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## LOCAL AND REGIONAL ECONOMIC BENEFITS FROM FOREST PRODUCTS PRODUCTION ACTIVITIES AT THE SAVANNAH RIVER SITE: 1955-PRESENT

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## EXECUTIVE SUMMARY

The decline in the defense mission budget at the Savannah River Site (SRS) has created a major economic impact on the community in the Central Savannah River Area (CSRA). The SRS is looking for ways to support positive economic activities that would offset these effects. The Savannah River Site has been producing revenue from the sale of forest products since 1955, primarily trees but also pine straw. The revenue from these sales (about \$80 million to date) has been re-invested into the infrastructure development, restoration and management of the natural resources of the SRS through the budget process. Total asset value of the forest-land has increased from about \$21 million to over \$500 million during the same period. Additionally, harvesting and silviculture activities are important tools for managing vegetation and habitat conditions for wildlife, restoring degraded communities such as wetlands, savannas, and hardwoods.

Forest products from SRS supply mills within a 25-county market area surrounding the Site. The SRS contains about 3% of the total forest-land in the same area. Input/output (I-O) modeling of the economic effects of the program were conducted using IMPLAN. The economic effects of the sale of forest products from the SRS were estimated by making specific assumptions about the ability of the forest products sector to obtain substitute wood in the absence of available supplies from SRS. Based upon average projected revenue over the period from 2000 to 2010 of \$6 million annually, and moderate substitution capability, the lost value to the 25 county area is \$16.85 million and employment is reduced by 134 jobs in various sectors. Under a scenario in which no substitution occurs, the lost value is

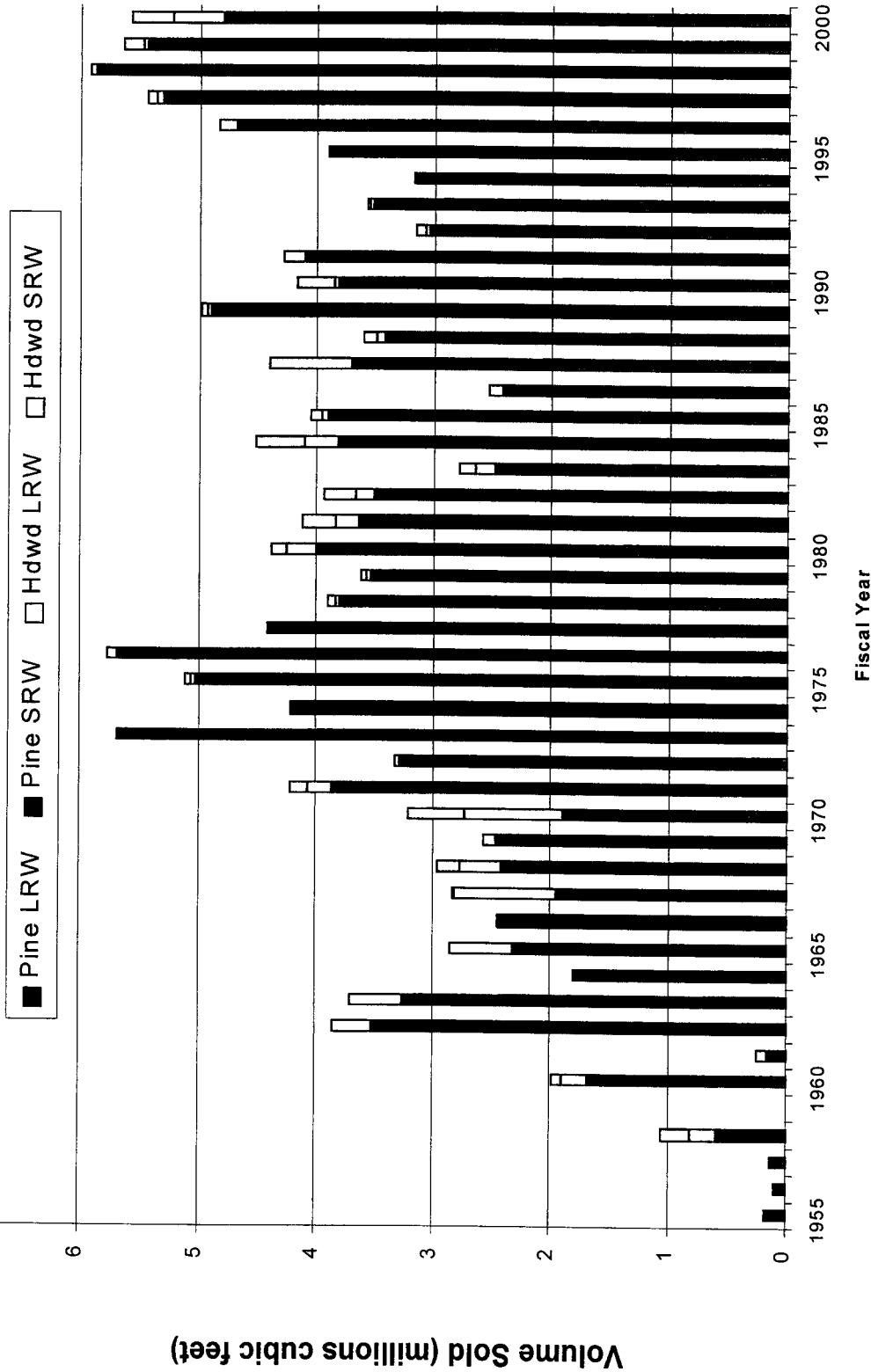
estimated at \$32.2 million and employment is reduced by 256 jobs. The latter scenario is possible given the importance of SRS as a source of wood supply to mills in the winter when access is restricted on other lands due to poor drainage. While standing volume at SRS is increasing, inventory data in the 25-county area shows that softwood volumes are not being sustained. Wood is being harvested at a rate that is 50% greater than the inventory growth rate which makes substitution of SRS wood less likely. SRS is serving to mitigate the region's decline in available softwood inventory through its current harvest management plans. Curtailing the forest products program at some future date would serve to exacerbate the inventory situation within the 25-county area. Associated losses to the regional economy in terms of jobs, incomes reduced production activity are projected to be significant.

