

---

REPORT BY THE  
**Comptroller General**  
OF THE UNITED STATES

---

9845

## **Allegations Regarding The Small Business Set-Aside Program For Federal Timber Sales**

The small business set-aside program for sales of Federal timber is administered jointly by the Small Business Administration and--primarily--the U.S. Forest Service and Bureau of Land Management.

GAO found that:

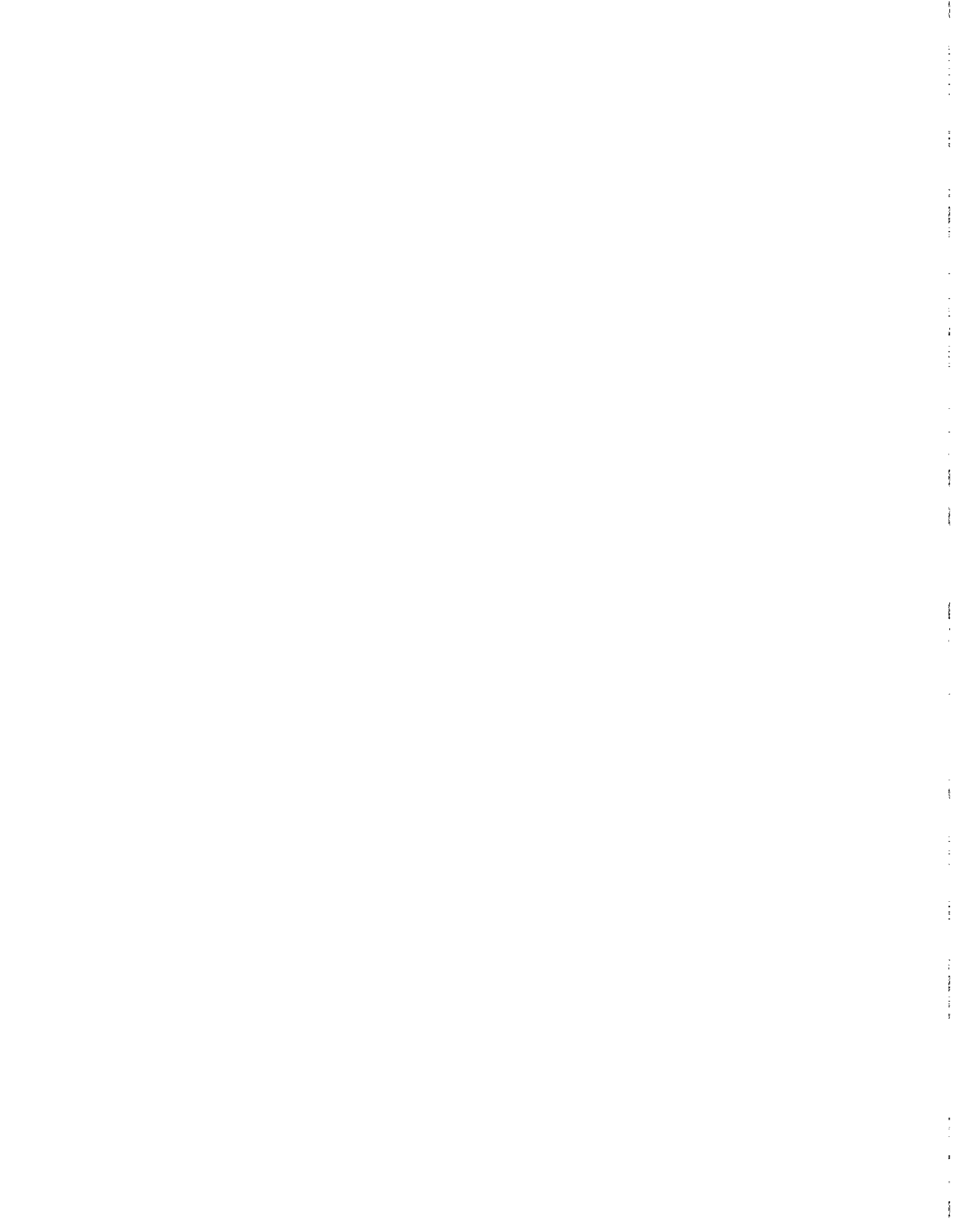
- There is no record that SBA considered the factors required by its regulations in setting the timber industry size standard.
- Companies with fewer than 100 employees have benefited less from the set-aside program than have companies with more than 100 employees.
- The program tends to maintain a static allocation of timber between small and large firms.
- Set-aside timber sales have been of higher quality yet have returned less revenue to the U.S. Treasury than open sales.
- The program has had little adverse effect on some communities dependent upon lumber mills owned by large companies.



504986

109123

GED-79-8  
APRIL 5, 1979





COMPTROLLER GENERAL OF THE UNITED STATES  
WASHINGTON, D.C. 20548

B-125053

The Honorable Malcolm Wallop, United States Senate  
The Honorable Pete V. Domenici, United States Senate  
The Honorable Paul Laxalt, United States Senate  
The Honorable Robert B. Duncan, House of Representatives  
The Honorable Al Ullman, House of Representatives

As you requested, we reviewed various allegations concerning the small business set-aside program for sales of Federal timber. This report summarizes our findings and conclusions on each allegation; the appendixes discuss each allegation in detail.

We reviewed the following areas to determine whether the allegations were valid:

- The Small Business Administration's size standard for determining eligibility to participate in the set-aside program.
- Procedures for calculating the small business share of Federal timber sales and for determining the specific sales which are reserved for eligible bidders.
- Revenues received from set-aside sales compared with those received from open sales.
- The set-aside program's economic impact on communities where ineligible mills are dependent on Federal timber sales.
- Deviations from normal and expected business practices which may be caused by the set-aside program.

The Small Business Administration, in response to 1958 amendments to the Small Business Act, developed and sponsored a timber sales set-aside program. Under the program, certain timber sales are offered preferentially to designated small business purchasers, thereby insuring small firms will be able to purchase some portion of the Federal timber sold. The program's primary objective is to give the small business community an opportunity to acquire its fair proportion of Federal contracts.

The set-aside program is administered jointly by the Small Business Administration and the various Federal agencies that sell Federal timber. The Small Business Administration determines whether firms are eligible to participate in the program, monitors how the program operates in timber-selling areas, and generally advocates and assists the interests of the small business community. The U.S. Forest Service and the Bureau of Land Management are the primary agencies responsible for actually selling the timber. Agreements between the Small Business Administration and the Forest Service and Bureau of Land Management and agency directives govern day-to-day administration.

↓  
SIZE STANDARD FOR DETERMINING  
PROGRAM ELIGIBILITY

We reviewed two allegations concerning the size standard that the Small Business Administration used to determine eligibility to participate in the set-aside program. One allegation is that the Small Business Administration set the current timber industry size standard without studying industry conditions. Implied in this allegation is that the current size standard has no factual basis and is not justified.

Small Business Administration regulations specify several factors to be considered in formulating industry size standards. However, Small Business Administration files contained no record that these factors were considered when the agency increased the size standard for the timber industry in 1964 from 250 employees to 500 employees. Furthermore, current Small Business Administration officials, as well as a former official who was familiar with size standards at that time, were unaware of any study made to justify the increase.

The Small Business Administration reviewed the 500-employee size standard in 1966 and again in 1975. On both occasions, the agency decided to retain the standard. The 1966 review was made to determine whether the increase to 500 employees had adversely affected firms with less than 250 employees or improved the competitive position of firms with 250 to 500 employees. The report on this review recommended retaining the 500-employee standard, but it stated that the agency could not determine whether an increased size standard improved the competitive position of firms with 250 to 500 employees. The report cautioned the Small Business Administration to make sure that the size standard did not overburden very small bidders.

In 1975 the Small Business Administration held public hearings on whether the 500-employee criterion should be raised, lowered, or retained. Following the hearings, a notice was published in the Federal Register announcing that on the basis of evidence submitted during the hearings, the 500-employee standard would be retained.

In May 1977 the Department of Agriculture's Assistant Secretary for Conservation, Research, and Education wrote the Administrator of the Small Business Administration requesting another review of the timber industry size standard. The Assistant Secretary was concerned that under the set-aside program, quite a large segment of the small business community was not being provided access to a fair proportion of national forest timber sales. He stated that the larger firms qualifying as small businesses under the present 500-employee size standard effectively barred firms with fewer than 200 employees from participating. He believed a joint review of the size standard for participation in the timber set-aside program was desirable.

In June 1977 the Director of the Small Business Administration's Size Standards Division responded to the Assistant Secretary and dismissed the need for a joint review. The Director stated that the issue was very carefully considered at the 1975 public hearings on the size standard, a majority of those attending the hearings had favored retaining the 500-employee standard, and that the Small Business Administration had decided to retain this standard.

The other allegation we examined is that the current timber industry size standard of 500 employees is so inclusive that firms with 100-500 employees receive a disproportionately large share of benefits compared to those firms with fewer than 100 employees. Many smaller size firms in the timber industry are engaged in logging, and they are alleged to receive few, if any, benefits from the set-aside program.

Our analysis confirmed that companies with less than 100 employees, and especially those with 25 or fewer, have used the set-aside program less than companies with more than 100 employees. Specifically, the analysis showed the larger companies were able to obtain a greater proportion of their public timber purchases through set-aside sales than the smaller firms. This happened because the smaller size companies did not compete as successfully for set-aside sales as they did for open sales. We also found that logging firms, in comparison to firms that mill timber, had a particularly difficult time competing for set-aside sales. Although firms with less than 100 employees used the set-aside program less than firms with over 100 employees, an earlier study suggested that the smaller firms may need the set-aside program most because they are the firms that most often fail.

Details on the allegations pertaining to the timber industry size standard are discussed in appendix II.

↓  
PROCEDURES FOR CALCULATING  
THE SMALL BUSINESS SHARE

We reviewed two allegations concerning procedures for calculating the small business share of Federal timber sales and for determining sales to be offered to small firms. The first allegation concerns the determination of the initial small business shares and entails the claim that in some instances the initial share of timber sales to be offered to small businesses did not accurately reflect the demand for timber by the large and small firms.

We found that controversy regarding determination of the initial small business share has focused on two marketing areas--the Carson National Forest in New Mexico and the Routt National Forest in Colorado. We examined the situation at

both forests and found the small business shares were initially established as compromises between various Forest Service and Small Business Administration proposals. The procedures for calculating the small business share allow the two agencies to consider other factors and unusual circumstances, such as past long-term sales and large salvage sales, when determining a small business share. Therefore, we conclude the allegation is invalid, as the compromise shares were determined by such procedures.

The second allegation is that the procedures used for the 6-month sales analysis and the 5-year recomputation of the small business share maintain a static allocation of timber between large and small firms irrespective of changes in industry structure. Our analysis indicates a straightforward true or false conclusion cannot be made about the allegation as the shares either increased or decreased for many market areas at the recomputation. However, the program, as implemented, does tend to maintain a static allocation as we found the small business shares did remain static in 93 of the 152 market areas.

The primary reason the small business share tends to remain static is that while the 5-year recomputation is intended to reflect historical purchases by the two size groups, the purchase history available at the recomputation will almost always indicate small businesses have purchased their share or more. The small business share can and does decline in some instances. However, the circumstances where the small business share is allowed to change in response to changes in industry structure are limited.

During our review, we analyzed several market areas where major changes in industry structure had occurred. One such area is the Rogue River National Forest located near Medford, Oregon. In the course of our work on the Rogue River, we observed certain consequences of the program's tendency to maintain a static allocation of timber which may be contrary to the best interests of the program. The most striking effect of maintaining the same allocation for the Rogue River is the wide divergence in revenues received between set-aside sales and open sales. We found that set-aside sales, although of higher quality, returned less revenue than the open sales. Although overall demand for timber is strong in the area, the volume of timber allocated to the exclusive bidding of small firms is far greater than

the relative demand for timber by this subgroup would be in the absence of the set-aside program. Consequently, local small firms have bid much less aggressively among themselves for set-aside sales.

We found similar situations in other market areas where the small business share has not readily adjusted to reflect changes in the local timber industry. It is not clear whether these results were intended by the Congress when the set-aside program was authorized. If the results as disclosed by our review were not intended, we believe the procedures for recomputing the small business share should be revised to reflect promptly the structural changes among timber purchasers. A more flexible approach would provide a more timely reflection of structural changes in the local industry and would still maintain the integrity of the set-aside program's protection of small purchasers.

Details on the allegations pertaining to the small business share are discussed in appendix III.

↓ REVENUES RECEIVED FROM  
SET-ASIDE AND OPEN SALES

The allegation we reviewed was that set-aside timber sales have been of higher quality yet have returned less revenue to the U. S. Treasury than open sales. (Quality of sale is characterized by such factors as sale size, difficulty of logging the timber, volume and quality of timber to be harvested, and distance timber is hauled for processing.) To compare the quality and revenues returned from set-aside and open sales, we used a methodology developed by the Forest Service. Quality of timber sales was defined in terms of 11 sale characteristics which are quantified on Forest Service timber sale reports. Sale characteristics of the open and set-aside sales were tested using statistical techniques to determine if the characteristics (quality) of the sales were different. Then, taking quality differences into account, revenue differences were tested again using statistical techniques.



We found set-aside sales were numerous enough at 58 of the 132 national forests included in our review and at all 5 of the Bureau of Land Management districts to make meaningful comparisons. At 50 of the 58 national forests tested, we found set-aside sales were of higher quality than open sales. At 48 national forests, set-aside sales returned less revenues than open sales. At three of the five Bureau of Land Management districts, we found set-aside sales were larger and considered more desirable than open sales yet returned less revenues than open sales.

Details on the allegations involving revenues on set-aside sales are discussed in appendix IV.

SET-ASIDE PROGRAM'S IMPACT  
ON DEPENDENT COMMUNITIES

We examined the allegation that the set-aside program adversely affects certain communities dependent upon lumber mills owned by large companies. This situation allegedly occurs where a mill is ineligible for the set-aside program and dependent upon Federal timber, but the amount of timber available to it in open sales is insufficient to keep the mill operating at its normal capacity. The mill is then forced to reduce its operations and employment or close down completely. When these mills are the major or only employer in a community, that community is directly affected.

Our examination included two communities which were alleged to be adversely affected by the set-aside program. The Public Timber Purchasers Group, an association of large forest products companies, identified Tillamook County, Oregon, as a community suffering economic setbacks because of the set-aside program. The alleged adverse impacts of the set-aside program on Tillamook County were also highlighted in articles in the trade magazine "Forest Industries" and the local Tillamook newspaper. The other community we examined was Johnsondale, California. The late Congressman William M. Ketchum identified Johnsondale as a community injured by the set-aside program and asked us to review the situation in Johnsondale.

Our analysis showed that no significant change has occurred between the timber purchases of companies located in Tillamook County compared to those located outside. We also found that Tillamook County's forest industries employment has declined steadily since 1960, but most of the decline occurred before the small business share procedures were inaugurated in 1971. Most of the decline since 1971 is attributable to the demise of the Oregon-Washington Plywood Company in 1974. We concluded the set-aside program has not damaged Tillamook County's economy by increasing the amount of Federal timber taken out of the county nor has the set-aside program contributed materially to the county's declining forest industries employment.

We found the viability of Johnsondale is in question because the mill located there cannot obtain an adequate log supply. This inability, however, cannot be blamed solely on the set-aside program. The Johnsondale mill's inability to compete against other mills and the reduced allowable cut of the Sequoia National Forest are the principal reasons the Johnsondale mill cannot obtain an adequate log supply.

Details on the allegations of the set-aside program's impact on dependent communities is discussed in appendix V.

↓ SET-ASIDE PROGRAM CAUSES DEVIATIONS  
FROM NORMAL BUSINESS PRACTICES

We investigated three specific allegations regarding this issue. The first is that some small owners who wish to sell their businesses have difficulty obtaining maximum value because of the allocation of the timber supply by the set-aside program. We found this allegation to be true.

Another allegation is that the 500-employee size standard is a barrier to the economic growth of small firms. We found only a few instances where the size standard was viewed as restricting a firm's possibilities for further growth, and we noted the current size standard allows eligible firms to grow to a significant economic size and still remain eligible for set-aside assistance.

A third allegation we examined involves claims that some firms, which are close to the current employee ceiling, are circumventing the intent of the program

through manipulations designed to maintain or gain eligibility for set-aside sales. We found that in a few instances firms which are close to the 500-employee ceiling do make special efforts, such as contracting for portions of their work to keep employment below 500 and so remain eligible to bid for set-aside sales. We also found seven firms which have deliberately divested portions of their operations or have restructured corporate ownership patterns specifically to become eligible for the set-aside program.

Details on the allegations that the set-aside program causes deviations from normal business practices are discussed in appendix VI.

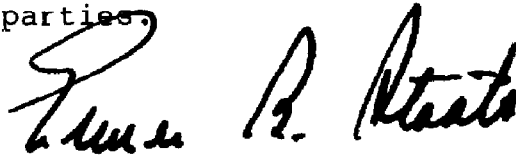
- - - -

To expedite issuance of the report, we did not ask for written comments from the agencies involved. However, we did discuss the report with agency officials responsible for administering the set-aside program. Forest Service and Bureau of Land Management officials agreed overall with the facts contained in the report, and we considered their comments and suggestions in preparing the final report. Forest Service officials said they have long felt that the timber industry size standard discriminates against very small firms.

We met with Small Business Administration officials, who disagreed with the report and said our findings were misleading and contained errors. They asked for more time to respond to our report in detail. Subsequently, we met with these officials again and they gave us written comments. The agency's major concerns were included in a letter to us from its Acting Associate Administrator for Procurement Assistance. (See app. VIII.) Our evaluation of each major Small Business Administration concern about our report is contained in appendix VII.

B-125053

Other Members of Congress interested in the timber set-aside program have requested copies of the report. We will contact you soon concerning release of the report to them and other interested parties.

A handwritten signature in black ink, appearing to read "Thomas R. Staats". The signature is written in a cursive style with a large initial 'T'.

Comptroller General  
of the United States

C o n t e n t s

APPENDIX		<u>Page</u>
I	SET-ASIDE PROGRAM BACKGROUND	1
	Purpose and administration of the program	1
	Eligibility for the program	3
	Administration of the program	4
	Prior GAO findings on Small Business Administration size standards	6
	Scope of review	6
II	SBA'S SIZE STANDARD FOR DETERMINING PROGRAM ELIGIBILITY	8
	Criteria for determining program eligibility	8
	Disproportionate benefits within the current size standard	14
III	PROCEDURES FOR CALCULATING THE SMALL BUSINESS SHARE	28
	Initial base average share incorrectly determined	29
	Propensity to maintain a static allocation	34
IV	REVENUES RECEIVED FROM SET-ASIDE AND OPEN SALES	43
	Quality differences between open and set-aside sales	44
	Revenue differences between open and set-aside sales	53
V	SET-ASIDE PROGRAM'S IMPACT ON DEPENDENT COMMUNITIES	61
	Tillamook County, Oregon	61
	Johnsondale, California	69
VI	SET-ASIDE PROGRAM CAUSES DEVIATIONS FROM NORMAL BUSINESS PRACTICES	76
	Set-aside program penalizes owners who wish to sell small businesses	76
	The size standard as a barrier to normal economic growth	78
	Maintaining set-aside eligibility	79

APPENDIX		<u>Page</u>
VII	AGENCY COMMENTS AND OUR EVALUATION	81
VIII	LETTER DATED FEBRUARY 2, 1979, FROM SBA'S ACTING ASSOCIATE ADMINISTRATOR FOR PROCUREMENT ASSISTANCE	85
IX	STATISTICAL DATA	88

ABBREVIATIONS

BLM	Bureau of Land Management
GAO	General Accounting Office
SBA	Small Business Administration
USDA	Department of Agriculture

SET-ASIDE PROGRAM BACKGROUND

The timber set-aside program has evolved from a declared national policy to assist and promote small businesses in order to preserve free competitive enterprise and maintain and strengthen the overall economy of the Nation. This policy was asserted in the Small Business Act, as amended, (15 U.S.C. 631) which established the Small Business Administration (SBA) as the Federal agency charged with promoting the interests of the small business community. The act directed SBA to provide aid and assistance to small businesses engaged in supplying goods and services to the Government.

In 1958 the Small Business Act was amended to provide that sales of Federal property would be subject to the provisions of the act. Congressional sponsors of the amendment wanted the Small Business Act to benefit smaller firms which purchase timber from Federal lands. The act, as amended, provides:

"It is the declared policy of the Congress that the Government should aid, counsel, assist, and protect, insofar as is possible, the interests of small-business concerns \* \* \* to insure that a fair proportion of the total sales of Government property be made to such enterprises \* \* \*."

Section 15 of the Small Business Act provides that

"To effectuate the purposes of this Act, small-business concerns within the meaning of this Act shall receive \* \* \* any contract for the sale of Government property, as to which it is determined by the Administration and the contracting procurement or disposal agency \* \* \* to be in the interest of assuring that a fair proportion of the total sales of Government property be made to small-business concerns \* \* \*."

PURPOSE AND ADMINISTRATION OF THE PROGRAM

In order to fulfill these new responsibilities to small businesses which purchase Federal timber, SBA developed and sponsors a timber sales set-aside program. Under the program, certain sales are offered preferentially to those purchasers designated as small businesses thereby insuring

that small firms will be able to purchase some portion of the Federal timber sold. The primary objective of the program is to give the small business community an opportunity to acquire its fair proportion of Federal contracts.

The program is based on two basic premises--smaller forest products businesses fail because of an inability to bid competitively with large firms for raw material, and larger firms within the industry eliminate competition by acquiring their smaller competitors. The program, as currently structured, is designed to counter these possibilities by (1) providing the smaller purchasers with some protection against the vicissitudes of competitive market economy and (2) establishing certain disincentives for larger firms to acquire small firms. The set-aside program indirectly through these restrictions on competitive market activities attempts to maintain a substantial small business community and thereby achieve the Small Business Act's goals of preserving free competitive enterprise and strengthening the overall economy.

The set-aside program is administered jointly by SBA and the various Federal agencies which manage and sell Federal timber. The Department of Agriculture (USDA), through the U.S. Forest Service, sells the majority of Federal timber. An SBA-USDA agreement providing for a set-aside program for Forest Service timber sales was signed late in 1958. Considerable volumes of timber are also sold from Federal lands by the Bureau of Land Management (BLM) of the Department of the Interior. An SBA-Interior set-aside agreement was signed in 1959. Some set-aside sales are also made when timber is sold from military installations managed by the Department of Defense. An agreement providing for these sales was signed by SBA and Defense in 1961.

According to data prepared by SBA, small businesses have won about two-thirds of the number and about one-half of the sawtimber volume of competitive timber sales sold by the Forest Service in recent years. Table 1 shows the number and volume of timber sales won by small and large businesses.



Table 1  
Timber Sale Awards  
Forest Service  
1975-1977

	Sales		Volume	
	<u>Number</u>	<u>Percent</u>	<u>Amount</u> (Mill. Bd. Ft.)	<u>Percent</u>
<u>1975</u>				
Small business	1,454	67	4,158	47
Large business	<u>729</u>	<u>33</u>	<u>4,757</u>	<u>53</u>
Total	<u>2,183</u>	<u>100</u>	<u>8,915</u>	<u>100</u>
<u>1976</u>				
Small business	1,386	69	3,044	46
Large business	<u>629</u>	<u>31</u>	<u>3,565</u>	<u>54</u>
Total	<u>2,015</u>	<u>100</u>	<u>6,609</u>	<u>100</u>
<u>1977</u>				
Small business	2,009	70	4,483	52
Large business	<u>855</u>	<u>30</u>	<u>4,106</u>	<u>48</u>
Total	<u>2,864</u>	<u>100</u>	<u>8,589</u>	<u>100</u>

#### ELIGIBILITY FOR THE PROGRAM

SBA defines eligibility to participate in the program, monitors the program in the various Federal market areas, and generally advocates and assists the interests of the small business community. Determining eligibility standards for the various SBA assistance programs is the responsibility of the Size Standards Division within the Office of Assistant Administrator for Planning, Research, and Data Management. A size standard consists of criteria designed to identify those firms within industrial categories which are the "small businesses" referred to in the Small Business Act. The Size Standards Division has established industry size standards

which determine eligibility for SBA assistance, including loan and procurement programs; surety bond guarantee program; small business investment company program; lease guarantee program; subcontracting program; and property sales program, which encompasses the timber sales set-aside program.

