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**The Stewardship Incentive Program, 1992-1994:
An Accomplishment and Program Review**

BY

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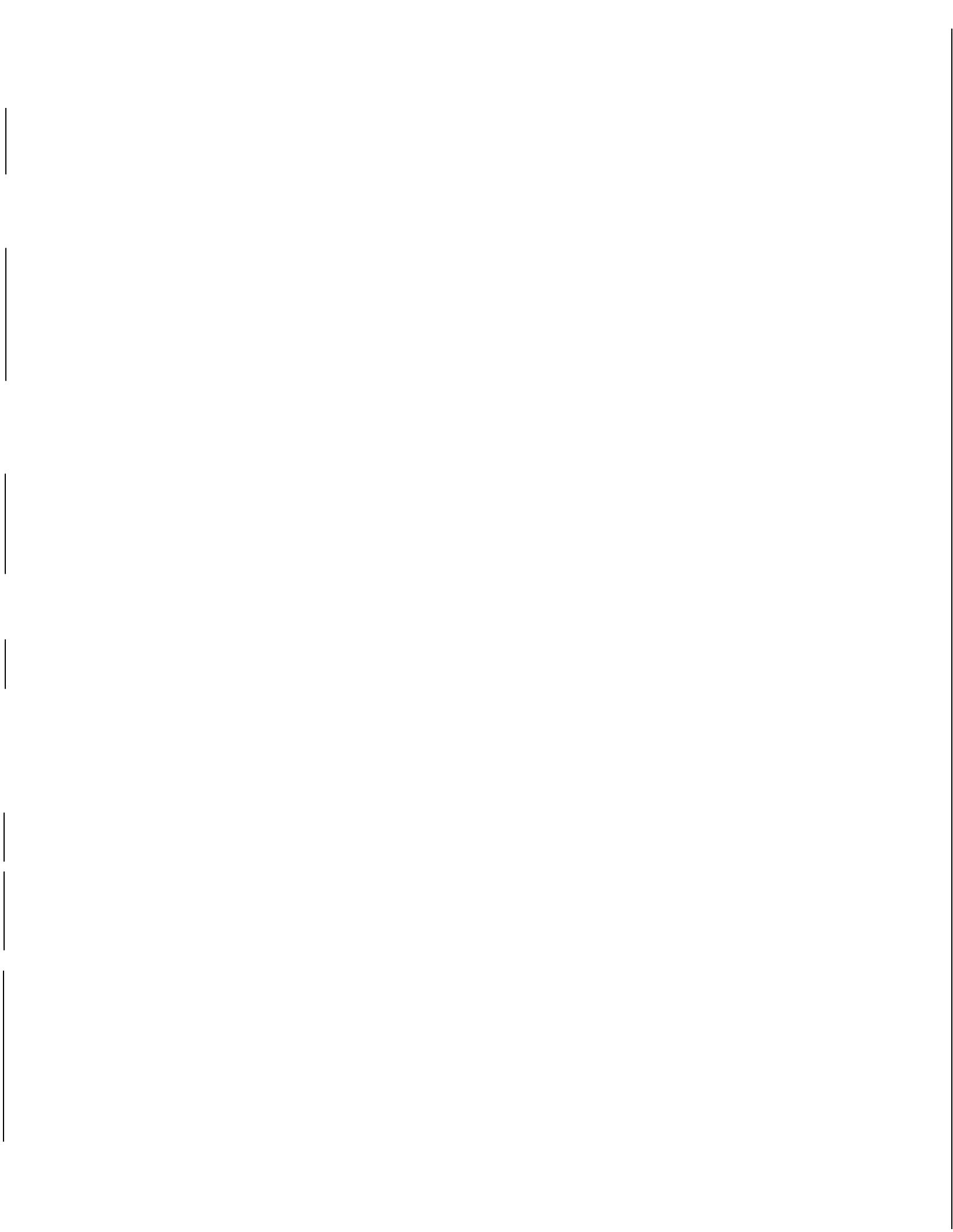
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EXECUTIVE SUMMARY

The Forestry Title of the 1990 Farm Bill, signed into law on November 28, 1990, provided a comprehensive national policy for the management, protection, and enhancement of the nation's 353 million acres of privately owned nonindustrial forest land. Two new USDA Forest Service programs were authorized under the legislation, the Forest Stewardship Program (FSP) and the Stewardship Incentive Program (SIP).

The USDA Forest Service operates the FSP in cooperation with State Forestry agencies and newly created State Forest Stewardship Coordinating Committees to deliver management planning assistance to landowners who have an interest in enhancing and protecting multiple forest values on their land. Comprehensive management plans are prepared for qualifying landowners by foresters and, in many cases, by teams of natural resource specialists. Plans are tailored to meet the specific objectives of each landowner and specifically address environmental, economic, and social values.