## INTRODUCTION

Many resource oriented organizations have linked policies of sustainable forest management with community stability and economic development since the early part of this century (Weyerhaeuser 2002). The SRS forest products program has been a continuing contributor to the regional economy for nearly a half century (Blake et al. 2001). The construction of the Continental Can Co. pulp and paper mill in Augusta, GA during the 1950's was in part a result of the potential availability of pulp from SRS (Hatcher 1959). By the late-1960's the SRS was supplying raw materials to 5 sawmills, 5 paper mills, 1 plywood mill and 1 wood preserving plant, and about 175-200 people were directly employed in the management and harvesting of wood from the SRS (U.S. Department of Energy 1979). The forest products program at SRS is therefore capable of mitigating some of the economic impacts associated with the decline in the defense mission through sustainable harvests (Figure 1).

However, controversies often arise regarding the local and regional economic benefits from forest products production relative to costs because of perceived conflicts with endangered species management, recreation, or water quality on Federal lands. Therefore, it is essential to determine the specific economic benefits of the forest products program and quantify their impacts on surrounding communities. Harvesting and silviculture are also performed at SRS to support other non-economic mission objectives such as infrastructure management, new facilities, conservation, restoration and research (Blake 2001). Although it is understood that harvesting and associated silvicultural activities are the primary means for manipulating

# SRS Forest Products Sold



Source: Blake et al. (2001).

Figure 1. Volume of forest products sold at the SRS, 1955-2000.

vegetation to benefit endangered species, wildlife habitat, and restore plant communities, no attempt is made by this study to include those or other mission benefits in the program assessment. The relationship between silviculture and harvesting activities with respect to the latter benefits are described elsewhere (Robinson and Bolen 1989).

## BACKGROUND

The Savannah River Site was established in 1951 as a nuclear materials production facility by the Atomic Energy Commission. A large proportion of the Site was in old-fields, reforested old-fields or cut-over woodlots, and high-graded forests (Langley and Marter 1973). The Savannah River Forest Station was established to reforest the old-fields and cut-over areas to reduce erosion and noxious weed problems. Because of the large amount of land in the reservation, there were concerns that land not needed for facilities would be idle and unproductive in terms of its contribution to the local economy as compared with similar private lands in the counties. The AEC stated in 1951 that areas not used for facilities would be managed to provide a marketable crop of timber (Hatcher 1959). Beginning in 1952, SRS began a program of planting 10,000,000 trees per year with a goal of reforesting 67,000 acres by 1960 (Hatcher 1959).

The SRS has sold timber and other commercial forest products since 1955. Commercial forest products are defined as any renewable commodity derived directly from the forest vegetation that is openly bought and sold. Products most commonly recognized in the southeast include trees sold to make lumber, utility poles, composite materials, paper products and chemicals. The SRS sells longleaf, loblolly, and slash pines (softwoods) as well as various species like oak,

sweetgum, sycamore, and yellow poplar (hardwoods). Pine straw is the only minor forest product sold from the SRS.

As the planted areas have matured, the SRS has continued to harvest (thin, partial cut and clearcut) and replant consistent with the Natural Resources Management Plan (U.S. Department of Energy 1991). Total forestland area currently managed exceeds 160,000 acres. Current annual harvest is about 5.5 million cubic feet (about half of net annual growth) generating sales of \$5-6 million annually while allowing forest inventories to increase continuously since the program's inception (Table 1). The number of acres available for some type of harvest has declined in recent years due to increases in industrial activities, conservation projects, and the number of designated Research Set-Asides and special use areas.

The revenue generated through these management activities is returned directly to the US Treasury by law. Management costs are budgeted annually through the SRS budget on a cash flow (or pay as you go) basis. In other words, revenues must equal or exceed planned expenses. The funding returned to the SRS through the budget process is re-invested in the development of infrastructure, restoration and management of natural resources, including restoration of wetland and upland communities, research, monitoring of wildlife and plants, archeology, road maintenance, and prescribed burning for endangered species and habitat restoration.

Table 1. Net standing volume of pines (longleaf, loblolly, slash) and hardwoods (gums, poplar, oaks, cypress) at the Savannah River Site at various intervals between 1952 and 2001. Large roundwood (LRW) approximates material that can be converted to solid wood products, and small roundwood (SRW) approximates material that can be converted to pulp, paper, corrugated box, composites, and fuel. (Blake et al. 2001)

Volume in Cubic Feet (millions)						
Year	1952 <sup>1</sup>	1962	1972	1987	1992	2001
Pine/LRW	-----	24.8	31.6	181.5	203.0	268.1
Pine/SRW	-----	28.6	58.2	50.4	44.2	55.0
Total Pine	17.9	53.4	89.8	231.9	247.2	323.1
Hwd/LRW	-----	35.6	35.3	62.6	64.6	78.5
Hwd/SRW	-----	28.0	32.3	33.5	33.3	40.0
Total Hwd	16.7	63.6	67.6	96.1	97.9	118.5
<b>Grand Total</b>	<b>34.6</b>	<b>117.0</b>	<b>157.4</b>	<b>328.1</b>	<b>345.1</b>	<b>441.6</b>
Forest Land in (Acres)	96,399	183,275 <sup>2</sup>	175,028 <sup>3</sup>	181,477 <sup>4</sup>	181,477	181,477
Ave. Volume (cuft per ac)	359.0	638.4	884.1	1807.9	1901.6	2433.4

1. Volume estimated from appraised value and proportion of pine to hardwood in 1947 in Aiken and Barnwell counties.

2. Includes 17,556 non-forest land for facilities, roads, power lines. About 2,800 acres of mixed hardwood forest were lost when PAR pond was constructed as a cooling water pond for P and R reactors.

