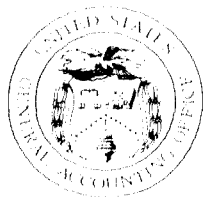


May 1991

FOREST SERVICE

The Flathead National Forest Cannot Meet Its Timber Goal



143864



United States
General Accounting Office
Washington, D.C. 20548

Resources, Community, and
Economic Development Division

B-243310

May 10, 1991

The Honorable Max Baucus
United States Senate

Dear Senator Baucus:

This report responds to your request for information on planned and actual amounts of timber offered for sale from the Flathead National Forest in northwestern Montana. This report presents the results of our review and, as requested, responds to four specific issues you raised: (1) how much timber sale offerings from the Flathead National Forest fell short of the planned goal for fiscal years 1986-90, (2) why timber offerings did not meet the goal, (3) how the local timber industry was affected by not meeting the goal, and (4) what the prospects are for meeting future timber offering goals.

Results in Brief

The Forest Service fell short of its Flathead timber-offering goal for the last 5 years by about 37 percent. The Forest Service set the goal at about the same level of harvesting as had taken place over the previous decade. The goal was not achievable because the Forest Service did not fully identify environmental effects when it established the goal. Also, after the goal was adopted, stricter interpretations of environmental standards were imposed, which many previously planned sales could not meet.

Studies indicate that local timber industry production and employment have not yet been significantly affected by the Flathead sales shortfall. However, while recent local mill closures that have occurred were generally related to market factors, experts predict additional industry cut-backs will occur because the Forest Service will not be able to meet Flathead timber sale goals for the next few years.

Background

The Forest Service, an agency in the U.S. Department of Agriculture, manages national forests for various multiple uses including timber and mineral production, recreation, wilderness, watershed protection, wildlife habitat preservation, and rangeland. The National Forest Management Act of 1976 requires that the Forest Service develop comprehensive 10- to 15-year land management plans, called "forest plans," which establish goals for, and balance consideration among, all of these multiple uses. The goal for timber sales in a forest plan may not

Reasons for the Sales Shortfall

The Flathead National Forest's timber-offering goal of 100 MMBF per year, set at equal to the estimated maximum ASQ the forest could provide, was not achievable. This goal was not achievable primarily because the Forest Service constrained the ASQ estimate by not allowing it to be less than the average harvest levels of the preceding few years. To achieve this constrained ASQ estimate, the Forest Service modified locations and methods of timber harvesting without identifying certain resulting environmental effects. Had these environmental considerations been taken into account, the ASQ and related timber goal would have been about 78 MMBF per year, or about 390 MMBF for the first 5 years of the forest plan instead of 500 MMBF.

In addition, stricter interpretations of the standards used to ensure that environmental requirements were met—as well as a requirement for more detailed environmental analysis procedures—were imposed by the Chief of the Forest Service and federal court decisions issued after the ASQ's adoption. Consequently, many previously planned sales had to be re-examined, resulting in 141 MMBF of planned sales volume being reduced or withdrawn and another 84 MMBF still being delayed. Until the delayed sales are resolved, determining how much application of stricter interpretations of standards would have further lowered the ASQ estimate is not possible.

Finally, even if planned sales had met all environmental standards, the forest received funding during the period that was sufficient to prepare only 443 MMBF. Funding was sufficient for only 443 MMBF largely because of the greatly increased time and costs involved in completing the more detailed environmental analyses required by Forest Service Chief and federal court decisions. (Appendix III contains further discussion of the reasons for the shortfall.)

Effects of the Sales Shortfall on Industry

Forest Service, industry, and academic officials we talked with said that local timber industry production and employment have not yet been significantly affected by the Flathead's not meeting its timber offering goal. They told us that local timber industry production from adoption of the Flathead forest plan through calendar year 1990 was at near-record levels and that the slight decline in employment over this period was largely due to mill automation. Forest Service and academic officials also said that sharper local production and employment declines, which occurred early this year, have largely been related to a recession-related decline in demand for wood products rather than by a lack of Flathead timber offerings.

environmental groups' concerns and provide the local timber industry, which is facing increasing difficulty in obtaining timber from private lands, with a basis for more realistic expectations.

Recommendation

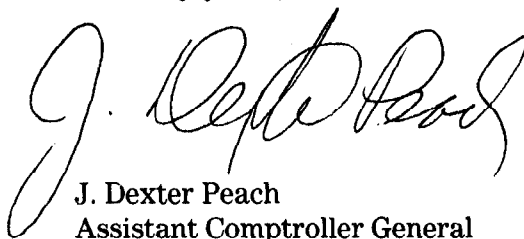
We recommend that the Secretary of Agriculture direct the Chief of the Forest Service to revise the ASQ and related future goals for Flathead National Forest timber offerings as soon as possible.

Appendix I of this report provides further information on the development of Forest Service timber goals, the Flathead National Forest, and our scope and methodology. We conducted our review primarily between April and November 1990, with updating in March 1991, in accordance with generally accepted government auditing standards. We relied primarily on data, which we did not verify, from the Forest Service and the Bureau of Business and Economic Research at the University of Montana. As requested, we did not obtain written agency comments on a draft of this report but have discussed its contents with Forest Service officials who agreed with the facts presented. Their views have been incorporated where appropriate.

We are sending copies of this report to the appropriate House and Senate Committees; interested Members of Congress; the Secretary of Agriculture; and the Director, Office of Management and Budget. Copies will also be made available to others on request.

This work was performed under the direction of John W. Harman, Director of Food and Agriculture Issues, who may be reached at (202) 275-5138. Other major contributors to this report are listed in appendix VI.