An approved Forest Stewardship management plan is a prerequisite to obtaining cost-share assistance under SIP. There are even funds under SIP to help landowners with the cost of hiring private consultants to develop the stewardship plan. While all federal forestry cost-share programs provide technical assistance for practice design and installation, along with standards for compliance before payments are made to landowners, SIP goes a step further because of its direct link to comprehensive whole property planning provided by the FSP. The emphasis placed on managing all forest-related resources, coupled with the synthesis of comprehensive technical assistance tied to financial incentives, makes the Forest Stewardship Program and the Stewardship Incentive Program a unique combination that will likely impact the direction of forest policy in the years to come.

The Forestry Incentives Program (FIP), which also provides financial incentives for forestry practices on nonindustrial private forest land, was scheduled to terminate on December 31, 1995, under provisions of the 1990 Farm Bill. Originally, Congress had intended that SIP would replace FIP after its sunset date. The 1996 Farm Bill, however, extended FIP to the year 2002.

Accomplishments

From 1992 through 1994, SIP cost-shares of approximately \$20.5 million have funded over 1.2 million acres of forest-related resource enhancements and long-range multiple-use planning on NIPF lands enrolled in the Forest Stewardship Program. The majority of acres enrolled have been for the development of landowner forest stewardship management plans (62%), while the majority of cost-

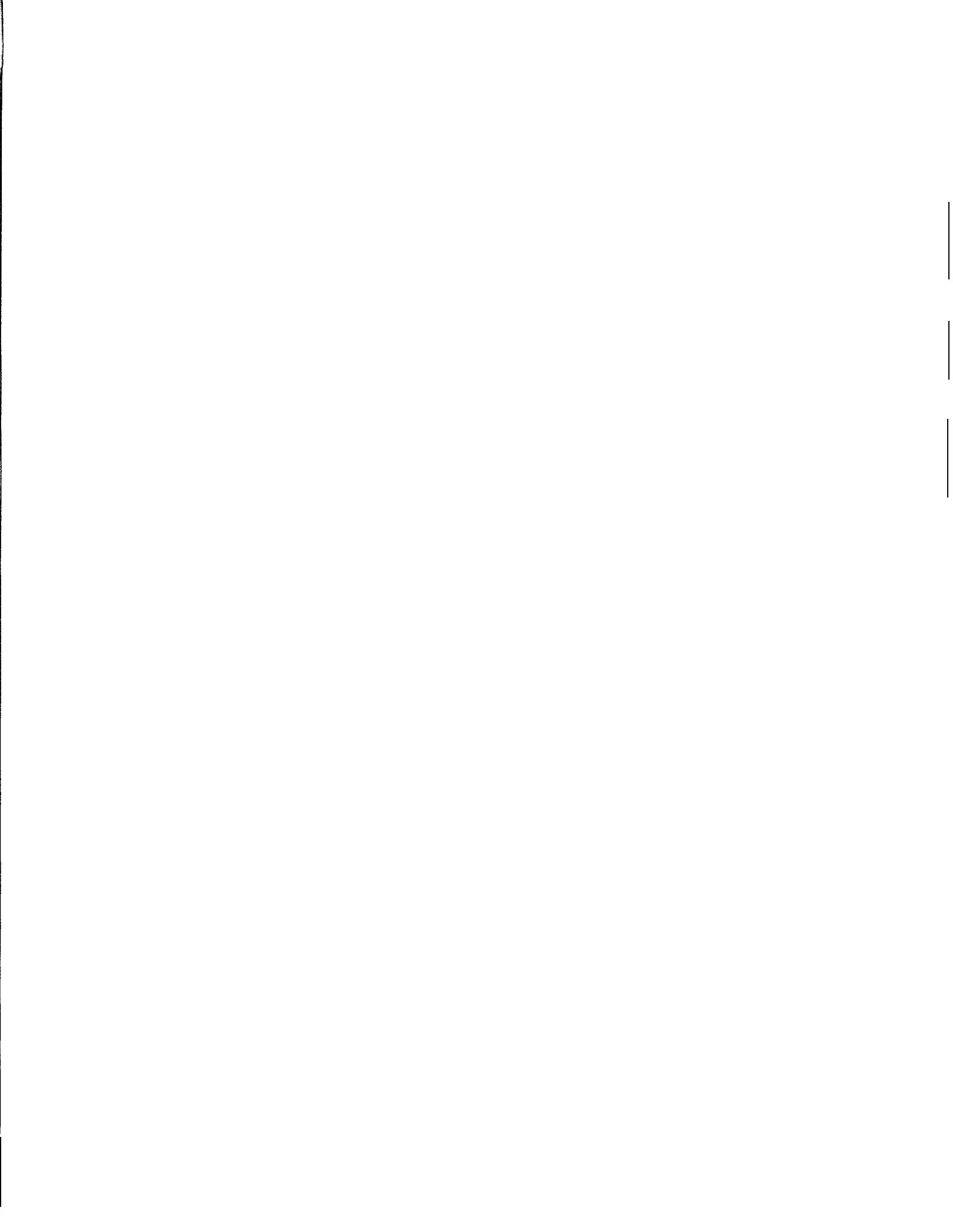
share funding has been spent on tree planting activities (40%). Of the eight practices that fund on-the-ground accomplishments, forest recreation enhancement has been the leading practice, enrolling 41 percent of the acres under this designation, while tree planting and forest improvement acres account for roughly 21 percent each. The remaining practices, although significant on a state-wide or regional basis, have accounted for less than 12 percent of all acres treated.