For timber set-aside sales, the size standard defines an eligible small business as a firm that (1) is primarily engaged in logging or forests products industry, (2) is independently owned and operated, (3) is not dominant in its field of operation, and (4) does not employ more than 500 employees, including affiliates. Factors 1, 2, and 3 have remained constant since the set-aside program began in 1958. Factor 4, the number of employees a qualifying small business may have, has changed several times. From initiation of the timber program to April 1959, the industry was subject to the general 500-employee standard applicable to manufacturing industries not otherwise defined. In April 1959, SBA established a 100-employee maximum for the timber set-aside program. In September 1959 the ceiling was raised to 250 employees, and in March 1964, the ceiling was again raised to the present 500-employee limit.

#### ADMINISTRATION OF THE PROGRAM

SBA's Property Sales Assistance Division of the Office of Procurement and Technical Assistance administers the timber set-aside program. Most of the sales assistance group's efforts involve the timber set-aside program. However, this division is also involved with other sales of Government property, including royalty oil, coal and natural gas leasing, surplus property, and materials from mineral stockpiles. Six field representatives are responsible for the timber set-aside program within specific regions. These SBA field representatives monitor sales of Federal timber within their regions and provide the point of contact between SBA and the timber-management agencies.

Potential sales are analyzed and appraised by Forest Service personnel and a description of the proposed sale, discussing the species to be offered, the volume of timber, the Forest Service appraised value, and various contract provisions, is made available to potential purchasers. The timber is then sold at an auction which may involve either oral or sealed bids. If the sale is a set-aside, the sale is preferentially offered to those bidders defined as "small businesses" by the SBA size standard.

Most Forest Service timber, for both regular and set-aside sales, is sold through the forest supervisor's office, although many small sales are made at the ranger district level. Each national forest is comprised of several ranger districts, which are under the forest supervisor's management. The forests within specific geographic regions are administered by the regional forester. Timber sales are the responsibility of the timber management group in each forest supervisor's office. The Forest Service maintains purchase records and conducts the necessary calculations and analysis to determine when set-asides are to be offered. The Forest Service and SBA mutually determine when and where set-aside sales will be made.

BLM is responsible for considerable acreages of Federal timber in western Oregon. Although BLM manages large areas in the western states, the lands in western Oregon produce most of BLM's harvestable timber. During fiscal year 1977 this area produced 95 percent of all timber sold by BLM.

BLM and SBA have been jointly administering a set-aside program in western Oregon since 1974. BLM timber sales are prepared, advertised, and sold through auction. Preparation of the sales and administration of the set-aside program is conducted by timber management personnel in BLM's district offices. BLM district offices function similarly to the Forest Service's forest supervisor's office. Overall administration of BLM operations in various States is conducted by a State office, which parallels the regional forester's office within the Forest Service.

The original interagency agreements, which initially established the set-aside program, provided that SBA, after consultation and review of proposed sales with the timber-managing agencies, could request that certain sales be set aside for the benefit of small businesses which had a demonstrated need for such assistance. During the period of operations under these earlier agreements, the program did not always work rapidly and effectively to meet small businesses' need for assistance.

The Forest Service and SBA agreed to review the program with the view of establishing new procedures. After discussions, which included representatives of the timber industry, SBA and USDA reached a new agreement in 1971. This agreement, like its 1958 predecessor, provides a mechanism

to fulfill the requirements of the Small Business Act that a fair proportion of the total sales of Federal property be made to small business concerns. In contrast to the previous program, the 1971 agreement and the respective Forest Service and SBA procedures for implementing the agreement provide for a more structured and arithmetic administration of the timber set-aside program.

The SBA/Interior agreement was revised in 1966. Following further discussions between SBA and BLM in the early 1970s, a set-aside program was activated for BLM lands in western Oregon in 1974. The BLM set-aside program closely parallels the Forest Service procedures. The allegations which we were asked to address have resulted primarily from the set-aside program developed by SBA, the Forest Service, and BLM to implement the 1971 and 1973 agreements.

PRIOR GAO FINDINGS ON SMALL BUSINESS  
ADMINISTRATION SIZE STANDARDS

Our August 9, 1978, report to the Chairman, Senate Select Committee on Small Business, summarizes the results of our review of SBA's definition of small businesses, referred to as size standards, which controls eligibility for Federal small business assistance programs. We found that many size standards may not direct assistance to firms which most need support to maintain competition in the industry. Our report recommends that the Administrator of the Small Business Administration reexamine the size standards to ensure that assistance is directed where it will best preserve free competitive enterprise and protect the interests of small business.

SCOPE OF REVIEW

We examined the operations of the set-aside program at locations in Oregon, Washington, California, Colorado, South Dakota, Georgia, South Carolina, New Mexico, and Wyoming. We selected our sample areas to include a broad geographical coverage of differing timber areas, to include locations where the set-aside program has been most active, and to include several locations where we were requested to address specific allegations.

We analyzed Forest Service and BLM sales data for the past several years and examined agency records relating to the set-aside program. We discussed the operations of the program with policymaking officials in Forest Service, SBA, and BLM headquarters and with line personnel responsible for the program at the various locations we visited. We also discussed the program with representatives of forest products firms and trade associations.

The methodologies we used to assess the various allegations are discussed in depth in subsequent appendixes.

SBA'S SIZE STANDARD FOR  
DETERMINING PROGRAM ELIGIBILITY

This appendix addresses two allegations pertaining to the size standard SBA uses to determine a firm's eligibility to participate in the set-aside program. One allegation is that SBA set the current timber industry size standard without study or factual basis of any kind. The other allegation is that the current timber industry size standard of 500 employees is so inclusive that firms with 100-500 employees receive a disproportionately large share of benefits to the disadvantage of those firms with fewer than 100 employees. Each of these allegations is discussed in this appendix.

CRITERIA FOR DETERMINING  
PROGRAM ELIGIBILITY

It was alleged that SBA set the current timber industry size standard without study or factual basis of any kind. Implied in this allegation is that the current size standard not only has no factual basis, but is not justified. To determine whether that is true, we reviewed SBA regulations pertaining to small business size standards and SBA files on the timber industry size standard. We also interviewed SBA officials involved in setting the timber industry size standard.

SBA regulations specify certain factors to be considered in formulating industry size standards. However, SBA files on the timber industry size standard contained no record that the agency had considered these factors when it increased the standard from 250 to 500 employees in 1964. Furthermore, current SBA officials, as well as a former official who was familiar with size standards matters at that time, were unaware of any study by SBA to justify the standard.

SBA reviewed the 500-employee size standard in 1966 and again in 1975. On both occasions, SBA decided to retain the standard. SBA's 1966 review was made to determine whether the increase to 500 employees had adversely affected firms with less than 250 employees or improved the competitive position of firms with 250-500 employees. SBA's report on this review recommended retaining the 500-employee standard but stated that SBA could not determine whether increasing

the size standard improved the competitive position of firms with 250-500 employees. The report cautioned SBA to make sure that the size standard did not overburden very small bidders. In 1975, SBA held public hearings on whether the 500-employee criterion should be raised, lowered, or retained. Following the hearings, SBA published a notice in the Federal Register announcing that on the basis of evidence submitted during the hearings, the 500-employee standard would be retained.

In May 1977 USDA's Assistant Secretary for Conservation, Research, and Education wrote to the SBA Administrator requesting another review of the timber industry size standard. The Assistant Secretary was concerned that under the set-aside program, a very large segment of the small business community was not being provided access to a fair proportion of national forest timber sales. He stated that the economic strength of the larger firms qualifying as small businesses under the present size standard of 500 employees effectively barred participation by firms with less than 100 or 200 employees. He believed a joint SBA-USDA review of the size standard applicable to participation in the timber set-aside program was desirable.

In June 1977 the Director of SBA's Size Standards Division dismissed the need for a joint review. The Director stated the issue was given very careful consideration at SBA's 1975 public hearings on the size standard, a majority of those attending the hearings favored retaining the 500-employee standard and, subsequently, SBA decided to retain this standard.

#### SBA regulations on setting size standards

Part 121 of SBA's Regulations establishes the standards, criteria, and procedures for determining which concerns are considered small businesses. The regulations limit the definition of a small business to include only that segment of an industry which is struggling to remain or become competitive and require that the standard for each industry be as low as reasonably possible. The regulations specify that the following six factors be considered in formulating industry size standards.

--The total number of concerns in an industry.

- Size of the leading industry firms.
- SBA programs for which the size standard is established. In formulating industry size standards for the purpose of Government procurement, the additional factor of Government procurement history shall be used.
- Concentration of output: the portion of the total output of an industry which is accounted for by a limited number of companies.
- Coverage ratio: ratio of the industry's shipments of its primary products to the total shipments by all industries of those primary products.
- Specialization ratio: ratio of the industry's shipments of its primary products to its total shipments of primary and secondary products.

SBA's Assistant Administrator for Planning, Research, and Data Management has responsibility for directing the development of and recommending new and changed size standards for all SBA programs. Responsibility for developing the individual size standards lies with SBA's Size Standards Division. The Division is also responsible for promulgating the size standards, processing inquiries concerning interpretation of the standards, and conducting industry hearings on size matters.

#### Establishment of the 500- employee size standard

The lack of documentation in SBA files prevented us from determining what factors SBA considered in establishing the 500-employee size standard for the timber industry in 1964. The files contained no record that SBA performed any study or other analysis as the basis for the standard. SBA officials currently with the Size Standards Division and the Timber and Property Sales section, as well as a former SBA official who was with the Size Standards Division during 1964, told us they were not aware of any specific study that was performed before SBA adopted the 500-employee criteria.



In a March 1978 appearance before a congressional subcommittee, SBA's Director of the Office of Procurement and Technical Assistance stated that the size standard was increased in 1964 because SBA concluded that integration and consolidation were key to survival against the larger, efficient, and integrated operations which had branched out into the paper and plywood industries, where it was not unusual for firms to have more than 250 employees.

The only documents available concerning establishment of the 500-employee size standard in 1964 were the proposed and final rulemakings which appeared in the Federal Register in December 1963 and March 1964, respectively. In neither document did SBA state that the standard was being increased in order to let firms integrate and consolidate to become competitive nor provide any insight into the analysis SBA performed and the factors it considered in arriving at its decision to increase the standard to 500 employees.

The Director of SBA's Timber and Property Sales section told us that he questioned whether SBA would have increased the timber size standard in 1964 without analysis of some kind. An industrial specialist in the same section told us that mitigating factors, such as a lack of adequate staff and the overall size of the program, probably prevented a formal study. The Director also told us that a size determination is a subjective judgment and that reliance must be placed in the competency and knowledge of those making the decisions. Furthermore, this official felt that the various studies performed by SBA and others on the timber program and the size standard since 1964 and the trends in the timber industry over the years support SBA's action in raising the size standard in 1964.

#### Subsequent review of the timber size standard

Since 1964 SBA has reviewed the 500-employee size standard on two occasions. In 1966 SBA issued a report on the competitive effect of increasing the size standard, and in 1975 SBA held public hearings on whether to raise, lower, or retain the 500-employee criterion. On both occasions SBA decided to retain the 500-employee size standard.

### 1966 study

According to the Director of SBA's Office of Procurement and Technical Assistance, the size standard was increased in 1964 with the understanding that its effects would be reviewed. In 1966 SBA's Assistant Administrator for Program Planning conducted such a review to determine whether the increase had adversely affected firms with less than 250 employees and whether it had improved the competitive position of firms with 250-500 employees. Statistics were developed on (1) the total amount of set-aside and non-set-aside sales of Government timber during the period March 1964 through July 1966 and (2) the manufacturing industries which represent potential purchasers of Government-owned timber.

In his September 13, 1966 report, the Assistant Administrator stated that his review of contracts awarded for the sales of Government-owned timber since March 1964 indicated that the total impact of the size standard increase on firms with less than 250 employees had been minimal. His main point was that since 1964 firms with less than 250 employees received a major portion of Government-owned timber sales--60 percent of the board-feet sold and about 72 percent of the total value of all timber sold. However, the report stated that SBA could not conclude whether increasing the size standard improved the competitive position of firms with 250-500 employees. The report recommended retaining the 500-employee criterion but cautioned SBA to make sure the size standard did not overburden very small bidders without accomplishing its intended mission.

### 1975 hearings

SBA's second review of the 500-employee size standard occurred in August and September 1975 when it held public hearings in Portland, Oregon, and Atlanta, Georgia, on whether the criterion should be raised, lowered, or retained. SBA felt that public hearings would enable interested parties to present their position as well as hear the position of others. Some points raised during the hearings were:

- Raise the size standard to 750 employees because the 500-employee criterion is not a true separation of large and small business in the forest industry.

- Raise the standard to 1,000 employees to meet the requirements of the Occupational Health and Safety Administration and changes in the forest products industry.
- Lower the standard to 250 employees so that firms in the 500-employee and lower range will not have to use questionable practices to remain in the small business category.
- Lower the standard to 100 employees because the 500-employee standard has no relationship to economic strength within the timber industry.
- Retain the 500-employee size standard because to change in either direction would require considerable work to establish a new base share.
- Retain the standard and, if possible, make some modification in the program to have some sales for firms with fewer than 250 employees.

In November 1975 SBA published a notice in the Federal Register announcing that on the basis of the evidence submitted during the hearings, the 500-employee criteria would be retained. SBA concluded that, generally, concerns with under 500 employees need the protection of the set-aside program not only from the industry giants but also from the firms with between 500 and 1,000 employees. SBA acknowledged, however, that its determination was a matter of judgment and stated that it knew of no specific method for determining which size concerns need the assistance of the timber set-aside program.

Documentation in SBA files shows that SBA's hearing panel based its 1975 decision to retain the 500-employee standard on the arguments presented during the hearings and did not study any additional data concerning the structure of the various industries in terms of employment, sales, or board-foot production. Also, SBA's notice in the Federal Register did not discuss the specific reasons why SBA decided that all firms with 500 employees needed the protection of the set-aside program or how it considered the factors which SBA regulations specify are to be considered in establishing the size standard. An official in the Size Standards Division and the individual in SBA's Office of the General Counsel who prepared the Federal Register notice both told us that

they were unaware of any other document prepared by SBA on the hearings which would give us further insight into specific factors and criteria considered by SBA.

DISPROPORTIONATE BENEFITS WITHIN  
THE CURRENT SIZE STANDARD

Under the present size standard, one requirement for firms wishing to purchase set-aside timber sales is that they must employ not more than 500 people. Critics of this size standard maintain the limit is so inclusive that firms with 100-500 employees comprise an economically powerful group which receives a disproportionately large share of benefits to the disadvantage of those firms with fewer than 100 employees. Many of the smaller size firms in the timber industry are only engaged in logging, and these firms are alleged to receive few, if any, benefits from the set-aside program.

Our analysis confirmed that companies with less than 100, and especially those with 25 or fewer employees, have used the set-aside program less than have companies with more than 100 employees. Specifically, the analysis showed that the larger size groups were able to obtain a greater proportion of their public timber purchases through set-aside sales than the smaller size groups. We found this happened because the smaller size groups did not compete as successfully for set-aside sales as they did for open sales. We also found that logging firms, in comparison to firms that mill the timber, had a particularly difficult time in successfully participating in set-aside sales. Although firms with less than 100 employees used the set-aside program less than firms with over 100 employees, an earlier study suggested the smaller firms may have the most need for the set-aside program, as they are the firms that most often failed.

Scope of analysis

We assessed the allegation that some firms receive a disproportionate share of benefits by analyzing a sample of open and set-aside timber sales sold by the Forest Service

between 1971 and 1977 and the Bureau of Land Management between 1973 and 1977. We divided the size classification into four groups based on employment levels as follows:

<u>Number of employees</u>	<u>Group</u>
0-25	I
26-99	II
100-249	III
250-499	IV

Although the allegation addresses only two size classifications (those below 100 employees and those above), we divided each of these classifications into two smaller groups. We split the 0-100 employee group at 25 because most firms engaged in logging have 25 or fewer employees. We split the 100-500 employee group at 250 because before the 500-employee size standard was set, 250 employees was the maximum size allowed.

Size information was obtained through interviews with mill owners and forestry officials, from State employment records, and from forest industry directories. Some of the firms were difficult to classify as to size because they were no longer in business, were in business for only a short period of time, bid as combinations of two or more independent companies, or changed names frequently. On occasion, a firm operated for a period of time in one size category and then changed size categories because of business fortune, a merger, or recategorization by an SBA decision. We handled these situations on a case-by-case basis before conducting our analysis.

We selected the following national forests and BLM districts for study:

<u>National forest</u>	<u>National forest headquarters</u>
Mt. Baker-Snoqualmie	Seattle, Washington
Willamette	Eugene, Oregon
Rogue River	Medford, Oregon
Six Rivers	Eureka, California
Carson	Taos, New Mexico
Santa Fe	Santa Fe, New Mexico
Routt	Steamboat Springs, Colorado
Francis Marion	Columbia, South Carolina

BLM district

Eugene  
Medford

BLM district headquarters

Eugene, Oregon  
Medford, Oregon

These locations were selected for several reasons. Some were chosen because of the large volume of timber sold annually, others because of high SBA set-aside sales activity, some of the specific allegations we reviewed involved these forests, or a combination of the above reasons. We combined the data for the geographically adjacent Carson and Santa Fe National Forests because of the relatively small number of sales in each forest.

For each size group, we determined the number of companies that bid on timber sales (bidding information was not readily available for BLM sales), the number that won sales, the number of sales won, the volume of timber in these sales, and the average size of each sale. We obtained this information for both set-aside timber sales and open sales. This information is summarized in table 1 for the eight national forests and two BLM districts we reviewed. Information for individual national forests and BLM districts is contained in appendix IX.

Table I  
Timber Sales Data for  
Selected National Forests  
1971-1977

Firm size group (no. of employees)	Firms bidding	Firms winning	Sales won	Sales volume	Average sale volume
(thousand board-feet)					
<b>Open Timber Sales:</b>					
I ( 0- 25)	421	193	484	573,093	1,184
II ( 26- 99)	108	65	355	1,174,039	3,307
III ( 100-249)	50	35	265	1,520,831	5,739
IV ( 250-499)	23	17	288	1,541,437	5,352
<b>Total</b>	<u>602</u>	<u>310</u>	<u>1,392</u>	<u>4,809,400</u>	<u>3,455</u>
<b>Set-Aside Timber Sales:</b>					
I ( 0- 25)	152	46	86	137,059	1,594
II ( 26- 99)	73	32	75	301,875	4,025
III ( 100-249)	a/ 37	a/ 25	a/ 118	820,452	6,953
IV ( 250-499)	a/ 31	a/ 19	a/ 80	416,693	5,209
<b>Total</b>	<u>293</u>	<u>122</u>	<u>359</u>	<u>1,676,079</u>	<u>4,669</u>

Source: Forest Service Forms 2400-17, Report of Advertised Sale (over \$2,000 in appraised value).

Timber Sales Data  
Selected BLM Districts  
1973-1977

Firm size group (no. of employees)	Firms bidding (note b)	Firms winning	Sales won	Sales volume (thousand	Average sales volume board feet)
<b>Open Timber Sales:</b>					
I ( 0- 25)		69	155	79,372	512
II ( 26- 99)		26	85	162,608	1,913
III ( 100-249)		16	83	235,089	2,832
IV ( 250-499)		11	50	158,817	3,176
<b>Total</b>		<u>122</u>	<u>373</u>	<u>635,886</u>	<u>1,705</u>
<b>Set-Aside Timber Sales:</b>					
I ( 0- 25)		18	21	27,228	1,297
II ( 26- 99)		12	31	119,875	3,867
III ( 100-249)		10	68	274,564	4,038
IV ( 250-499)		a/ 11	a/ 42	181,293	4,317
<b>Total</b>		<u>51</u>	<u>162</u>	<u>602,960</u>	<u>3,722</u>

Source: Summary Results of Timber Sales, maintained by BLM's Oregon State Office.

a/Includes firms now classified as large but qualified as small when the particular sales were executed.

b/Data not readily available.

Relative sources of  
timber supply

Our analysis of timber sales showed that firms with 100-499 employees obtained a greater proportion of their total timber purchases through set-aside sales than did firms with less than 100 employees. Firms with less than 100 employees, size groups I and II, obtained only 20 percent of their Forest Service purchases and 38 percent of their BLM purchases from set-aside sales. In contrast, firms with 100-499 employees, size groups III and IV, purchased 29 percent of their Forest Services timber and 54 percent of their BLM timber through set-aside sales. Table 2 shows the relative dependence of each group on open and set-aside sales.



Table 2  
Source Of Timber For Each  
Size Group From Selected National Forests  
1971-1977

<u>Size group</u>	<u>Total purchases</u>		<u>Open Sales</u>		<u>Set-aside sales</u>	
	<u>Volume</u>	<u>Percent</u>	<u>Volume</u>	<u>Percent</u>	<u>Volume</u>	<u>Percent</u>
	(Thou. bd.-ft.)		(Thou. bd.-ft.)		(Thou. bd.-ft.)	
I	710,152	100	573,093	81	137,059	19
II	<u>1,475,914</u>	100	<u>1,174,039</u>	80	<u>301,875</u>	20
Total	<u>2,186,066</u>	100	<u>1,747,132</u>	80	<u>438,934</u>	20
III	2,341,283	100	1,520,831	65	820,452	35
IV	<u>1,958,130</u>	100	<u>1,541,437</u>	79	<u>416,693</u>	21
Total	<u>4,299,413</u>	100	<u>3,062,268</u>	71	<u>1,237,145</u>	29

Source Of Timber For Each  
Size Group From Selected BLM Districts  
1973-1977

<u>Size group</u>	<u>Total purchases</u>		<u>Open sales</u>		<u>Set-aside sales</u>	
	<u>Volume</u>	<u>Percent</u>	<u>Volume</u>	<u>Percent</u>	<u>Volume</u>	<u>Percent</u>
	(Thou. bd.-ft.)		(Thou. bd.-ft.)		(Thou. bd.-ft.)	
I	106,600	100	79,372	74	27,228	26
II	<u>282,483</u>	100	<u>162,608</u>	58	<u>119,875</u>	42
Total	<u>389,083</u>	100	<u>241,980</u>	62	<u>147,103</u>	38
III	509,653	100	235,089	46	274,564	54
IV	<u>340,110</u>	100	<u>158,817</u>	47	<u>181,293</u>	53
Total	<u>849,763</u>	100	<u>393,906</u>	46	<u>455,857</u>	54

Competition for set-aside  
sales

Our timber sales analysis showed that groups I and II firms were less successful in competing against groups III and IV firms for either set-aside or open sales. But groups I and II firms were more successful in bidding for open sales where they had to bid against not only groups III and IV firms but also against the large, non-SBA-eligible firms.

For example, in our sample of national forest timber sales, group I firms won 12 percent of the open sales volume but only 8 percent of the set-aside sales volume. Conversely, group III firms won 32 percent of the open sale volume but captured 49 percent of the set-aside sale volume. A comparison of the percentages of sales volume won by size group is presented in Table 3.

Table 3  
Percentage Of Sales Volume Won For Each  
Size Group From Selected National Forests  
1971-1977

<u>Size group</u>	<u>Open sales</u>		<u>Set-aside sales</u>	
	<u>Volume</u>	<u>Percent</u>	<u>Volume</u>	<u>Percent</u>
	(Thou. bd.-ft.)		(Thou. bd.-ft.)	
I	573,093	12	137,059	8
II	1,174,039	24	301,875	18
III	1,520,831	32	820,452	49
IV	<u>1,541,437</u>	<u>32</u>	<u>416,693</u>	<u>25</u>
Total	<u>4,809,400</u>	100	<u>1,676,079</u>	100

Percentage Of Sales Volume Won For Each  
Size Group From Selected BLM Districts  
1973-1977

<u>Size group</u>	<u>Open sales</u>		<u>Set-aside sales</u>	
	<u>Volume</u>	<u>Percent</u>	<u>Volume</u>	<u>Percent</u>
	(Thou. bd.-ft.)		(Thou. bd.-ft.)	
I	79,372	12	27,228	4
II	162,608	26	119,875	20
III	235,089	37	274,564	46
IV	<u>158,817</u>	<u>25</u>	<u>181,293</u>	<u>30</u>
Total	<u>635,886</u>	100	<u>602,960</u>	100

Managers of group I firms seem to realize they cannot compete as successfully on set-aside sales as they can on open sales. Many of the small firms, although eligible, do not bid on set-aside sales. A total of 421 group I firms bid on open timber sales in the eight national forests we sampled, but only 152 of these firms (36 percent) bid on set-aside sales. In contrast, 50 group III firms bid on open sales, and 37 of these firms (74 percent) bid on set-aside sales.