3. Area reduced as a result of transfer of 2,487 ac to Barnwell Co., and 6,021 ac to the Sumter National Forests.

4. Area increased as a result of transfer of 6,021 ac back to Department of Energy

Note: Several thousand acres of mixed hardwood forest were lost when PAR pond and L-Lake were constructed as cooling water ponds for P, R and L reactors

About 34% of the funding is spent directly on forest products and silviculture management activities, 22% on prescribed fire management, 16% on administrative functions, 16% on research and monitoring, and 12% on engineering support. These expenditures are significant and involve purchases of products and services from local vendors and wages for workers on the Site. Therefore the economic benefits associated with the forest management

program are accruing to the community, in addition to the raw material supply to the forest products sector, and the non-economic benefits to the SRS natural resources. Although there is no revenue sharing system in place comparable to the 25% fund (established by the National Forest Revenue Act of 1908) through which states receive monies from National Forest timber sales, the SRS does make payments to counties in lieu of property taxes.

The combination of relatively low levels of expenditure and dramatically increasing inventories (Table 1) makes it apparent that SRS activities have resulted in efficiently producing a very valuable asset. The asset value of the land in 1951 was \$18,957,00 and the appraised value of the standing forests was \$2,279,000. By 2001, the estimated standing value of the forest had increased to approximately \$504,808,169. While harvest levels have remained fairly stable since the mid-1970's and inventories have soared, revenue from the sale of forest products has increased dramatically (Figure 2).

The increase in asset value and the pattern of annual revenues exceeding costs has yielded an impressive "internal rate of return" for the investments in forest management activities at SRS. Treating the SRS forest management program as a single forestry investment (with beginning and ending asset values and cashflows represented by the expenses and revenues), the calculated internal rate of return is approximately 11.44%, which can be compared with average long-term U.S. government bonds (1955-2000) of 6.77% (FRB SL, 2002). The primary factor producing these impressive returns has been the dramatic increase in the average market value of wood per unit volume (Figure 3). The second factor is the increasing proportion of large round wood or sawtimber that is been harvested at SRS as the