SIP has been most active in the Northeast and North Central states, accounting for 48 percent of all acres enrolled, followed by the Southern states with 37 percent. Leading states have been Georgia with 135,658 acres enrolled; New York (93,840 acres); and Oregon, Massachusetts, Vermont, Pennsylvania, Mississippi, Michigan, and New Hampshire with over 50,000 acres each.

In comparing tree planting accomplishments under SIP and the Forestry Incentives Program (FIP) for 1992 through 1994, over five times as many acres have been planted under FIP. SIP tree planting cost-shares paid to landowners have averaged \$85.09 per acre, while under FIP they have averaged only \$59.90 per acre.

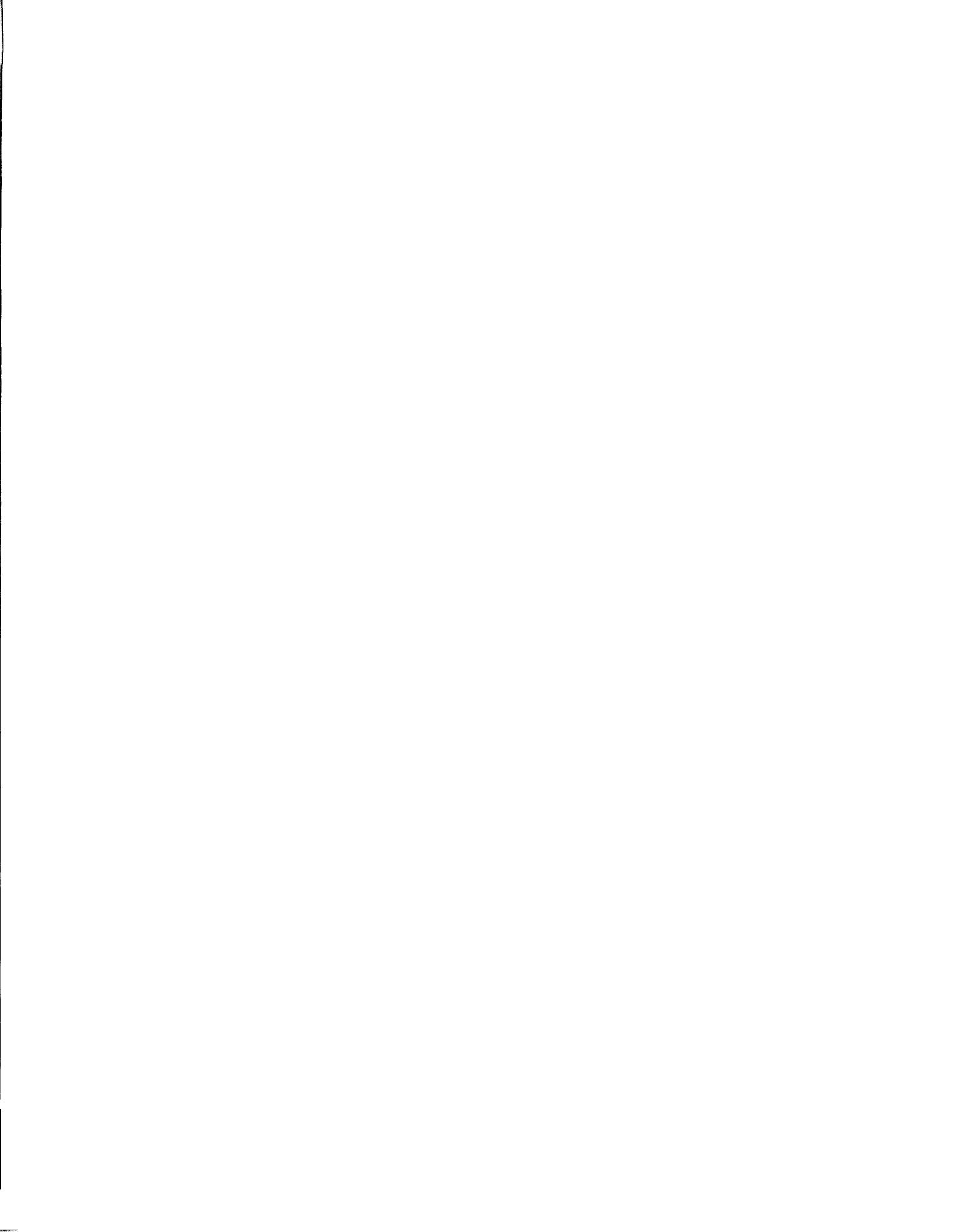
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**THE STEWARDSHIP INCENTIVE PROGRAM, 1992-1994:
AN ACCOMPLISHMENT AND PROGRAM REVIEW**