Another indicator of the poorer competitive position of the smaller firms is that the ratio of firms winning sales as compared to firms bidding increases as the size of the firm increases. For example, in our sample of Forest Service sales, only 46 percent of the group I firms bidding on open sales won a sale, but 70 percent of the group III firms bidding on open sales won a sale. The difference is even more pronounced on set-aside sales: 30 percent of the group I firms bidding won a sale, but 68 percent of the group III firms won. These comparisons are shown in table 4 for selected Forest Service sales. Similar information for BLM sales was not readily available.

Table 4

Firms Winning Sales Compared by Size Group  
With Number of Firms Bidding  
from Selected National Forests, 1971-1977

Group I firms:	<u>Open sales</u>	<u>Set-aside sales</u>
Firms winning/firms bidding	193/421	46/152
Ratio	.46	.30
Group II firms:		
Firms winning/firms bidding	65/108	32/73
Ratio	.60	.44
Group III firms:		
Firms winning/firms bidding	35/50	25/37
Ratio	.70	.68
Group IV firms:		
Firms winning/firms bidding	17/23	19/31
Ratio	.74	.61

Not only does the ratio of the number of firms winning sales as compared to those bidding get larger with an increase in firm size, but the ratio of the number of sales won compared with the number of firms bidding also gets larger with an increase in firm size. And, once again, this difference is more pronounced in set-aside sales than in open sales. For example, on our sample of Forest Service sales, each of the group I firms bidding on open sales won an average of 1.2 sales per firm, but on set-aside sales, each firm bidding won an average of only 0.6 sales per firm. Each of the group III firms bidding on open sales won an average of 5.3 sales per firm, and an average of 3.2 sales

per firm on set-aside sales. These comparisons are shown in table 5 for selected Forest Service sales. Similar information was not readily available for BLM sales.

Table 5

Sales Won Compared by Size Group  
With Number of Firms Bidding from  
Selected National Forests, 1971-1977

Group I firms:	<u>Open sales</u>	<u>Set-aside sales</u>
Sales won/firms bidding	484/421	86/152
Ratio	1.2	0.6
Group II firms:		
Sales won/firms bidding	355/108	75/73
Ratio	3.3	1.0
Group III firms:		
Sales won/firms bidding	265/50	118/37
Ratio	5.3	3.2
Group IV firms:		
Sales won/firms bidding	288/23	80/31
Ratio	12.5	2.6

Difficulties of logging firms

As shown above, group I firms, many of which are only engaged in logging, have benefited less from the set-aside program. We found that the difficulty logging firms have in successfully participating in set-aside sales is principally due to the "70/30 rule." The 70/30 rule is an SBA

regulation which allows only up to 30 percent (50 percent in Alaska) of the timber sold in set-aside sales to be resold to firms which do not qualify as small businesses under the program. Further, the regulation requires the purchaser of a set-aside sale to maintain for 3 years the name, address, and size status of each concern to whom the timber was sold or disposed and record the log species, grades, and volumes involved. Also, any subsequent small business concern that acquires the sawlogs must require its small business purchasers to maintain similar records for 3 years.

Loggers which participate in Federal timber sales often act as log brokers--they buy the timber, log it, and then sell the logs where they can obtain the best price. The 70/30 rule influences the way a logger would normally approach a timber sale. Many loggers told us they are not interested in buying set-aside sales mainly for two reasons. For one, loggers are concerned that if they outbid the small mills for set-aside sales, those mills may retaliate by refusing to purchase logs or will not pay a fair price for the 70 percent which the loggers must sell to small mills. Loggers in some areas told us the small mills are allocated more than an adequate supply of timber through the set-aside program and that the mills will not pay prices similar to those the loggers can receive for the 30 percent of the timber that can be sold to anyone, principally large businesses. The loggers told us they often truck the 70 percent considerable distances to small businesses which will pay a better price, even though in many cases they could receive an even better price from a local large business.

Loggers told us the SBA regulation also affects the manner in which set-aside timber is logged and marketed. They hesitate to purchase and log those species or grades of timber which are difficult to sell because only 30 percent can go to large mills. A large mill is sometimes the only potential purchaser which can process a wide variety of species and grades. Because a logger must sell at least 70 percent of his logs to small firms, at least 70 percent of what he logs must be suitable for sale to small firms to process.

The 70/30 rule also requires that loggers sort and segregate their logs for record purposes and separate those

they can sell to large and small firms. Additionally, loggers complain that too few small firms exist close to their base of operations. The loggers must often truck their logs longer distances to sell them to small SBA-qualified firms. In most cases, we were told, the small firms will not pay as much as the large firms will for these logs.

#### Business failures in the wood products industry

Although firms with less than 100 employees use the set-aside program less than firms with over 100 employees, available data suggests that the smaller firms may have the most need for the set-aside program, as they are the firms suffering the most business failures. Wesley Rickard, an independent forest management and forest economics consultant, conducted an extensive study of the structural characteristics of the forest products manufacturing industry. His study was made at the request of the Ad Hoc Committee of Federal Timber Purchasers and was presented in 1975 at both the SBA public hearings on the size standard of firms bidding on sales of Government-owned timber held in Portland, Oregon, and before the Senate Select Committee on Small Business. Rickard made several findings which are pertinent to our study.

First, he found the industry is composed of three general types of economic units classified in terms of employee size: (1) "large business," companies employing more than 500, (2) "medium-size business," companies employing between 100 and 500, and (3) "small business," companies employing fewer than 100. Second, Rickard found that by every relevant economic measure, medium sized companies are not small businesses but are much more similar to the large business category of firms with more than 500 employees.

In terms of business failure, the medium-size firms were also very different from the small business category. Based on his analysis of census data for the period 1967-70, Rickard documented that 90 percent of all mills that went out of business or disappeared from production occurred in the small business segment that employed less than 20 employees. Practically all of the remaining 10 percent of mill losses was for companies with 20-100 employees.



Companies with over 100 employees were unaffected in that the number of companies in the medium- and large-size categories has either remained the same or has increased.

We do not infer, nor does Rickard's study imply, that a direct relationship exists between the proportion of timber small firms have been able to purchase and the high failure rate of similarly sized firms. Nevertheless, the basic premise of the set-aside program is that small businesses will be preserved and protected by assuring them an opportunity to obtain a timber supply through set-aside sales. However, we found that very small firms, with less than 100 employees, have been unable to purchase a proportionate share of the set-aside sales and that the program appears to benefit particularly those firms with between 100-499 employees which are economically stronger and in less need of help.

PROCEDURES FOR CALCULATING  
THE SMALL BUSINESS SHARE

We reviewed two allegations involving the procedures which implement the 1971 SBA/USDA interagency agreement. The first concerns the determination of the initial small business shares and entails the claim that in some instances the initial share of timber sales to be offered to small businesses did not accurately reflect the demand for timber by the large and small firms. The second allegation is that the procedures used for the 6-month sales analysis and the 5-year recomputation of the small business share tend to maintain a static allocation of timber between large and small firms irrespective of changes in industry structure.

Controversy regarding the accuracy of the initial small business share calculations has been primarily focused on two market areas 1/--the Carson National Forest in New Mexico and the Routt National Forest in Colorado. Firms purchasing from these forests claimed sales purchase information in addition to the 1966-70 base period purchase history should be considered in establishing the small business share. Forest Service and SBA personnel responsible for determining the shares disagreed as to what weight should be given this additional information. We found that in both instances some consideration was eventually given to the additional sales purchase history and the Carson and Routt shares were initially established as compromises between various Forest Service and SBA proposals. The procedures for calculating the small business share allow the two agencies to consider other factors and unusual circumstances when determining a small business share. Therefore, we conclude the allegation is invalid as the compromise shares were determined by such procedure.

---

1/The geographical unit for which small business shares and other calculations are made is termed a market area. Usually this area coincides with a national forest. In some cases, there is more than one market area per national forest and in other instances parts of several forests are included in a single market area.

For the second allegation, regarding the effect of the 6-month analysis and the 5-year recomputation calculations, our analysis indicates a straightforward true or false conclusion cannot be made regarding the allegation as the shares either increased or decreased for many market areas at the recomputation. However, the program, as implemented, does tend to maintain a static allocation of timber. We found that in 93 of the 152 market areas the small business shares remained static. We observed that this tendency is greater in the western states where mills are generally most dependent on Federal timber.

The primary reason the small business share tends to remain static is that while the 5-year recomputation is intended to reflect historical purchases by the two size groups, the effect of the 6-month analysis is such that the purchase history available at the recomputation will almost always indicate that small businesses have purchased their share or a greater percent. The small business share can and does decline in some instances. However, the circumstances where the small business share is allowed to change in response to changes in industry structure are limited.

INITIAL BASE AVERAGE SHARE  
INCORRECTLY DETERMINED

We were requested to evaluate allegations that the initial base average share was incorrectly established in some instances. These allegations commonly involve a claim that the sales purchase history compiled from the 1966-70 base computation period was not an accurate indicator of the actual market and industry structure in certain market areas. In these market areas, it is alleged that various unusual factors distorted the traditional and usual purchasing patterns of the large and small firms during the base period, and that such distortions were not adequately reflected in the base share as it was determined.

The base average share

The "fair proportion" of Federal timber sales for small businesses, as required by the Small Business Act, is established in the 1971 SBA/USDA agreement and the agencies' implementing procedures as a base average share. The implementing procedures required that the

base average share be determined by comparing historic purchases of timber by small businesses to the total volume of timber sold. To do so, SBA and Forest Service personnel tabulated the purchases from each market area from Forest Service sales records. The volume of timber purchased by large and small businesses was determined for each Forest Service market area for the 5-year base period January 1, 1966, through December 31, 1970. In tabulating the purchases, the volume of timber purchased by firms whose size status changed during the initial 5-year period was credited for the entire period according to the firm's size status at January 1, 1971. The agencies could allow for such factors as past long-term sales, large salvage sales, or other unusual considerations, when computing the base average share. The total timber sold from each market area was determined and the portion of the total volume purchased by small business firms was expressed as a percentage. This percentage represents the small business share or "fair proportion" of Federal timber sales for small businesses.

Carson and Routt base average  
shares established through  
compromise

In order to assess the validity of the allegation, we examined the computations of the initial base average share for several market areas and discussed the allegation with both critics and proponents of the set-aside program in addition to Forest Service and SBA personnel responsible for program administration. We found that controversy regarding the determination of the initial base average shares has focused on two marketing areas--the Carson National Forest in northern New Mexico and the Routt National Forest in northern Colorado. We visited both forests, discussed the operations of the set-aside program with Forest Service and SBA personnel, and examined file documents relating to the administration of the base shares and the resultant controversies. We also contacted representatives of large and small firms purchasing from each forest and obtained their views regarding the base share determinations and other aspects of the set-aside program.

Carson National Forest  
base share

The initial analysis of purchase history for the Carson National Forest indicated that small business firms purchased 78 percent of the timber volume sold during the 1966-70 base period. However, Forest Service and SBA personnel believed a 78-percent base average share would be neither equitable nor representative of the actual industry structure of the forest. Forest Service personnel noted that several sales which contributed to the 78-percent purchase history during 1966-70 were made by small portable mills which no longer existed by 1970. In addition, the primary large business operating on the Carson--the Duke City Lumber Company--was especially concerned that a large, long-term sale (the Arriba sale), which Duke City purchased in 1965 be reflected in the determination of the base share. The firm was also concerned that consideration be given to the harvested volume from certain sales Duke City was cutting during the 1966-70 period. Duke City noted that the actual harvested volume from these sales far exceeded the sold volume. Duke City claimed these volume overruns, plus having the Arriba sale under contract, resulted in the firm's purchasing significantly less timber during 1966-70 than otherwise would have been the case.

Consequently, the Forest Service prepared two additional analyses of purchasing patterns on the Carson to assist in determining the small firm's demand for timber and an appropriate base share. One analysis examined harvest volumes during the 1966-70 period. The timber volume harvested by firms during a given period may differ significantly from the volume purchased during the same period. These differences occur because timber sales contracts generally allow the purchasers several years to actually harvest and remove the timber. Consequently, harvest volume is indicative of a firm's more immediate demand for timber, as firms with volume under contract may adjust the harvest and utilization of the timber to reflect operating considerations or market demand for the final products. The harvest volume analysis, prepared from Carson National Forest's records, indicated that small businesses utilized 40 percent of the total volume of timber harvested during the 1966-70 base period.

Another analysis prepared by Carson Forest Service personnel tabulated purchases from the forest for a 10-year period, 1961-71. During this analysis period, small business purchased 44 percent of the total timber sold. After evaluation and discussion of these analyses, Forest Service and SBA personnel eventually concurred in a compromise position whereby the volume harvested by Duke City from the Arriba sale during 1968, 1969, and 1970 was added to the volume purchased by Duke City during the 1966-70 base period. The Duke City purchases plus the Arriba harvest volume were tabulated as a measure of large business demand during the base period when this was compared with the small business purchases during 1966-70, it provided for a base average share of 64 percent. According to the Forest Service, the 64-percent base share was substantiated by comparing the mill capacities of both large and small firms operating on the Carson, considering a single shift operation. The 64-percent share was used for set-aside program calculations for the Carson during the 1971-75 period.

Routt National Forest  
base share

Determination of a base average share for the Routt National Forest also proved difficult due to an atypical purchase history during the 1966-70 base period. The Routt National Forest was initially combined with the Arapaho and Medicine Bow National Forests in a single market area for set-aside program calculations; but in early 1973 the SBA and the Forest Service decided to establish the Routt, Arapaho, and Medicine Bow as separate market areas with individual small business shares. SBA and Forest Service personnel found the purchase history from the 1966-70 period was not acceptable to determine the shares for Arapaho and Medicine Bow due to atypical purchasing by small firms during the base period. In both instances, SBA and the Forest Service agreed to consider other factors in establishing the base average shares.

For the Routt National Forest, the Forest Service proposed an analysis of purchase history, volume under contract, and harvested volume be utilized to establish a small business share of 34 percent. However, this proposal was not acceptable to the SBA representative who, in contrast to his positions on the Arapaho and

Medicine Bow determinations, insisted that purchase history from the 1966-70 period should be the sole factor of analysis. Forest Service sales records indicate small businesses purchased approximately 44 percent of the timber sold from the Routt during the 1966-70 base period.

Similar to the situation on the Carson, large businesses operating on the Routt had purchased two large sales, totaling more than 50 million board-feet, in the 2 years before 1966. A Forest Service analysis of the 7-year purchase history, 1964-70, indicated that small firms had purchased 35.5 percent of the sale volume during this longer period. The Forest Service noted that this 7-year analysis of purchase history was substantiated by an analysis of harvest volume which indicated that small businesses had harvested 34 percent of the volume during the 1966-70 base period; therefore, the Forest Service again proposed that a 34-percent base average share be established for the Routt.

The Forest Service and SBA continued the discussion of a proper base share for several months, and in early 1974 SBA proposed a 42-percent share based on purchase history which included volume from five large sales sold before 1966. The Routt forest supervisor accepted this proposal and recommended that the regional forester accept 42 percent as the base average share. Before the regional forester could act, a large firm, the Edward Hines Lumber Company, filed an appeal protesting the proposed 42-percent share. The regional forester was able to reject this appeal by informing the Hines Company that the Forest Service region was not accepting the Routt supervisor's recommendation and that the share would remain at 34 percent.

SBA then took up the issue with the Chief of the Forest Service, asking that the regional forester's decision to establish the Routt share at 34 percent be overturned. This appeal was upheld and in early 1975 the Chief informed the Edward Hines Lumber Company that the regional forester would be directed to use 42 percent as the small business share. The Chief's letter to the Hines Company concluded that Hines might appeal the decision under the administrative review procedures.

The Edward Hines Lumber Company's subsequent appeal of the Chief's decision, filed in February 1975, again alleged that sales volumes from several sales were incorrectly

credited to large and small categories during the base share calculation period. However, these allegations were never directly addressed, as the appeal was dismissed by the Department of Agriculture's Assistant Secretary for Conservation, Research, and Education.

The Assistant Secretary informed the Hines Company that his January 1975 response to and concurrence with the SBA appeal represented a secretarial decision and that consequently Hines had no further entitlement to review under the administrative review procedures. Hines chose not to pursue the matter further, and the 42-percent base share remained in use through the remainder of the 1971-75 analysis period.

#### PROPENSITY TO MAINTAIN A STATIC ALLOCATION

We also investigated an allegation that the procedures for the 6-month sales analysis and the base share recomputation tend to maintain a static allocation of timber between large and small firms. The procedures are alleged to maintain an allocation of timber between large and small firms as existed during the 1966-70 base period. Several of the additional allegations we were asked to examine, including questions regarding the competition for set-aside sales and the revenues received, the program's impact on dependent communities, and deviations from expected business practices, could all result from a propensity to maintain a static allocation of raw material.

#### Triggering of set-asides

The 1971 SBA/USDA agreement provided that the availability of the base average share to the small business sector of each market area would be assured by the application of set-asides (i.e., a preferential offering of certain timber sales where bidding is limited to those firms designated as "small"). The operating procedures for triggering set-asides, which were revised in 1975 to provide a quicker triggering of set-asides, require a periodic analysis of timber purchases in each market area be conducted at 6-month intervals to determine if the small firms have purchased the recomputed base average share. If they have not, and the accumulated volume of the deficit between the base share



and the small firm's actual purchases is 10 percent or more of the recomputed base share, set-aside sales will be required during the following two 6-month periods.

The set-aside sales will be of volume equal to the small business share plus the deficit volume from the previous analysis period which triggered the set-aside sales. Normally, the base share and one-half of the deficit volume will be offered as set-asides during the first 6-month period, but this percentage may be adjusted to meet program requirements. During the second 6-month period, the small business share and any remaining deficit volume will be offered as set-asides. If, however, the deficit volume is not eliminated during the two 6-month sales periods, during the third 6-month analysis period, and thereafter as required, 100 percent of the deficit plus the small business base average share will be set aside until the accumulated deficit is less than the volume required to trigger a set-aside program for the next current analysis.

#### The recomputation procedures

The interagency agreement and the Forest Service/SBA implementing procedures also allow for a recomputation of the base average share in future years. The purpose of this recomputation, according to SBA, is to provide flexibility and reflect changes in the industry. The Forest Service procedures which implement the set-aside program provide that the recomputation will generally occur at 5-year intervals. The recomputation is made by crediting the timber sale volume purchased during the previous 5-year period to the size class of the initial purchaser at the time of the sale. The sales volumes purchased by nonmanufacturers are credited to the size class of the manufacturing firm. As in the initial calculations, the volume purchased by small businesses is compared with the total volume sold and the resultant percentage becomes the recomputed base average share. The implementing instructions note that purchase history is to be the primary basis of the recomputed share, although other factors such as past long-term sales, large salvage sales, or other unusual circumstances may be taken into account. The instructions also note that any small business share established by the recomputation must not be less than 50 percent of the initial base share established by the 1966-70 purchase history.

An additional factor in the recomputation involves the procedures for dealing with surplus or deficit sales volume at the end of the 5-year recomputation period. Surplus or deficit volume represents the differences between the actual purchases by small businesses during the analysis period and the volume calculated by applying the base share percentage to the total volume sold during the period. The implementing procedures provide that when the recomputed small business share change from the previous share is + 5 percentage points or less, a surplus or deficit volume will be carried forward into the next 5-year analysis period. When the recomputed share change exceeds + 5 percentage points, the surplus or deficit volume may be dropped or carried over totally or in part, depending on local circumstances. A decision not to carry over such volume requires concurrence between the forest supervisor and the local SBA representative and is subject to the approval of the regional forester.

Limited possibilities for  
change in base average  
shares

We reviewed the mathematical functioning of the 6-month sales analysis and the recomputation procedures and evaluated the effect these procedures had upon the recomputation of base shares for several forests. We also discussed the operation and intent of these procedures with a number of cognizant officials within both the Federal agencies and the timber industry.

Our examinations and discussions lead us to believe the program, as implemented, does tend to maintain a static allocation of timber. The primary reason the small business share tends to remain static is that while the 5-year recomputation is intended to reflect historical purchases by the two size groups, the effect of the 6-month sales analysis is such that the purchase history available at the recomputation will almost always indicate that small businesses have purchased their share or a greater volume. The base average share can and does decline in some instances. However, the circumstances where the small business share is allowed to decline in response to changes in industry structure are limited.

There are three special circumstances where the 6-month analysis and the recomputation procedures reflect changes in demand for timber between the two purchaser groups. The first is where an unusual and unexpected purchasing effort by one category of purchasers could occur during the final 6 months of the 5-year recomputation period. Such heavy purchases by one group, when added into the recalculation volume, could alter the recomputed share by several percentage points. The Forest Service and SBA recognized that such maneuvering by industry groups might occur near the end of the 5-year period, and the problem was discussed in depth at a national set-aside program work conference in early 1975.

Program procedures allow Forest Service and SBA personnel to establish or eliminate set-aside sales which they determine appropriate under the Small Business Act. One SBA representative told us he had used this authority to counter such situations on one forest in his region during the final analysis period of 1975. In this instance, the SBA representative believed large and small businesses might attempt to manipulate the base share through heavy purchasing in the final period. To counter this effort, SBA and the Forest Service initiated additional set-asides at sufficient volume to maintain the small business share. The end result of counteractions of this type, of course, is that the shares are somewhat more likely to remain unchanged than might otherwise be the case.

The second circumstance where the procedures allow for a change in the base average share is where a set-aside sale is offered to eligible small firms but goes unbid. In these instances where small firms express no interest in purchasing the set-aside sale, Forest Service sales procedures allow a large firm to purchase the unbid set-aside sale. If a large firm does purchase a set-aside sale which small business chose not to bid, the sales volume will be credited as purchase volume to the small firm category for purposes of the 6-month sales analysis. However, at the conclusion of the 5-year recomputation period, the volume of the no-bid set-aside sale, if purchased by a large firm, will be credited to the large category purchase history. In this manner, the base average share would be reduced by the percentage represented by the volume of such no-bid set-asides.

Such a scheme seems a reasonable method to reflect changes in demand for timber by the small firms as it is logical that a reduction of demand due to changing market conditions or simply a reduction in the number of small firms operating on a forest should result in increased no-bid set-asides. In practice, however, changes in industry structure appear to be only marginally reflected in the occurrence of no-bid set-asides. We found, for example, that of the 528 set-aside sales purchased in our sample market areas from 1971-77, only 7 set-asides went unbid and were eventually purchased by large firms even though there were major changes in the industry structure in some areas. An SBA analysis of national sales data for the period January 1976 through September 1977 found a similar pattern. The SBA analysis noted 554 open sales and 40 set-aside sales went unbid during the period. Large businesses purchased 25 of the 40 no-bid set-asides.

The third circumstance which allows for some change in the base average share involves the provision that surplus or deficit volumes existing at recomputation may be dropped from future analysis if the change in the recomputed share exceeds +5 percentage points. If surplus or deficit volumes are carried forward into the next 5-year recomputation period, the following recomputation will most probably return to the initial base average share, thereby maintaining the original allocation between the large and small firms. This situation occurs because carried forward surplus or deficit volumes are included in the 6-month sales analysis, which determines the volume of the future set-aside sales. Conversely, if surplus or deficit volumes are not carried forward and are dropped from future consideration, the effect is to "lock-in" the new recomputed share.

Since implementation of the revised set-aside program in 1971, recomputation of the small business shares for the 152 national forest market areas has occurred once. The shares were recomputed in early 1976 using sales data for the years 1971-75. As previously noted, if surplus or deficit volume is carried forward, the effect is to maintain a static allocation during the following 5-year period. This was the case for 93 of the 152 market areas; the surplus or deficit volumes were carried forward into the 1976-80 analysis period, thereby maintaining the initial allocations. In 7 of the remaining 59 market areas, some portion or all of the surplus or deficit volumes were carried forward while in the other 52 areas the entire surplus or deficit was dropped, thereby "locking-in" the recomputed shares.

