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Below-Cost Timber Sales: An Overview

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Summary

The USDA Forest Service (FS) sells some timber at prices that are less than the agency expenses to administer the timber program. These *below-cost* timber sales have been debated by Congress sporadically for more than two decades, but no policy to address the issue has been adopted legislatively or administratively.

Part of the debate over below-cost timber sales has been about their relative frequency. At the direction of Congress, the FS developed a system for reporting the financial and economic results of timber sales. Data were reported annually for each national forest, beginning with FY1989, but no report has been issued since FY1998. Interest group estimates of "losses" continue to be made public with much fanfare and attendant news stories, but the estimates of the financial results of FS timber sales vary widely. This disparity is due to differences in basic approach — profit-and-loss, cash flow, or other approach — and in assumptions about relevant costs.

The FS sells timber for a variety of reasons. In some cases, the purpose may be to provide timber for a local mill, and mills (and communities) have been built on the implicit promise of continuing timber availability. Timber sales may also be used to modify existing conditions — to reduce fuel loadings, to alter the mix of tree species, to provide habitat for specific animal species, to restore forests to more natural conditions, to provide access for recreation and other uses, etc. While alternative means of modifying vegetation exist, timber sales may be more efficient (have a lower net cost to the Treasury and to society) than the alternatives, even though the sales may not cover costs according to strict financial criteria.

The issue is what, if anything, Congress and the Administration should do about below-cost timber sales. Some argue that no action is warranted, because the fiscal concern is merely a tool being used to reduce timber sale levels. Others are concerned about the net cost to taxpayers, about the environmental damages that result from some timber sales, or about alleged "subsidies" to timber companies. The debate is often characterized as either "do nothing" or "eliminate all below-cost sales." However, other options exist. Choices for a below-cost policy might include how to measure fiscal results, over what geographic and temporal scales, with what opportunities to demonstrate improvement, and with how much agency discretion over how to factor costs into the decision to sell or not to sell timber.

This report provides background on the issue; it is not anticipated that it will be updated.

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Below-Cost Timber Sales: An Overview

Financial losses from timber sales by the USDA Forest Service (FS) have been a persistent concern.[1] The possibility of losses was first raised in a 1980 report that caught the attention of the House Appropriations Subcommittee on Interior and Related Agencies. The committee requested FS data on timber sale revenues and costs. Subsequent studies using these and other data reached similar conclusions — that FS timber sales lose money. The committee agreed that the existing data were inadequate for accurately measuring the losses, and agreed to give the authorizing committees time to review the situation while directing the FS to develop a timber cost accounting system. Despite numerous hearings over the ensuing two decades, neither Congress nor the Administration has acted to limit financial losses from FS timber sales, but questions about such sales are raised in Congress periodically.

This report provides an overview of *below-cost* timber sales — sales where the revenues are less than the costs to prepare and administer them. It provides a brief history of concerns over timber management profitability, discusses difficulties in identifying below-cost timber sales, examines concerns over financial losses and justifications offered for continuing such sales, and discusses relevant aspects of below-cost timber sale policy options for Congress and/or the Administration.

Historical Background

Profitability was an early concern in federal timber management. The first FS chief, Gifford Pinchot, believed that the national forests could and should be managed profitably, to demonstrate the profitability of long-term sustained timber management to the private sector.[2] Despite the efforts and proclamations by Pinchot and his successors, the FS did not generate net revenues for the U.S. Treasury. In 1920, the third FS chief, William Greeley, proclaimed that timber management was profitable when one included the nonmonetary benefits — access for recreation and for fire protection, improvement of wildlife habitat, etc.[3] This claim — that total timber management benefits exceed total costs — continues to be the FS's principal rationale for its timber management policies.

In 1960, the FS sought, and Congress enacted, the Multiple-Use Sustained-Yield Act (P.L. 86-517, 16 U.S.C. §§528-531). The National Lumber Manufacturers

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[1]The FS is authorized to sell timber (standing trees) to private companies who pay for the right to remove the trees and convert them into lumber, plywood, and other products.

[2]Robert E. Wolf, "National Forest Timber Sales and the Legacy of Gifford Pinchot: Managing a Forest and Making It Pay," *University of Colorado Law Review*, vol. 60, no. 4 (1989): 1037-1078. (Hereafter referred to as Wolf, "Timber Sale Profitability.")