Barry D. New, Frederick W. Cabbage and Robert J. Moulton

INTRODUCTION

The Stewardship Incentive Program (SIP) is a federal financial cost-share assistance program designed to encourage private landowners throughout the U.S. to manage their forest lands for economic, environmental, and social benefits. Nine cost-sharing practices offer the landowner a broad spectrum of financial assistance options to accomplish stewardship objectives. SIP is authorized in the Forestry Title of the 1990 Farm Bill. It is a companion program to the Forest Stewardship Program, also authorized by the 1990 Farm Bill.

The Forest Stewardship Program (FSP) focuses on technical assistance to nonindustrial private forest (NIPF) landowners who are not currently managing their forest land according to a plan that embodies multi-resource stewardship principles. Through the FSP, landowners receive a comprehensive written management plan prepared by a forester or other resource specialist that addresses specific objectives of the individual landowner, including recommendations for protecting and improving soil and water resources, fish and wildlife habitats, recreation and aesthetic values, and timber and other forest products.

The relationship between SIP and the FSP is unique, in that a landowner must meet requirements of and participate in the FSP in order to qualify for financial assistance under SIP. Other forestry cost-share programs do not require this level of total resource planning as a provision of receiving financial assistance.

SIP cost-shares of over \$20.5 million have funded improvements on over 1.2 million acres of private forest land through 1994. Over 14,000 landowners have participated in the program. Overall, 83,000 landowners are managing over 10 million acres for multiple uses under the Forest Stewardship Program.

PROGRAM ADMINISTRATION

The Forest Stewardship Program and the Stewardship Incentive Program are authorized by Congress in the Forestry Title of the Food, Agriculture, Conservation, and Trade Act of 1990, commonly referred to as the 1990 Farm Bill (P.L. 101-624, Title XII, Section 6). The primary intent of SIP is to provide technical assistance and financial incentives to implement forest and related resource enhancements prescribed in approved forest stewardship management plans. It is a companion program under the broader umbrella of the Forest Stewardship Program (FSP). FSP participants may use SIP cost-shares to help achieve their management objectives, or they may apply for assistance under other federal cost-share programs, such as the Forestry Incentives Program (FIP); Environmental Quality Incentives Program (EQIP), formerly Agricultural Conservation Program (ACP); Conservation Reserve Program (CRP); and Wetlands Reserve Program (WRP), among others. Many states also have financial assistance programs that can be utilized to implement stewardship goals.

SIP is a program of the U.S. Department of Agriculture, Forest Service. State level leadership for SIP is provided by the State Foresters. Administrative assistance for SIP at the national, state, and local levels is provided by the USDA Farm Services Agency (FSA, formerly Agricultural Stabilization and Conservation Service, ASCS) under an interagency agreement with the Forest Service. FSA provides assistance by accepting landowner applications and arranging for payments to be disbursed. Each State Forester, in consultation with the State Forest Stewardship Coordinating Committee, determines cost-share levels, practice priorities, practice specifications and minimum acreage eligibility requirements. SIP is available in all states and territories, including American Samoa, Guam, Northern Mariana Islands, and Puerto Rico.

Allocation Of SIP Funds

In allocating SIP funds to the states, Congress charged the Secretary of Agriculture to assess the public benefit to be derived from the distribution and to consider the following six criteria (16 USCS 2103b (e)):

- 1) the total acreage of nonindustrial private forest land in each state;
- 2) the potential productivity of the land;
- 3) the number of owners eligible for cost-sharing in each state;
- 4) the need for reforestation in each state;
- 5) the opportunities to enhance nontimber resources on such forest lands; and

6) the anticipated demand for timber and nontimber resources in each state.

Annual appropriations are allocated by the Forest Service to three geographic areas, consisting of one or more USFS Regions: the North (Northeastern Area State and Private Forestry), the South (Region S), and the West (Regions 1 through 6 and Region 10). Three Regional SIP Coordinators then distribute funds to the states within their region based on the criteria outlined by Congress. Since 1992, the North and South have each received approximately 40 percent of the annual appropriations, with the West receiving roughly 20 percent (Baldwin 1995).