We found the allocations to be most static in the Forest Service regions on the Pacific Coast where the recomputed shares for only 7 of 50 market areas changed more than 5 percentage points. In five of these seven market areas, the small business share increased. In the Forest Service regions in the Rocky Mountains, the shares for 28 of 55 market areas changed more than 5 percentage points through the recomputations. The small business sector again improved its position in the Rockies as the small business share increased for 17 of these 28 areas. In contrast, while the 1976 recomputation in the Forest Service eastern and southern regions resulted in the shares for 23 of 46 market areas changing more than 5 percentage points, the small business shares decreased in 18 of 23 instances. The small business share also decreased on the single market area in Alaska at the 1976 recomputation.

An interesting observation from our analysis is that for 92 of 106 (87 percent) of the market areas in the West, the small business share either remained static or increased, while in the East the small business shares remained static or increased in 28 of 46 (60 percent) of the market areas. (See app. IX.) We suspect these differences are partially attributable to a lesser dependency on Federal timber by Eastern mills.

#### Consequences of a static allocation of timber

During our review, we evaluated the operation and impact of the set-aside program in several market areas. In the course of these evaluations, we observed certain consequences of the program's propensity to maintain a static allocation of timber which may be inimical to the best interests of the program. The Rogue River National Forest is one of the market areas we examined in depth, and we believe it illustrates the program's effect in the more active market areas.

The Rogue River National Forest is one of several national forests and BLM districts which support a substantial forest products industry in the vicinity of Medford, Oregon. The base average share for the Rogue River was initially established at 69 percent based on the 1966-70 purchase history. Following the initial 5-year recomputation period, the base share was recomputed based on the 1971-75

purchase history as prescribed in the program procedures and was again established at 69 percent. However, major changes in the structure of the industry had occurred in the Medford area since 1971. Two small firms which had contributed to the small business purchase history during 1971-75 had been purchased by large business and were subsequently operated as part of the large business community. In addition, another small business firm, which had purchased more timber during 1971-75 than any other single firm, was acquired by a large business in January 1976, thereby transferring its production capacity into the large business category.

A Forest Service analysis of these changes indicated a small business share of approximately 43 percent would be required to accurately reflect the actual industry structure. The Forest Service and SBA solicited comments from purchasers regarding the validity of considering these structural changes in the recomputation. However, the recomputation was eventually based only on the 1971-75 purchase history and the share was again established at 69 percent for the 1976-80 period.

The most striking effect of maintaining the same allocation for the Rogue River is the wide divergence in revenues received between set-aside sales and open sales. We found that set-aside sales on the Rogue River, although of better quality, returned substantially less revenue than the open sales. We discussed this situation with timber agency and industry personnel in the Medford area. The consensus of explanations for the difference in return is simply that although overall demand for timber is strong in the area, the volume of timber allocated to the exclusive bidding of small firms is far greater than the relative demand for timber by this subgroup would be in the absence of the set-aside program. Consequently, local small firms have bid much less aggressively among themselves for set-aside sales.

Interestingly enough, in recent months the revenue differential between set-aside sales in the Medford area and in other milling centers has been such that loggers have bought set-aside sales and trucked the logs up to 90 miles for sale to other small mills in Roseburg. These loggers told us they were unable to get a competitive price from the Medford mills for the 70 percent of each set-aside sale which nonmanufacturers must sell to SBA-certified small mills.

Small business mills from outside the Medford area have also found the set-aside sales attractive and have increased their bidding for set-aside sales offered by the Rogue River. Forest Service sales records indicate that the proportion of timber going to such outside firms has increased significantly since the 1976 recomputation. In fiscal year 1975, 14 percent of the Rogue River timber went to outside firms, but by late 1977, 75 percent of the Rogue River timber was going to firms outside the Medford area.

The revenue differential is also explained partially by the converse situation confronting the Medford area large mills. These mills find the timber allocated to their use by the program to be insufficient to meet the total demand of the various large firms. Consequently, bidding for these "open" sales is very competitive, increasing further the revenue differential between open and set-aside sales. A most interesting comment regarding this situation was made at one small mill where personnel expressed a belief that the small mills may sometimes "run up" the open sales simply to make the large firms pay more. We were also told the small firms may avoid bidding up set-asides among themselves as the small firms do a great deal of log trading among each other and do not wish to increase the overall cost of their raw material by aggressively bidding against each other.

We found similar situations in other market areas where the small business share has not readily adjusted to reflect changes in the local timber industry. It is not clear whether these results were intended by the Congress when the set-aside program was authorized. If the results as disclosed by our review were not intended, we believe the procedures for the recomputation of the small business share should be revised to provide a more rapid reflection of structural changes among timber purchasers. One possible revision involves the procedures for tabulating purchase histories during the recomputation period. Under present procedures, purchase histories are tabulated according to each firm's size status at the date a sale is purchased. This procedure results in misallocations when firms change size status several years into the 5-year recomputation period. Purchase histories for each recomputation period could be tabulated according to the size category of each firm at the ending date of the recomputation period. Such a revision would provide a

more timely reflection of structural changes in the local industry, and still maintain the integrity of the set-aside program's protection of small purchasers.



REVENUES RECEIVED FROM  
SET-ASIDE AND OPEN SALES

This appendix addresses an allegation pertaining to the revenues received from set-aside timber sales compared with the revenues received from open sales. The allegation is that set-aside timber sales have been of higher quality yet have returned less revenue to the U.S. Treasury than open sales.

While exploring various alternative methods to answer this allegation, we discovered that a forest economist with the Forest Service's Pacific Northwest Forest and Range Experiment Station had just completed a study comparing the quality and revenue differences between open and set-aside timber sales. His study covered the timber sales sold in fiscal years 1975 and 1976 at nine national forests in Oregon and Washington. His methodology included defining the quality of a timber sale in terms of various sale characteristics which are quantified on the Forest Service's timber sale report. The sale characteristics of the open and set-aside sales were tested using statistical techniques to determine if the characteristics (quality) of the sales were different. Then, taking quality differences into account, the economist tested revenue differences again using statistical techniques. He found the set-aside sales did not return higher revenues to the U.S. Treasury despite the fact that the set-aside sales were of higher quality than the open sales.

For our study, we used essentially the same methodology developed by the Forest Service economist. However, we expanded the scope to include 4-1/2 years of timber sales sold at 132 national forests, excluding those in Alaska, and also included 3 years of timber sales sold at the BLM districts in western Oregon.

The results of our study were similar to those of the Forest Service economist. Set-aside sales were numerous enough at 58 national forests and at 5 BLM districts to make comparisons. We found set-aside sales were of higher quality than open sales at 50 of the 58 national forests tested. At 48 national forests, set-aside sales returned less revenues than open sales. At three of the five BLM districts, we found set-aside sales were larger, a factor

generally indicative of a more desirable sale, than open sales yet returned less revenues than open sales. Our methodology and findings are discussed in the following sections.

#### QUALITY DIFFERENCES BETWEEN OPEN AND SET-ASIDE SALES

Both the Forest Service and BLM endeavor to make the quality of set-aside sales equal to the quality of open sales. Both also recognize the quality of one timber sale can differ substantially from another sale. Such factors as sale size, difficulty of logging the timber, the volume and quality of timber to be harvested per acre, and the distance the timber has to be hauled for processing are characteristics which represent the overall quality of a timber sale. For example, a timber sale comprised of scattered, short, small diameter trees located on steep, rocky terrain 100 miles from the nearest mill would be of lower quality than a timber sale comprised of many tall, large diameter trees located on gentle sloping or flat terrain 30 miles from the nearest mill. The latter sale would be expected to bring a higher price per board-foot than the former sale.

#### Quality differences on Forest Service timber sales

The quality characteristics of timber sales are quantified on Forest Service timber sale reports. The Forest Service quantifies timber sale characteristics to arrive at the appraised price. The appraised price is determined by subtracting the cost of logging, transporting, and manufacturing the logs, plus a margin for profit and risk, from the estimated selling value of an average mix of products, such as door jams, paneling, lumber, and wood chips, which can be manufactured from the timber. In most instances, the appraised price has to be greater than the estimated costs to reforest the cutover areas. Federal timber is sold to the highest bidder during an oral or sealed bid auction. The highest bid must not be less than the minimum appraised price.

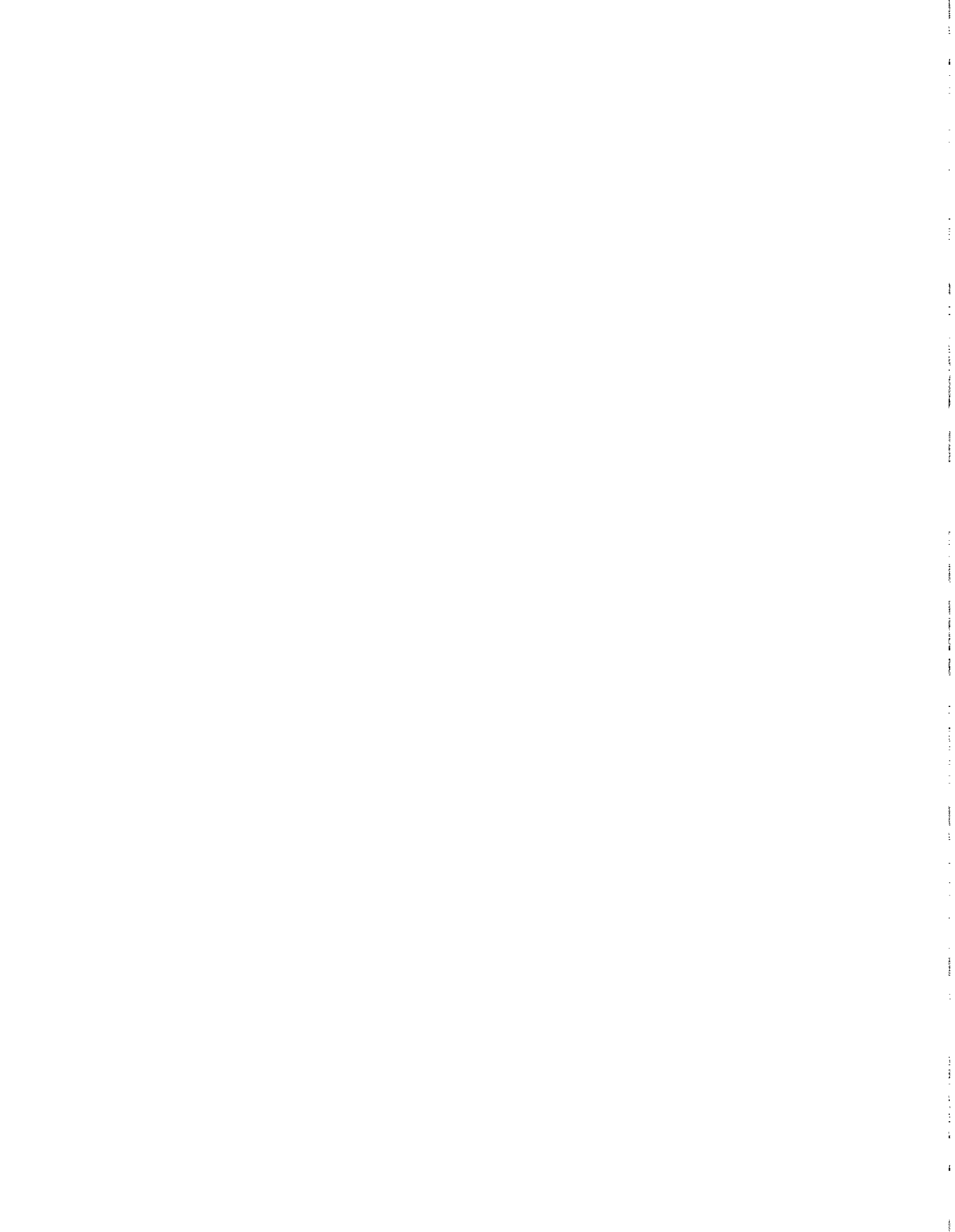
We reviewed Forest Service timber sales containing timber valued in excess of \$2,000 sold between July 1, 1973, and December 31, 1977. We segregated the timber sales by national forest and, to increase validity, we dropped from

our evaluation all national forests where fewer than eight set-aside sales occurred. This resulted in evaluating 7,106 timber sales on 58 national forests. These 58 national forests accounted for 66 percent of all Forest Service timber sales during the period and 68 percent of the volume. The location of the 58 national forests we examined are shown on the map of figure 1. The breakdown of the timber sales between set-aside and open sales follows:

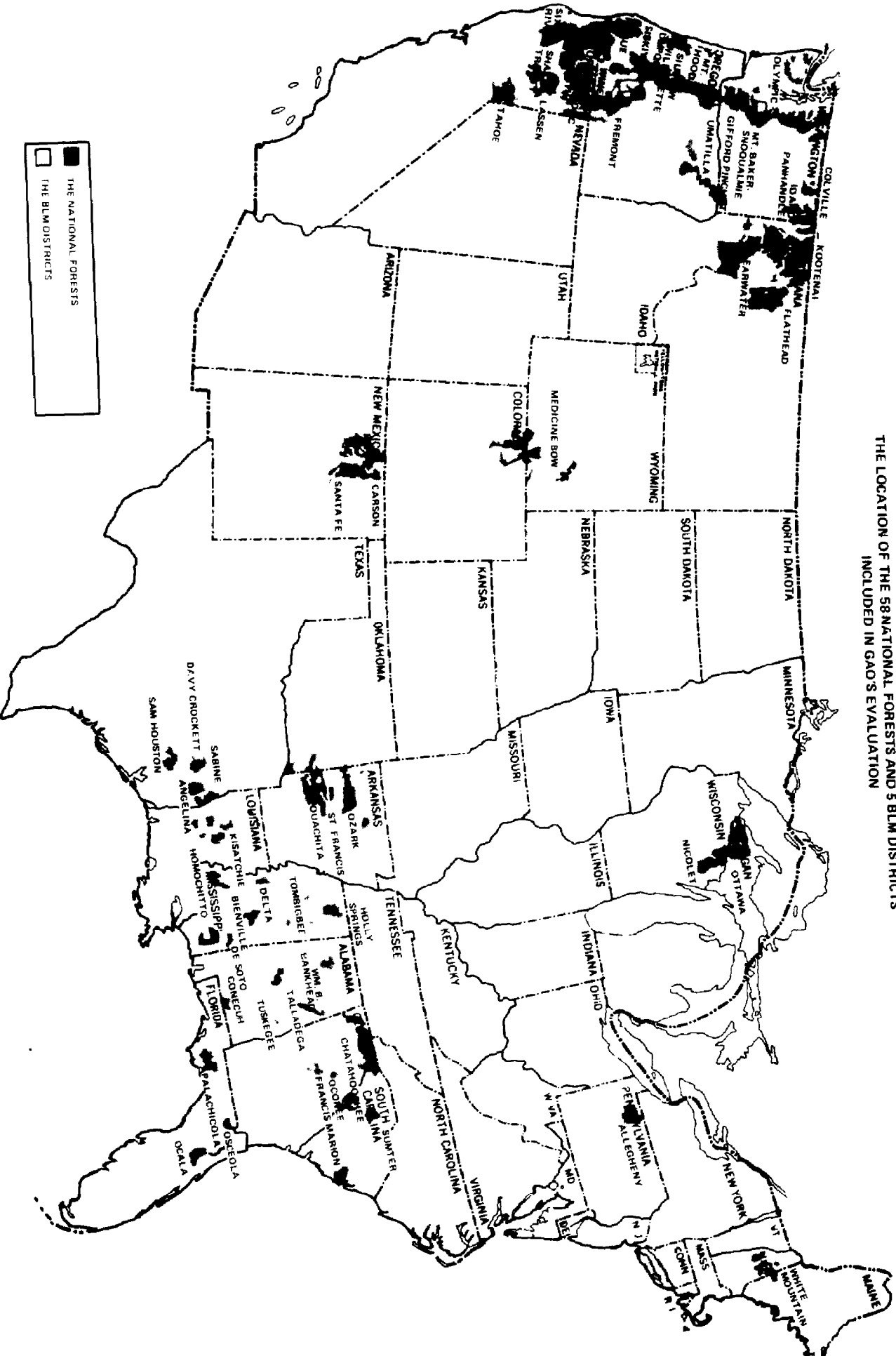
	<u>Number of sales</u>	<u>Volume (million bd.-ft.)</u>
Open sales	5,416	19,700
Set-aside sales	<u>1,690</u>	<u>7,311</u>
Total	<u>7,106</u>	<u>27,011</u>

We compared 11 quality characteristics of set-aside sales to the quality characteristics of open sales and used various statistical tests to determine if quality differed between the two types of sales. The following characteristics were incorporated into our evaluation.

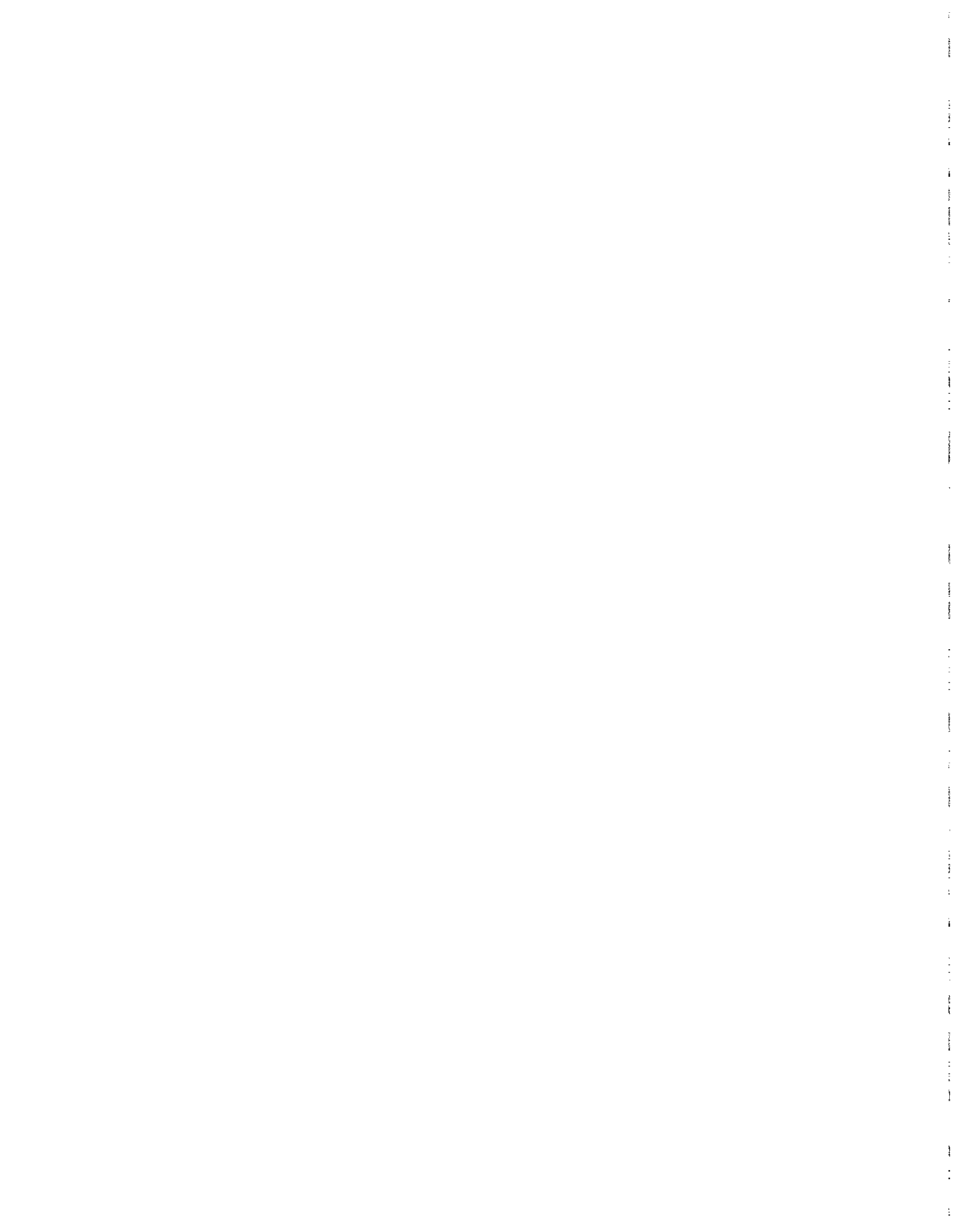
<u>Sale characteristics</u>	<u>Units of measure</u>
Timber sale volume	Thousand board-feet
Volume per acre	Thousand board-feet per acre
Ratio of predominate or high value timber volume to total volume	Percent
Ratio of fiber volume to total volume	Percent
Selling value of products to be produced from the timber	\$ per thousand board-feet
Appraised value of timber	\$ per thousand board-feet
 <u>Timber processing characteristics</u>	
Logging costs	\$ per thousand board-feet
Road costs	\$ per thousand board-feet
Manufacturing costs	\$ per thousand board-feet
Haul distance to manufacturing facility	Miles
Length of timber sale	Years



THE LOCATION OF THE 58 NATIONAL FORESTS AND 5 BLM DISTRICTS INCLUDED IN GAO'S EVALUATION



THE NATIONAL FORESTS  
 THE BLM DISTRICTS



Once we determined that the quality of the set-aside timber sales differed from the open timber sales, we analyzed if the difference made the set-aside timber sales higher or lower in quality than open sales. To offset the effect of inflation during the 4-1/2-year test period, we deflated all cost and price data by the appropriate quarterly value of the wholesale commodity price index.

Results of our evaluation

We classified the aggregate of set-aside sales sold by the individual forest as either higher, equal to, or lower than the aggregate of open sales. We found that 50 of the 58 national forests, representing 91 percent of the volume of set-aside sales, were of higher quality than the open sales sold. At two forests the set-aside sales were of equal quality as open sales, while at the remaining six forests set-aside sales were of lower quality than open sales. Table 1 summarizes our findings and table 2 lists the various national forests by higher, equal, and lower quality.

Table 1

Volume Sold in National Forests  
Covered by Our Review

<u>Set-aside sales quality was</u>	<u>Number of forests</u>	<u>Set-aside sales</u>		<u>Open sales</u>	
		<u>volume</u>	<u>percent</u>	<u>volume</u>	<u>percent</u>
		(million bd.-ft.)		(million bd.-ft.)	
Higher	50	6,648	90.9	17,656	89.6
Equal	2	96	1.3	215	1.1
Lower	<u>6</u>	<u>567</u>	<u>7.8</u>	<u>1,829</u>	<u>9.3</u>
Total	<u>58</u>	<u>7,311</u>	100.0	<u>19,700</u>	100.0

Table 2Quality Differences in National Forests  
Covered by Our Review

The quality of set-aside sales as compared to open sales was:

<u>Higher</u>	<u>Equal</u>	<u>Lower</u>
Alabama <u>1/</u>	Colville	Clearwater
Allegheny	Routt	Idaho Panhandle <u>5/</u>
Mt. Baker-Snoqualmie		Medicine Bow
Carson		Quachita
Chatahoochee and Oconee		
Flathead		
Florida <u>2/</u>		
Fremont		
Gifford Pinchot		
Mt. Hood		
Kisatchie		
Klamath		
Kootenai		
Lassen		
Francis Marion and Sumter		
Mississippi <u>3/</u>		
Modoc		
White Mountain		
Nicolet		
Olympic		
Ottawa		
Ozark and St. Francis		
Rogue		
Santa Fe		
Shasta-Trinity		
Siskiyou		
Siuslaw		
Six Rivers		
Tahoe		
Texas <u>4/</u>		
Omatilla		
Umpqua		
Willamette		
winema		



- 1/Includes the Wm. B. Bankhead, Conecuh, Talladega, and Tuskegee National Forests.
- 2/Includes the Apalachicola, Ocala, and Osceola National Forests.
- 3/Includes the Bienville, Delta, DeSoto, Holly Springs, Homochitto, and Tombigbee National Forests.
- 4/Includes the Angelina, Davy Crockett, Sabine, and Sam Houston National Forests.
- 5/Includes the Coeur d'Alene, Kaniksu, and St. Joe National Forests.

Specifics concerning our evaluation for the 58 national forests are included in appendix IX.

