, to leave the technical question about setting the ASQ to professional foresters. However, it has become clear that technical decisions based on quantitative models merely provide the starting point for the inevitable political decision process:

[M]odel results are combined with 'outside-the-model' information, and a decision is reached in the usual way, as a result of political negotiations and mutual accommodations among interested groups and individuals and the responsible forest administrator. At most, the role of analytical procedures is limited to providing a 'reasonable' starting point for a more subtle and less apparent decision process.⁹¹

Given that the ASQ apparently has been viewed as a political as well as a biophysical figure (the ASQ shares this attribute with Congressional timber targets, but its political nature is less overt), the Forest Service's contention that the ASQ represents an upper limit on resource capability—a 'ceiling'—appears understandable.⁹² Nonetheless, the national forest planning process should produce reasonable estimates of forest output levels for various national forest stakeholders. In recognition of the concern for both long-term ecological and community stability, foresters emphasize that the sustainability of a level of timber output over time is at least as important, and perhaps more important, than the actual level of that output.⁹³ This view is consistent with the Multiple-Use Sustained Yield Act of 1960,⁹⁴ which RPA/NFMA in no way weakens.

90. Letter from D. Robertson, Chief of the Forest Service, to Sen. D. Bumpers (Feb. 5, 1992).

91. H. Cortner & D. Schweitzer, *Institutional Limits and Legal Implications of Quantitative Models in Forest Planning*, 13 *Env'tl. L.* 493, 516 (1983) (cites omitted).

92. As previously discussed, the contention that the ASQ represents a "ceiling" is not universally held by all Forest Service employees. Ultimately, it is the view of the Forest Service leadership, particularly the Chief, that counts the most in gauging the agency's policy position.

93. Personal communication from B. Calesa, Deputy Supervisor, Clearwater National Forest (April 9, 1992).

94. 16 U.S.C. §§ 528-531 (1988).

FOREST PLAN ASQ AMENDMENTS

The issue of whether forest plan ASQs represent a 'duty' or a 'ceiling' subject to resource standards and guidelines represents the larger issue of where the locus of agency decisionmaking should be. If national timber targets are established by Congress or the Administration (through the President's budget), they may be subject to charges of political interference in technical land management issues. ASQs associated with forest plans are supposed to represent timber harvest levels that are actually achievable in the forests. Two recent events illustrate some of the various aspects of this issue.

The supervisor of Montana's Lolo National Forest announced in 1991 that timber sale levels for the next five years would be less than half the forest plan ASQ, based on new results from an extensive monitoring study of forest and resource conditions. In response, Chief Robertson sent a memorandum to the Regional Office in Missoula, Montana, stating that the Lolo's harvest level "departs so significantly" from the sales schedule in the forest plan that "monitoring and evaluation data results are not sufficient to make such sweeping forest plan decisions."⁹⁵ The Chief stated that decisions to change forest plans must be reached through the forest plan amendment and revision process which requires appropriate NEPA analysis and public involvement before reaching a decision: "Until the forest plan is amended, the forest plan remains in effect."⁹⁶ The Lolo National Forest does intend to prepare a significant forest plan amendment that reflects a lower ASQ figure.⁹⁷

A similar action by the Wasatch-Cache National Forest in Utah to reduce its timber program in 1992 also was rejected by the Washington Office of the Forest Service. A draft five-year monitoring report of the forest showed that the ASQ level in the forest plan was not sustainable over the next decade and that attempts to meet the ASQ would seriously compromise the forest plan standards and guidelines. In this case, a letter to the Regional Forester from Senators Malcolm Wallop (R-WY) and Alan Simpson (R-WY) raised a key issue. The senators wrote, "Although the ASQ levels are not mandates, they sure were portrayed by the Forest Service to be legitimate and obtainable goals . . . It was also understood that any significant change . . . would only be made via a complete significant amendment."⁹⁸ As in many forest plans, the

95. J. St. Clair, *The Lolo Goes Solo*, 12 Forest Watch 14 (1991) (quoting Memorandum from Chief Robertson to Acting Regional Forester Hughes (Sept. 13, 1991)).

96. *Id.*

97. Personal communication from G. Leighton, Lolo National Forest (Nov. 25, 1992).

98. J. St. Clair, *Wallop on the Wasatch-Cache*, 12 Forest Watch 19 (1991) (quoting a letter from Sen. M. Wallop and Sen. A. Simpson to G. Reynolds, Regional Forester).

Wasatch-Cache plan created the expectation that the ASQ would be the expected timber output from the forest. Again, this expectation is indicative of the confusion in the agency over the ASQ and its meaning.