[3]Wolf, "Timber Sale Profitability."

Association (now the American Forest and Paper Association) proposed a substitute that would have included profitability as a goal for national forest management.[4] The substitute was rejected; instead, §4(a) of the act directed national forest management "with consideration being given to the relative values of the various resources, [but] not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output."

For the next 20 years, FS timber sales were widely presumed to be generally profitable. Nonetheless, there were hints of possible problems. In 1970, the Bolle Report decried apparently uneconomical intensive forestry practices on the Bitterroot (MT) National Forest.[5] In 1976, Marion Clawson (an economist with Resources for the Future) criticized national forest management as wasteful and inefficient.[6] In §6(*l*)(2) of the National Forest Management Act of 1976 (NFMA; P.L. 94-588, 16 U.S.C. §§1600-1614 et al.), Congress directed the FS to include a representative sample of below-cost timber sales in the agency's annual report. However, NFMA implicitly accepted general timber sale profitability in §14(h) by creating a special fund for salvage sales (potentially unprofitable because of low values for dead and dying trees).

The conventional wisdom of FS timber sale profitability was challenged in a 1980 report by the Natural Resources Defense Council (NRDC).[7] That report compared specified annual protection, management, and investment costs with revenues for each national forest for five years (FY1974-FY1978), and found that, depending on the costs included, about half of the national forests had costs exceeding revenues for all or part of that period.

Congressional Deliberations

An article summarizing the NRDC report caught the attention of Representative Sidney Yates, Chair of the House Appropriations Subcommittee on the Department of the Interior and Related Agencies. A discussion of FS timber cost accounting in the 1983 FS appropriations hearings led the subcommittee to request data on timber sale costs and revenues for each national forest.[8] In 1984, four studies using these and other data reached conclusions similar to the NRDC findings — that revenues

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[4]Wolf, "Timber Sale Profitability," p. 1063-1064.

[5]U.S. Senate, Committee on Interior and Insular Affairs, *A University View of the Forest Service*, prepared by a select committee of the University of Montana at the request of Senator Metcalf (Washington, DC: GPO, Dec. 1, 1970), S.Doc. 91-115.

[6]Marion Clawson, "The National Forests," *Science*, vol. 191 (Feb. 20, 1976), pp. 762-767.

[7]Thomas J. Barlow, Gloria E. Helfand, Trent W. Orr, and Thomas B. Stoel, Jr., *Giving Away the National Forests: An Analysis of U.S. Forest Service Timber Sales Below Cost* (Washington, DC: Natural Resources Defense Council, June 1980).

[8]U.S. House, Appropriations Subcommittee on the Department of the Interior and Related Agencies, *Hearings on Department of the Interior and Related Agencies Appropriations for 1984: Part 11* (Washington, DC: GPO, 1983), p. 51-56, 326-342.

from many national forest timber sales did not recover the costs to prepare and administer the sales.[9]

The House Appropriations Committee responded to these studies in report language for the FY1985 appropriations:[10]

> First, the Forest Service is directed to develop a true timber sales cost accounting system, which will address the issues of cost allocation and valuation of benefits, specifically related to the commercial timber sales program....
>
> Secondly, bill language has been included which will allow increases in timber sale levels from the previous year in any forest only if the estimated receipts are in excess of annual expenditures for timber sold in at least three of the preceding five years.

The bill language prohibiting timber sale increases on forests with below-cost sales was deleted during the floor debate at the request of the chair of the House Agriculture Committee, to allow that committee an opportunity to deal with the issue legislatively.[11] The Senate Appropriations Committee also objected to direction on timber sales that was related to sale costs and receipts, although it agreed with the need for better timber cost accounting and allocation.[12]

The House Agriculture Committee held extensive hearings on below-cost timber sales, with Administration witnesses on February 26, 1985, and with 41 other witnesses on June 5 and 6, 1985.[13] Despite this extensive review, the committee developed no legislative proposal and no direction for the Administration or for the Appropriations Committee.

Since 1985, in addition to discussions during House and Senate Appropriations Committee hearings, Congress has held more than a dozen hearings focused partly or solely on below-cost timber sales. The House Agriculture Committee has held the majority of the hearings, but the House Interior and Insular Affairs (now Resources), House Government Operations, and Senate Agriculture Committees have also held hearings. Bills have been introduced to limit or end below-cost timber sales, but none has been reported by any committee.