Quality differences on  
BLM timber sales

Our analysis of BLM timber sales covered 1,053 open and set-aside timber sales sold by BLM's five western Oregon districts between January 1, 1975, and December 31, 1977. These five districts account for over 90 percent of BLM timber sales and are the only districts where BLM operates a formal set-aside program similar to the Forest Service program. The locations of five BLM districts included in our evaluation are shown on the map on Figure 1. A breakdown of the sales and their corresponding volumes are presented below.

	<u>Number of sales</u>	<u>Volume</u>  (million bd.-ft.)
Open sales	787	2,435
Set-aside sales	<u>266</u>	<u>969</u>
Total	<u>1,053</u>	<u>3,404</u>

We could not perform as extensive an evaluation of the BLM sales as we could with the Forest Service sales because the data was not readily available. Our evaluation of the BLM sales consisted of statistically testing only one quality characteristic, the size of the timber sale. BLM officials advised that most timber purchasers would prefer larger sales over smaller ones.

Results of our evaluation

We found set-aside timber sales on the Medford, Eugene, and Salem districts were larger than open sales. These three districts accounted for 67 percent of the set-aside timber sales evaluated. At the Coos Bay and Roseburg districts, set-aside sales were of smaller size than the open sales. Table 3 summarizes the results of our evaluation.

Table 3

Volume Sold in BLM Districts  
Covered by Our Review

Set-aside sales size was	Number of districts	Set-aside sales		Open sales	
		Volume	Percent	Volume	Percent
		(million bd.-ft.)		(million bd.-ft.)	
Larger	3	645	66.6	1,484	60.9
Equal	-	-	-	-	-
Smaller	<u>2</u>	<u>324</u>	<u>33.4</u>	<u>951</u>	<u>39.1</u>
Total	<u>5</u>	<u>969</u>	100.0	<u>2,435</u>	100.0

REVENUE DIFFERENCES BETWEEN  
OPEN AND SET-ASIDE SALES

In order to assess whether set-aside timber sales returned less revenues, we evaluated the revenues returned from the set-aside and open sales which we analyzed for quality differences. We took the quality differences into account because higher quality timber sales are more desirable than lower quality timber sales and should return more revenues. Our analysis involved (1) segregating the national forests and BLM districts into groups which correspond to the quality of the set-aside sales, (2) computing the difference between the average amount the timber actually sold and its appraised value, commonly referred to as overbid for set-aside and open sales, and (3) using various statistical techniques to test whether the overbids between set-aside and open sales were different.

Revenue differences on  
Forest Service timber sales

To demonstrate the methodology we used to compare revenues, a detailed explanation of our analysis is discussed below for 2 of the 58 national forests in our review. At both national forests, the set-aside sales were of higher quality than the open sales. At the Gifford Pinchot National Forest, the higher quality

set-aside sales also returned higher revenues than the open sales. This result is what would be expected under normal competitive bidding conditions. At the Umpqua National Forest, however, the higher quality set-aside sales returned less revenues than the open sales. This result is not what would be expected under normal competitive bidding conditions.

The results of the Umpqua National Forest and at the 47 other national forests with similar results exemplify that restrictive bidding conditions do exist on set-aside sales; the results also serve as a rough measure of the impact of the restrictions at the various national forests. At most of the national forests, the restrictions resulted in less revenues of varying magnitude.

#### Gifford Pinchot National Forest

Our evaluation of the 84 set-aside sales sold at the Gifford Pinchot National Forest disclosed that set-aside sales were of higher quality than the open sales. For example, compared to the open sales, the set-aside sales

- contained 84 percent more total volume and 28 percent more volume per acre,
- could be logged over a longer time period,
- had lower logging and manufacturing costs, and
- contained more higher valued timber.

The actual differences between all the quality characteristics on the Gifford Pinchot National Forest can be found in appendix IX.

The higher quality set-aside sales at the Gifford Pinchot National Forest had a 44-percent, or \$11.20, higher overbid than the forest's lower quality open sales. The method used to compute overbid was as follows.

<u>Type of sale</u>	<u>Selling price - Appraised value = overbid</u>		
	(\$ per thousand board-feet)		
Set-aside	\$83.75	-	\$47.29 = \$36.46
Open	<u>67.92</u>	-	<u>42.66</u> = <u>25.26</u>
Difference	<u>\$15.83</u>		\$ <u>4.63</u> = <u>\$11.20</u>

Thus, at the Gifford Pinchot National Forest, set-aside timber purchasers paid more for higher quality set-aside sales. This result is what would be expected under normal competitive bidding conditions.

#### Umpqua National Forest

Our evaluation of 108 set-aside sales sold at the Umpqua National Forest also disclosed that set-aside sales were of higher quality than the open sales. The set-aside sales

- contained 9 percent more total volume,
- could be logged over a longer time period,
- had lower logging costs, and
- contained more higher valued timber.

In contrast to the Gifford Pinchot National Forest, the higher quality set-aside sales sold at the Umpqua National Forest returned 18 percent, or \$5.84, less overbid than the lower quality open sales, as shown below.

<u>Type of sale</u>	<u>Selling price</u>	-	<u>Appraised value</u>	=	<u>Overbid</u>
	(\$ per thousand board-feet)				
Set-aside	\$72.32	-	\$45.13	=	\$27.19
Open	<u>76.62</u>	-	<u>43.59</u>	=	<u>33.03</u>
Difference	(\$ <u>4.30</u> )		\$ <u>1.54</u>		(\$ <u>5.84</u> )

On the Umpqua National Forest, set-aside timber purchasers paid less for higher quality set-aside sales. This result is not what would be expected under normal competitive bidding conditions. At the Umpqua National Forest, the restrictive bidding conditions existing on set-aside sales resulted in less revenues, and the \$5.84 difference in overbid serves as a rough measure of the extent of the competitive restrictions operating in this forest.

The Umpqua example also demonstrates why we based our analysis of revenues on the overbid rather than upon total selling price. As has been shown, selling price is appraised value plus overbid. In the Umpqua example, there was only a \$4.30, or 6-percent, difference in revenues between the set-aside and open sales, while there was a \$5.84, or 18-percent, difference in overbid. The difference of \$1.54 occurred because the set-aside sales were of higher quality and the sales appraised value was higher by \$1.54. By just comparing the selling price of set-asides and open sales, we would not have accounted for the quality differences between the two types of sales.

To insure that the overbids were different, we statistically tested the overbids at the 90-percent confidence level. The statistical test was used to insure that widely varying overbids for each individual timber sale did not bias our analysis. For example, at the Gifford Pinchot National Forest, the set-aside overbids and the open sale overbids did not vary greatly within all the set-aside sales and open sales, and thus the overbid difference was statistically valid. On the other hand, at the Fremont National Forest, the set-aside sales overbids and the open sales overbids varied greatly, and we could not conclude that the overbid difference was statistically valid.

We used this methodology and found that the revenues from set-aside sales on 48 national forests, which accounted for 74 percent of the set-aside sales volume sold, were less than similar or lower quality open sales. At the nine other national forests, the revenues from set-aside sales were equivalent to or greater than the forests' open sales. At the one remaining national forest, the revenues from lower quality set-aside sales were less than for the higher quality open sales.

We did not determine the magnitude of the revenues denied the Federal Government because we were concerned that the amount calculated would be pure speculation since we could not determine that the set-aside sales, if sold as open sales, would have generated similar overbids. Table 4 presents our results in summary form. Appendix IX contains the specific results of our evaluation for each of the 58 national forests.

Table 4

Quality and Overbid Differences Between  
Set-aside and Open Sales

<u>National forest</u>	<u>Set-aside versus open sales</u>	
	<u>Quality differences</u>	<u>Overbid differences</u>
Forests where higher quality set-aside sales sold for less:		
Alabama <u>1/</u>	Higher	-73%
Allegheny	Higher	None
Carson	Higher	None
Chattahoochee and Oconee	Higher	None
Colville	Equal	-49%
Flathead	Higher	-30%
Florida <u>2/</u>	Higher	None
Francis Marion and Sumter	Higher	-69%
Fremont	Higher	None
Kisatchie	Higher	None
Klamath	Higher	None
Kootenai	Higher	-78%
Lassen	Higher	None
Mississippi <u>3/</u>	Higher	None
Modoc	Higher	None
Mt. Baker-Snoqualmie	Higher	None
Mt. Hood	Higher	-62%
Nicolet	Higher	None
Olympic	Higher	None
Ottawa	Higher	None
Ozark and St. Francis	Higher	None
Rogue	Higher	-29%
Santa Fe	Higher	None
Shasta-Trinity	Higher	None
Siskiyou	Higher	-30%
Six Rivers	Higher	None
Texas <u>4/</u>	Higher	None
Umatilla	Higher	-63%
Umpqua	Higher	-18%
White Mountain	Higher	-62%
Willamette	Higher	-12%
Winema	Higher	None



Forest where set-aside sales  
revenues were equal or greater:

Clearwater	Lower	None
Gifford Pinchot	Higher	+44%
Idaho Panhandle <u>5/</u>	Lower	None
Medicine Bow	Lower	None
Routt	Equal	None
Siuslaw	Higher	+18%
Tahoe	Higher	+65%

Forests where lower quality set-aside  
sales sold for less:

Quachita	Lower	-46%
----------	-------	------

1/Includes the Wm. B. Bankhead, Conecuh, Talladega, and  
Tuskegee National Forests.

2/Includes the Apalachicola, Ocala, and Osceola National  
Forests.

3/Includes the Bienville, Delta, DeSoto, Holly Springs,  
Homochitto, and Tombigbee National Forests.

4/Includes the Angelina, Davy Crockett, Sabine, and Sam  
Houston National Forests.

5/Includes the Coeur d'Alene, Kaniksu, and St. Joe National  
Forests.

Revenue difference on  
BLM timber sales

As previously mentioned, our analysis of the quality of BLM's timber sale set-aside program was not as intensive as the analysis made of national forests. For BLM timber sales, we determined if set-aside sales were statistically larger, equal to, or smaller than the corresponding district's open sales. We then analyzed the same timber sales to determine if the set-aside sales overbid were statistically dissimilar from the district's open sales.

We found that set-aside timber sales on the Medford, Eugene, and Salem districts were larger than open sales.

These three districts accounted for 67 percent of the set-aside timber sales evaluated. According to BLM officials, timber purchasers prefer large timber sales and view those larger timber sales as more desirable than small timber sales. These larger set-aside sales, however, received either the same or a smaller overbid than the open sales.

The set-aside sales at the Coos Bay and Roseburg districts were smaller in size than the district's open sales. At the Coos Bay district, the set-aside sales overbid was the same as open sales, while at the Roseburg district, the set-aside sales overbid was 56 percent greater than the district's open sales. Table 5 presents our results.

Table 5

Sale Size and Overbid Differences Between  
Set-aside and Open Sales

<u>BLM district</u>	<u>Set-aside sales versus open sales</u>	
	<u>Sale size</u>	<u>Overbid</u>
Coos Bay	Smaller	None
Eugene	Larger	None
Medford	Larger	-38%
Roseburg	Smaller	+56%
Salem	Larger	None

SET-ASIDE PROGRAM'S IMPACTON DEPENDENT COMMUNITIES

We examined the allegation that the set-aside program adversely affects certain communities that are dependent upon lumber mills owned by large companies. This situation allegedly occurs where a mill is ineligible for the set-aside program and dependent upon Federal timber, but the amount of timber available to it in open timber sales is insufficient to keep the mill operating at its normal capacity. The mill is then forced to reduce its operations and employment or close down completely. If these mills are located in communities where they are the major or only source of employment, the community is directly affected.

Our examination included two communities which were alleged to be adversely affected by the set-aside program. The Public Timber Purchasers Group identified Tillamook County, Oregon, as a community suffering economic setbacks because of the set-aside program. The alleged adverse impacts of the set-aside program on Tillamook County were also highlighted in the trade magazine "Forest Industries" and in the Tillamook newspaper. The other community we examined was Johnsondale, California. The late Congressman William M. Ketchum identified Johnsondale as a community injured by the set-aside program and asked us to review the situation there.

We concluded that the SBA set-aside program has not damaged Tillamook County's economy by increasing the amount of Federal timber taken out of the county nor has the set-aside program contributed materially to employment in the county's declining forest industry. We found that the viability of Johnsondale is in question because the mill located there is unable to obtain an adequate log supply. This inability, however, cannot be blamed solely on the set-aside program.

TILLAMOOK COUNTY, OREGON

Since the 1890s, the timber and wood products industry has played an important role in Tillamook County's economy. Nearly 90 percent of the county is made up of forest lands of which almost 20 percent is owned by the Federal Government. For purposes of the set-aside program, Federal forests in Tillamook County are included in either the

Forest Service's Hebo marketing area or BLM's Columbia marketing area. The initial small business shares for the Hebo and Columbia marketing areas were 59 and 53 percent, respectively. In 1976, the Hebo marketing area's recomputed share was 57 percent.

When the initial small business share was established, three mills in Tillamook County qualified as small businesses and purchased Federal timber sales: Oregon-Washington Plywood, Diamond Lumber, and Tillamook Veneer. Louisiana Pacific, a large firm, purchased Diamond Lumber and Tillamook Veneer in 1973. Oregon-Washington Plywood went out of business in 1974, and the mill was dismantled.

Even though the three small firms listed above no longer exist, the recomputed small business share was not substantially revised. This situation prompted the allegation that the set-aside program is damaging Tillamook County's economy. The economic losses allegedly occur because eligible firms from outside the county are now coming into Tillamook County, buying the small business share of Federal timber sales, and taking the logs out of the county for processing. This has supposedly lead to a loss of jobs and consequent injury to Tillamook County's economy.

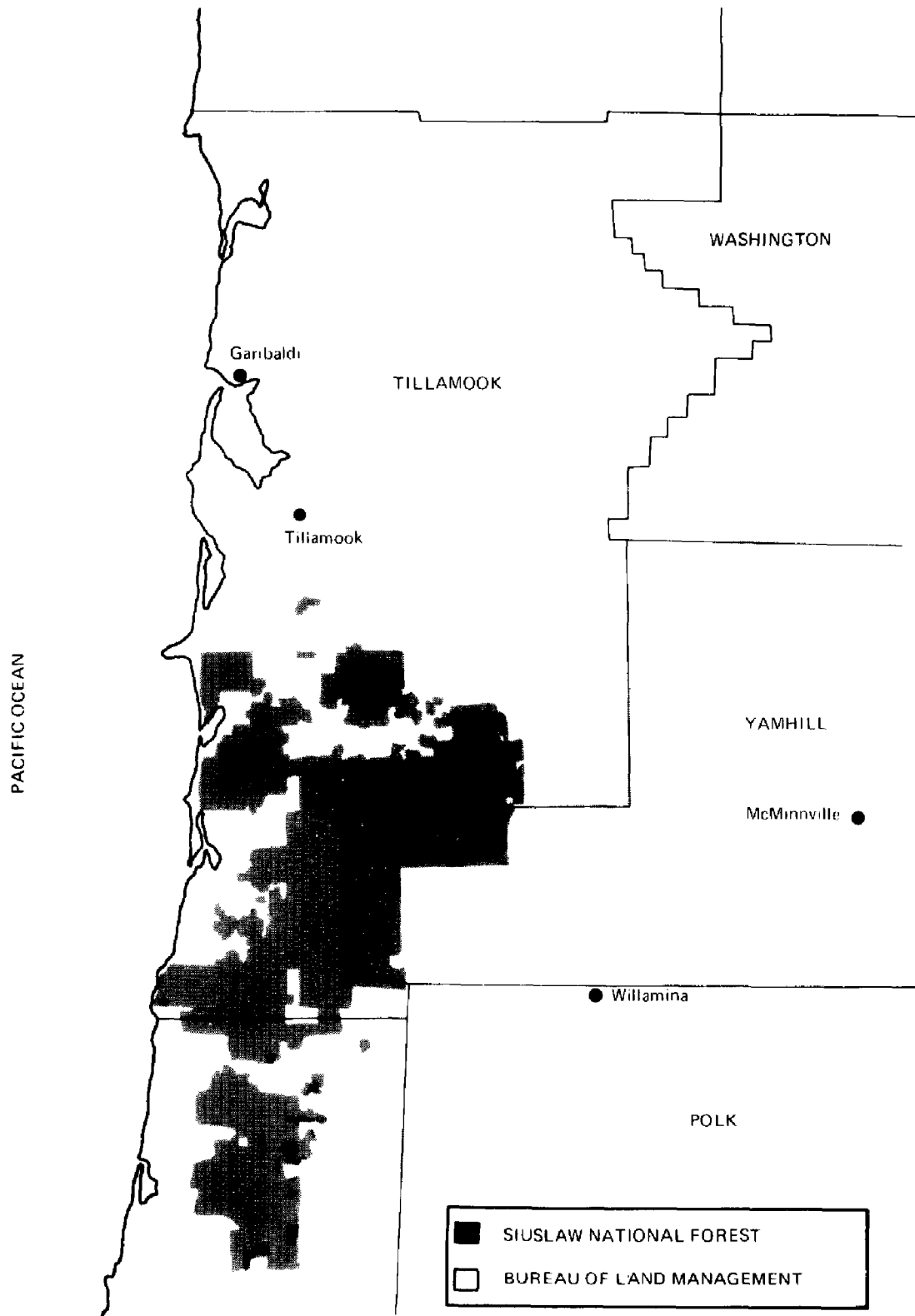
We examined this allegation by analyzing Federal timber sales made between 1966 and 1976 in the Tillamook County area to determine if significantly less Federal timber has been purchased by Tillamook County firms since the small business share procedures were inaugurated by the Forest Service in 1971 and by BLM in 1973. This analysis enabled us to determine if increasing amounts of Federal timber are now being purchased by companies located outside Tillamook County. We also reviewed available employment data for the forest industry in Tillamook County between 1960-76 to determine employment trends and their causes.

Our analysis demonstrated that no significant change has occurred between the timber purchases of companies located in Tillamook County compared to those located outside. We also found that Tillamook County's forest industries employment has steadily declined since 1960, but most of the decline occurred before the small business share procedures were inaugurated in 1971. Most of

the decline since 1971 is attributable to the demise of the Oregon-Washington Plywood Company in 1974. We concluded that the SBA set-aside program has not damaged Tillamook County's economy by increasing the amount of Federal timber taken out of the county for processing nor has the set-aside program contributed materially to the declining forest industries employment in Tillamook County.

No significant change in Federal  
timber purchase patterns

While all the Federal timber in Tillamook County is included in either the Hebo or Columbia marketing areas, these marketing areas also include Federal land outside Tillamook County. Of the Federal acreage in these two marketing areas, 44 percent lies within Tillamook County. (See map on the following page.)

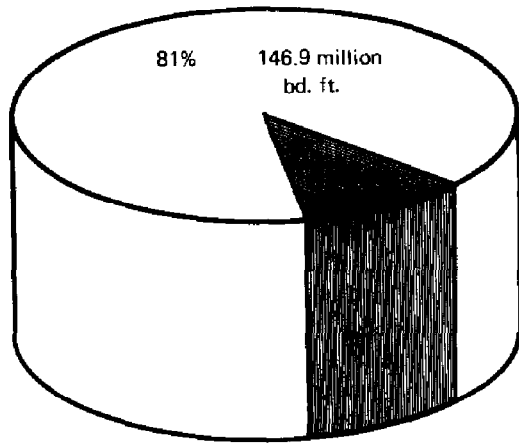


As shown on the map, the majority of Federal timber in Tillamook County lies in its extreme southern region. Additionally, the Federal timber is in close proximity to the principal purchasers of Federal timber identified in our review of Federal timber sales data. The Federal timber lands lie approximately equal distance between the City of Tillamook and the principal purchasers outside Tillamook County.

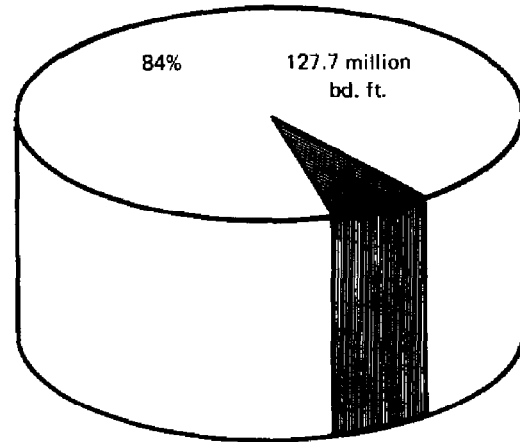
We analyzed Federal timber sales in the Hebo and Columbia marketing areas for the 11 years between 1966-76 to determine if significantly less Federal timber has been purchased by Tillamook County firms since the small business share procedures were inaugurated. We found that firms located outside Tillamook County not only have purchased Federal timber in the Tillamook County area, but they have also purchased the major portion of the available timber. Furthermore, these purchase patterns changed very little after the small business share procedures were started compared with the period immediately prior. Figure 1 displays the relative share of Federal timber sales for firms located inside and outside Tillamook County.

FEDERAL TIMBER PURCHASES FROM THE COLUMBIA AND  
HEBO MARKETING AREAS BY FIRMS INSIDE AND OUTSIDE TILLAMOOK COUNTY  
1966-1976

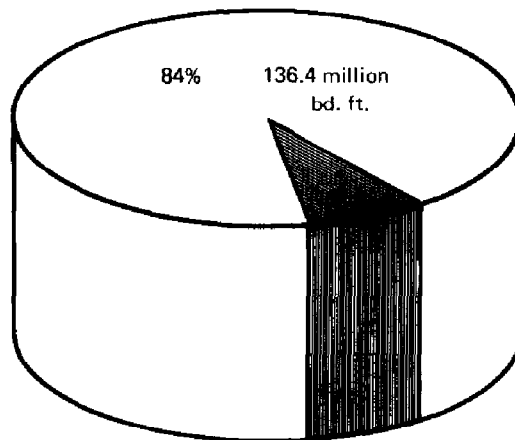
1966-1970  
AVERAGE ANNUAL SALES  
181 million bd. ft.



1971-1976  
AVERAGE ANNUAL SALES  
151 million bd. ft.



1966-1976  
AVERAGE ANNUAL SALES  
164.6 million bd. ft.



□ NONTILLAMOOK COUNTY PURCHASERS  
▨ TILLAMOOK COUNTY PURCHASERS



During the 5 years before 1971, Tillamook County's large and small firms together purchased an average annual volume of 34.2 million board-feet, or nearly 19 percent of the average annual volume of timber sold in the Hebo and Columbia marketing areas. The remaining volume was bought by firms outside Tillamook County. Only three set-aside sales occurred in this period, and in each case the timber was located inside Tillamook County but purchased by firms outside.

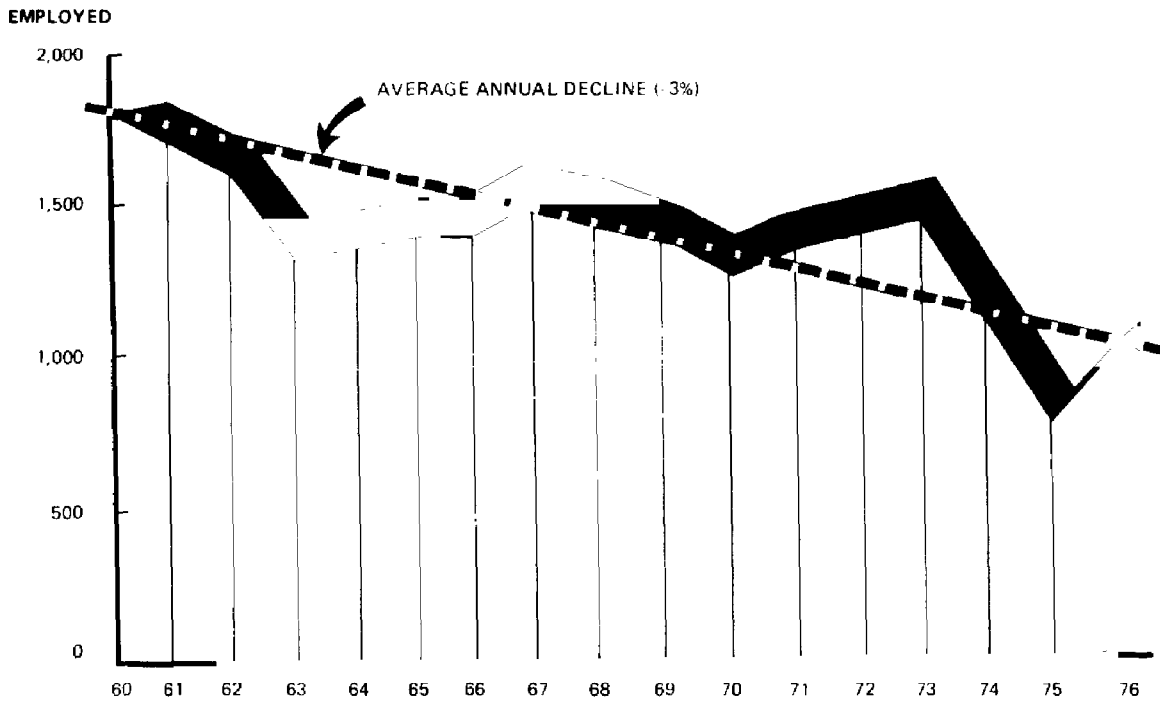
During the 6-year period starting in 1971, the firms in Tillamook County purchased an average annual volume of 23.3 million board-feet, or 16 percent of the average annual volume of timber sales made in the Hebo and Columbia marketing areas. Again, the majority of the timber volume was purchased by firms located outside Tillamook County. During this 6-year period, 29 out of 39 set-aside sales were located in Tillamook County; only 1 of the set-aside sales was purchased by a Tillamook County firm.