The Washington Office was sympathetic to the senators' concerns. In a memo to Deputy Assistant Secretary of Agriculture John Bueter, James Overbay, Deputy Chief for the National Forest System, criticized the Wasatch-Cache managers for making a decision without following a formal process of forest plan amendment that includes NEPA analysis and public involvement. Overbay also questioned the proposed reduction in the timber program, saying, "neither the exact extent of the perceived future conflicts with Forest Plan standards and guidelines, nor the specific quantitative influences on the suited land base and the ASQ have been substantiated."⁹⁹ Until the forest plan is amended or revised, the Wasatch-Cache managers were directed to continue "to program as much ASQ as possible consistent with the Forest Plan standards."¹⁰⁰ In response to these concerns, a number of forest plans (including those for the Nez Perce, Lolo and Wasatch-Cache National Forests) will be revised or amended with a process that examines the possible impacts of timber-level reduction and allows public review of them and the alternatives considered.

This situation raises a second issue: at what level below the established forest plan ASQ does a reduction in a national forest's timber sale program require a forest plan amendment or revision? Do planned timber harvest level reductions to a level below forest plan ASQ as announced on the Lolo and Wasatch-Cache National Forests require a forest plan amendment or revision? Direction is provided by a recent court decision¹⁰¹ that cites the Forest Service Manual and accompanying *Land Resource Management Planning Handbook (LRMP)*. The Forest Service Manual makes the distinction between "significant" and "not significant" changes to a forest plan. Changes to a forest plan are *not* considered significant if they result from: (1) actions that do not significantly alter multiple-use goals and long-term management objectives, (2) management-area boundary changes that do not cause significant changes in multiple-use goals or long-term objectives, (3) minor changes in standards and guidelines, and (4) additional management practices that contribute to achievement of management prescription.¹⁰² Significant changes to a forest plan include changes that "significantly alter the long-term relationship between levels of multiple-use goods and services projected" and changes that "may

99. *Id.* at 19 (quoting a confidential memorandum from J. Overbay, Deputy Chief for the National Forest System to J. Bueter, Assistant Secretary of Agriculture).

100. *Id.*

101. *Southern Timber Purchasers Council v. Alcock*, 779 F.Supp. 1353 (N.D. Ga. 1991).

102. Forest Service Manual § 1922.51.

have an important effect on the entire forest plan or affect land and resources throughout a large portion of the planning period."¹⁰³

The distinction between a forest plan change considered to be significant and one determined to be insignificant is important. If a change resulting from the proposed amendment is "significant," the Forest Supervisor must follow the same procedure as that required for the development and approval of a forest plan;¹⁰⁴ this process may take several years. If the change is considered insignificant, the Forest Supervisor may implement the amendment following appropriate public notification and satisfactory completion of NEPA procedures¹⁰⁵ in a process that may be completed within months.

The LRMP Handbook enumerates four factors that are used to determine whether a proposed action represents a significant change in the forest plan: (a) timing, (b) location and size, (c) goals, objectives, and outputs, and (d) management prescription.¹⁰⁶ Also to be included in the determination of significance are "other factors" deemed appropriate to the circumstances (e.g., endangered species protection concerns). Under the definition of "goals, objectives, and outputs" in the LRMP Handbook, it says:

Determine whether the change alters the long-term relationships between the levels of goods and service projected by the forest plan. Consider whether an increase in one type of output would trigger an increase or decrease in another. Determine whether there is a demand for goods or services not discussed in the forest plan. In most cases, changes in outputs are not likely to be a significant change in the forest plan unless the change would forego the opportunity to achieve an output in later years.¹⁰⁷

The definition of "management prescription" reads:

Determine whether the change in a management prescription is only for a specific situation or whether it would apply to future decisions throughout the planning area. Determine whether or not the change alters the desired future condition on the land and resources or the anticipated good and services to be produced.¹⁰⁸

As discussed earlier, in the recently decided *Southern Timber Purchasers Council v. Alcock*¹⁰⁹ the court held that a Forest Service harvesting policy to protect red-cockaded woodpecker habitat did not significantly amend

103. *Id.* § 1922.52.

104. 36 C.F.R. § 219.10(f) (1992).

105. *Id.*

106. LRMP Handbook, 1909.12 ch. 5.32 (3).

107. *Id.* at 1902.12 ch. 5.32(3)(c).

108. *Id.* at 1909.12 ch. 5.32(3)(d).

109. 779 F.Supp. 1353 (N.D. Ga. 1991).

the forest plan, but rather represented a prudent step in carrying it out. The court held that the red-cockaded woodpecker policy was temporary in that it need not extend beyond the forest plan period, that the policy protects the "desired future conditions of the land and resources" set forth in the management prescription, and that the area affected by the policy is a small proportion of the total area subject to timber harvest under the forest plan.