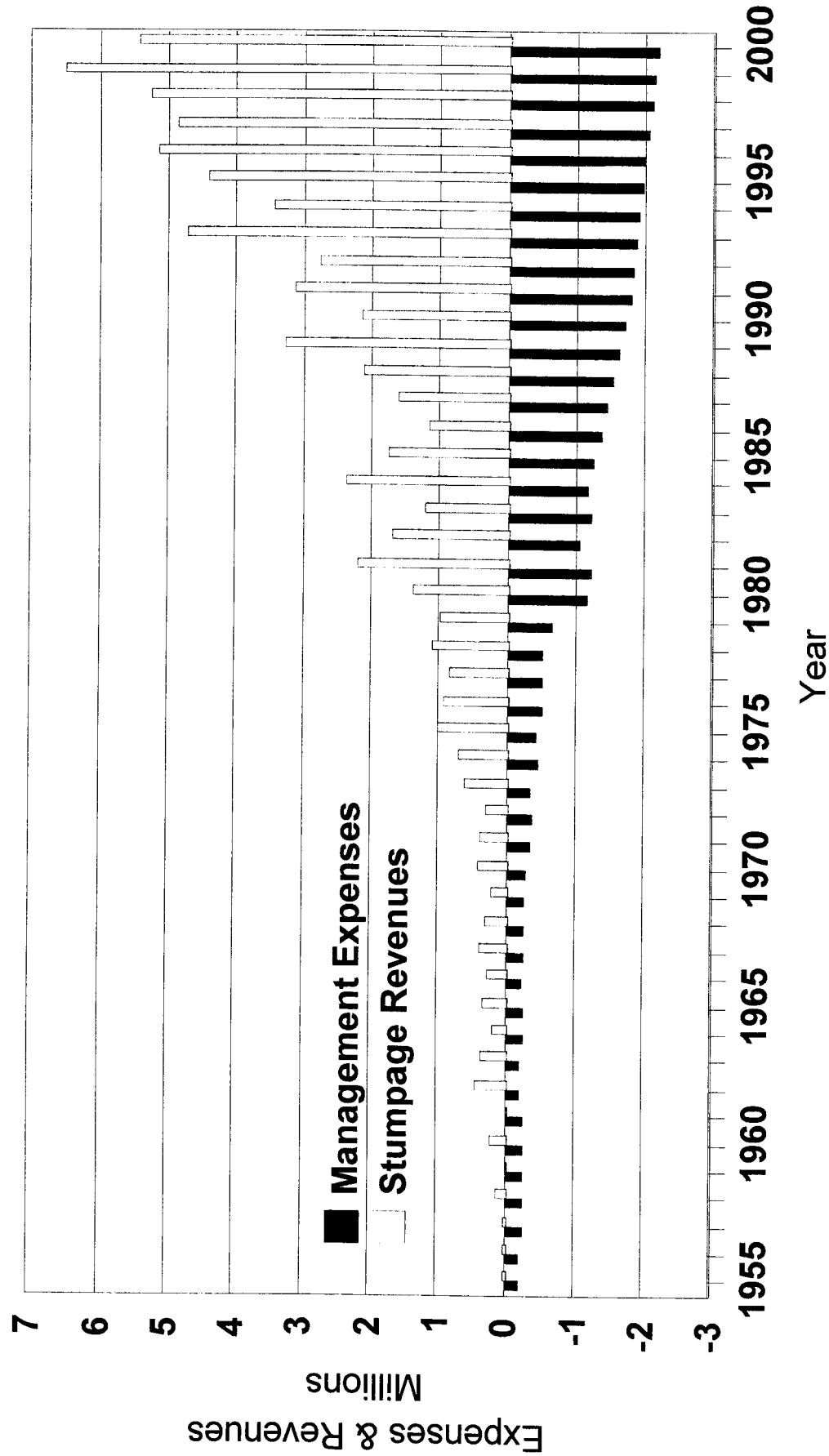
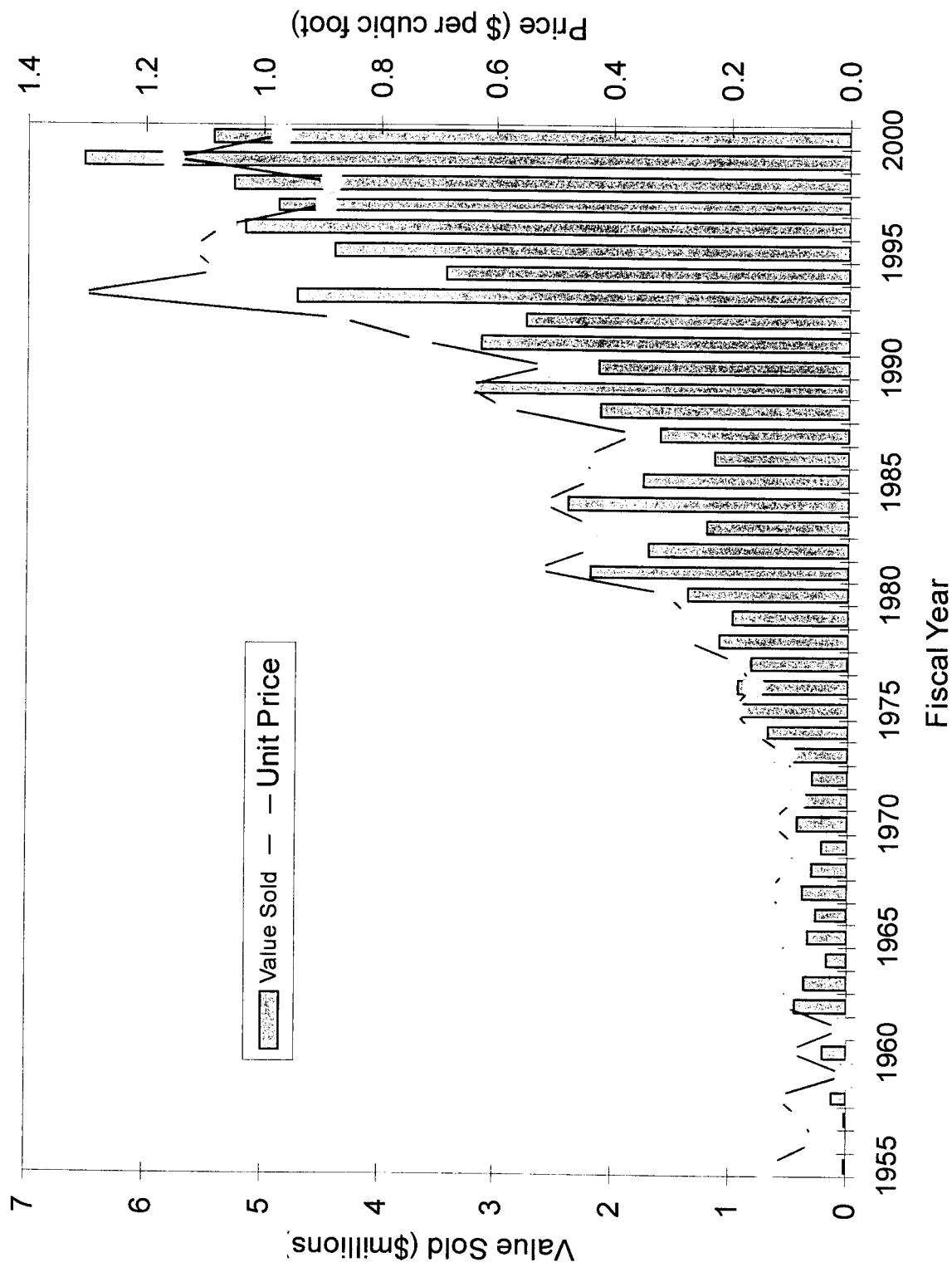


Figure 2. On average, annual timber harvest revenues have exceeded annual expenses of the timber management program by more than 50%.

Figure 3. Annual value of forest products sold and annual average price per unit.



early plantings mature. Sawtimber prices are generally 3-5 times higher per cubic foot than prices paid for pulpwood stumppage. Due to the relatively long rotation lengths for forest stands at the SRS, a higher proportion of the wood sold there is in the sawtimber category when compared to industry and private landowners in the region. Despite evidence of a sound forest management program at the SRS in recent years that regularly reports a large sales excess over direct forest products management costs (sale administration, roads, contracts, personnel, etc.) while at the same time increasing the quantity and value of the forest inventory, no assessment of the economic benefits of the program to the Site and the surrounding community has been conducted.