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[9]These studies were conducted by The Wilderness Society, the General Accounting Office, the House Appropriations Committee Surveys and Investigations Staff, and CRS. See archived CRS Report 84-799 ENR, *Summary of Recent Reports on Forest Service Timber Sale Costs and Revenues*, by Ross W. Gorte, Nov. 8, 1984. (Available from the author.)

[10]U.S. House, Committee on Appropriations, *Department of the Interior and Related Agencies Appropriations, 1985* (Washington, DC: GPO, June 29, 1984), H.Rept. 98-886.

[11]*Congressional Record* [daily ed.], vol. 130, no. 99 (July 31, 1984), p. H8097.

[12]U.S. Senate, Committee on Appropriations, *Department of the Interior and Related Agencies Appropriations, 1985* (Washington, DC: GPO, Aug. 6, 1984), S.Rept. 98-578.

[13]U.S. House, Committee on Agriculture, *Hearings: Economics of Federal Timber Sales* (Washington, DC: GPO, 1985), Serial No. 99-4.

Administrative Efforts

In response to the direction for "a true timber sales cost accounting system," the FS developed its Timber Sale Program Information Reporting System (TSPIRS). The agency presented a draft proposal to the House Appropriations Committee in March 1986. The Committee asked the General Accounting Office (GAO) to examine the proposal, and GAO found several problems.[14] GAO was then asked to work with the FS on "a basic design for a timber program cost accounting system that will meet the needs of the Congress and the Forest Service."[15] The FS supplemented the cost accounting system with additional reports presenting other relevant information on the timber sale program. This three-report system — the Statement of Timber Sale Revenue and Expenses; the Economic Account; and the Employment, Income, and Program Level Account — was presented to Congress in 1987.[16] The FS tested TSPIRS in FY1988, and presented data for the national forests (with state, regional, and national summaries) annually for FY1989-FY1998. No report has been produced since FY1998.

In February 1990, the George H. W. Bush Administration proposed a test of the implications of phasing out certain below-cost timber sales.[17] A House Agriculture subcommittee held hearings on the proposal in March,[18] and in July, approved a bill (H.R. 5292, 101st Congress) to prevent the pilot test. Although the subcommittee did not forward the bill for full committee consideration, the apparent congressional disfavor was viewed as sufficient to preclude the test.[19]

The Clinton Administration also suggested a phase-out of below-cost timber sales in its initial economic stimulus and deficit reduction program.[20] The FS drafted a plan for phasing out below-cost timber sales on more than half of the national forests over four years, and the draft proposal was made public in the *New York*

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[14] U.S. General Accounting Office, *Timber Sale Accounting: Analysis of Forest Services's Proposed Timber Program Information Reporting System*, GAO/AFMD-86-42 (Washington, DC: April 1986).

[15] U.S. General Accounting System, *Timber Program: A Cost Accounting System Design for Timber Sales in National Forests*, GAO/AFMD-87-33 (Washington, DC: April 1987).

[16] U.S. Dept. of Agriculture, Forest Service, Programs and Legislation, Policy Analysis Staff, *Forest Service Timber Sale Program Information Reporting System (TSPIRS): Final Report to Congress* (Washington, DC: GPO, April 1987).

[17] U.S. House, Appropriations Subcommittee on Department of the Interior and Related Agencies, *Department of the Interior and Related Agencies Appropriations for 1991. Part 3: Justification of the Budget Estimates, Forest Service* (Washington, DC: GPO, 1991).

[18] U.S. House, Agriculture Subcommittee on Forests, Family Farms, and Energy, *Administration's Proposed Below-Cost Commercial Timber Sale Pilot Test: Hearing on March 1, 1990* (Washington, DC: GPO, 1991), Serial No. 101-65.

[19] "Subcommittee Opposes Plan To Lessen Timber Losses," *Congressional Quarterly*, July 21, 1990, p. 2294.

[20] Executive Office of the President, *A Vision of Change for America* (Washington, DC: GPO, Feb. 17, 1993), p. 75.