There are several differences between the supporting rationale of the court decision and a national forest manager's decision to significantly change its ASQ level. A significant reduction in a forest plan's ASQ (before it is annualized) would appear to constitute a significant amendment to or revision of the forest plan because, unlike the case in the red-cockaded woodpecker policy, this action would significantly alter the long-term relationship between the level of timber output and other projected forest outputs. Furthermore, a reduction in ASQ would not be limited to a specific situation; rather, it would apply to future decisions throughout the planning area (i.e., the management prescription would be very broad).

The amount of reduction in ASQ level that constitutes a "significant" change is inherently a subjective judgment. Proposed reductions that are sufficiently "significant" are to be decided on a case-by-case basis. Clearly any such decision must be defensible and based on documented analysis of environmental and economic impacts and public review of that analysis. For example, the Lolo National Forest cited the following reasons for its projected reduction in the timber sale program: (1) overcutting on private industrial timber lands next to the forest; (2) maximum cutting levels in some drainages to compensate for loss of entries into areas affected by private harvesting; (3) unresolved wilderness issues; (4) visual quality concerns; (5) concerns about adequate elk security; (6) snag retention difficulties; (7) old growth retention; and (8) hydrological constraints.¹¹⁰

CONCLUSION

There are two different interpretations of national forest law relating to the ASQ or allowable sale quantity. One view is that the ASQ is a 'ceiling' on the timber harvest level. Another view is that the ASQ is a 'duty' or legal obligation. In the absence of definitive post-

110. See J. St. Clair & S. Greacen, *Calm in the Eye of the Storm: How the Lolo Dropped the Cut*, 12 Forest Watch 15 (1991) (citing the Lolo Monitoring Report of May, 1991). In the Lolo Monitoring Report, Supervisor Daniels wrote: "Our forest plan contained some incorrect assumptions . . . we assumed that all of the 1.24 million acres of land with

NFMA judicial interpretation, the Forest Service as implementing agency, and Congress as the overseer, have struggled to define the role of the ASQ, sometimes with divergent results.

Within the Forest Service, the ambiguity over ASQ is heightened by confusion with timber targets used to develop Forest Service budgets. Although it would seem that the Forest Service generally views the ASQ as a harvest 'ceiling' subject to meeting forest plan standards and guidelines, this understanding is not universally shared, even within the agency.

Congressional timber targets and forest plan ASQs are distinctly different concepts, but in practice the distinction is often blurred, even among Forest Service field employees. The experiences of several national forests in the Rocky Mountains in reducing their timber sale levels from the forest plan ASQ levels suggest a number of problems resulting from differing interpretations and expectations concerning the ASQ. In particular, even where agreements on the ASQs between the forests and concerned interest groups were made during the planning process, different assumptions about the meaning of ASQ later led to controversy when actual timber sale levels were lower than average annual ASQ levels.

The decision process that currently estimates the ASQ is not inherently detrimental to national forest management. Many forest managers, however, are cognizant of the limitations associated with the determination of an ASQ level. Many forest plans are now being revised and amended on the basis of new information and more refined, detailed data. Given that the Forest Service views forest planning as an ongoing, iterative process, any conscious deviation from an existing plan recognizes that things change and that sound planning is flexible. As one Forest Service employee stated:

A plan is an educated guess about the future based on information you have at present. Many forest plans were optimistic about ASQ when they were prepared and this was not discovered until well into the planning period. Now, in many cases, the Forest Service wants to alter the plans to reflect a more realistic ASQ but Congress (possibly due to budget worries) seems reluctant to want to listen to us and wants to hold us to our original projections.¹¹¹

Once the ASQ has been set, it is desirable that there be some flexibility in adjusting the ASQ to a level that is realistic, sustainable,

merchantable trees designated as 'suitable' for timber harvest would be available for harvest. In at least four cases, this assumption no longer holds up."

111. Comments from an anonymous Forest Service employee on a questionnaire from a nationwide survey of Forest Service employees. See works cited *supra* note 71.

and thus appropriate for land and resource management. However, this approach to forest planning also requires that all interested parties participate actively in the development and modification of forest plans and that resource monitoring and evaluation programs be in place and be used as a basis for modifying previous ASQ estimates. With recognition of the uncertainties of estimating ASQs and the establishment of a relationship between the ASQ and resource conditions in the forest plan, the ASQ can take its place as a reliable planning guide that reflects the need to provide sustainable timber harvest levels. If historic harvest levels now appear to be unsustainable, the forest planning process should be flexible enough to expedite an amendment of the ASQ to a sustainable level. A realistic ASQ—and a workable and expeditious process to arrive at it—should be more acceptable to all stakeholders than the flexible number that now exists, which is subject to various interpretations and controversies and thus is rendered meaningless as a planning tool.