## SRS FOREST IN A REGIONAL CONTEXT

The SRS forest represents approximately 3% of the total forest area in the SRS economic region defined for this report. Defining the relevant economic region or market area is an important step in conducting an economic impact assessment. Since economic data on production, employment and income are most conveniently available at the county level, the primary decision is to determine which counties to include in the impact region. We determined that the impact region should at least include each county claimed as home by the bidders for SRS timber sales. Information on bidders was obtained from bid records ("Comparative Bid Abstract and Certificate of Award") from the period 1989-1997. Firms submitted bids from 21 South Carolina counties and 4 Georgia counties<sup>1</sup> and these were used

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<sup>1</sup>Georgia counties include Columbia, Richmond, Burke, and Chatham. South Carolina counties include Edgefield, Aiken, Barnwell, Allendale, Hampton, Jasper, Beaufort, Greenwood, Saluda, Lexington, Orangeburg, Bamberg, Colleton, Charleston, Dorchester, Berkeley, Clarendon, Calhoun, Sumter, Richland, Newberry

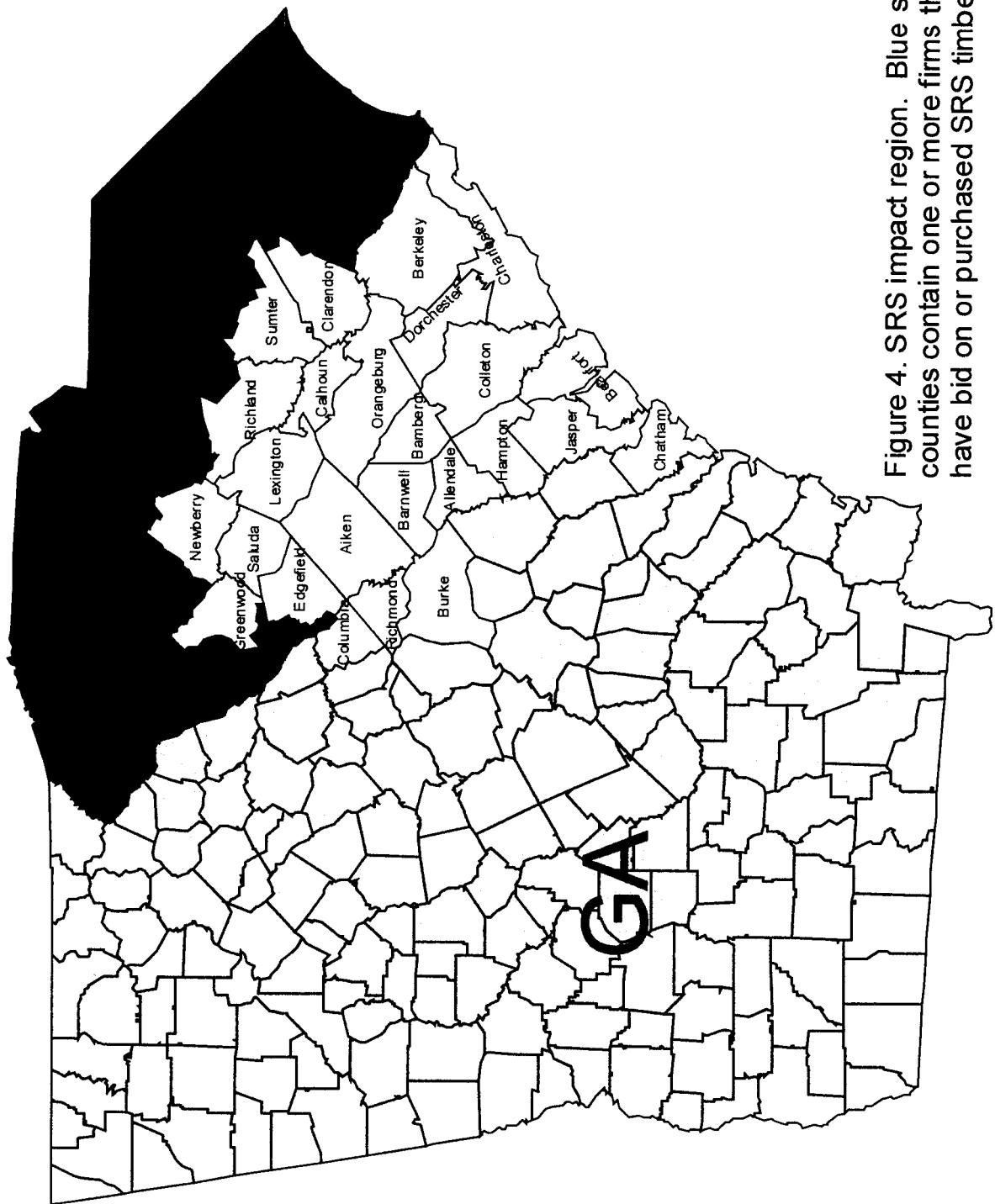


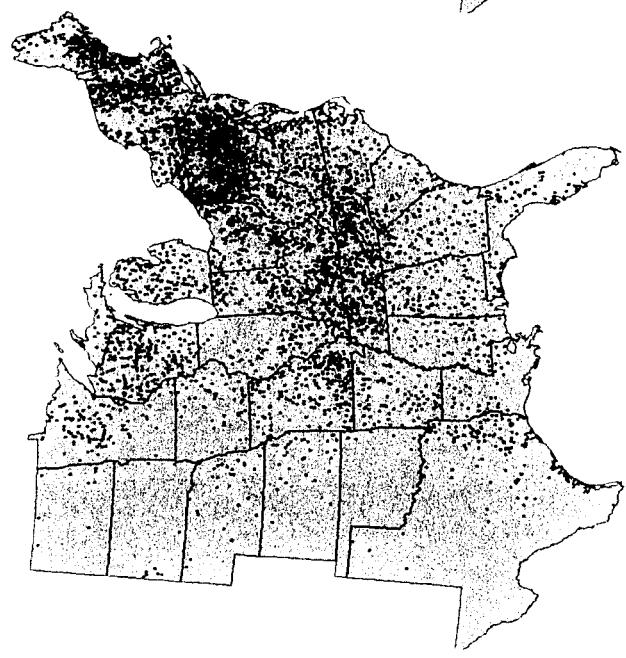
Figure 4. SRS impact region. Blue shaded counties contain one or more firms that have bid on or purchased SRS timber.

to define the SRS timber management program impact region (Figure 4). On a region basis, the forest contains about an equal number of softwood (pine) and hardwood acres. At SRS the forest area is more heavily skewed to the pine types with nearly 69% of the land base occupied by pines. Additionally SRS has a much higher percentage of its pine area occupied by the longleaf/slash type (50%) relative the larger region percentage of only 15%.