Times.[21] That proposal was explicitly rejected as the Administration's policy in Senate Agriculture Committee hearings by then-Assistant Secretary of Agriculture James Lyons, arguing that data were inadequate to assess options and promising a study of policy options.[22]

The FS study to examine options for reducing below-cost timber sales was conducted under the guidance and review of an interagency advisory team. The report, published in January 1995, described timber program financial policies, various perspectives on below-cost timber sales, the shifting management direction (to ecosystem management), and policy options described in previous studies and new options for addressing below-cost timber sales.[23] However, the Clinton Administration did not proffer a proposal to reduce below-cost timber sales.

What Are Below-Cost Timber Sales?

Identifying below-cost timber sales is a deceptively simple exercise. Comparisons of FS timber sale receipts and expenses appear to both illuminate and disguise information about the financial and economic consequences of timber sales. The FS sells timber for many reasons — to generate receipts, to supply wood for manufacturers, to provide employment, to expand access for motorized vehicles, to alter the composition and distribution of vegetation in an area, and more. Often, sales are modified to mitigate or enhance other values on or near sale sites, mixing timber and non-timber costs and benefits. This raises questions about whether each timber sale should be examined, or whether the timber program (locally, regionally, or nationally) is the proper level for assessing financial performance. Furthermore, government cost accounting for the disposal of appreciating assets is not as simple and straightforward as many believe. Thus, questions arise about the relevant and appropriate measures of costs. Different interest groups measure the financial and economic consequences of timber sales differently. The two most commonly used measures are cash flow and profitability, although other measures are occasionally used.

None of these approaches or measures is inherently right or wrong. Each provides useful information by which to assess various aspects of the FS timber program. Each might provide a relevant criterion for individual timber sales, depending on why that timber sale is being offered, or for the timber program at some aggregate level. Some are most useful for monitoring financial performance and for supporting planning efforts, while others could be used to screen individual sales

[21]Keith Schneider, "U.S. Would End Cutting of Trees in Many Forests," *New York Times*, April 30, 1993, pp. A1, A18.

[22]U.S. Senate, Agriculture Subcommittee on Agricultural Research, Conservation, Forestry, and General Legislation, *The Clinton Administration's Below-Cost Timber Sale Policy: Hearing on June 24, 1993* (Washington, DC: GPO, 1993), S.Hrg. 103-230.

[23]Chris Liggett, Cliff Hickman, Rick Prausa, and Nick Reyna, *Timber Program Issues: A Technical Examination of Policy Options* (Washington, DC: USDA Forest Service, Jan. 1995). Hereafter called *Timber Program Issues*.

before committing to major investments. Probably none, on its own, is sufficient to assess the timber program completely, but in concert they may provide a picture that describes many of the nuances of the program.

Profitability. One approach to estimating the financial consequences of timber sales is to calculate the profitability of FS timber sales. TSPIRS generally follows the structure of an income (or profit-and-loss) statement used in the private sector for reporting to investors, regulators, and tax collectors. This approach has two major strengths. First, profit-and-loss calculations depend on matching revenues with the expenditures that generate those revenues; current investments to produce future revenues are capitalized, and then fully amortized by the time revenues are produced. Second, income statements are standard accounting reports that provide a defined structure for presenting information on financial performance. However, profitability analyses may be poor predictors of long-term performance and investment potential. In addition, profitability determinations may be impossible for assessing individual sales, because of the limitations in allocating fixed costs (including long-term investments) among the sales. Thus, profitability analyses may be restricted to national forests or some other level of aggregation.

Cash Flow. Another approach is to calculate the resulting cash flow by comparing the cash receipts from timber sales with the relevant costs. Cash flow analyses have two major strengths. First, cash flow directly measures the fiscal results of the current year's timber sales for the U.S. Treasury. Second, cash flow — the statement of sources and uses of cash — is a standard accounting activity, because it is possible for profitable businesses to go bankrupt if their cash income is insufficient to cover current expenses. However, as with profit-and-loss analyses, annual cash flow analyses may poorly indicate long-run financial results, because changes in market conditions can rapidly alter an organization's cash flow, and may poorly indicate management profitability and investment potential. This is particularly true for logged areas that need substantial restoration investments, because current receipts result from existing conditions while current expenditures may be to provide future benefits.

Other. Other approaches to assessing the financial and economic consequences of timber sales exist. Financial investment analyses, such as calculating the internal rate of return, can be appropriate for assessing investments, but are difficult and are fraught with uncertainty about future receipts. Regional economic analyses can be used to examine the economic benefits of the timber program, but are impractical for assessing individual timber sales, and comparable data for assessing effects on other sectors, such as the recreation industry, do not exist except in rare circumstances. Social investment analyses and estimating net public benefits are other approaches to assessing the broad economic consequences of the timber sale program, but methods for assessing current and future timber and other values are, at best, imprecise and highly debatable.