Sincerely yours,



J. Dexter Peach
Assistant Comptroller General

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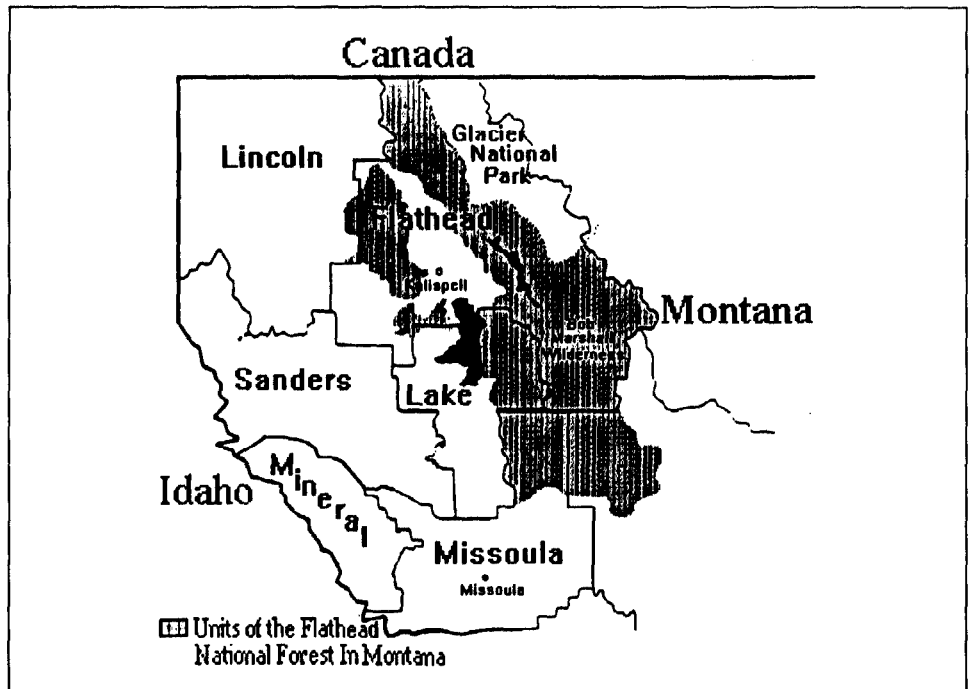
Abbreviations

ASQ allowable sales quantity
 GAO General Accounting Office
 MMBF million board feet

Flathead forest is composed of major wilderness, rare wildlife, and large recreation areas, and the forest is adjacent to Glacier National Park. Figure I.1 shows the various units of the Flathead National Forest and their environs, including nearby national park and wilderness areas and the six nearby counties—Lincoln, Flathead, Lake, Sanders, Mineral, and Missoula—where the bulk of Flathead timber is processed.

The timber industry, citing its importance to the northwestern Montana's economy and its comparatively high degree of dependence on national forest supplies, has argued that the entire Flathead ASQ ceiling should be offered for sale. However, environmental groups have argued that offering the entire ASQ ceiling amount would irreparably harm the Flathead's nationally significant nontimber resources.

Figure I.1: Flathead National Forest Units and Nearby Counties



Source: Forest Service.

A characteristic of the Flathead National Forest which cannot be seen in figure I.1 because of its scale, but which is a significant factor in timber harvesting there, is that the timber industry owns large portions of land located within the forest's outer boundaries in a "checkerboard" pattern of alternating one-square-mile sections. This pattern of intermingled ownership, also present in several other Region 1 forests, is the result of

obtained from Flathead Forest officials data on the volume of previously purchased but not yet harvested Flathead timber, planned future timber sales, and actions the officials have taken to help resolve problems with timber offerings. Finally, we talked with Flathead and Region 1 officials about prospects for future sales goal attainment. We did not verify the accuracy of Forest Service data, nor did we assess the reasonableness of the basic assumptions used in the mathematical model to establish the ASQ.

To determine the effect of sales shortfalls on the local timber industry, we reviewed studies of industry production and employment for recent years that were prepared by the Forest Service and by the Bureau of Business and Economic Research, University of Montana, an independent analysis center jointly funded by federal and state agencies and the forest products industry. We also interviewed the authors of these studies and officials from local timber firms. We did not verify the accuracy of data from the studies, nor did we analyze the relationship between Flathead timber offerings and the financial conditions of any specific firms in the local timber industry.

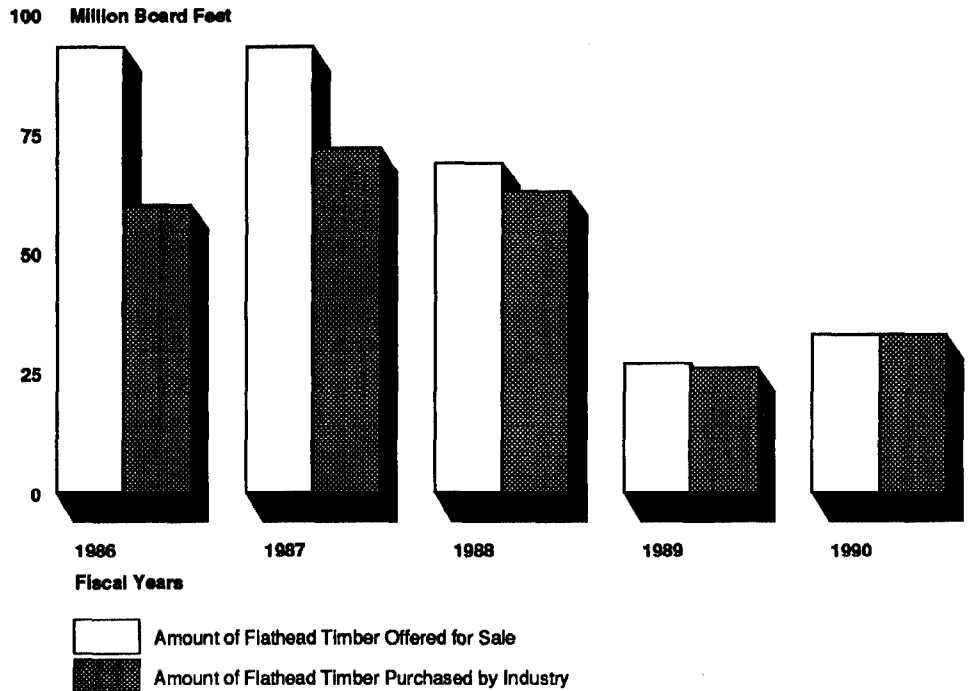
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**Appendix II
The Forest Service Has Not Met Flathead
Timber-Offering Goals in Recent Years**

**Industry Did Not
Purchase All Timber
Offered Until Last
Year**

Although the Forest Service did not offer as much Flathead timber as it had planned, as figure II.2 shows, industry did not purchase all of the timber that was offered until fiscal year 1990. Over the plan's first 4 years, the timber industry purchased only 221 MMBF of the 282 MMBF offered from the Flathead. According to Flathead officials, industry already had a large inventory of previously purchased Flathead timber that had not been cut. Thus, over all 5 years we examined, of the 315 MMBF offered for sale from the Flathead, industry purchased 254 MMBF and declined to purchase 61 MMBF.

Figure II.2: Amount of Flathead Timber Offered for Sale vs. Amount Purchased by Industry, Fiscal Years 1986-90



Source: Forest Service.