Longleaf at SRS accounts for about twice as many acres as slash pine. Although no comparable data exist for the region as a whole, longleaf area has been in decline throughout the South for several decades. Market prices for longleaf pine are quite good, but the added time required to produce a merchantable product relative to loblolly has many landowners switching (to loblolly) when they plant. This creates problems for species dependent on the longleaf ecosystem for habitat. In the public sector, where taxes and land rents are not an issue and non-market objectives can carry more weight in planting decisions, longleaf is a good choice.

Regarding growth and removals from inventory, the SRS lands are currently producing more than twice as much growth annually as is being removed. This is significantly better than the situation for the larger region where removals are exceeding growth by ~50% (Table 2). Declining inventories in the region are a cause for concern among timber products producers. As inventories decline and demand remains stable or continues to increase, prices for available wood will increase. Figure 5 indicates some of the available processing facilities in the region. These facilities in combination with independent wood dealers (wholesalers) are the destinations for stumpage produced in the region. At some point, marginal firms (mills,

# Sawmills



# Pulp mills

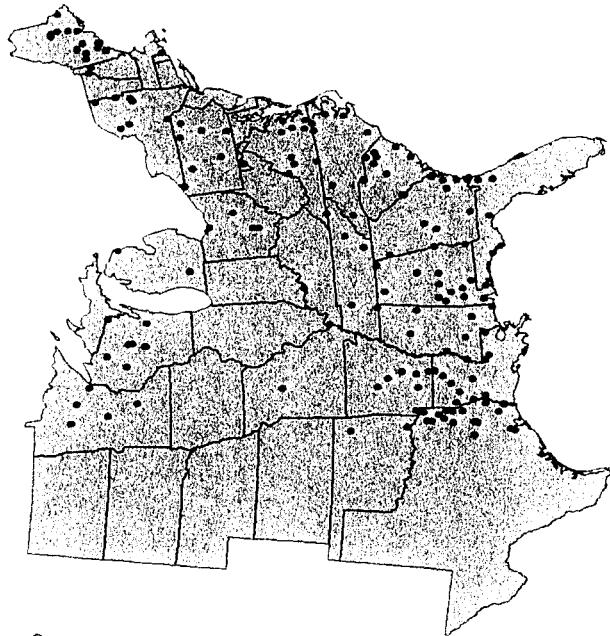
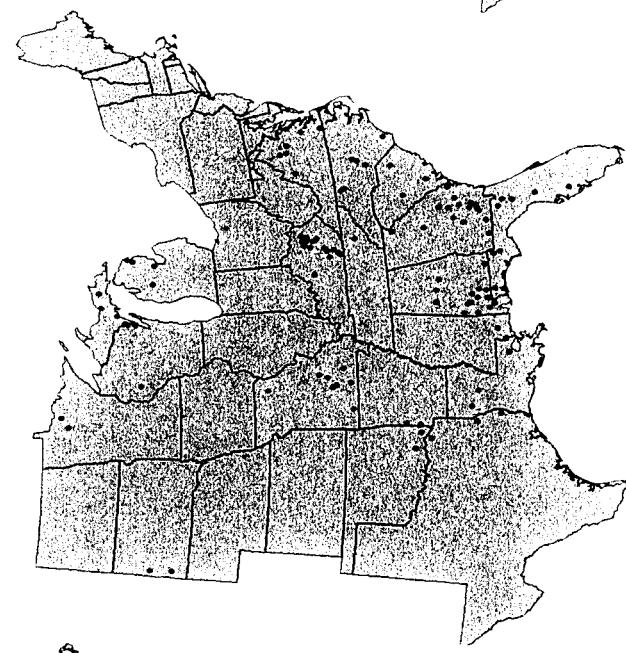


Figure 5. Distribution of sawmills, pulp mills, and post/pole production facilities in the eastern U.S. (D.N. Wear, 2001)

or wood dealers) will no longer be able to compete and will be forced to exit the industry. From the point of view of those firms, sustainable forest management should have sustained harvestable inventories as an objective so that future prices remain stable, allowing the firms to remain in business. This is beneficial both to the ecosystem (because sustainable forestry implies a balance among successional habitats and landscape disturbance) and to the local timber economy. SRS is serving to mitigate the regional decline in available softwood inventory through its current harvest management plans. Curtailing the timber program at some future date would serve to exacerbate the inventory situation to a significant degree within the 25-county economic region.

Table 2--Average net annual growth and average annual removals of growing stock on timberland by species group in the SRS impact region (FIA Reports, Georgia 1997, South Carolina 1994)

Species group	Growth	Removals
- - - - million cubic feet - -		
Longleaf-slash pine	19.2	55.2
Shortleaf-loblolly pine	168.6	205.1
Other pine	-4.8	12.0
Cypress	3.7	4.4
Other softwood	0.3	0.2
Total softwoods	187.0	276.8