Although most of the funding for SIP goes directly to landowners, a portion of each year's appropriation is retained to cover administrative and technical assistance costs incurred by the US Forest Service, FSA, and the State Foresters. State Foresters may hold no more than 10 percent of their annual appropriation for costs incurred for program administration and the preparation of required practice project outlines (Hoge 1995b).

Table 1 shows annual appropriations for the FSP, SIP, and FIP for federal fiscal years 1990 through 1995. For the start-up years of 1990 and 1991, all FSP funding was distributed to the states. Although SIP was authorized in 1990 and funds were first appropriated in FY 1991, landowner applications were not accepted until February of 1992 with the first payments also being made during FY 1992. Actual appropriations for both FSP and SIP have fallen below appropriations authorized by Congress for fiscal years 1991 through 1995 (\$25 million for FSP and \$100 million for SIP). In 1995, FIP appropriations fell to about half of the amount allocated in previous years and was roughly one-third of SIP's 1995 appropriation.

Table 1. Program Appropriations (dollars in thousands)

	1990	1991	1992	1993	1994	1995
FSP	5,900	11, 831	13, 333	14, 873	15, 862	15, 552
SIP			751	17, 847	17, 932	18, 238
FIP	12, 446	12, 446	12, 446	12, 446	12, 820	6, 625

Source: Baldwin 1995.

Available Practices

Nine SIP practices were authorized at the national level at the program's inception. Each State Forester in consultation with the State Stewardship Committee is responsible for deciding which practices will be available in that state. State Foresters also have the authority to customize technical specifications for each practice as long as they meet or exceed national specifications. The following is a brief explanation of the nine available SIP practices (USDA, ASCS 1994a).

SIP-1 Landowner Forest Stewardship Plan Development. SIP-1 funds are available to prepare a new forest stewardship management plan or revise an existing land management plan to meet certain standards set for the Forest Stewardship Program at the state level. Each plan is intended to be action oriented, multi-disciplinary in scope, responsive to the landowner's objectives, and must provide recommendations for the long-term management of the total forest resource. The plan must specifically address the following, as appropriate: forest health, fire hazard, timber and wood products, soil and water quality, riparian areas and wetlands, wildlife and fish habitat, outdoor recreation and aesthetics, and threatened and endangered species. The plan must emphasize biological, environmental, and economic management principles. All forest land under contiguous ownership must be included in the plan. Early on, landowners were required to sign a pledge of intent to abide by the plan for a period of ten years, however, that requirement has been dropped. The plan may be prepared by the State Forester or his local representative, usually a service forester; an approved agency service representative, such as employees from cooperating state natural resource agencies; or other approved resource management professional, such as private consultants. Ultimately, all plans must meet approval of the State Forester.

SIP-2 Reforestation and Afforestation. Cost-share is available to establish and maintain a stand of trees for conservation purposes and timber production. This may involve tree planting, site preparation, controlled burning, competition control, fertilizing, and fencing. Beginning in 1994, this practice was designated as a vehicle to achieve accelerated tree planting goals outlined in the President's Climate Change Action Plan.

SIP-3 Forest Improvement. This practice was renamed in 1994 and was previously called "Forest and Agroforest Improvement." The agroforest improvement component has been incorporated into the SIP-4 practice. The SIP-3 practice involves release and noncommercial thinning, vine control, prescribed burning, pruning, fertilizing, and fencing to improve existing stands of trees.

SIP-4 Agroforestry Establishment, Maintenance, and Renovation. This practice, also renamed in 1994, was previously called "Windbreak and Hedgerow Establishment, Maintenance, and Renovation." This practice cost-shares the establishment, maintenance, and renovation of new and existing windbreaks, hedgerows, living snow fences, tree and shrub livestock shelters, and alley cropping systems.

SIP-5 Soil and Water Protection and Improvement. The purpose of this practice is to maintain or improve water quality, soil productivity, and prevent soil erosion on forest lands. This may be accomplished by establishing a permanent

vegetative cover on critical areas and through proper design and layout of forest roads, stream crossings, drainage systems, and water diversions.

SIP-6 Riparian and Wetland Protection and Improvement. This practice is designed to protect, restore, and improve wetlands and riparian areas; reduce sedimentation and streambank degradation; improve water quality; and restore productivity to these sites. Authorized activities include establishing forest buffers, restoring areas to their original hydrology, streambank stabilization, and establishing a permanent vegetative cover.