Relevant Costs. Even analyses using the same basic approach can yield quite different results, depending on the assumptions about the relevant costs and cost allocations. Determining the relevant timber sale costs might seem to be simple and straightforward, but timber sales (actually all FS land management activities) affect not only timber but all of the resources on and near the sale site. Researchers have addressed the issue of allocating joint production costs — the costs of activities that produce multiple goods and services — and have always concluded that no allocation scheme for joint production costs is widely and unambiguously accepted as yielding the "right" answer.[24] Thus, any estimate of financial performance is disputable.

A wide variety of costs have been included in various studies. *Direct sale costs* — the cost to prepare and administer timber sales — are usually included, but studies have suggested that federal costs are increased (or timber bids are decreased) by sale adjustments to mitigate and enhance nontimber resources.[25] *Indirect sale costs* — expenses for activities that would not likely occur if timber were not being sold, such as boundary surveys, some road maintenance, and staff specialist support for environmental analyses on timber sales — are often included, but the extent to which such costs are relevant is arguable. *Sale-related investments* — such as road access and post-sale reforestation — are also typically included, but allocating such investments over time and among beneficiaries is also debatable. *Timber program costs* that are part of long-run timber management but are not related to current timber sales — such as timber inventories, timber research, reforestation of burned sites, and timber stand improvement to increase productivity — are also included in some studies. Finally, some *other costs* — such as general administration, receipt-sharing payments, and wildfire protection — have been at least partially attributed to timber sales and timber management and included in some studies. However, the multiple outputs, environmental impacts, and differing time scales of timber sales and related activities make identifying relevant costs and comparing them with relevant revenues problematic. Two decades of debate have not resolved the dilemma, and further debate seems unlikely to result in widespread agreement.

Why Do Below-Cost Sales Occur?

The FS is authorized to sell timber, and is not required to make money on each sale or overall under current law. As noted above, sales are made for an array of reasons — to generate receipts, to supply wood for manufacturers, to provide employment, to expand access for motorized vehicles, to alter the composition and distribution of vegetation in an area, and more. At times, selling the timber may be ancillary to the primary purpose of the action (i.e., trees may be cut for other reasons than to provide timber for the industry).

Three general reasons are typically presented to explain why below-cost timber sales persist: past promises; the nature of the national forest lands; and the nature of multiple-use management. In addition, individual sales or timber programs for a national forest or nationwide might have been predicted to generate net returns, but

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[24]See, for example, Ervin G. Schuster, "Apportioning Joint Costs in Multiple-Use Forestry," *Western Journal of Applied Forestry*, vol. 3, no. 1 (Jan. 1988): 23-24; and John V. Krutilla, "Below-Cost Sales: Tying Up the Loose Ends of the National Forest Management Act," *Journal of Forestry,* vol. 85, no. 8 (Aug. 1987): 27-29.

[25]Ervin G. Schuster, Charles E. Keegan, III, and Robert E. Benson, *Provisions for Protecting and Enhancing Nontimber Resources in Northern Region Timber Sales*, Research Paper INT-326 (Ogden, UT: USDA Forest Service, Mar. 1984).

site-specific costs or unanticipated price fluctuations might have led to results that differ from the expectations.

Past Promises

One justification for continuing to sell timber, regardless of possible financial losses, is the at least implicit FS promise to provide timber from the national forests. Many sawmills, and communities, have been located because of the expected continuing timber supply from the national forests. In a few cases, the clearest example being the Tongass National Forest in southeast Alaska, national forest timber was explicitly used for economic development, to create an industry where none had previously existed.[26]

The promise of supplying timber from the national forests is an old one. The 1897 act that first authorized the sale of timber identified one of the purposes of the forest reserves (now national forests) as "to furnish a continuous supply of timber for the use and necessities of citizens of the United States." In 1960, the Multiple-Use Sustained-Yield Act (P.L. 86-517, 16 U.S.C. §528-531) expanded on this promise by requiring national forest management for sustained yields, as defined in §4(b):

> "Sustained yield of the several products and services" means the achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources of the national forests without impairment of the productivity of the land.