Many Previously Planned Sales Did Not Meet Stricter Interpretations of Environmental Standards

After the Flathead forest plan was finalized by the Forest Service's Region 1 headquarters, environmental organizations filed numerous appeals to the Chief of the Forest Service through the agency's administrative appeals process. These appeals alleged that the timber harvesting contemplated by the plan did not meet several requirements to adequately analyze the environmental effects of timber harvesting and that the standards proposed in the plan to ensure that these requirements were met were either inadequate or not observed strictly enough.

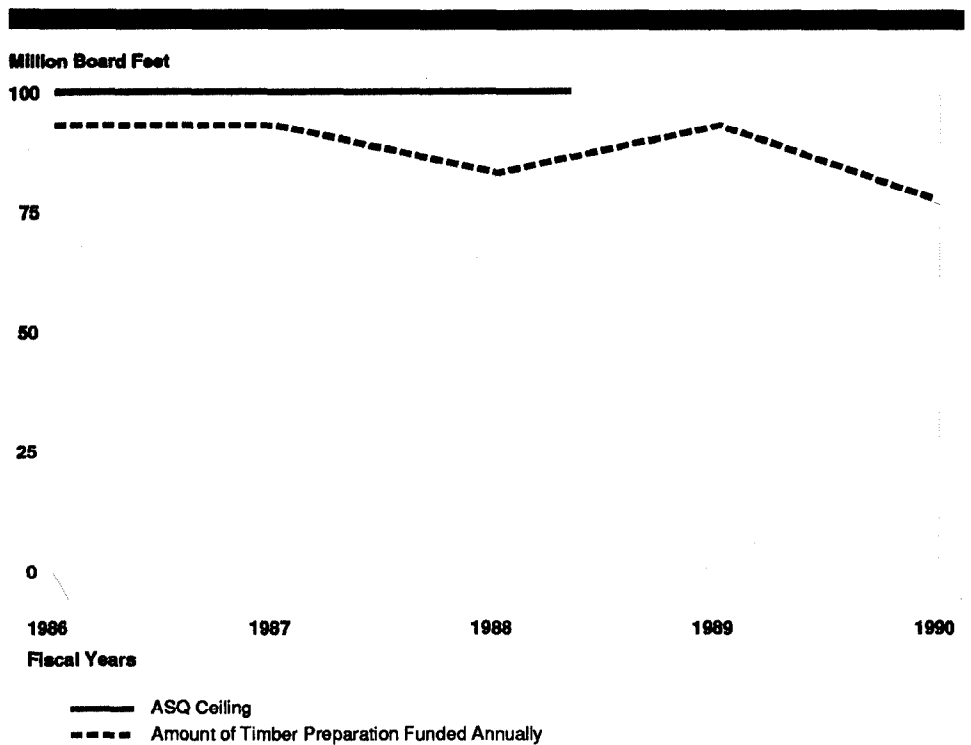
The Chief agreed with the appellants in several of these appeals of the Flathead plan. At the same time, in similar controversies over other forest plans, both the Chief and federal courts ruled that much more detailed analyses of major timber sales' environmental effects, as well as stricter interpretations of the standards to be used in these analyses, were required. Consequently, the Service had to re-examine several previously planned major Flathead sales using the stricter interpretations. Additionally, when re-examining proposed timber sales, the Flathead was required to consider the cumulative environmental effects of both the planned sale and of timber harvesting taking place on intermingled adjacent lands owned by the timber industry.

Performing these re-examinations delayed many of the sales and, upon application of stricter interpretation of standards, resulted in several other sales being substantially reduced in size or withdrawn entirely. To date, as shown in figure III.1, of the 404 MMBF of major planned timber sales listed in the forest plan to be sold during the plan's first 5 years, only 179 MMBF, or 44 percent, were offered and sold.¹

¹This 179 MMBF does not match the 315 MMBF discussed previously as having been offered over the 5-year period because it does not include the small sales referred to in appendix I. Small sales, estimated in the plan at 94 MMBF, were increased to 136 MMBF, but this was not enough to offset the greatly reduced major sales.

**Appendix III
The Flathead Timber-Offering Goal Was
Not Achievable**

**Figure III.2: Flathead ASQ Ceiling vs.
Amount of Timber Sale Preparation
Funded Annually, Fiscal Years 1986-90**



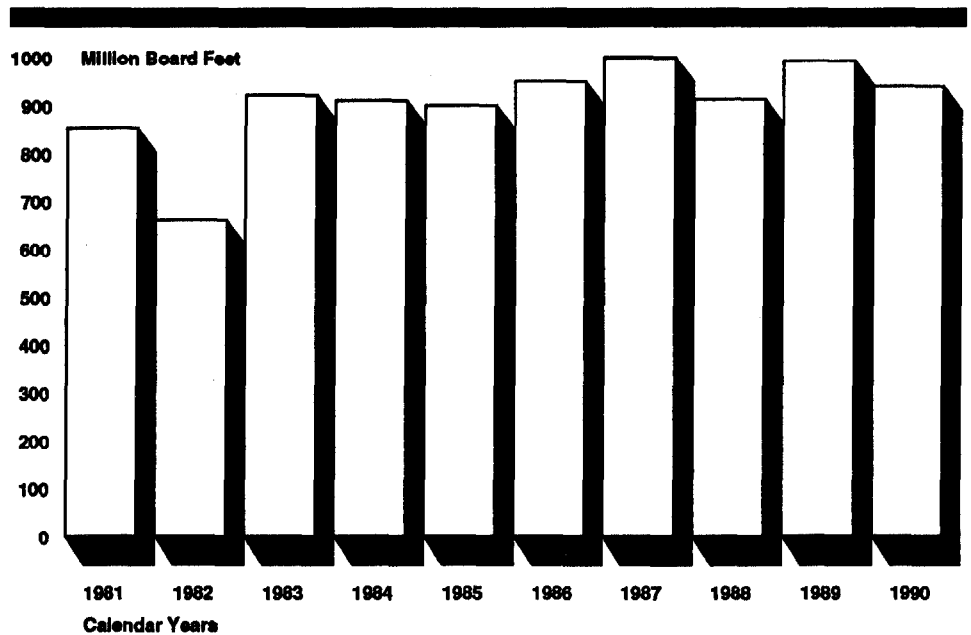
Source: Forest Service.

Annual funding was not sufficient primarily because of the considerable increase over the period in costs to prepare timber for offering. These costs rose because of the more detailed analyses that were required to ensure that environmental standards were met. Internal Forest Service staff studies indicated that between fiscal years 1987 and 1990, the time required to complete these more detailed analyses increased from about 8 months to nearly 18 months and that the cost to conduct environmental analyses increased from about \$10 to about \$32 per thousand board feet.