SIP-7 Fisheries Habitat Enhancement. The intent of this practice is to enhance in-stream habitat for native aquatic species including resident and anadromous fish. Habitat enhancements and modifications to lakes, ponds, wetlands, rivers, and streams associated with forestlands may be cost-shared. A ratings system was developed to ensure that higher priority would be given to species listed as threatened or endangered.

SIP-8 Wildlife Habitat Enhancement. Included in this practice are measures to restore, improve, or establish permanent upland or wetland wildlife habitat as well as activities to restore, protect, and improve threatened or endangered plant species and their unique habitats and communities. As with SIP-7, this practice places a higher priority on endangered, threatened, or rare species and their habitats. Components include: permanent wildlife plantings, creating forest openings, control of undesirable plant species, wildlife thinnings, wildlife water facilities, wildlife corridors, artificial cavities and nest boxes, creating snags, developing springs and green tree reservoirs.

SIP-9 Forest Recreation Enhancement. This practice is designed to improve forest lands for outdoor recreation, enhance aesthetic benefits, and identify and protect sites of historic or cultural value. Authorized component activities include establishing paths and trails, reducing stand densities, establishing permanent vegetative cover, pruning, and fencing.

Cost-Share Rate

National guidelines for SIP allow cost-share rates of up to 75 percent of the total cost of implementing the practice. State Foresters are responsible for establishing rates for each practice adopted. States have the option of basing landowner payments for each practice and its components on either a flat rate or on a percentage of actual cost not to exceed certain established limits. Flat rates are based on a reasonable estimation of state or local average costs of eligible materials, services, and labor necessary to perform the practice. Percentage rates must be set at or below the 75 percent maximum level. Reasonable estimates of the maximum cost to implement the component along with the percentage are used in determining

the “not to exceed” limits for percentage rates. In no instance may a landowner receive more than 100 percent of his out-of-pocket expenses incurred. The maximum cost-share payment a landowner may receive in any given year is \$10,000. SIP practices are to be completed within 18 months of contract approval, however, additional 6-month extensions are possible upon approval.

Eligibility Requirements

SIP cost-share assistance is available to all NIPF landowners including individuals, groups, associations, American Indian tribes, corporations without publicly traded stocks, and other private legal entities, provided that no more than 50 percent of their gross income is derived from primary processing of forest products or from hunting, fishing, camping, or other similar outdoor recreation activities. The program is limited to ownerships of 1,000 acres of NIPF land, including non-forested land scheduled for conversion to a SIP practice. In certain instances, ownerships of up to 5,000 acres may be awarded a waiver, subject to an assessment of the property’s unique environmental attributes, social benefits and economic contributions.

The basic requirement for receiving cost-share assistance under SIP is an approved forest stewardship management plan, and thus a landowner must be a participant in the FSP. The exception is for funds requested under SIP-1, Landowner Forest Stewardship Management Plan Development. In addition, the practice being applied for must be recommended in the landowner’s forest stewardship plan. In some cases, landowners applying for SIP already have an approved stewardship plan that has been developed without cost-share as part of the technical assistance provisions of the FSP. Forest stewardship plans may be developed by the State forestry agency or other cooperating natural resource agency, or by a private resource consultant. In other cases, landowners will apply for SIP cost-shares to offset the cost of developing the plan, usually prepared by a private consultant. After the plan is approved, the landowner is eligible for SIP and may apply for assistance under any of the eight remaining practices.

There is no national minimum acreage requirement for SIP practices as there is for FIP. State Foresters, however, have the option of requiring a minimum of up to 25 acres of contiguous forestland for participation in the Forest Stewardship Program.

General Requirements Common To All SIP Participants

Landowners must maintain and protect SIP funded practices for at least 10 years after establishment. All or part of the cost-share funds paid to the landowner are subject to repayment if during the practice lifespan, the land is sold and the new owner does not agree to assume responsibility for the contract, the landowner destroys the practice, or fails to maintain and protect the practice. All practice

areas must be protected from destructive fire and grazing. Any chemicals used must be appropriately registered and legally applied. All prescribed burning must conform to state and local laws and regulations,

Landowner Application Procedure

In some cases, landowners will have an approved forest stewardship management plan prepared either by the local service forester, an appointed service representative from a partner agency, or from a private consultant or contractor prior to applying for SIP. In other cases, landowners may apply for SIP-1, which pays a portion of the cost of developing a management plan.

Landowners apply for SIP cost-share at the local FSA office, where appropriate eligibility information is gathered. FSA then sends the applicants' paperwork to the service forester who determines applicant eligibility. The service forester or designated service representative must determine if the practice requested is needed, is practical, and is consistent with recommendations in the landowner's forest stewardship management plan. In some states, interagency agreements have been established between the State Forester and other natural resource agencies which have agreed to provide technical assistance for certain SIP practices as "service representatives". It is common in some states to have agreements with the Natural Resources Conservation Service, Cooperative Extension Service, and the State wildlife and fish agency.