## METHODS FOR ESTIMATING ECONOMIC IMPACTS

Regional economic impact analysis measures the impacts of a significant change in local economic activity on production, employment, incomes and other important measures of economic well being. The forest products management program at the SRS plays an

important role in the regional timber economy as a supplier of high value products and as a valuable source of accessible timber in wet weather conditions. In a similar way, the timber economy is an important component of the 25-county regional economy. According to the 1996 data sources developed by IMPLAN (see below), Forest Products Manufacturing related jobs accounted for ~15% of all manufacturing jobs in the 25-county region. These jobs (and manufacturing jobs in general) are highly valued by most communities because they often pay more. In 1996, the average textile worker in the region earned \$25,600, food processing industry workers averaged \$30,000, solid wood products industry workers averaged \$27,600 and pulp and paper industry workers averaged \$57,100. On the other hand, construction workers averaged \$24,700, automotive service workers earned \$18,200, hotel industry workers earned an average \$15,100, and the average retail worker earned only \$13,000. In addition to relatively high wages for region residents, the forest based industries generally purchase more of their inputs locally (compared to other industries) due to the nature of the commodity they are working with (logs are expensive to transport long distances, logging equipment is generally purchased locally where it can be readily serviced). This particular characteristic of the industry is what allows us to demonstrate its importance to the economy with high economic multipliers (Teeter et al. 1989, Flick and Teeter 1988). If a significant economic change occurs in the forest products industry (either up or down) that change reverberates to a greater degree throughout the rest of the economy than a similar change would for most other industries.

Input-output modeling is a frequently used method for conducting regional economic impact assessments. I-O models can be constructed for regions defined as aggregations of counties

using the most recently available national and county-level economic data and a software package known as IMPLAN<sup>2</sup>. Other models are available, but IMPLAN was specifically developed to analyze forest-oriented economies by the USDA Forest Service and remains a flexible tool for that purpose. A listing of recent forestry and non-forestry applications of the IMPLAN model is available on the Minnesota IMPLAN Group website:

<http://www.implan.com/>

Essentially, I-O is an accounting framework for recording the purchases and sales of inputs and outputs among industries in a region. Patterns can be determined for each industry that generally indicate how business is conducted (what items and quantities the industry purchases as inputs, and what it sells to other firms and consumers). When these relationships are understood in a given region, a predictive model can be developed that will indicate the magnitude of the effects on other industries of a change in economic activity for a particular industry (for example, forest products).

As mentioned above, the SRS region, like many other parts of the South, is experiencing a period of declining sawtimber inventories (Cubbage et al. 1995, Prestemon and Abt 2001, p. 18). Numerous scientists and research organizations have devoted a significant amount of time and resources to studying trends in timber supply and developing strategies to ensure a continuing supply of timber for an important regional industry. Sustainable forestry means different things to different groups, but all views seem to include a concern about declining inventories.

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<sup>2</sup>IMPLAN is maintained and distributed by the Minnesota IMPLAN Group, Inc. Dr. Teeter was an early developer of the software while working with the US Forest Service, 1980-1985.

Timber supply projections are very important to the investment decisions of forest industries and non-industrial private forest landowners. Forest products firms make decisions on investments in mills, equipment, land, and trees that depend on assessments of current and future forest conditions. Other private landowners are also influenced by assessments of future conditions in making their forestry management decisions. In order to assess the economic impacts of any future changes to the SRS forestry program, we made several assumptions about the surrounding forest economy and the SRS timber program:

1. Softwood inventory at SRS represents approximately 8% of the total available softwood inventory in the region (this percentage may be much less than SRS' share of available softwood in the wet, winter logging season when it is a primary source in the region).
2. The amount of timber removed from the market will be 5,200,000 ft<sup>3</sup>/per year based on a projection of harvests and revenues for the next 10 year cycle. In line with that quantity, the value of the annual harvest in 1996 dollars (base year of the IMPLAN database) is approximately \$6,000,000.
3. Only limited substitution of wood to replace wood obtained from SRS is possible. Since inventories are already declining (particularly for sawtimber) firms would have to reduce regional inventories to substitute for lost SRS timber. Our assumption is that firms will curtail production in line with the reductions in available inventory rather than "overcut" other stands in the region. The implicit corollary assumption is that forest industry is committed to a program of sustainable forest management in the region.

Potential change in the SRS timber management program was modeled as two separate scenarios, one more conservative than the other about the degree to which some limited substitution takes place. Analysis was conducted using the IMPLAN software and 1996 county level data. Two scenarios are examined because it is difficult to predict the responses of businesses to changes in the availability and cost of raw materials. Basic economics tells

us that current softwood sawtimber shortages in the regional timber economy will get worse if SRS removes its timber from the market, and consequent higher prices may force some final products manufacturers to look for supplies elsewhere. This “export” of forestry services and logging jobs to locations outside the region would not be a good result for SRS region residents working in the timber based industries. Additionally, some final products producers (such as small sawmills) may find they cannot compete if they have to obtain wood outside the region and incur higher transportation costs to bring it to their mills. These marginal producers may be required to exit the industry.

The first scenario assumes that because SRS timber will no longer be available, output in the logging sector decreases. This is because prices for remaining wood in the region rise to unacceptable levels (for marginal producers) or transportation costs of importing wood from outside the region are prohibitive. The logging sector will reduce its output in relation to the amount of timber being removed from the market by SRS.

According to the IMPLAN database, approximately 48% of the total wood harvested in the region is exported to processing facilities outside the region (in a similar way, wood is imported from counties outside the region). Our conservative assumption then is that 52% of the wood produced by SRS would directly impact regional logging firms and those firms would reduce their production by an the same amount. The production function for the logging sector in IMPLAN indicates that stumpage purchases represent 34.4% of the cost of producing delivered logs to mills. As a result, if the industry reduces its purchase of inputs

by 2.7 million ft<sup>3</sup> (52% of the total SRS harvest) then industry production will fall by 9.005 million dollars (a “direct effect”)<sup>3</sup>.