However, Forest Service funding for sales preparation is based on cost factors that are estimated 3 years in advance and are not updated before the funding is to be used. As a result, the increased costs for conducting the detailed environmental analyses were not considered in establishing the Flathead's annual funding over the past 3 years. Thus, even if all the sales scheduled for fiscal years 1986-90 had been able to successfully pass detailed environmental review, the forest still did not receive enough funds to prepare them all for offering.

**Appendix IV
Lack of Meeting Goals Has Not Yet
Significantly Affected the Local Timber
Industry, but Likely Will in the Future**

**Figure IV.1: Amount of Timber Processed
in Counties Around the Flathead National
Forest, 1981-90**



Timber Processed in Six Northwestern Montana Counties: Flathead, Lake, Lincoln, Mineral, Missoula, and Sanders.

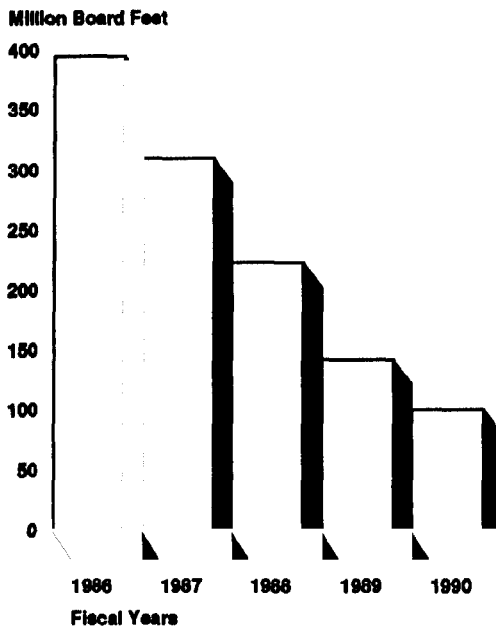
Source: Bureau of Business and Economic Research, University of Montana.

As shown in figure IV.2, the Bureau's data indicate that timber industry employment, while lower than levels reached in 1983 and 1984, was generally stable through 1990.

Industry Obtained Timber From Alternative Sources, but These Sources Are Declining

As shown in figure IV.3, since fiscal year 1986, one way the local timber industry has made up for reduced Flathead timber offerings is by drawing down its large inventory of previously purchased Flathead timber it had not yet cut.

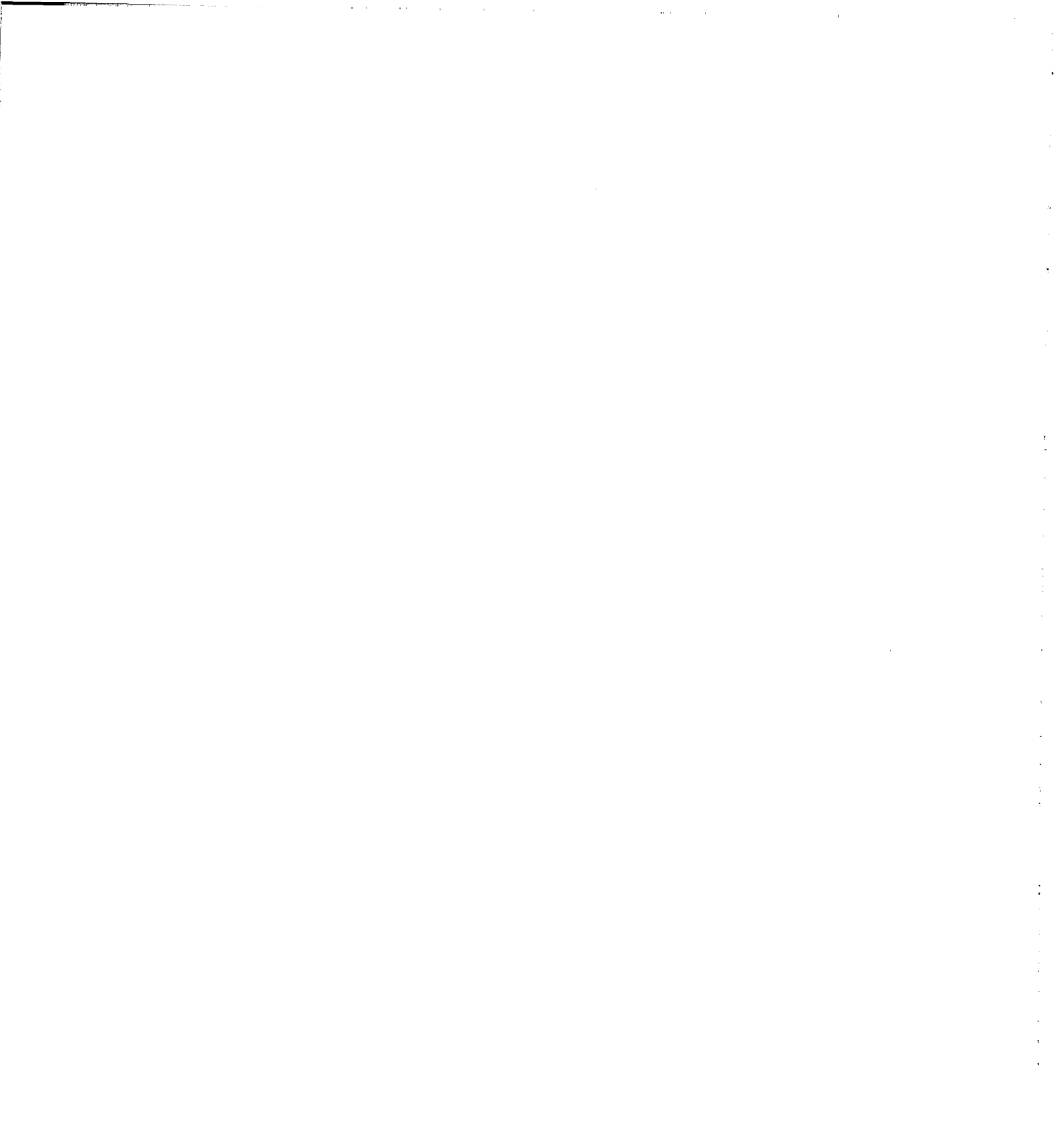
Figure IV.3: Industry Inventory of
Previously Purchased, but Not Yet Cut,
Flathead Timber, Fiscal Years 1986-90



Source: Forest Service.