Thus, national forest management was intended to produce outputs, without regard to the financial results of such production. In 1976, NFMA further implied sustained production in §13(a) by generally limiting national forest timber sale levels to an allowable sale quantity "which can be removed from such forest annually in perpetuity on a sustained-yield basis."

Together, these laws at least imply an expectation of continued timber sales from the national forests, and some have argued that the promise is a guarantee.[27] Most observers note that, while sustained timber sale programs have been promised, they are not legally enforceable. By establishing other conditions on national forest management, Congress, the Executive Branch, and the public (through participation in national forest planning) may choose to constrain, or even eliminate, timber sales in some areas. Indeed, timber sale levels have declined significantly, from a peak of 11.3 billion board feet in FY1987 to 1.6 billion board feet in FY2002.

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[26]In Alaska, the FS began trying to establish a timber industry in the 1920s; two long-term contracts, each requiring the construction of a pulp mill, were finally signed (and the mills built) in the 1950s. For more on these contracts and on the agency's use of timber for regional development, see Alfred A. Weiner, *The Forest Service Timber Appraisal System: A Historical Perspective, 1891-1981*, Report No. FS-381 (Washington, DC: GPO, Aug. 1982).

[27]W. Hugh O'Riordan, "Discussion: Neither Complex Nor Obscure in Meaning," *Community Stability in Forest-Based Economies: Proceedings of a Conference in Portland, Oregon, November 16-18, 1987*, Dennis C. LeMaster and John H. Beuter, eds. (Portland, OR: Timber Press, 1989), pp. 51-53.

National Forest Lands

The nature of the national forests lands may explain the persistence of below-cost timber sales. Many of the early forest reserves were established in the Rocky Mountains to protect watersheds, sustain flows for navigable waterways, and reduce downstream flooding. The Weeks Law (36 Stat. 961; 16 U.S.C. §515, et al.) was enacted in 1911 to authorize acquisition of lands (particularly in mountainous areas of the East) for similar reasons. Thus, many of the lands have low timber growth rates and/or species with low timber values.

Some national forests have also been degraded, often prior to their acquisition or protection. Poor timber harvesting practices, principally on private timberlands before World War II, is one cause. Abandoned, eroding agricultural lands were also acquired and typically planted to fast-growing tree species to stop the erosion, but (with 20-20 hindsight) the species now are considered ecologically inappropriate for those sites. Natural disasters — most commonly forest fires, insect and disease epidemics, and windstorms — can also degrade forests; for example, Hurricane Hugo, which struck in September 1989, probably caused the loss reported in TSPIRS for the Francis Marion-Sumter (SC) National Forests in FY1991 because of the extensive salvage of degraded timber.

Despite the poor inherent or historical condition of some national forests, timber sales may still be warranted. Some vegetative manipulation may be desirable, to reduce fuel loadings and the risk of damage by fire, to invest in future timber production, to enhance water flows or wildlife habitat, to alter existing vegetation for a more sustainable or naturally functioning ecosystem, and for other reasons. Selling timber may be an efficient tool for manipulating the vegetation, achieving the desired results at lower cost to the government than alternative methods; however, the relative efficiency and public acceptance of timber sales versus other means of altering vegetation can only be assessed on a site-specific basis.

Multiple-Use Management

In addition to being managed for sustained yield, the national forests are to be managed for multiple uses, defined in the Multiple-Use Sustained Yield Act as "for outdoor recreation, range, timber, watershed, and wildlife and fish purposes." The act includes a lengthy definition of multiple use, including "harmonious and coordinated management of the various resources, ... with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or greatest unit output."

Clearly, the FS is not to manage the national forests *principally* to generate revenues or profits. This is not to suggest that costs, efficiency, or profits must be ignored, only that they cannot be the sole or primary reason for the management decision. The FS does use timber sales to alter vegetation, and timber harvesting might be a cost-efficient means to achieve such goals. The FS modified TSPIRS to acknowledge such practices, by separating timber sales into commercial timber sales (primarily for providing wood to users) and stewardship sales (primarily for other purposes). It might be expected that stewardship sales would be more likely to be below-cost, but during the several years for which TSPIRS distinguished between commercial and stewardship sales, there was no consistent pattern of stewardship sales having lower revenues or higher costs or being more likely to be below-cost.