The average annual timber purchases by firms located in Tillamook County declined by 3 percentage points after the small business share procedures were inaugurated. We tested the statistical significance of the difference between periods; in our opinion, the decline is not significant because of the demonstrated fluctuations of annual timber sales over the 11-year period.

Declining forest industries  
employment in Tillamook County

Through statistics provided by the Oregon State Department of Human Resources, Employment Division, we traced the trend in the forest industries employment in Tillamook County from 1960 through 1976. The county's forest industries employment declined, and most of the decline occurred before 1971. Figure 2 illustrates this trend.

FIGURE 2  
TILLAMOOK COUNTY EMPLOYMENT - TIMBER INDUSTRIES  
1960-1976



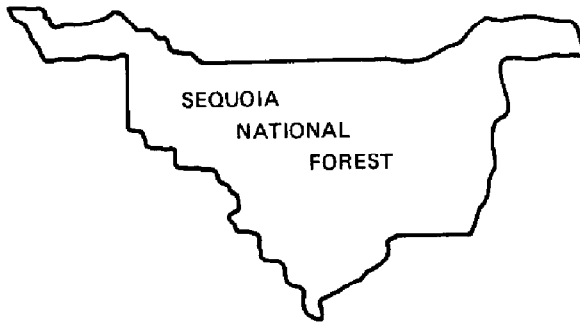
SOURCE: Oregon Department of Human Resources - Employment Division

The State Employment Division's analyses of employment in Tillamook County showed that the declines have been caused by one major factor, the county's sensitivity to fluctuations in the market for forest products. In particular, the large employment declines in 1974 and 1975 are attributed to poor market demand for forest products coupled with a national recession. These conditions caused some firms to go out of business or to resort to temporary shut-down or discontinuance of shifts. Additionally, some of the mills and logging firms operated intermittently or reduced working hours, further reducing the work force's earnings. In the second half of 1974 the county experienced the most severe employment cutbacks in its recent history.

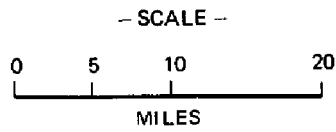
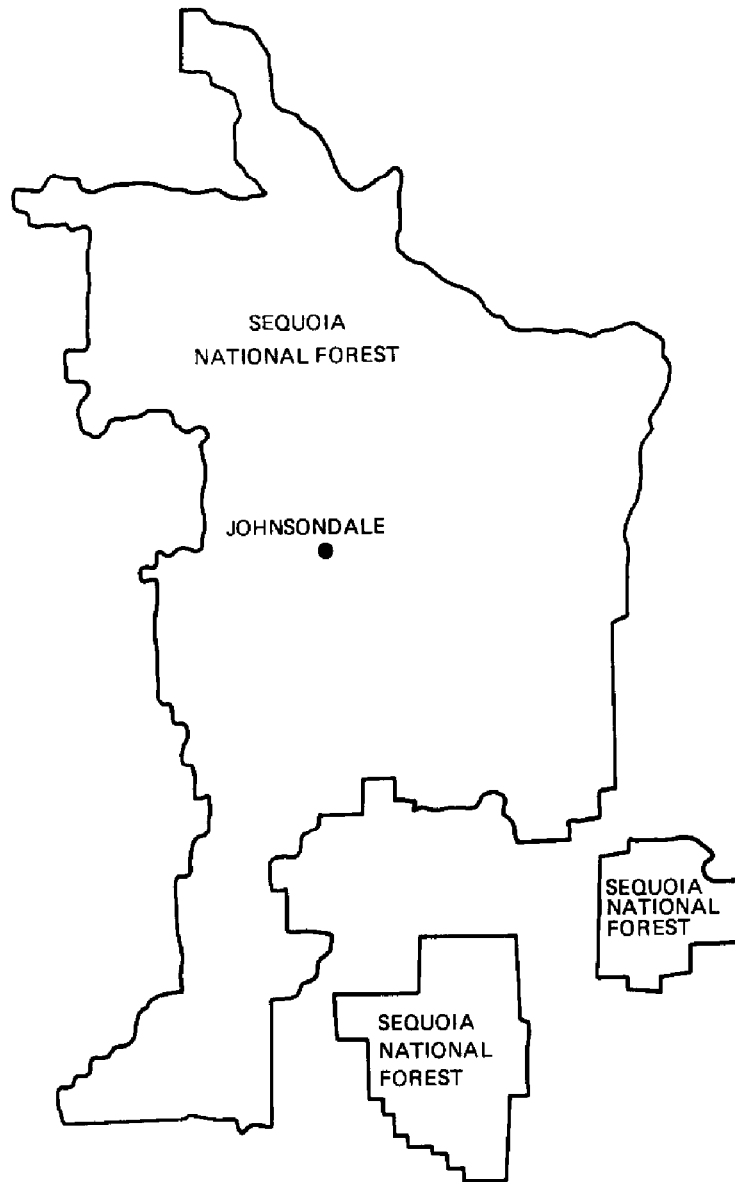
The declines in forest industries employment in Tillamook County have consistently made up the majority of those unemployed in the county. Also, Tillamook County's unemployment rates have generally exceeded both the State and national averages. The most recent permanent job losses have been connected with the closure of the Oregon-Washington Plywood mill in August 1974 which caused the permanent loss of 250 jobs. At no time did the State's labor market analyses identify lack of access to Federal timber as an influencing factor upon the county's level of employment.

#### JOHNSONDALE, CALIFORNIA

Johnsondale, California, is a small, isolated community located in the Sierra Nevada Mountains surrounded by the Sequoia National Forest. The town's location is shown on the following map.



SEQUOIA  
NATIONAL FOREST



The American Forest Products Company owns the mill and most of the community's housing and operates the only food and mercantile store. As of May 1978, an estimated 250 people were living in the community. This decreased from 590 people during the summer of 1975. Most of the town's inhabitants work either at the mill or for one of the mill's contractors.

The Johnsondale mill was built in 1937 and rebuilt after a fire in 1944 to process privately owned, old growth ponderosa pine and related species of timber which grew in and around the Sequoia National Forest. As the privately owned timber diminished, the mill became more dependent upon the Sequoia National Forest timber for its continued operation. Today the mill is totally dependent on the Sequoia National Forest for its log supply.

During the base share determination period, 1966-70, four mills--three rated large and one small--purchased most of the Sequoia's timber sales. The original small business share on the Sequoia was 22 percent. The Johnsondale mill purchased an annual average of 34 million board-feet during this period.

During the next 5-year period, 1971-75, five mills--three classified as large businesses and two as small--purchased most of the Sequoia's timber. The small mills purchased 95 million board-feet over their share, and as a result, the small business share increased to 40 percent. The Johnsondale mill purchased an annual average of 19 million board-feet during this period.

The sharp increase in the small business share and the decreasing timber purchases by the Johnsondale mill form the basis for the allegation that the set-aside program adversely affects the viability of the Johnsondale mill. We examined this allegation by analyzing the conditions leading to the increase in the small business share on the Sequoia National Forest and the reasons for the Johnsondale mill's declining timber purchases.

Our analysis showed that during the 1971-75 period, when the small business share increased from 22 to 40 percent, both small and large firms were eligible to bid

on all of Sequoia's timber sales. The small firms, principally the Sierra Forest Products Company, were able to increase their share by simply outbidding the large firms at the timber sale auctions.

The Johnsondale mill has several competitive disadvantages which prevented it from competing effectively. In addition, the large decrease in the annual allowable cut on the Sequoia National Forest adversely affected the companies operating on the forest, including the Johnsondale mill.

We concluded the viability of the Johnsondale mill and the community is in question because of the mill's inability to obtain an adequate log supply. This inability, however, cannot be blamed solely on the set-aside program. The Johnsondale mill's inability to compete against the small mills and the reduced allowable cut of the Sequoia National Forest are the principal reasons why the Johnsondale mill cannot obtain an adequate log supply.

#### Increase in the small business share

The small firms increased their share of the Sequoia's timber sales by outbidding the large firms at the timber sale auctions. Sierra Forest Products Company purchased most of the small business share by outbidding the large mills, including the Johnsondale mill. A Forest Service official pointed out that the large firms could have prevented or minimized the increase in the small business share. The large firms attended the oral timber sale auctions and knew what the small firms were bidding for the timber. If the large firms had bid high enough to purchase additional timber sales, the small firms would not have obtained the additional timber volume, and the small share would not have increased. Forest Service officials noted that, except for the last few years, the American Forest Products Company has had little competition for Federal timber on the Sequoia National Forest because the company acquired most of its timber at or near appraised prices.

The large companies appealed the Forest Service's decision to raise the small business share from 22 to 40 percent. Three large companies, through the Public Timber Purchaser's Group, requested in December 1976 that the

Forest Service modify its decision because of the "extraordinary circumstances" which occurred during the preceding 5 years. The Public Timber Purchaser's Group requested that the 95 million board-feet surplus that the small firms purchased in the preceding 5 years be carried over into the new 5-year period to soften the impact of raising the small share by 18 percentage points. The net impact of this change could have decreased the set-aside share from 40 to 22 percent if the large firms had purchased all of the 95 million board-feet surplus. The large firms would then have had an opportunity to purchase an additional 19 million board-feet annually.

The final decision on the appeal was not made until October 1977. At that time, the Chief of the Forest Service ruled the Sequoia's small business share would be 40 percent with a 30 million board-feet carryover. The Chief concluded both the large and small business segments of the timber industry which purchase timber in the Sequoia National Forest would be afforded a reasonable degree of protection in light of the forest's reduced timber supply.

The effect of the Chief's decision was that the large firms would be eligible to purchase, on the average, an additional 6 million board-feet a year. The net effect for the small businesses was that their share could be reduced from 40 percent to 34 percent, if the large firms purchased all the carryover.

#### Competitive disadvantages of the Johnsondale mill

American Forest Products Company officials advised us the Johnsondale mill has a number of competitive disadvantages which have prevented the mill from competing effectively for Federal timber. These competitive disadvantages include higher production, transportation, and overhead costs.

In 1944 the Johnsondale mill was rebuilt following a fire and was designed to process large diameter ponderosa pine logs. Company officials said that when an adequate supply of these large diameter pine logs is available, the mill can process between 80,000 to 90,000 board-feet of lumber per shift a day.

However, these types of logs have been in short supply since most of the large diameter pine trees have been harvested, leaving the available commercial timber lands with small diameter fir and pine trees. Thus, to keep operating, the mill has been sawing small diameter fir and pine logs which have caused its production to decrease to between 60,000 and 70,000 board-feet per shift a day.

The Johnsondale mill's transportation costs are high because Johnsondale is not located on a rail line. As a result, all finished goods and fuel must be trucked over narrow, winding mountain roads. Also, lumber byproducts cannot be sold. The Johnsondale mill has difficulty attracting qualified employees who are willing to live in a small, isolated community. In addition, the Johnsondale mill, being part of a large corporation, has higher office overhead costs than its small competitors.

These higher costs have placed a ceiling on what the Johnsondale mill can pay for timber and still operate profitably. American Forest Products Company officials told us if the mill had paid more for its timber, it could not be operated profitably. The mill's timber supply has dwindled to the point that in March 1976 the mill's second shift was dropped and American Forest Products Company has stopped modernizing the mill because there is no assurance it would operate long enough to make the new investment profitable.

#### Decrease in Sequoia National Forest allowable cut

The Sequoia National Forest has had to decrease its annual sales program from 118 million to 74 million board-feet because timber harvesting has been restricted on large portions of the Sequoia's commercial forest lands. The Forest Service is studying about 30 percent of the commercial forest land on the Sequoia National Forest for possible inclusion into the National Wilderness System. Until the land management planning is completed and the land use decisions made, the availability of commercial forest lands for timber harvesting is unknown. A Sequoia National Forest official advised that the withdrawal of these lands for study necessitated reducing the forest's annual timber sales program from 118 million to 94 million board-feet annually.



The Sequoia's timber supply was restricted further in February 1978 when the 306,000-acre Golden Trout Wilderness was established. This removed approximately 42,100 acres of commercial forest land from timber production. This action reduced the Sequoia's annual timber sales program to 74 million board-feet.

Impact of the reduced  
timber supply on the Sequoia's  
forest products industry

Because of the Sequoia's reduced timber supply, the large firms, even if the small share had not increased, would have had difficulty depending on the Sequoia National Forest for their timber supply as they have in the past. Between 1971 and 1975, Sequoia's predominate timber purchasers bought about 113 million board-feet more than the Sequoia's current sales program. The three large mills purchased about 77 million board-feet annually, or 3 million board-feet more than the Sequoia's current sales program. If the small share had not increased, the large firms' share of the forest's timber sales program would have been 58 million board-feet, or 19 million less than they had historically obtained from the forest. With the small share increase taken into account, the large firms' share decreased to about 44 million board-feet, or 33 million board-feet less than they had historically purchased.

American Forest Products officials recognize the timber supply problems confronting the large firms operating on the Sequoia National Forest. They advised us that the collective capacity of the large mills on the forest is too large for the available timber supply and, as a result, one of the larger mills will probably have to cease operations. In light of the timber supply problems, American Forest Products officials are studying how to keep their mill open and the community of Johnsondale alive.

SET-ASIDE PROGRAM CAUSES DEVIATIONSFROM NORMAL BUSINESS PRACTICES

We reviewed three allegations that the set-aside program results in deviations from normal and expected business practices. To assess the validity of these allegations, we analyzed the applicable program regulations and procedures, examined file documents and correspondence relating to the allegations, and discussed the allegations in depth through interviews with SBA, Forest Service, and BLM personnel and with representatives of forest products firms.

The first allegation involves a claim that some small owners who wish to sell their businesses have difficulty obtaining maximum value due to the allocation of the timber supply by the set-aside program. We found this allegation to be true.

We also reviewed an allegation that the 500-employee size standard is a barrier to the economic growth of the small firms. We found only a few instances where the size standard was viewed as restricting a firm's possibilities for further growth, and we noted the current size standard allows eligible firms to grow to a significant economic size and still be eligible for set-aside assistance.

A third allegation involves claims that some firms close to the current employee ceiling are circumventing the spirit and intent of the program through manipulations designed to maintain eligibility for set-aside sales. We found in a few instances that firms which are close to the 500-employee ceiling do make special efforts to keep employment below 500 and thereby remain eligible to bid for set-aside sales. We also found instances where firms have deliberately divested portions of their operations or have restructured corporate ownership patterns specifically to become eligible for the set-aside program.

SET-ASIDE PROGRAM PENALIZES OWNERS  
WHO WISH TO SELL SMALL BUSINESSES

We reviewed the allegation that small business owners who wish to sell may have difficulty obtaining a maximum market price for their firms because of the set-aside program.

We found this allegation to be true in areas where firms are dependent on Federal timber sales for raw material.

Many small lumber firms are owned and operated by entrepreneurs who often plan to sell their firms when they reach retirement age. Because of several considerations, owners of small firms usually seek to sell their businesses to one of the large forest products corporations. However, due to the set-aside program, the opportunity for the small owner to obtain the maximum price for his firm has been greatly reduced in many areas.

Under the present program procedures, when a small business firm is sold to a large business the purchase history of the small firm does not transfer to the firm's new status as a large business but rather is tabulated as small business purchases during recomputation of the small business share. In market areas where firms are dependent on Federal timber, the large business purchaser of a small firm would be in a position of having to operate the purchased facility without the timber supply upon which it had historically relied.

Consequently, the large companies have become increasingly reluctant to purchase small firms. Several large firms told us they had modified company policies regarding acquisitions in response to the constraints of the set-aside program. These large companies related several examples where they had been approached by small owners who wished to sell out to the large firms. The large firms claim that prior to the current set-aside program, they would have been interested in purchasing some of the offered firms. However, due to the restriction on transfer of the small firm's purchase history, the large firms had to inform the small owners that they could not purchase the small businesses.

Several of the small firm owners we contacted confirmed that the set-aside program reduced the marketability of their firms. Some small owners, who are actively seeking to sell their businesses, were disturbed that the set-aside program had lessened their opportunity to obtain a maximum price. Other small operators told us that while they recognized the program had reduced the marketability of their firms, they believe the benefits of the program outweigh this penalty.

SBA contends that the maximum value contains the facility, the timber holdings, and small business share as if the latter could be sold separately. SBA insists the small business share is one that is shared by the community of small businesses and a single mill does not have the vested right to sell or buy a "share" of Federal timber.

THE SIZE STANDARD AS A BARRIER  
TO NORMAL ECONOMIC GROWTH

We also examined an allegation that the eligibility size standard is a barrier to expected and hoped-for economic growth of the small business firms. We conclude that the size standard does not appear to be a substantial barrier to economic growth for most of the set-aside eligible firms. It seems self-evident that an employee size standard would be a barrier to normal growth only if the benefits of remaining eligible for set-aside sales are perceived as greater than the expected benefits of increasing a firm's labor force. We also note that SBA procedures and policies do not intend for a firm to remain under the umbrella of the set-aside program but rather provide for such assistance to the small firm which will allow it to grow beyond the program's protection and compete with all firms for open sales.

We found, however, that aspects of the program are working against the probability that many small firms will grow larger than the current 500-employee size standard and graduate from the set-aside program. The size standard itself is large enough that a firm can remain eligible for the program and still expand to a rather considerable size. Table 1 below lists the five largest firms which are eligible to purchase set-aside sales.

Table 1

	<u>No. of mills</u>	<u>1977 production</u> (mil. bd.-ft.)	<u>Ranking by production among all U.S. producers</u>
Mountain Fir Lum- ber Company	4	169	32
White Swan Lumber Company	4	138	34
Eel River Saw- mills, Inc.	2	120	37
Idaho Forest Industries	6	115	41
Willamina Lumber Company	2	113	44

Source: Forest Industries 1978 Annual Lumber Review and Buyers' Guide.

Given this indication of the production capabilities of the largest of the set-aside eligible firms, it seems obvious that the majority of the small business community has room for considerable growth within the current size standard.

#### MAINTAINING SET-ASIDE ELIGIBILITY

We found instances where firms which are already close to the 500-employee ceiling have made special efforts to keep employment below 500 and thereby remain eligible to bid for set-aside sales. These firms generally contract out portions of their work, such as logging, road building, and accounting services, in order to keep total employment below the 500-employee ceiling. In one case we found SBA suggested that a firm in Oregon lay off employees in order to gain eligibility for set-aside sales. This firm discharged 90 employees to comply with this suggestion.

Even more unusual is the situation where at least seven firms have deliberately divested portions of their firms or

have restructured corporate ownership patterns specifically to become eligible for the set-aside program. Although such activities are not illegal, they seem oddly at variance with SBA's stated size standards policy

"\* \* \* that concerns which \* \* \* have grown to a size which exceeds the applicable small business size standard \* \* \* should not rely on continuing assistance under the Small Business Act from the cradle to the grave, but should plan for the day on which they become other than small business and should be able to compete without assistance."

AGENCY COMMENTS AND OUR EVALUATION

We met with agency officials responsible for administration of the set-aside program in November 1978. Forest Service and Bureau of Land Management officials agreed overall with the facts contained in the report as they applied to their respective agency. Their specific comments and suggestions were considered in preparing the final report. Forest Service officials also said they have long felt that the timber industry size standard has discriminated against very small firms.

Small Business Administration officials disagreed overall with the report and said our findings were misleading and contained errors. They asked for more time to respond to our report in detail. Therefore, we met with SBA officials again in January 1979 and they gave us written comments. SBA's major concerns were explained in a letter to us from its Acting Associate Administrator for Procurement Assistance. (See app. VIII.)

SBA said the allegations we received and considered did not represent a total review of the SBA set-aside program and related timber sales efforts, as implied by both our findings and cover letter. SBA also stated that our findings are generally not substantiated and that the allegations referenced and conclusions drawn are misleading in structure and content and cast the small business set-aside program in an unfavorable light.

We agree that we did not make a total review of the set-aside program but responded to a series of allegations about the program, as the report title clearly states. The specific areas the allegations relate to are listed on the first page of the letter. However, we strongly disagree that our findings are not substantiated and our conclusions misleading. In its extensive reviews of this report, SBA was unable to point out any substantial errors in the facts we present, and consequently we see no basis for modifying our findings.

SBA stated that our finding that it did not follow its regulations in setting the size standard is not true and not substantiated. SBA maintains that various reviews, evaluations, public hearings, and SBA letters since 1966 support its position that the size standard regulations have been and are being followed. We continue to stand by our finding that

SBA files contained no record that the regulations for setting size standards were considered when SBA increased the size standard for the timber industry to its current level in 1964. We substantiated this finding by contacting a former SBA official who was familiar with size standards in 1964 and he too was unaware of any study made to justify the increase in the standard. In its letter to us, SBA agreed that the reasons for the 1964 size standard increase were not documented.

We disagree with SBA's opinion that the reviews of the size standard since 1964 support SBA's position that the size standard regulations have been and are being followed. SBA reviewed the timber industry size standard in 1966 and 1975. These reviews were made well after the size standard had been raised to 500 employees and were not part of the original justification to change the standard. Furthermore, SBA regulations specify six factors that are to be considered in formulating industry size standards (see pp. 9 and 10), but neither the 1966 nor 1975 review considered all these factors. The 1966 review was conducted to determine whether the increase in the size standard had adversely affected firms with less than 250 employees and whether it had improved the competitive position of firms with 250-500 employees. SBA developed statistics on only two of the size factors. The 1975 review consisted of two public hearings where interested parties commented on whether the size standard should be raised, lowered, or retained. Documentation in SBA files showed that SBA's hearing panel based its 1975 decision to retain the 500-employee standard on arguments presented during the hearings and did not study any additional data concerning the size factors, as is called for in the regulations.

With respect to our finding that firms with less than 100 employees, and especially those with 25 or fewer, use the set-aside program less than those with more than 100 employees, SBA claims this finding is meaningless in light of its newly established Special Salvage Timber Sales program and is not substantiated by our data. We believe that the fact that SBA saw the need to establish a separate timber sales program specifically for firms under 25 employees, primarily loggers, tends to further substantiate our findings. Our analysis of 2,286 timber sales to small businesses at 8 national forests and 2 BLM districts showed that firms with 100-499 employees obtained a greater proportion of their total timber purchases



through set-aside sales than did firms with less than 100 employees. Our analysis of firms with 25 or fewer employees, primarily logging firms, showed that these firms had a particularly difficult time competing for set-aside sales. It is exactly this group that SBA has targeted for its new special timber sales program.

SBA stated that it categorically denied our conclusion that set-aside timber sales returned less revenue to the U.S. Treasury than open sales. SBA said its own statistics showed a greater return to the U.S. Treasury for set-aside sales versus sales awarded to large business. SBA also disagreed with the methodology we used for our analysis. We evaluated SBA's comparison of revenues between set-aside and open sales and found that although the quantitative data seems valid, SBA's interpretation of the data is based on an unproven and, as we found, a fallacious assumption. SBA did not show that set-aside sales returned more revenue to the U.S. Treasury, but that set-aside sales returned more dollars per thousand board-feet of timber than did open sales. For example, according to SBA data, in fiscal year 1978 the Forest Service set-aside sales returned \$166 per thousand board-feet compared to \$152 per thousand board-feet for open sales. From this, SBA concluded that set-aside sales return more revenue than open sales.