As figure IV.3 indicates, however, the inventory of timber that industry had purchased but not yet cut has sharply declined. As of October 1, 1990, the inventory was 99 MMBF, equal to about a 1-year supply. While Flathead officials told us that as of March 31, 1991, the inventory has not declined further, due to recession, the Forest Service and industry view a 2- to 3-year inventory as being desirable to ensure continued timber availability during periods of rapidly increasing demand.

A second way industry has compensated for the Flathead timber offering shortfall has been to increase harvesting on its own lands. A 1990 Bureau of Business and Economic Research study notes that the



exceed the Allowable Sale Quantity (ASQ), which is defined in the plan as the maximum the forest can produce in perpetuity after giving balanced consideration to other multiple uses in accordance with environmental standards.

In 1986, the Forest Service adopted a forest plan for the Flathead National Forest in northwestern Montana. The Flathead is adjacent to Glacier National Park and contains major wilderness areas and rare wildlife species. The Flathead is also a major source of logs for the local timber industry, which is the largest nonfarm industry in the area.

The Flathead forest plan contained an ASQ for timber sale offerings of 1 billion board feet¹ for the decade from fiscal year 1986 to 1995, or an average of 100 million board feet (MMBF) annually. This ASQ is about the same as the rate of harvesting that occurred on the Flathead over the previous decade. The plan listed proposed sales totaling about 500 MMBF for the first 5 years that were subject to further, in-depth environmental analysis prior to being offered.

However, following the plan's adoption, the Forest Service experienced difficulty in offering many of these proposed sales because of concern over their effects on wildlife and water quality raised by environmental organizations. The local timber industry is concerned that, because of a lack of Flathead sales, some of its mills may be unable to obtain sufficient timber supplies and may be forced to close.

Amount That Timber Offerings Fell Short of Plan Goals

The volume of timber offered for sale from the Flathead National Forest for fiscal years 1986-90 (the first 5 years of its 10-year forest plan) fell short of the planned amount by about 185 MMBF. During these first 5 years, timber offered for sale totaled 315 MMBF, or about 63 percent of the forest's goal of about 500 MMBF for the period. The shortfall from the planned amount was most pronounced in the last 3 years.

However, the timber industry did not begin purchasing all timber offered for sale by the Flathead until fiscal year 1990, having declined to purchase 61 MMBF of the amount offered in the previous 4 years. (Appendix II contains further discussion of the extent of the shortfall.)

¹A board foot is a measure of wood volume equal to a board 1 foot long by 1 foot wide by 1 inch thick.

According to the officials, industry made up for the lack of Flathead timber offerings by increasing harvests both from its own lands and from its inventory of previously purchased Flathead forest timber that it had not yet cut. However, their analyses indicate that the current heavy reliance on these two alternative sources cannot be maintained much longer because both are being depleted. As a result, they believe that the Flathead's continued inability to meet its original, unattainable ASQ-based goal will contribute to production cutbacks and mill closures as early as this year, especially among smaller firms that own no private timberland. However, it is unclear how many mill closures may occur for other reasons, such as a decline in demand for wood products due to recession-related slowdowns in housing starts. (Appendix IV contains further discussion of the effects of the sales shortfall on the local timber industry.)

Prospects for Future Sales Goal Achievement

Flathead National Forest officials believe that, given current environmental standards, they will not be able to meet either this year's annual goal for timber offerings or ASQ-based goals established for the remaining 5 years of the plan. However, these officials have taken actions to improve the quality of, and time required to complete, timber sale environmental analyses. As a result, the volume of timber prepared for offering increased from 11 MMBF at the beginning of fiscal year 1990 to 46 MMBF at the beginning of fiscal year 1991.

Flathead officials are currently examining future timber availability on the basis of present environmental standards. Although they have been falling far short of the ASQ-based sales goal and prospects for achieving it in the future are not good, they have no immediate plans to revise the present 10-year forest plan ASQ. They told us they do not plan to do so because (1) it is defined as a maximum, rather than a mandatory level, and (2) current planning regulations require that such a revision be done by formally amending the forest plan, which involves a lengthy and expensive public hearing process. (Appendix V contains further discussion of future sales goal attainment.)

Conclusion

Given findings of numerous, detailed environmental analyses of timber sales over the last 5 years, it is apparent that the current Flathead National Forest ASQ and related sales goal of 100 MMBF per year are not achievable. Despite this, the Forest Service has no immediate plans to revise the ASQ. Revising the ASQ and related sales goal to better reflect limitations imposed by applicable environmental standards will reduce

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Introduction

Background

The Department of Agriculture's Forest Service manages 152 national forests across the country. The Forest Service is required to manage these forests for multiple uses, including timber sales, watershed protection, recreation, wildlife habitat, wilderness, mineral and gas extraction, and rangelands.

The National Forest Management Act of 1976 requires that the Forest Service develop comprehensive management plans, called forest plans, for each forest. These forest plans identify goals for each of the multiple forest uses for a 10- to 15-year period and establish standards and guidelines for accomplishing them. Forest plan goals for timber sales are derived after determining the maximum amount of timber that may be harvested over the plan's duration. This maximum amount is statutorily defined as the allowable sales quantity (ASQ). The ASQ is determined using a computerized mathematical model that assesses the forest's biological potential to produce timber and also considers the additional statutory requirements that (1) timber be removed at a rate no higher than can be sustained in perpetuity and (2) the other forest uses, including various environmental requirements, be given sufficiently balanced consideration.

The ASQ is defined as a maximum or ceiling level for sales, not a mandatory level to be produced, as actual sales are subject to further limitations. Based on the ASQ ceiling, a list of sales planned to be offered over the first 5 years is included in the forest plan. However, accomplishing this 5-year sales goal depends on whether (1) the proposed sales meet environmental standards as determined in subsequent detailed environmental analysis and (2) sufficient funds are provided annually to prepare and administer the proposed sales.

The forest products industry is concerned that Forest Service timber-offering goals be met because it purchases about 13 percent of all its timber supplies from national forests. Environmental groups, in contrast, believe that national forest timber goals are generally too high and do not give sufficient consideration to recreation, wildlife, and other forest uses.

The Flathead National Forest, in northwestern Montana, is administered by the Forest Service's Region 1, which encompasses Montana and Northern Idaho and is headquartered in Missoula, Montana. The timber industry is northwestern Montana's largest nonfarm industry, and it obtains about 44 percent of its supplies from the Flathead National Forest and other nearby public timberlands. About 71 percent of the

19th century land grants to railroads. Harvesting on these intermingled industry lands generally has greater effects on Flathead environmental conditions such as water quality and wildlife than if the lands were more geographically separated from the national forest. These effects can limit the Forest Service's ability to undertake harvesting on its adjacent lands.