The service forester then forwards forms approving the practice back to FSA. The service forester also completes a practice project outline and sends it to the landowner. The practice project outline, prepared by either the service forester or service representative, provides specific requirements for implementing the practice. Once the landowner receives the practice project outline and written notice from FSA that the practice requested has been approved, the landowner may begin implementing the practice. In cases where landowners have established records at FSA, service foresters may have the authority to sign up landowners in the field. Landowners are normally given 18 months to complete the practice, but may request an additional 6 month extension if practice completion was delayed due to conditions beyond their control. Once the practice is complete, the landowner notifies the service forester, who will visit the site to verify completion, certify that the practice meets minimum specifications, and make any necessary adjustments in acres completed and cost-shares earned. The landowner must provide the service forester with appropriate documentation of expenses incurred. Once the service forester notifies FSA of project completion, FSA processes payment to the landowner. Periodic spot checks are to be conducted by the service forester throughout the contract period to determine whether practices are being properly maintained and protected.

PROGRAM ACCOMPLISHMENTS

Regional Distribution

The distribution of SIP activities by USDA Forest Service Region are shown in Table 2 and Figures 1 and 2. Unlike FIP, which has been most active in the South, SIP accomplishments have been greatest in the Northeast. The Northeastern Area, which includes 20 Northeast and North Central states, has enrolled over 48 percent of all SIP acres to date (600,596 acres) compared with 37 percent (465,324 acres) in the 13 states comprising the South (Region 8). Participation in the West has been considerably more limited, and is at least partially attributable to the fact that there are relatively few NIPF owners and acres in the West. Regions 1 through 6 and Region 10 combined have enrolled about 179,000 acres, 14 percent of the program total.

Accomplishments By Practice

Table 3 and Figures 3 through 6 summarize the number of participants, acres enrolled, cost-shares paid, and average cost-shares per acre for each SIP practice from 1992 through 1994.

Sixty-two percent of the program's total acreage has been enrolled in the SIP-1 practice, which cost-shares the development of long-term multi-resource forest stewardship management plans. Almost 5,000 participants have placed 776,626 acres under stewardship management. SIP-1 has been the leading practice in all but two regions, Regions 4 and 10. The SIP-1 practice has been the least costly, with an average cost-share rate of only \$3.65 per acre, the lowest of any practice. Overall, \$2.8 million in cost-shares have been paid for plan development.

Table 4 shows the number, acreage, and average tract size for forest stewardship management plans prepared in each Forest Service Region. The Forest Stewardship Program (FSP) plans include all landowner forest stewardship management plans prepared as part of the program's technical assistance efforts as well as all plans cost-shared under the SIP-1 practice. Of the 83,329 plans prepared to date, 4,965 (6%) were cost-shared under the SIP-1 practice (Figure 7). Only 8 percent of the total acres enrolled under the Forest Stewardship Program were a result of plans cost-shared under SIP-1.

Table 2. SIP Accomplishments by State and FS Region 1992-1994

Region	Acres									Totals	Participants	Cost-Share \$
	SIP-1	SIP-2	SIP-3	SIP-4	SIP-5	SIP-6	SIP-7	SIP-8	SIP-9			
Region 1												
Idaho	12,267	1,056	359	97	0	0	0	5	31	13,819	141	239,602
Montana	0	61	270	0	134	41	0	0	0	506	30	22,937
North Dakota	0	92	9	716	0	0	0	299	0	1,116	89	108,596
Total	12,267	1,209	638	813	134	41	0	304	31	15,441	260	371,135
Region 2												
Colorado	18,380	65	276	2,230	52	30	1	216	0	21,258	465	569,812
Kansas	0	0	39	500	0	198	0	43	0	780	92	146,304
Nebraska	24	70	263	2,168	0	43	0	191	0	2,759	187	239,002
South Dakota	1,296	10	177	1,432	0	0	6	252	0	3,173	344	182,212
Wyoming	282	21	522	836	0	684	0	54	0	2,404	166	275,939
Total	19,982	166	1,277	7,166	52	955	7	756	0	30,374	1,254	1,413,269
Region 3												
Arizona	622	18	79	87	0	0	0	89	0	895	22	50,129
New Mexico	8,728	30	152	1,692	0	0	23	42	0	10,667	77	288,131
Total	9,350	48	231	1,779	0	0	23	131	0	11,562	99	338,260
Region 4												
Nevada	58	2	0	60	0	10	0	2	0	132	7	15,825
Utah	0	5	5	1,015	0	201	0	2,144	0	3,370	37	103,629
Total	58	7	5	1,075	0	211	0	2,146	0	3,502	44	119,454
Region 5												
California	11,307	292	91	139	91	650	0	823	1,456	14,849	126	464,556
Hawaii	34	38	0	0	0	0	0	152	0	229	13	45,026
Total	11,341	330	91	139	91	650	0	975	1,456	15,078	139	509,582
Region 6												
Oregon	67,150	4,615	2,969	0	1,475	21	63	1,119	1	77,413	513	1,057,599
Washington	23,041	287	991	20	15	135	432	1,976	63	28,960	315	461,482
Total	90,191	4,902	3,960	20	1,490	156	495	3,095	64	104,373	828	1,519,081
Region 8												
Alabama	90	8,882	4,881	203	353	18	0	2,560	1	16,988	321	858,734
Arkansas	0	3,576	5,182	0	0	64	0	1,317	71	10,210	128	347,463
Florida	28,313	4,836	496	0	0	0	20	1,991	3,466	39,122	246	667,786
Georgia	114,454	13,831	3,458	0	59	0	0	1,158	2,698	135,658	740	1,465,629
Kentucky	0	4,458	3,814	0	76	15	0	4,458	1,478	14,299	625	1,210,970
Louisiana	22,878	4,167	3,321	0	20	0	0	193	98	30,677	199	351,008
Mississippi	43,345	13,090	3,258	0	208	0	0	1,924	0	61,825	492	1,161,525