To overcome this shortcoming with the SBA data, we used a methodology developed by the Forest Service. The Forest Service methodology first compares the quality differences between open and set-aside sales and then takes these quality differences into account in comparing revenues. This methodology was developed by a Forest Service economist who is an expert in this field. The methodology received extensive review both within the Forest Service and by technical and other reviewers outside the Forest Service. As finally used, the methodology was supported by the technical reviewers. SBA reviewers questioned the Forest Service study, but SBA's comments did not result in changes to the study. The only substantial change made to the Forest Service study after the various reviews were made was strengthening of its conclusion that small business timber purchasers are receiving an implicit subsidy from Federal timber sales.

We did not rely solely on the results of the Forest Service study because it only covered timber sales in the Pacific Northwest. We asked the Forest Service to let us

use its methodology because it was the best available for comparing timber sales nationwide. Using the Forest Service methodology, we found that in most instances there was a significant difference between the quality of set-aside and open sales; the set-aside sales were generally of higher quality. (See app. IV.) The fact that set-aside sales are generally of higher quality than open sales also helps explain why SBA found that set-aside sales return more dollars per thousand board-feet than do open sales. Purchasers paid more for set-aside sales because they were buying a higher quality product.

SBA also commented that our study indicated that the Forest Service and BLM agreed overall with the facts contained in the report. SBA said it considered this unqualified endorsement to be unsupported and unattainable based on their discussion with officials of both agencies. Our subsequent inquiries with the Forest Service and BLM confirmed our earlier understanding that there was no disagreement with the facts contained in this report.



**U.S. GOVERNMENT**  
**SMALL BUSINESS ADMINISTRATION**  
 WASHINGTON, D.C. 20416

FEB 2 1979

Mr. Henry Eschwege  
 Director, Community and Economic  
 Development  
 General Accounting Office  
 441 G Street, N.W.  
 Washington, D.C. 20426

Dear Mr. Eschwege:

At the request of the General Accounting Office (GAO), representatives of the Small Business Administration (SBA) have provided comments, both oral and written, concerning the GAO proposed report "Certain Allegations Regarding the Small Business Set-Aside Program for Federal Timber Sales." Previous comments provided by SBA are as indicated by the enclosed correspondence dated November 22, 1978, and January 23, 1979, respectively.

As a direct result of the GAO/SBA meetings of January 23-24, 1979, the enclosed expanded comments, as well as the below outlined comments, are provided. It should be noted that the enclosed expanded comments relate, as indicated, to the findings, the Senator Wallop letter and to the appendices provided where the bulk of the GAO reference material is responded to. Once again, it must be stated that SBA did not have access to the detailed backup information collected and reportedly used during the GAO year-long review and that significant portions of that data are considered, at best, suspect for purposes of the conclusions drawn.

As a matter of general comment regarding the proposed revised GAO report as discussed and reviewed since January 23, 1979, the following major concerns are provided:

The allegations considered and received by GAO do not represent a total review of the SBA set-aside program and related timber sales efforts as implied by both the GAO findings and the summary cover letter. Further, as previously commented on by SBA, the findings continue to be generally not substantiated. The allegations referenced and the conclusions drawn are misleading in structure and content, and cast the very effective, fair, historically supported, carefully and repeatedly reviewed small business set-aside program in an unfavorable light.



The specific GAO findings that SBA did not follow its regulations in setting the size standard are not true and not substantiated. The 1964 established size standard and the documented reviews, evaluations, public hearings and SBA letters on file since 1966, clearly support the SBA position that SBA procedures for establishing the size standard for the forest products industry have and are being followed. Discussions have indicated that the GAO agrees that currently the size standard meets current regulations. The implication that SBA did not follow current regulations in 1964 is based solely on the fact that a document outlining all factors with a date in 1964 is unavailable. SBA agrees that such a document is not now available in 1978 or 1979, some 14/15 years later.

The established size standard for timber set-aside sales applies to all firms within the standard and all GAO stated categories within the current 500 size standard are actively participating. Additionally, while the GAO study emphasized very small firms of 1-25 employees in the results, no recognition was given to the fact that a very high proportion of these firms are non-manufacturers (loggers) who work to a high degree in contract logging, do not have the management or financial resources to purchase typical sales, and who benefit from the share determined by the bulk of the small manufacturers who are larger in employee size. Also, the GAO report did not initially reference the ongoing SBA efforts started in early 1978 to establish a Special Salvage Timber Sales (SSTS) program that was specifically patterned for the type, size and value of the sale these non-manufacturers (25 or fewer employees) would most preferably bid on and benefit from. As a result, the GAO comment that companies with less than 100 employees and especially those with 25 or fewer, have benefited less from set-asides than those with more than 100 employees, is meaningless and not substantiated in the GAO data provided, and in light of the very active efforts being taken by SBA, independent of the GAO review, is misleading.


The GAO conclusion of set-aside timber sales returning less revenue to the U. S. Treasury than open sales is categorically denied. The conclusion does not reflect the fully documented statistics provided which show a greater return to the U. S. Treasury for set-aside sales versus sales awarded to large business.

The GAO effort to establish a procedure to increase the value of set-aside timber sales sold in the past and thus conclude that sales revenue returns between open and set-aside sales favors to some unstated degree open sales, is also refuted. The GAO procedure used to adjust timber value of past set-aside timber sales is not accepted by SBA or the other agencies involved. The supporting documentation has not been made available, reviewed and the data is suspect. Regardless of the outcome of adjusting timber value, no credit, value or recognition was provided to reflect the congressionally mandated directive given all Federal Agencies to "aid, counsel, assist and protect, insofar as possible, the interests of small-business concerns." As a result, the conclusion is considered invalid in all regards.

The GAO study effort continues to indicate that the U. S. Forest Service and the Bureau of Land Management agree overall with the facts contained in the report. This unqualified endorsement is considered unsupported and to be unattainable based on our discussion with officials of those Agencies.

In summary, while SBA has been able to provide in a very short time only a cursory review of an 8+ man-year effort by the GAO, a significant number of errors, exclusions and challenges to procedures, data and content, have been given both in writing and orally to invalidate the conclusions drawn. As such, it is recommended that the report be revised as necessary and/or the conclusions be restructured or withdrawn prior to publication of the report.

Sincerely,



R. F. McDermott  
Acting Associate Administrator  
for Procurement Assistance

Enclosures

STATISTICAL DATA

Carson and Santa Fe National Forests  
Bidding and Purchase Record  
By Size Groups for 1971-77

<u>Firm size group (no. of employees)</u>	<u>Firms bidding</u>	<u>Firms winning</u>	<u>Sales won</u>	<u>Sales volume</u>	<u>Average sale volume</u>
				(Thou. bd.-ft.)	(Thou. bd.-ft.)
Open timber sales:					
Group I ( 0- 25)	11	6	9	22,690	2,521
II ( 26- 99)	6	5	9	34,156	3,795
III (100-249)	3	3	21	85,774	4,084
IV (250-499)	<u>1</u>	<u>1</u>	<u>1</u>	<u>950</u>	950
Total	<u>21</u>	<u>15</u>	<u>40</u>	<u>143,570</u>	3,589
Set-aside timber sales:					
Group I ( 0- 25)	3	3	3	10,570	3,523
II ( 26- 99)	4	4	4	26,640	6,660
III (100-249)	2	1	2	12,950	6,475
IV (250-499)	<u>1</u>	<u>1</u>	<u>3</u>	<u>11,800</u>	3,933
Total	<u>10</u>	<u>9</u>	<u>12</u>	<u>61,960</u>	5,163

Francis Marion National Forest a/  
Bidding and Purchase Record  
by Size Groups for 1971-77

<u>Firm size group (no. of employees)</u>	<u>Firms bidding</u>	<u>Firms winning</u>	<u>Sales won</u>	<u>Sales volume</u>	<u>Average sale volume</u>
				(Thou. bd.-ft.)	(Thou. bd.-ft.)
Open timber sales:					
Group I ( 0- 25)	9	5	15	18,780	1,252
II ( 26- 99)	4	3	9	5,498	611
III (100-249)	2	2	3	2,055	685
IV (250-499)	<u>1</u>	<u>1</u>	<u>27</u>	<u>43,286</u>	<u>1,603</u>
Total	<u>16</u>	<u>11</u>	<u>54</u>	<u>69,619</u>	<u>1,289</u>
Set-aside timber sales:					
Group I ( 0- 25)	7	4	10	20,603	2,060
II ( 26- 99)	6	4	10	12,761	1,276
III (100-249)	2	2	3	1,301	434
IV (250-499)	<u>b/ 2</u>	<u>b/ 2</u>	<u>b/ 8</u>	<u>9,521</u>	<u>1,190</u>
Total	<u>17</u>	<u>12</u>	<u>31</u>	<u>44,186</u>	<u>1,425</u>

a/Includes only the Francis Marion marketing area of this national forest.

b/Includes a firm now classified as large but qualified as small when the particular sale(s) was executed.

Mt. Baker-Snoqualmie National Forest  
Bidding and Purchase Record  
by Size Groups for 1971-77

<u>Firm size group (no. of employees)</u>	<u>Firms bidding</u>	<u>Firms winning</u>	<u>Sales won</u>	<u>Sales volume</u>	<u>Average sales volume</u>
				(Thou. bd.-ft.)	(Thou. bd.-ft.)
Open timber sales:					
Group I ( 0- 25)	169	83	179	186,561	1,042
II ( 26- 99)	38	28	169	569,746	3,371
III (100-249)	11	8	97	523,426	5,396
IV (250-499)	<u>5</u>	<u>4</u>	<u>52</u>	<u>142,430</u>	<u>2,739</u>
Total	<u>223</u>	<u>123</u>	<u>497</u>	<u>1,422,163</u>	<u>2,861</u>
Set-aside timber sales:					
Group I ( 0- 25)	37	9	12	24,430	2,036
II ( 26- 99)	26	4	8	31,658	3,957
III (100-249)	9	5	20	125,040	6,252
IV (250-499)	<u>a/ 6</u>	<u>a/ 6</u>	<u>a/ 11</u>	<u>58,420</u>	<u>5,311</u>
Total	<u>78</u>	<u>24</u>	<u>51</u>	<u>239,548</u>	<u>4,697</u>

a/ Includes a firm now classified as large but qualified as small when particular sale(s) was executed.



Rogue River National Forest  
Bidding and Purchase Record  
By Size Groups For 1971-1977

Firm size group (no. of employees)	Firms bidding	Firms winning	Sales won	Sales volume	Average sale volume
				(Thou. bd.-ft.)	(Thou. bd.-ft.)
Open timber sales:					
Group I ( 0- 25)	74	36	122	152,605	1,251
II ( 26- 99)	19	5	18	17,153	953
III (100-249)	11	6	44	264,157	6,004
IV (250-499)	<u>4</u>	<u>3</u>	<u>19</u>	<u>64,160</u>	3,377
Total	<u>108</u>	<u>50</u>	<u>203</u>	<u>498,075</u>	2,454
Set-aside timber sales:					
Group I ( 0- 25)	38	14	32	27,509	860
II ( 26- 99)	11	6	17	35,349	2,079
III (100-249)	9	6	38	283,168	7,452
IV (250-499)	a/ <u>5</u>	<u>2</u>	<u>13</u>	<u>65,572</u>	5,044
Total	<u>63</u>	<u>28</u>	<u>100</u>	<u>411,598</u>	4,116

a/Includes a firm now classified as large but qualified as small when the particular sale(s) was executed.

Routt National Forest  
Bidding and Purchase Record  
By Size Groups for 1971-77

Firm size group (no. of employees)	Firms bidding	Firms winning	Sales won	Sales volume	Average sale volume
				(Thou. bd.-ft.)	(Thou. bd.-ft.)
Open timber sales:					
Group I ( 0- 25)	2	1	1	1,700	1,700
II ( 26- 99)	3	2	4	10,000	2,500
III (100-249)	0	0	0	0	0
IV (250-499)	0	0	0	0	0
Total	<u>5</u>	<u>3</u>	<u>5</u>	<u>11,700</u>	2,340
Set-aside timber sales:					
Group I ( 0- 25)	4	2	3	1,632	544
II ( 26- 99)	2	2	8	27,310	3,414
III (100-249)	0	0	0	0	0
IV (250-499)	0	0	0	0	0
Total	<u>6</u>	<u>4</u>	<u>11</u>	<u>28,942</u>	2,631

Six Rivers National Forest  
Bidding and Purchase Record  
By Size Groups for 1971-77

<u>Firm size group (no. of employees)</u>	<u>Firms bidding</u>	<u>Firms winning</u>	<u>Sales won</u>	<u>Sales volume</u>	<u>Average sale volume</u>
---	--------------------------	--------------------------	----------------------	-------------------------	--------------------------------

(Thou. bd.-ft.) (Thou. bd.-ft.)

## Open timber sales:

Group I ( 0- 25)	61	22	34	18,242	537
II ( 26- 99)	7	2	11	65,581	5,962
III (100-249)	7	5	23	147,443	6,411
IV (250-499)	<u>4</u>	<u>2</u>	<u>20</u>	<u>81,533</u>	4,077
Total	<u>79</u>	<u>31</u>	<u>88</u>	<u>312,799</u>	3,554

## Set-aside timber sales:

Group I ( 0- 25)	40	9	16	8,165	510
II ( 26- 99)	8	5	7	49,022	7,003
III (100-249)	a/9	a/6	a/23	197,143	8,571
IV (250-499)	<u>a/4</u>	<u>3</u>	<u>13</u>	<u>60,100</u>	4,623
Total	<u>61</u>	<u>23</u>	<u>59</u>	<u>314,430</u>	5,329

a/Includes a firm now classified as large but qualified as small when the particular sale(s) was executed.

Willamette National Forest  
Bidding and Purchase Record  
By Size Groups for 1971-77

<u>Firm size group (no. of employees)</u>	<u>Firms bidding</u>	<u>Firms winning</u>	<u>Sales won</u>	<u>Sales volume</u>	<u>Average sale volume</u>
			(Thou. bd.-ft.)	(Thou. bd.-ft.)	(Thou. bd.-ft.)

## Open timber sales:

Group I ( 0- 25)	95	40	124	172,515	1,391
II ( 26- 99)	31	20	135	471,905	3,496
III (100-249)	16	11	77	497,976	6,467
IV (250-499)	<u>8</u>	<u>6</u>	<u>169</u>	<u>1,209,078</u>	<u>7,154</u>
Total	<u>150</u>	<u>77</u>	<u>505</u>	<u>2,351,474</u>	<u>4,656</u>

## Set-aside timber sales:

Group I ( 0- 25)	23	5	10	44,150	4,415
II ( 26- 99)	16	7	21	119,135	5,673
III (100-249)	6	5	32	200,850	6,277
IV (250-499)	<u>a/13</u>	<u>a/5</u>	<u>a/32</u>	<u>211,280</u>	<u>6,603</u>
Total	<u>58</u>	<u>22</u>	<u>95</u>	<u>575,415</u>	<u>6,057</u>

a/Includes a firm now classified as large but qualified as small when the particular sale(s) was executed.

Eugene District--BLM  
Bidding and Purchase Record  
by Size Groups for 1973-77

<u>Firm size group (no. of employees)</u>	<u>Firms winning</u>	<u>Sales won</u>	<u>Sales volume</u>	<u>Average sale volume</u>
			(Thou. bd.-ft.)	(Thou. bd.-ft.)
Open timber sales:				
Group I ( 0- 25)	20	53	36,208	683
II ( 26- 99)	15	63	135,215	2,146
III (100-249)	5	7	12,454	1,779
IV (250-499)	<u>5</u>	<u>40</u>	<u>130,219</u>	<u>3,255</u>
Total	<u>45</u>	<u>163</u>	<u>314,096</u>	<u>1,927</u>
Set-aside timber sales:				
Group I ( 0- 25)	6	8	20,219	2,527
II ( 26- 99)	7	21	75,721	3,606
III (100-249)	2	5	17,810	3,562
IV (250-499)	<u>a/ 6</u>	<u>a/ 20</u>	<u>69,707</u>	<u>3,485</u>
Total	<u>21</u>	<u>54</u>	<u>183,457</u>	<u>3,397</u>

a/Includes a firm now classified as large but qualified as small when the particular sale(s) was executed.

Medford District--BLM  
Bidding and Purchase Record  
by Size Groups for 1973-77

<u>Firm size group (no. of employees)</u>	<u>Firms winning</u>	<u>Sales won</u>	<u>Sales volume</u>	<u>Average sale volume</u>
			(Thou. bd.-ft.)	(Thou. bd.-ft.)
Open timber sales:				
Group I ( 0- 25)	49	102	43,164	423
II ( 26- 99)	11	22	27,393	1,245
III (100-249)	11	76	222,635	2,929
IV (250-499)	<u>6</u>	<u>10</u>	<u>28,598</u>	2,860
Total	<u>77</u>	<u>210</u>	<u>321,790</u>	1,532
Set-aside timber sales:				
Group I ( 0- 25)	12	13	7,009	539
II ( 26- 99)	5	10	44,154	4,415
III (100-249)	8	63	256,754	4,076
IV (250-499)	a/ <u>5</u>	<u>22</u>	<u>111,586</u>	5,072
Total	<u>30</u>	<u>108</u>	<u>419,503</u>	3,884

a/Includes a firm now classified as large but qualified as small when the particular sale(s) was executed.

1976-80 Recomputation  
Small Business Shares  
for National Forest Market Areas

<u>National forest regions</u>	<u>Market areas</u>	<u>Less than 5%</u>	<u>Small business share changes</u>	
			<u>Greater than 5% Increase</u>	<u>Decrease</u>
Pacific Coast Regions:	50	43	5	2
Region V	(16)	(11)	(4)	(1)
Region VI	(34)	(32)	(1)	(1)
Rocky Mountain Regions:	55	27	17	11
Region I	(15)	(9)	(3)	(3)
Region II	(12)	(3)	(5)	(4)
Region III	(13)	(9)	(4)	(4)
Region IV	(15)	(6)	(5)	(4)
Eastern and Southern Regions:	46	23	5	18
Region VIII	(32)	(19)	(3)	(10)
Region IX	(14)	(4)	(2)	(8)
Alaskan Region:	1			1
Region X	(1)	—	—	(1)
<b>Total</b>	<u>152</u>	<u>93</u>	<u>27</u>	<u>32</u>

RESULTS OF OUR EVALUATION FOR THE 58 NATIONAL FORESTS

Quality differences

	Alabama (note a)		Allegheny		Carson & Santa Fe	
	set-aside	open	set-aside	open	set-aside	open
<b>Sale characteristics:</b>						
Timber sale volume (thousand board-feet)	1,930	1,792	4,982	1,809	4,229	4,221
Volume per acre (thousand board-feet)	1.86	3.51	8.3	6.2	2.4	2.93
Ratio of predominate or high value timber volume to total volume (percent)	-	-	24.3	55.7	50.7	36.6
Ratio of fiber volume to total volume (percent)	62.4	65.1	54.6	46.2	-	-
Selling value of products to be produced from the timber (\$ per thousand board-feet)	\$80.52	\$81.54	\$43.60	\$94.14	\$109.70	\$119.33
Appraised value of timber (\$ per thousand board-feet)	\$ 7.09	\$ 8.02	\$ 9.72	\$20.73	\$ 18.57	\$ 26.01
Number of timber sales	43	87	18	79	8	35
<b>Timber processing characteristics:</b>						
Logging costs (\$ per thousand board-feet)	\$23.17	\$22.22	\$13.56	\$26.77	\$ 32.98	\$ 33.56
Road costs (\$ per thousand board-feet)	\$19.95	\$27.69	\$ 8.27	\$ 1.77	\$ 6.31	\$ 3.54
Manufacturing costs (\$ per thousand board-feet)	\$ 2.63	\$ 2.52	\$12.79	\$30.99	\$ 41.96	\$ 42.56
Haul distance to nearest manu- facturing facility (miles)	29.7	30.96	14.0	16.4	40.4	47.0
Length of timber sale (years)	2.1	1.5	3.8	2.4	3.4	2.4

Revenue differences

Amount the bid was over the appraised value (\$ per thousand board-feet)	\$ .49	\$ 1.84	\$ 3.15	\$ 3.89	\$ 2.46	\$ 4.38
The revenue differences were statistically	different		not different		not different	



Quality differences

Sale characteristics:	Chattahoochee & Oconee		Clearwater		Colville	
	set-aside	open	set-aside	open	set-aside	open
Timber sale volume (thousand board-feet)	1,567	837	4,492	4,780	5,250	4,573
Volume per acre (thousand board-feet)	4.6	4.6	8.7	11.8	4.2	7.8
Ratio of predominate or high value timber volume to total volume (percent)	-	16.1	6.7	9.1	15.4	20.3
Ratio of fiber volume to total volume (percent)	19.0	28.7	10.5	20.6	-	3.6
Selling value of products to be produced from the timber (\$ per thousand board-feet)	\$111.21	\$95.41	\$132.47	\$125.25	\$122.58	\$124.84
Appraised value of timber (\$ per thousand board-feet)	\$ 30.08	\$14.56	\$ 18.74	\$ 18.82	\$ 7.36	\$ 15.20
Number of timber sales	35	152	18	100	11	38

99

Timber processing characteristics:	Chattahoochee & Oconee	Clearwater	Colville
Logging costs (\$ per thousand board-feet)	\$ 26.94	\$ 43.95	\$ 43.74
Road costs (\$ per thousand board-feet)	\$ 6.39	\$ 14.24	\$ 13.07
Manufacturing costs (\$ per thousand board-feet)	\$ 36.14	\$ 43.60	\$ 52.35
Haul distance to nearest manu- facturing facility (miles)	13.6	31.2	20.6
Length of timber sale (years)	2.0	3.3	4.7

Revenue differences

Amount the bid was over the appraised value (\$ per thousand board-feet)	\$ 8.77	\$ 8.80	\$ 3.62	\$ 4.50	\$ 4.65	\$ 9.08
The revenue differences were statistically	not different		not different		different	

Quality differences

Sale characteristics:	Flathead		Florida (note b)		Francis Marion & Sumter	
	set-aside	open	set-aside	open	set-aside	open
Timber sale volume (thousand board-feet)	5,223	2,657	2,258	1,992	2,008	2,231
Volume per acre (thousand board-feet)	5.9	4.6	4.6	2.6	4.4	4.3
Ratio of predominate or high value timber volume to to- tal volume (percent)	18.8	14.9	-	-	1.3	11.9
Ratio of fiber volume to total volume (percent)	-	2.9	84.4	95.7	73.3	62.8
Selling value of products to be produced from the timber (\$ per thousand board-feet)	\$131.66	\$136.68	\$81.72	\$54.83	\$83.40	\$82.40
Appraised value of timber (\$ per thousand board-feet)	\$ 19.75	\$ 25.87	\$12.47	\$ 9.35	\$27.77	\$21.32
Number of timber sales	35	113	18	182	75	111

100

Timber processing

characteristics:

Logging costs (\$ per thousand board-feet)	\$ 46.88	\$ 44.10	\$15.93	\$ 5.90	\$22.66	\$25.08
Road costs (\$ per thousand board-feet)	\$ 8.26	\$ 11.79	\$27.00	\$25.84	\$ 7.12	\$ 7.02
Manufacturing costs (\$ per thousand board-feet)	\$ 51.85	\$ 50.49	\$ 2.94	\$ 2.62	\$20.12	\$21.47
Haul distance to nearest manu- facturing facility (miles)	33.7	36.7	26.1	26.7	19.7	21.8
Length of timber sale (years)	3.5	1.8	2.4	1.8	1.9	1.8

Revenue differences

Amount the bid was over the  
appraised value (\$ per  
thousand board-feet)

\$ 8.26	\$ 11.79	\$ 2.95	\$ 1.53	\$ 2.70	\$ 8.59
---------	----------	---------	---------	---------	---------