In 1986 the Forest Service adopted a forest plan for the Flathead National Forest. The plan established an ASQ ceiling on timber sales for the ensuing 10 years (i.e., through fiscal year 1995) of 1 billion board feet, or a maximum average rate of 100 MMBF per year. The plan also (1) allowed timber offerings to vary from 70 to 130 MMBF for any particular year during the period and (2) included a list of proposed sales over the first 5 years totaling 498 MMBF, for an average of 99.6 MMBF per year (or virtually at the ASQ ceiling). This proposed timber-offering goal consisted of 68 specific major sales totaling 404 MMBF, with an additional 94 MMBF in unspecified small sales. The plan presumed full Forest Service funding to prepare and administer these sales.

Objectives, Scope, and Methodology

On January 29, 1990, Senator Max Baucus requested that we obtain information regarding an apparent shortfall of timber offerings from the Flathead National Forest below levels anticipated based on the ASQ level established in its forest plan. We agreed to answer the following questions:

- By how much did timber sale offerings from the Flathead National Forest fall short of the planned goal for fiscal years 1986-90?
- Why were Flathead timber sale offerings less than the goal?
- How has not meeting the goal for timber sale offerings affected the timber industry?
- What are the prospects for meeting future sales goals?

We examined how the ASQ for fiscal years 1986-90 was established, including the computerized mathematical model used to generate it. To identify the extent to which sales did not meet the ASQ ceiling, we obtained and analyzed records on the history and status of planned Flathead timber sales listed in the forest plan for fiscal years 1986 through 1990. We interviewed staff from the Flathead's four Ranger District offices, as well as officials from the Flathead National Forest and Forest Service Region 1, to determine the status of planned sales and identify those that were delayed, reduced in size, or withdrawn. We also

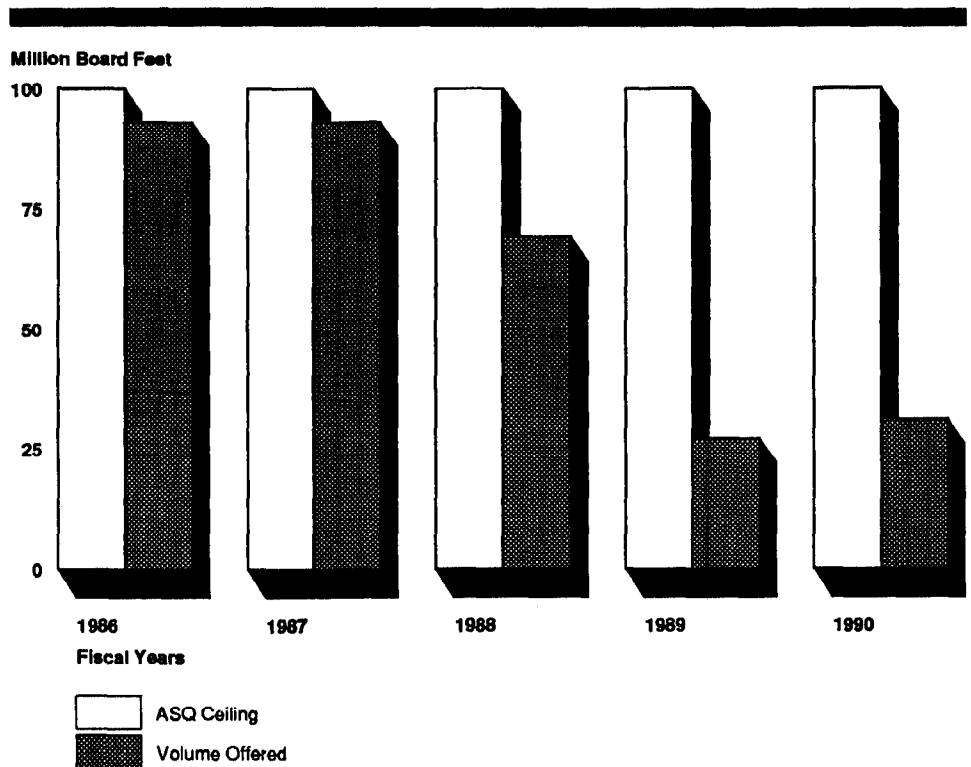
The Forest Service Has Not Met Flathead Timber-Offering Goals in Recent Years

Flathead National Forest timber sale offerings for the 5-year period from 1986 to 1990 were 63 percent of the forest's ASQ ceiling. However, industry did not purchase all the timber offered from the Flathead.

Timber Offerings Have Been Much Lower for the Last 3 Years

As shown in figure II.1, for the first 2 years of the plan (fiscal years 1986 and 1987), Flathead timber offerings were close to the annual ASQ ceiling of 100 MMBF. However, for the last 3 years (fiscal years 1988-90), timber offerings have been significantly below this ceiling. As a result, total timber offerings over the first 5 years were 315 MMBF. This amount was 185 MMBF less than the 500 MMBF ASQ ceiling (or 183 MMBF short of the planned offering of 498 MMBF).

Figure II.1: Flathead ASQ Ceiling vs. Amount of Timber Offered for Sale, Fiscal Years 1986-90



Source: Forest Service.