Some critics have suggested that below-cost timber sales occur because governments generally, and the FS in particular, are inefficient.[28] One analyst has produced a detailed critique of timber sale practices that "cross-subsidize" high-value and low-value species, generating much greater overall expenditures but without significantly increasing receipts.[29] Numerous studies have offered suggestions for changes to improve timber sale efficiency. The FS has made numerous changes in its timber sale process to improve efficiency, but the overall financial results appear (despite the lack of TSPIRS reports) to have not changed substantially.

What, If Anything, Should Be Done? The Future of Below-Cost Timber Sales

Some interest groups have argued that nothing should be done about below-cost sales, because the apparent fiscal concern is simply being used to reduce FS timber sale levels. Using FS losses to reduce timber sales may well be a tactic for some (possibly most) critics of below-cost timber sales, and thus improved financial performance would be unlikely to reduce the conflict over national forest management.

Nonetheless, some are concerned about taxpayers financing the environmental damages that occur from some timber sales, and others are concerned about recent projections of federal budget deficits. In his FY1994 budget, President Clinton proposed phasing out below-cost timber sales, as part of his package to reduce "subsidies" for extractive resource uses of federal lands. The FY1995 House Republican Budget Initiative also proposed to eliminate below-cost timber sales by directing the Forest Service "to bring down the costs of managing their programs ... without reducing receipts."[30]

Much of the debate over a below-cost timber sale policy has focused on two approaches: do nothing, because below-cost concerns are not the real issue; and cease all below-cost timber sales, because the justifications are inadequate. Between these two extremes, however, are a multitude of possibilities. To date, only one study has suggested alternatives to this persistent debate of "continue current practices" versus "stop below-cost logging."[31] This study discusses (among other things) relevant choices for a policy on below-cost timber sales. Choices include:

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[28]John H. Beuter, *Overview of Below-Cost Timber Sale Issue*, Technical Bulletin No. 90-02 (Washington, DC: American Forest Resource Alliance, Nov. 30, 1990).

[29]Randal O'Toole, *Reforming the Forest Service* (Washington, DC: Island Press, 1988).

[30]U.S. House, Committee on the Budget, Republican Caucus, *The Republican Budget Initiative for Fiscal Year 1995* (Washington, DC: March 3, 1994), p. 160.

[31]*Timber Program Issues*. A summary of many of the studies to improve efficiency can be found at pages 157-186 of that report. See also CRS Report 95-1077 ENR, *Forest Service Timber Sale Practices and Procedures: Analysis of Alternative Systems*, by Ross W. Gorte.

- Measurement of fiscal performance. Cash flow and TSPIRS profitability are commonly used in the below-cost debate, but other measures might be appropriate for some sales (e.g., stewardship sales) or for some sites (e.g., salvage in devastated areas or lands not suited for timber production);

- Geographic scope of assessment. TSPIRS measures timber programs for entire national forests, but sale-by-sale decisions and other scales (e.g., watersheds or ranger districts) may also be feasible;

- Temporal scale of assessment. Cash flow and TSPIRS analyses focus on annual performance, while national forest plans make decisions that can apply for a decade or more; to compensate for annual fluctuations, performance could be assessed by combining years or using rolling averages for multiple years or by permitting one or a few years of losses within a period (e.g., losses in two of the past five years might be acceptable);

- Opportunities for improvement. Debates have focused on past performance, but managers might be able to improve the fiscal results of the timber sale program; the implementation period and criteria for reestablishing terminated programs are choices that could be included in a below-cost policy; and

- Agency discretion. The Forest Service currently has complete discretion over fiscal standards for timber programs; the opposite extreme would be a rigid policy prohibiting all below-cost sales or programs based on the identified standards. Other possibilities include national standards for local consideration in forest or project planning; regional or Washington Office review of fiscal performance; and external regional or national review boards (consistent with or exempted from the Federal Advisory Committee Act) for recommendations to the Regional Forester or the Chief.

Additional choices and possibilities undoubtedly exist, and the number of feasible combinations is nearly infinite. Thus, there are many approaches that Congress and/or the Administration could select to improve FS timber sale fiscal performance, with myriad ramifications for local economies and for the environment. Ultimately, decisions about the quantity, location, and timing of FS timber sales will be determined by agency decision-makers responding to direction from Congress and the Administration and to input from the public.