The revenue differences  
were statistically

different

not different

different

APPENDIX IX

APPENDIX IX

Quality differences

	<u>Fremont</u>		<u>Gifford Pinchot</u>		<u>Idaho Panhandle (note c)</u>	
	<u>set-aside</u>	<u>open</u>	<u>set-aside</u>	<u>open</u>	<u>set-aside</u>	<u>open</u>
Sale characteristics:						
Timber sale volume (thousand board-feet)	11,498	5,114	7,050	3,832	3,986	4,872
Volume per acre (thousand board-feet)	5.3	4.0	22.4	17.5	6.7	7.5
Ratio of predominate or high value timber volume to to- tal volume (percent)	89.0	67.9	24.2	31.5	15.2	11.7
Ratio of fiber volume to total volume (percent)	2.3	7.0	5.1	11.8	5.7	12.6
Selling value of products to be produced from the timber (\$ per thousand board-feet)	\$140.43	\$120.63	\$158.65	\$156.60	\$137.18	\$137.43
Appraised value of timber (\$ per thousand board-feet)	\$ 38.33	\$ 27.91	\$ 47.29	\$ 42.66	\$ 18.40	\$ 21.52
Number of timber sales	18	43	84	349	20	188

101

Timber processing characteristics:						
Logging costs (\$ per thou- sand board-feet)	\$ 32.82	\$ 33.09	\$ 35.91	\$ 38.92	\$ 44.97	\$ 48.77
Road costs (\$ per thousand board-feet)	\$ 4.93	\$ 5.27	\$ 3.43	\$ 2.75	\$ 10.12	\$ 6.33
Manufacturing costs (\$ per thousand board-feet)	\$ 48.29	\$ 42.60	\$ 51.64	\$ 52.95	\$ 51.18	\$ 49.21
Haul distance to nearest manu- facturing facility (miles)	49.2	40.2	32.2	29.8	43.2	39.9
Length of timber sale (years)	4.9	3.0	3.8	2.7	3.2	2.8

Revenue differences

Amount the bid was over the appraised value (\$ per thousand board-feet)	\$ 13.30	\$ 22.39	\$ 36.46	\$ 25.26	\$ 4.08	\$ 6.87
The revenue differences were statistically	not different		different		not different	

Quality differences

	Kisatchie		Klamath		Kootenai	
	set-aside	open	set-aside	open	set-aside	open
<u>Sale characteristics:</u>						
Timber sale volume (thousand board-feet)	3,401	2,102	7,127	6,717	6,522	3,577
Volume per acre (thousand board-feet)	2.8	5.1	6.7	7.3	7.0	5.6
Ratio of predominate or high value timber volume to to- tal volume (percent)	8.2	10.0	23.6	11.4	13.1	11.2
Ratio of fiber volume to total volume (percent)	47.8	47.9	-	1.1	5.0	3.1
Selling value of products to be produced from the timber (\$ per thousand board-feet)	\$98.92	\$87.21	\$127.39	\$120.04	\$126.24	\$137.26
Appraised value of timber (\$ per thousand board-feet)	\$31.93	\$22.82	\$ 23.94	\$ 22.36	\$ 17.75	\$ 22.67
Number of timber sales	61	189	42	99	13	168
<u>Timber processing characteristics:</u>						
Logging costs (\$ per thou- sand board-feet)	\$24.87	\$28.22	\$ 39.00	\$ 41.37	\$ 38.85	\$ 42.96
Road costs (\$ per thousand board-feet)	\$ 6.45	\$ 3.15	\$ 7.57	\$ 4.66	\$ 14.71	\$ 6.65
Manufacturing costs (\$ per thousand board-feet)	\$28.17	\$26.04	\$ 43.01	\$ 39.74	\$ 46.25	\$ 52.42
Haul distance to nearest manu- facturing facility (miles)	19.5	21.1	45.6	42.8	28.3	29.7
Length of timber sale (years)	2.3	1.3	3.3	2.4	3.7	2.3

Revenue differences

Amount the bid was over the appraised value (\$ per thousand board-feet)	\$10.34	\$ 8.97	\$ 24.07	\$ 26.73	\$ 2.12	\$ 9.51
The revenue differences were statistically	not different		not different		different	

Quality differences

	<u>Lassen</u>		<u>Medicine Bow</u>		<u>Mississippi (note d)</u>	
	<u>set-aside</u>	<u>open</u>	<u>set-aside</u>	<u>open</u>	<u>set-aside</u>	<u>open</u>
Sale characteristics:						
Timber sale volume (thousand board-feet)	13,530	6,543	3,307	4,740	2,621	1,306
Volume per acre (thousand board-feet)	7.1	5.2	2.0	4.0	3.6	3.4
Ratio of predominate or high value timber volume to to- tal volume (percent)	3.6	3.9	73.2	76.0	2.2	3.0
Ratio of fiber volume to total volume (percent)	-	.6	1.0	3.6	48.6	35.9
Selling value of products to be produced from the timber (\$ per thousand board-feet)	\$122.41	\$113.26	\$114.01	\$114.75	\$97.83	\$76.03
Appraised value of timber (\$ per thousand board-feet)	\$ 36.28	\$ 29.10	\$ 5.61	\$ 4.78	\$28.82	\$22.83
Number of timber sales	10	94	19	15	117	295

Timber processing characteristics:

Logging costs (\$ per thou- sand board-feet)	\$ 28.45	\$ 31.85	\$ 49.35	\$ 49.21	\$27.08	\$26.58
Road costs (\$ per thousand board-feet)	\$ 6.05	\$ 2.64	\$ 7.66	\$ 8.74	\$ 5.52	\$ 2.36
Manufacturing costs (\$ per thousand board-feet)	\$ 37.88	\$ 38.47	\$ 49.65	\$ 46.36	\$28.43	\$17.31
Haul distance to nearest manu- facturing facility (miles)	35.1	27.4	26.6	31.3	20.2	17.4
Length of timber sale (years)	5.5	2.5	3.5	3.4	2.2	1.2

Revenue differences

Amount the bid was over the appraised value (\$ per thousand board-feet)	\$ 26.13	\$ 30.47	\$ .33	\$ .07	\$11.94	\$10.20
The revenue differences were statistically	not different		not different		not different	

APPENDIX IX

APPENDIX IX

Quality differences

Sale characteristics:	Modoc		Mt. Baker-Snoqualmie		Mount Hood	
	set-aside	open	set-aside	open	set-aside	open
Timber sale volume (thousand board-feet)	10,161	4,542	5,845	3,582	4,476	4,186
Volume per acre (thousand board-feet)	3.1	1.8	52.4	23.9	12.3	25.7
Ratio of predominate or high value timber volume to to- tal volume (percent)	13.8	8.1	27.1	21.0	16.3	53.1
Ratio of fiber volume to total volume (percent)	-	-	9.7	10.1	5.2	10.2
Selling value of products to be produced from the timber (\$ per thousand board-feet)	\$125.56	\$124.68	\$145.15	\$144.29	\$136.01	\$156.88
Appraised value of timber (\$ per thousand board-feet)	\$ 24.76	\$ 30.06	\$ 33.71	\$ 34.35	\$ 28.75	\$ 34.87
Number of timber sales	14	37	30	310	45	323

104

## Timber processing

## characteristics:

Logging costs (\$ per thou- sand board-feet)	\$ 34.63	\$ 37.00	\$ 35.03	\$ 40.02	\$ 32.73	\$ 41.73
Road costs (\$ per thousand board-feet)	\$ 11.91	\$ 3.77	\$ 7.99	\$ 4.57	\$ 3.96	\$ 6.50
Manufacturing costs (\$ per thousand board-feet)	\$ 40.52	\$ 39.15	\$ 51.69	\$ 47.92	\$ 55.27	\$ 55.39
Haul distance to nearest manu- facturing facility (miles)	55.8	52.8	40.7	34.1	30.8	45.2
Length of timber sale (years)	3.8	1.7	3.2	2.6	3.5	2.9

Revenue differences

Amount the bid was over the appraised value (\$ per thousand board-feet)	\$ 19.80	\$ 21.03	\$ 28.75	\$ 27.32	\$ 13.88	\$ 36.18
The revenue differences were statistically	not different		not different		different	

Quality differences

	Nicolet		Olympic		Ottawa	
	set-aside	open	set-aside	open	set-aside	open
Sale characteristics:						
Timber sale volume (thousand board-feet)	5,053	3,261	6,208	3,486	3,193	2,639
Volume per acre (thousand board-feet)	14.9	8.4	44.8	34.9	9.4	7.6
Ratio of predominate or high value timber volume to to- tal volume (percent)	22.6	56.1	37.7	30.5	42.1	41.2
Ratio of fiber volume to total volume (percent)	49.2	85.5	8.1	4.8	73.0	77.1
Selling value of products to be produced from the timber (\$ per thousand board-feet)	\$13.60	\$25.62	\$152.99	\$155.19	\$41.96	\$33.28
Appraised value of timber (\$ per thousand board-feet)	\$ 2.69	\$ 4.40	\$ 23.88	\$ 32.79	\$ 5.67	\$ 4.80
Number of timber sales	28	65	21	88	24	92

105

Timber processing characteristics:

Logging costs (\$ per thou- sand board-feet)	\$ 6.61	\$13.22	\$ 47.58	\$ 47.99	\$16.96	\$13.31
Road costs (\$ per thousand board-feet)	\$ 2.27	\$ 1.54	\$ 11.24	\$ 3.87	\$ 2.03	\$ 1.50
Manufacturing costs (\$ per thousand board-feet)	\$ 2.92	\$ 6.27	\$ 52.83	\$ 51.95	\$12.76	\$10.13
Haul distance to nearest manu- facturing facility (miles)	21.4	16.9	48.7	46.2	14.3	14.1
Length of timber sale (years)	4.6	4.2	3.8	2.5	4.7	4.4

Revenue differences

Amount the bid was over the appraised value (\$ per thousand board-feet)	\$ 1.74	\$ 2.77	\$ 13.44	\$ 20.14	\$ 1.98	\$ 2.38
The revenue differences were statistically	not different		not different		not different	

APPENDIX IX

APPENDIX IX

Quality differences

Sale characteristics:	Ozark & St. Francis		Quachita		Rogue River	
	set-aside	open	set-aside	open	set-aside	open
Timber sale volume (thousand board-feet)	1,592	704	1,837	1,809	4,119	3,720
Volume per acre (thousand board-feet)	2.4	1.6	3.8	4.2	12.3	11.2
Ratio of predominate or high value timber volume to to- tal volume (percent)	7.1	24.3	3.2	5.0	42.6	47.0
Ratio of fiber volume to total volume (percent)	63.4	30.4	71.3	67.7	10.4	8.2
Selling value of products to be produced from the timber (\$ per thousand board-feet)	\$86.14	\$98.78	\$82.24	\$79.97	\$151.22	\$157.98
Appraised value of timber (\$ per thousand board-feet)	\$19.24	\$19.42	\$17.46	\$16.70	\$ 35.07	\$ 38.42
Number of timber sales	34	105	187	201	97	120
Timber processing characteristics:						
Logging costs (\$ per thou- sand board-feet)	\$24.62	\$28.85	\$27.90	\$27.85	\$ 38.06	\$ 39.22
Road costs (\$ per thousand board-feet)	\$18.59	\$ 7.10	\$10.10	\$ 9.05	\$ 5.37	\$ 5.96
Manufacturing costs (\$ per thousand board-feet)	\$24.24	\$33.48	\$22.38	\$21.62	\$ 55.86	\$ 54.67
Haul distance to nearest manu- facturing facility (miles)	28.4	26.3	20.9	21.4	45.6	42.9
Length of timber sale	2.3	1.7	2.3	2.2	2.5	2.0

Revenue differences

Amount the bid was over the appraised value (\$ per thousand board-feet)	\$ 3.76	\$ 4.34	\$ 6.35	\$11.86	\$ 21.72	\$ 30.44
The revenue differences were statistically	not different		different		different	



Quality differences

	Routt		Shasta-Trinity		Siskiyou	
	set-aside	open	set-aside	open	set-aside	open
Sale characteristics:						
Timber sale volume (thousand board-feet)	3,142	3,181	7,627	4,584	3,762	2,667
Volume per acre (thousand board-feet)	2.1	4.2	9.4	7.2	22.8	22.6
Ratio of predominate or high value timber volume to to- tal volume (percent)	61.0	44.6	26.8	30.3	81.7	71.9
Ratio of fiber volume to total volume (percent)	3.7	5.4	-	2.1	10.7	10.0
Selling value of products to be produced from the timber (\$ per thousand board-feet)	\$106.21	\$109.93	\$125.77	\$120.93	\$184.61	\$190.60
Appraised value of timber (\$ per thousand board-feet)	\$ 4.43	\$ 3.07	\$ 29.25	\$ 26.54	\$ 40.63	\$ 51.00
Number of timber sales	12	13	22	175	57	226

Timber processing characteristics:

Logging costs (\$ per thou- sand board-feet)	\$ 48.66	\$ 45.51	\$ 34.81	\$ 37.60	\$ 49.14	\$ 49.26
Road costs (\$ per thousand board-feet)	\$ 9.12	\$ 9.09	\$ 11.59	\$ 6.12	\$ 9.41	\$ 7.01
Manufacturing costs (\$ per thousand board-feet)	\$ 46.36	\$ 44.52	\$ 36.63	\$ 38.75	\$ 64.82	\$ 60.41
Haul distance to nearest manu- facturing facility (miles)	39.6	43.2	30.0	36.9	43.0	39.4
Length of timber sale (years)	2.8	2.4	4.7	2.7	2.5	2.0

Revenue differences

Amount the bid was over the appraised value (\$ per thousand board-feet)	\$ .03	\$ 2.19	\$ 17.05	\$ 22.47	\$ 38.20	\$ 54.51
The revenue differences were statistically	not different		not different		different	

Quality differences

Sale characteristics:	Siuslaw		Six Rivers		Tahoe	
	set-aside	open	set-aside	open	set-aside	open
Timber sale volume (thousand board-feet)	6,216	3,867	4,664	4,473	8,305	6,705
Volume per acre (thousand board-feet)	30.9	22.1	13.4	12.8	7.6	9.6
Ratio of predominate or high value timber volume to to- tal volume (percent)	73.3	75.1	9.1	8.0	13.5	9.7
Ratio of fiber volume to total volume (percent)	7.2	5.5	3.0	2.3	-	-
Selling value of products to be produced from the timber (\$ per thousand board-feet)	\$165.15	\$172.12	\$127.89	\$121.97	\$112.18	\$118.03
Appraised value of timber (\$ per thousand board-feet)	\$ 45.28	\$ 48.99	\$ 25.19	\$ 27.62	\$ 11.22	\$ 25.26
Number of timber sales	102	164	48	71	12	58
Timber processing characteristics:						
Logging costs (\$ per thou- sand board-feet)	\$ 33.39	\$ 39.82	\$ 37.96	\$ 36.27	\$ 36.42	\$ 33.72
Road costs (\$ per thousand board-feet)	\$ 11.63	\$ 5.63	\$ 8.70	\$ 5.79	\$ 14.25	\$ 9.56
Manufacturing costs (\$ per thousand board-feet)	\$ 56.02	\$ 57.82	\$ 43.47	\$ 39.78	\$ 42.17	\$ 37.98
Haul distance to nearest manu- facturing facility (miles)	34.3	27.5	30.1	26.8	28.8	25.8
Length of timber sale (years)	3.5	2.3	2.4	1.8	4.7	3.2

Revenue differences

Amount the bid was over the appraised value (\$ per thousand board-feet)	\$ 38.11	\$ 32.39	\$ 26.09	\$ 28.50	\$26.15	\$ 15.84
The revenue differences were statistically	different		not different		different	

Quality differences

	Texas (note e)		Umatilla		Umpqua	
	set-aside	open	set-aside	open	set-aside	open
Sale characteristics:						
Timber sale volume (thousand board-feet)	2,048	1,121	4,401	7,141	4,887	4,488
Volume per acre (thousand board-feet)	1.7	2.7	5.7	4.8	15.2	18.1
Ratio of predominate or high value timber volume to to- tal volume (percent)	26.1	24.1	17.7	31.4	63.4	66.6
Ratio of fiber volume to total volume (percent)	22.1	37.2	5.2	5.6	10.5	11.1
Selling value of products to be produced from the timber (\$ per thousand board-feet)	\$104.46	\$91.07	\$129.13	\$128.43	\$172.65	\$171.15
Appraised value of timber (\$ per thousand board-feet)	\$ 30.59	\$24.03	\$ 19.84	\$ 18.75	\$ 45.13	\$ 43.59
Number of timber sales	46	116	22	88	108	254

109

Timber processing characteristics:						
Logging costs (\$ per thou- sand board-feet)	\$ 22.50	\$26.04	\$ 38.29	\$ 39.33	\$ 44.05	\$ 44.33
Road costs (\$ per thousand board-feet)	\$ 9.79	\$ 3.29	\$ 7.46	\$ 5.74	\$ 5.22	\$ 4.87
Manufacturing costs (\$ per thousand board-feet)	\$ 32.62	\$25.96	\$ 52.26	\$ 49.69	\$ 58.39	\$ 57.45
Haul distance to nearest manu- facturing facility (miles)	20.0	21.5	35.4	40.9	53.8	47.2
Length of timber sale (years)	1.9	1.1	3.0	3.0	3.3	2.9

Revenue differences

Amount the bid was over the appraised value (\$ per thousand board-feet)	\$ 12.64	\$13.63	\$ 2.25	\$ 6.00	\$ 27.19	\$ 33.03
The revenue differences were statistically	not different		different		different	

Quality differences

	<u>White Mountain</u>		<u>Willamette</u>		<u>Winema</u>	
	<u>set-aside</u>	<u>open</u>	<u>set-aside</u>	<u>open</u>	<u>set-aside</u>	<u>open</u>
<u>Sale characteristics:</u>						
Timber sale volume (thousand board-feet)	3,612	2,334	6,073	5,775	6,354	3,979
Volume per acre (thousand board-feet)	17.2	16.5	20.9	27.2	7.7	5.4
Ratio of predominate or high value timber volume to to- tal volume (percent)	-	-	62.6	59.8	65.3	44.4
Ratio of fiber volume to total volume (percent)	65.4	74.4	14.2	16.1	1.9	3.7
Selling value of products to be produced from the timber (\$ per thousand board-feet)	\$35.95	\$43.25	\$175.47	\$164.40	\$136.15	\$122.44
Appraised value of timber (\$ per thousand board-feet)	\$ 5.77	\$ 4.59	\$ 46.74	\$ 44.60	\$ 38.09	\$ 29.48
Number of timber sales	12	36	93	456	31	81
<u>Timber processing characteristics:</u>						
Logging costs (\$ per thou- sand board-feet)	\$14.29	\$19.36	\$ 39.87	\$ 36.69	\$ 27.61	\$ 31.02
Road costs (\$ per thousand board-feet)	\$ 1.35	\$ 3.53	\$ 6.06	\$ 5.53	\$ 4.54	\$ 2.46
Manufacturing costs (\$ per thousand board-feet)	\$11.32	\$11.96	\$ 62.39	\$ 57.72	\$ 49.83	\$ 45.92
Haul distance to nearest manu- facturing facility (miles)	27.0	30.6	38.2	36.8	34.5	28.2
Length of timber sale (years)	3.9	3.8	3.2	3.2	3.8	2.7

Revenue differences

Amount the bid was over the appraised value (\$ per thousand board-feet)	\$ 4.10	\$ 4.05	\$ 40.14	\$ 45.41	\$ 20.80	\$ 25.29
The revenue differences were statistically	different		different		not different	

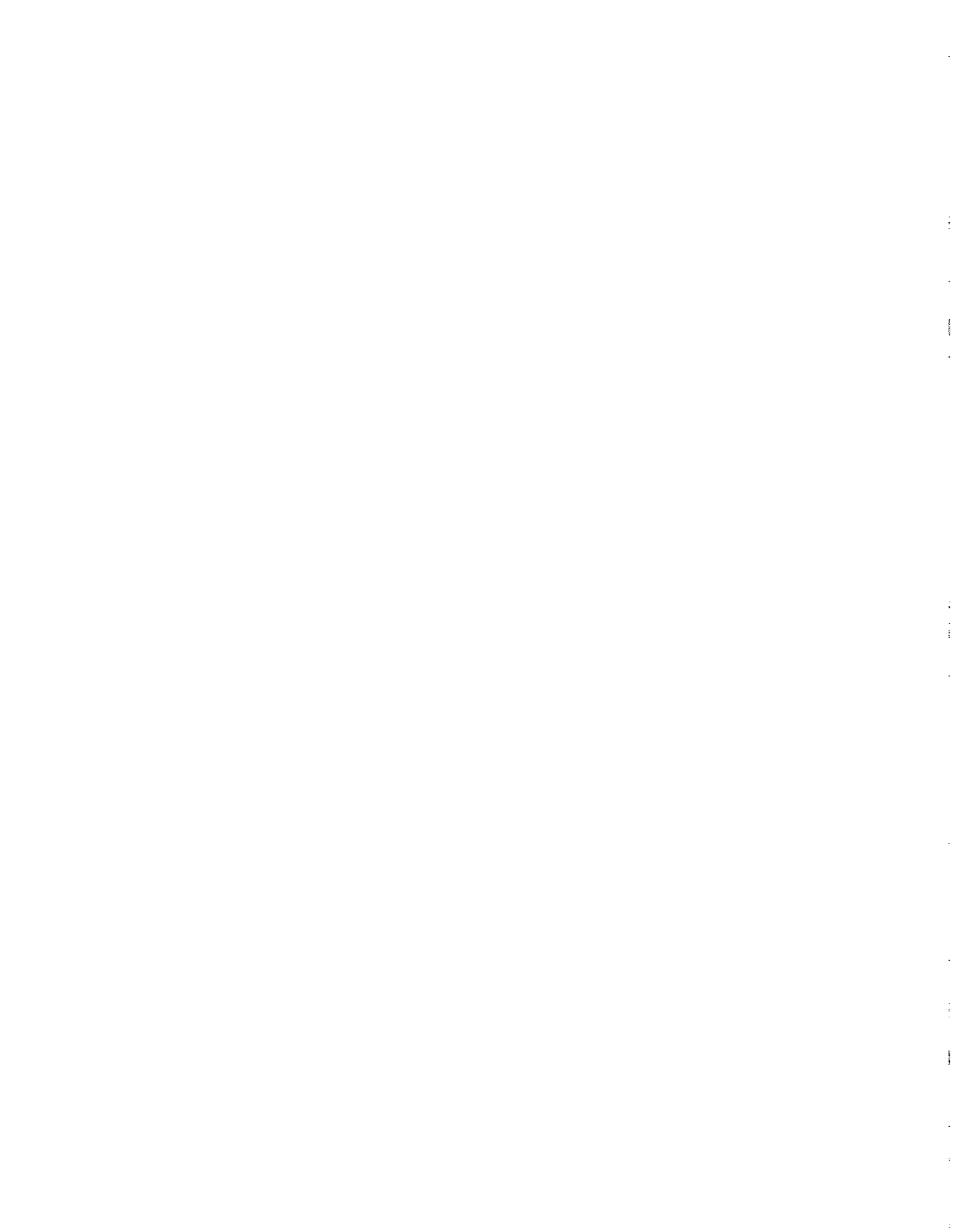
a/Includes the Wm. B. Bankhead, Conecuh, Talladega, and Tuskegee National Forests.

b/Includes the Apalachicola, Ocala, and Osceola National Forests.

c/Includes the Coeur d'Alene, Kaniksu, and St. Joe National Forests.

d/Includes the Bienville, Delta, DeSoto, Holly Springs, Homochitto, and Tombigbee National Forests.

e/Includes the Angelina, Davy Crockett, Sabine, and Sam Houston National Forests.



Single copies of GAO reports are available free of charge. Requests (except by Members of Congress) for additional quantities should be accompanied by payment of \$1.00 per copy.

Requests for single copies (without charge) should be sent to:

U.S. General Accounting Office  
Distribution Section, Room 1518  
441 G Street, NW.  
Washington, DC 20548

Requests for multiple copies should be sent with checks or money orders to:

U.S. General Accounting Office  
Distribution Section  
P.O. Box 1020  
Washington, DC 20013

Checks or money orders should be made payable to the U.S. General Accounting Office. NOTE: Stamps or Superintendent of Documents coupons will not be accepted.

**PLEASE DO NOT SEND CASH**

To expedite filling your order, use the report number and date in the lower right corner of the front cover.

GAO reports are now available on microfiche. If such copies will meet your needs, be sure to specify that you want microfiche copies.