The Flathead Timber-Offering Goal Was Not Achievable

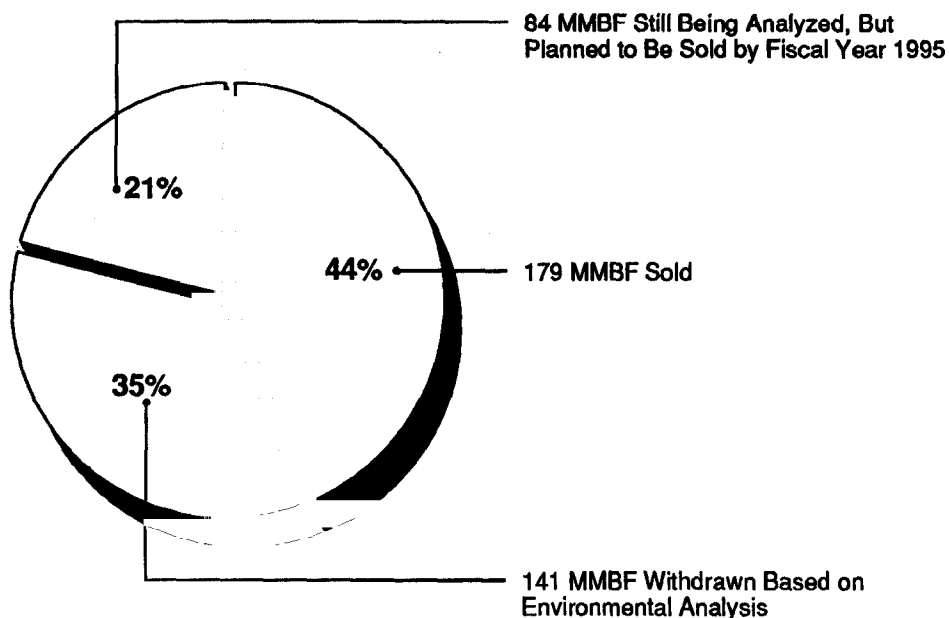
The Forest Service did not meet its Flathead timber offering goal primarily because the ASQ ceiling was based on a computerized mathematical model calculation that did not adequately identify environmental effects of timber sales. Also, standards for meeting environmental requirements were interpreted more strictly after the ASQ was adopted, such that several previously planned sales could no longer meet them. However, even had these sales met all environmental standards, the Flathead did not receive enough funding to prepare them.

The Forest Service Did Not Fully Identify Environmental Effects of Timber Harvesting When It Established the Timber Goal

The computerized mathematical model used to develop the Flathead forest ASQ ceiling was modified by adding a "floor constraint" factor. This floor constraint factor did not allow an ASQ ceiling of less than 100 MMBF per year and was added to ensure that the timber goal was consistent with harvest levels of the previous few years in order to avoid economic displacement in the local timber industry. In order for the model to meet this desired floor constraint level of 100 MMBF, it was necessary to modify the plan's proposed treatment of certain considerations related to locations and methods of timber harvesting. However, the environmental effects of these modifications—on grizzly bear habitat, old-growth timber ecosystems, and water quality—were not identified because the Forest Service had insufficient data to do so. The Service also did not have data on environmental effects of timber harvesting taking place on intermingled "checkerboard" sections of land owned by the timber industry. Instead, standards for meeting environmental requirements with regard to these considerations were treated as guidelines rather than limits and were assumed to be satisfied. Thus, imposing the floor constraint factor made the model's calculation fail to fully consider all environmental effects of timber harvesting.

At our request, Forest Service staff recalculated the ASQ ceiling after removing modifications related to the 100 MMBF floor constraint factor. The result was a 777 MMBF ASQ ceiling for the 10-year period, or a maximum average annual ceiling of about 78 MMBF. Thus, if the floor constraint factor had not been added to the computer model, the ASQ ceiling on offerings for the first 5 years of the forest plan would have been about 390 MMBF instead of 500 MMBF. Had the timber goal been based on this lower ASQ ceiling, the 315 MMBF offered by the Flathead over the 5 years would then have represented a shortfall of 75 MMBF rather than about 185 MMBF.

Figure III.1: Outcomes of Major Flathead
Timber Sales Planned for Fiscal Years
1986-90



Source: Forest Service.

Figure III.1 also shows that, as a result of re-examining planned sales, the Forest Service has withdrawn entirely sales volume totaling 141 MMBF, or more than one-third of the volume of the major sales that were scheduled to be offered during the first 5 years of the forest plan.

The Forest Service expects that the remaining 84 MMBF of planned major sales will eventually meet environmental standards and be offered during the second 5 years of the plan. However, until these delayed sales are resolved, it cannot be determined how much the stricter interpretations of standards by themselves, had they also been factored into the computer model originally, would have further reduced the Flathead's calculation of the ASQ ceiling in its forest plan.

The Forest Service Did Not Provide the Flathead With Enough Funding to Meet Its Goal

As shown in figure III.2, the Forest Service did not provide the Flathead with enough funding to prepare sales at the ASQ ceiling during fiscal years 1986-90. The forest received annual funding to prepare offerings of 443 MMBF, or 57 MMBF less than the 500 MMBF ASQ ceiling.

Lack of Meeting Goals Has Not Yet Significantly Affected the Local Timber Industry, but Likely Will in the Future

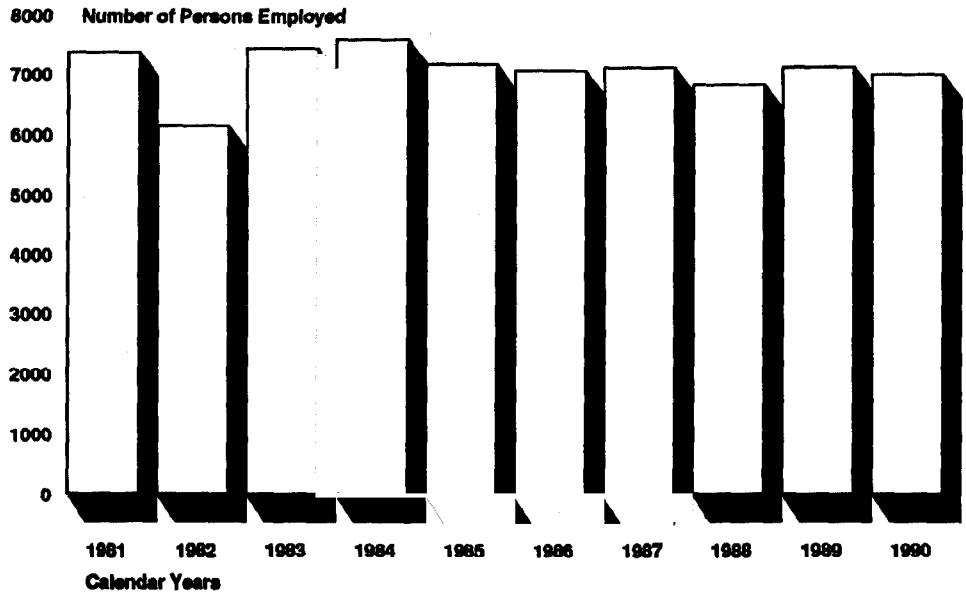
Forest Service and industry officials and academic experts said that local timber industry production and employment have not yet been significantly affected by lower-than-planned Flathead timber offerings because alternative sources of uncut timber have been available. However, they said that these alternative sources are dwindling. As a result, they believe that, if the Forest Service continues to be unable to meet original Flathead timber goals, this will contribute to mill cutbacks and closures in the near future, particularly among smaller operators.