The effects of such a decrease in output by an important regional industry are significant. As mentioned above, forest based industries have high multiplier effects. Not only are employees in the logging industry affected, but all industries that support the logging industry directly and indirectly will experience reductions in sales. In addition, employees will have reduced incomes and their purchases of consumer goods will also be reduced (an “induced” effect). The total effect is embodied in the Type II multiplier and is referred to as the Direct+Indirect+Induced effect (Table 3). For scenario 1, a \$9 million reduction in output in the logging sector translates into an \$16.85 million reduction in output for the entire regional economy, distributed primarily across several economic sectors: Forestry Products, Forestry Services, Logging, and Eating and Drinking establishments (in Services). Employment losses associated with this reduction in output will total approximately 134 jobs and consequent losses in employee compensation of approximately \$3 million.

Scenario 2 assumes that loss of harvestable inventory in the region will translate into harvest reductions to an even greater extent. Continuing to harvest at the same level in the absence of significant inventories at SRS will only exacerbate the declining trends in commercial softwood sawtimber in the region. As inventories decline and prices for available local timber rise, mills may have to procure wood from logging firms located outside the region, effectively exporting those jobs from the area. Some mills may also find that sources outside

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<sup>3</sup>In the I-O model, the change is modeled by reducing final demand for the logging sector by \$9.005 million. The default RPC for the logging sector is also adjusted to reflect our regional substitution assumption (all of the 52% reduction would have been consumed regionally).

Table 3. Direct + Indirect + Induced impacts of scenario 1, where 52% of an eliminated SRS timber sales program directly affects the production of the regional logging sector.

Industry	Total Gross Output 1996 Dollars	Employee Compensation 1996 Dollars	Jobs
Agriculture	-78,768	-3,862	-1
Forestry & Forest Products	-3,297,349	-138,428	-8
Mining	-207,675	-101,513	-9
Construction	-116,933	-46,224	-2
Food	-128,538	-19,326	-1
Textiles	-16,962	-4,659	-0
Logging	-9,580,635	-1,548,488	-61
Solid Wood Products	-50,262	-110,53	-0
Pulp, Paper & Board Mills	-12,720	-2,772	-0
Manufacturing	-235,333	-58,246	-1
Transportation	-201,213	-57,165	-2
Communications & Public Services	-195,926	-43,002	-1
Trade	-733,321	-304,862	-16
Banking, Finance, Real Estate	-753,158	-124,549	-5
Services	-1,127,857	-465,997	-24
Government	-114,127	-38,629	-2
Total	-16,850,776	-2,968,775	-134

the region are too expensive and mill production will be curtailed. This potential effect is acknowledged but not included in the analysis.

Scenario 2 assumes the impact is fully felt by the Logging sector, implying that because SRS timber is no longer available, output for the sector will decrease by the annual quantity previously purchased from SRS. This result is possible if sourcing wood from alternative locations within the region is too costly due to higher prices associated with an SRS induced

lower level of supply or if transportation costs to locations outside the region are prohibitively high. The SRS produces 26 to 35% of all the softwood products in Aiken and Barnwell counties and about 7-12 % of all softwood products in the nine-county Central Savannah River Area of South Carolina and Georgia (USDA Forest Service TPO 1996). Also, nearly all the softwood harvested at SRS is harvested during the winter months when many other pine sites in the region are too wet. This unique characteristic of the SRS forest will make finding substitute sources at a reasonable cost even more difficult for local producers.

According to the impact analysis, total region output would drop by \$32.2 million if Scenario 2 represents the effects of the elimination of the SRS timber program. Jobs lost would number around 256, with 110 of those directly occurring in the logging industry, 83 jobs lost indirectly to the firms that provide goods and services to the logging industry, and 63 jobs lost through the reductions in consumer spending throughout the region brought about by wage losses in all industries. The actual reduction in employee compensation associated with the direct, indirect and induced employment losses could approach \$5.7 million for the region. It is more likely that the majority of those losses will occur near the SRS.

## CONCLUSIONS

According to data from the IMPLAN database for the 25-county region (1996), reducing or eliminating harvests at the SRS would cost the region jobs and revenue. The logging jobs lost are not particularly high paying (~\$25,000/yr in 1996) and yet the effects of losing \$6.7

million of employee compensation could be significant for the rural counties in which the losses occur.

Any action that is expected to reduce harvest levels in a forest dependent economy can have serious repercussions in the rural communities that are affected. It is admittedly difficult to forecast the trends in future harvest activity. However, the mood in the southern timber

Table 4. Direct + Indirect + Induced impacts of scenario 2, where 100% of an eliminated SRS timber sales program directly affects production in the regional logging sector.

Industry	Total Gross Output 1996 Dollars	Employee Compensation 1996 Dollars	Jobs
Agriculture	-150,444	-7,376	-2.2
Forestry & Forest Products	-6,297,760	-264,391	-14.5
Mining	-396,648	-193,884	-17.3
Construction	-223,336	-88,286	-3.5
Food	-245,500	-36,912	-1.6
Textiles	-32,396	-8,898	-0.4
Logging	-18,298,502	-2,957,529	-117.1
Solid Wood Products	-95,997	-21,110	-0.7
Pulp, Paper & Board Mills	-24,294	-5,295	-0.1
Manufacturing	-449,473	-111,247	-2.7
Transportation	-384,307	-109,182	-3.9
Communications & Public Services	-374,208	-82,132	-1.9
Trade	-1,400,605	-582,270	-31.2
Banking, Finance, Real Estate	-1,438,491	-237,882	-9.6
Services	-2,154,146	-890,030	-45.7
Government	-217,977	-73,779	-3.1
Total	-32,184,082	-5,670,201	-255.5

economy regarding the trends in forest inventories seems to be one of proactive concern. Considerable energy has been expended to ensure that forests in the region are sustainable and able to supply regional final products producers with raw materials at competitive costs. If raw material prices continue to escalate due to decreasing inventories, imports may be the producers' solution to remaining competitive and that will mean reductions in domestic harvests. Job losses associated with changes in the SRS timber program would not be welcome in the economic region surrounding the Savannah River Site.

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