Timber Production and Employment Have Not Yet Been Significantly Affected

Through calendar year 1990, timber industry production in the six-county area where the bulk of Flathead timber is processed remained near the all-time high reached in 1987 despite the Forest Service offering less timber for sale than planned. According to the Director, Bureau of Business and Economic Research, University of Montana, figure IV.1 indicates that local timber production has generally increased since 1981. Although this general increase was interrupted by the 1982 recession, an industry strike in 1988, and the beginning of another recession in late 1990, production remained at nearly a billion board feet, or still close to the all-time record reached in 1987. However, the director said preliminary data for the first quarter of 1991 indicates a further, larger drop took place, due mainly to deepening recession.

**Appendix IV
Lack of Meeting Goals Has Not Yet
Significantly Affected the Local Timber
Industry, but Likely Will in the Future**

**Figure IV.2: Timber Industry Employment
in Counties Around the Flathead National
Forest, 1981-90**



Timber Industry Employment in Six Northwestern Montana Counties: Flathead, Lake, Lincoln, Mineral, Missoula, and Sanders.

Source: Bureau of Business and Economic Research, University of Montana.

According to the Bureau's Director, the decline in employment between 1984 and 1990 was largely due to increased automation in some mills, a long-term trend that is expected to continue in the future. However, he said preliminary data for the first quarter of 1991 indicate sharper declines in local timber employment, the bulk of which resulted from the closure of two mills. Since the owners of these mills also owned substantial timberlands, these closures were due to a recession-related decline in demand for their products rather than to a lack of Flathead timber sale offerings.

However, Forest Service officials and the director noted that reduced Flathead offerings have caused increases in the prices that mills pay for logs, while the recession has meant declines in the prices they are receiving for their finished products. Thus, the shortfall in Flathead offerings has had an indirect effect of worsening the impact of recession on those wood product firms that must purchase logs to process. Both cited this indirect effect as a factor in the recent closure of two much smaller local mills that did not own timberlands.

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industry has been harvesting timber from its own lands faster than it is being replaced through growth of remaining stands and reforestation. This high rate of harvesting reflects continuation of a trend over the last several years, previously identified in both 1981 and 1987 in analyses published by the Forest Service's Intermountain Research Station. Consequently, according to the Bureau and Forest Service officials, the rate of harvesting from industry lands in northwestern Montana, which in recent years has exceeded 200 MMBF per year, cannot be sustained beyond the 1990s. Moreover, this anticipated decline in future harvesting from industry lands is expected to be larger than the recent reduction in offerings from the Flathead.

Forest Service, Bureau, and industry officials said that the impending decline of these two alternative timber sources means that continued inability to meet the original Flathead timber goal will contribute to reduced industry production and employment beginning this year and into the foreseeable future. They said that this will likely mean local mill cutbacks or closures, especially among smaller timber processors who do not own their own timberlands and are thus more dependent on Flathead timber offerings.

Despite Efforts to Increase Timber Sale Preparation, Meeting Future Goals Is Still Viewed as Unlikely

The Forest Service has undertaken efforts to improve the quality and time required to complete its environmental analyses and has prepared more timber sales for offering this year than it did last year. Nonetheless, given existing environmental requirements and standards, the Service does not believe it can meet either this year's timber goal or, between now and fiscal year 1995, the ASQ ceiling rate of 78 MMBF per year which the model projected after the floor constraint was removed.

The Amount of Flathead Timber Sales Prepared for Offering Increased This Year

Forest Service officials told us that they have developed better guidance for staff to conduct environmental analyses in accordance with federal court and the Chief's decisions. In particular, they noted development and testing of a computer-aided system to ensure better identification of the various standards that apply to a given sale area. They said that, as a result of improved staff understanding of requirements, the number of previously prepared sales still awaiting re-examination or that do not meet standards has been reduced. Consequently, the volume of offerings that completed the environmental analysis stage of preparation increased from 11 MMBF on October 1, 1989, to 46 MMBF on October 1, 1990.

Forest Service Officials View Meeting This Year's Goal, or the Original 10-Year ASQ Ceiling, as Unlikely

In July 1990, on the basis of available funding and the status of timber sale preparation, Flathead forest officials proposed a fiscal year 1991 timber-offering goal of 84 MMBF. In November 1990, as a result of annual congressional appropriations, Region 1 directed the forest to raise this goal to 87 MMBF. Flathead officials told us that their originally proposed goal of 84 MMBF was probably itself unrealistic in that it assumed that there would be no problems identified in any completed or in-process environmental analyses that might cause delays or reductions in planned sales. Thus, they believe that it is unlikely they will meet even their own proposed fiscal year 1991 goal of 84 MMBF.

During the first 5 years of the Flathead's forest plan, the Forest Service offered sales of 315 MMBF toward the Flathead's original 10-year ASQ goal of 1 billion board feet. Thus, in order to meet its 10-year goal, the Forest Service would have to offer 685 MMBF of Flathead timber, or an average of 137 MMBF per year, over the remaining 5 years of the plan. Forest Service officials told us that, given current environmental requirements and standards, neither this original goal nor the original average annual ASQ rate of 100 MMBF can be met. Moreover, they said it is unlikely that they will be able to offer the average of 78 MMBF per

year which the computerized mathematical model—with the floor constraint factor removed—predicted. They said that even that figure did not take into account stricter interpretations of environmental standards imposed by federal court and the Chief's decisions made subsequent to the forest plan's being finalized in 1986.

Despite Inability to Meet Timber Goals, No Revision of the ASQ Ceiling Is Planned Yet

Flathead officials are currently re-examining future timber availability as a part of a required summary review of accomplishments under the first 5 years of the forest plan. They anticipate completing this examination in the next few months and completing the summary review next year. However, Forest Service officials told us that, despite the inability to achieve the existing timber goal, they have not yet decided to revise the current ASQ ceiling based on the findings of this review. They have not yet planned to do so because the ASQ is defined as a maximum and not a mandatory amount, and under current Forest Service planning regulations, revising the ASQ would involve a lengthy and expensive public hearing process to formally amend the forest plan that would drain staff resources needed to prepare more timber offerings.

However, Forest Service officials told us that changes have been proposed in the current planning regulations that would allow an ASQ revision without formally amending the forest plan. They said that if these changes are adopted, then they might revise the ASQ within the following year or two as a part of implementing the changed planning regulations. Should the changes in planning regulations not be adopted, they will begin reviewing the ASQ in 2 or 3 years as a part of the required 10-year revision of the entire forest plan.

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