Table 2. SIP Accomplishments by State and FS Region 1992-1994

Region 8	Acres									Totals	Participants	Cost-Share \$
	SIP-1	SIP-2	SIP-3	SIP-4	SIP-5	SIP-6	SIP-7	SIP-8	SIP-1			
North Carolina	2,365	406	1,925	0	33	0	0	11,705	30,554	46,988	109	175,964
Oklahoma	3,233	839	610	132	3	0	0	640	2	5,457	65	163,598
South Carolina	0	3,146	1,419	0	828	5	0	3,034	123	8,555	202	544,827
Tennessee	0	5,574	957	0	22	0	0	321	30,548	37,422	190	639,662
Texas	3,577	6,214	697	76	26	4	115	736	221	11,666	177	492,445
Virginia	0	6,276	2,840	12	216	78	2	2,367	34,666	46,457	526	632,530
Total	218,255	75,295	32,858	423	1,844	184	137	32,404	103,924	465,324	4,020	8,712,141
Northeast Area												
Connecticut	5,977	6	111	0	1	3	0	165	0	6,263	34	49,933
Delaware	0	144	42	21	1	3	0	49	1	261	17	39,136
Illinois	5,106	1,936	3,177	128	110	7	0	437	2,595	13,496	327	429,047
Indiana	2,321	1,162	6,159	12	5	0	0	130	0	9,789	298	362,012
Iowa	127	1,065	2,439	1	6	0	0	79	0	3,717	153	358,861
Maine	24,331	123	588	13	63	40	0	411	2,552	28,121	313	389,852
Maryland	1,329	978	861	3	69	4	0	371	35	3,650	169	191,815
Massachusetts	33,265	301	411	0	260	0	0	234	39,537	74,008	446	398,288
Michigan	50,718	643	80	120	109	23	4	2,607	0	54,304	604	374,209
Minnesota	21,846	1,583	2,954	14	498	5	485	2,074	2,154	31,613	443	595,950
Missouri	8,424	244	673	13	555	1	1	140	0	10,051	87	113,696
New Hampshire	35,597	81	14,473	0	772	0	0	108	2,367	53,398	338	369,540
New Jersey	1,756	617	73	0	4	16	0	265	47	2,778	42	35,744
New York	62,633	1,982	6,141	83	583	122	0	3,082	19,214	93,840	1,668	1,650,978
Ohio	15	529	15,452	2,240	34	229	0	327	0	18,826	402	518,329
Pennsylvania	59,537	526	760	0	34	29	4	453	710	62,053	637	405,466
Rhode Island	1,425	14	29	0	0	0	0	9	41	1,518	27	15,058
Vermont	46,142	123	1,276	0	1,322	0	0	1,797	12,663	63,323	535	364,081
West Virginia	34,245	242	3,366	0	141	44	0	671	1,756	40,465	371	326,502
Wisconsin	20,348	2,589	2,750	49	226	126	1	1,230	1,803	29,122	630	547,076
Total	415,142	14,888	61,815	2,697	4,793	652	495	14,639	85,475	600,596	7,541	7,535,573
Region 10												
Alaska	40	8	90	0	0	0	0	1	0	139	13	18,428
Totals	776,626	96,853	100,965	14,112	8,404	2,849	1,157	54,451	190,972	1,246,389	14,192	20,536,923

Figure 1. Stewardship Incentive Program

Accomplishments by FS Region, 1992-1 994

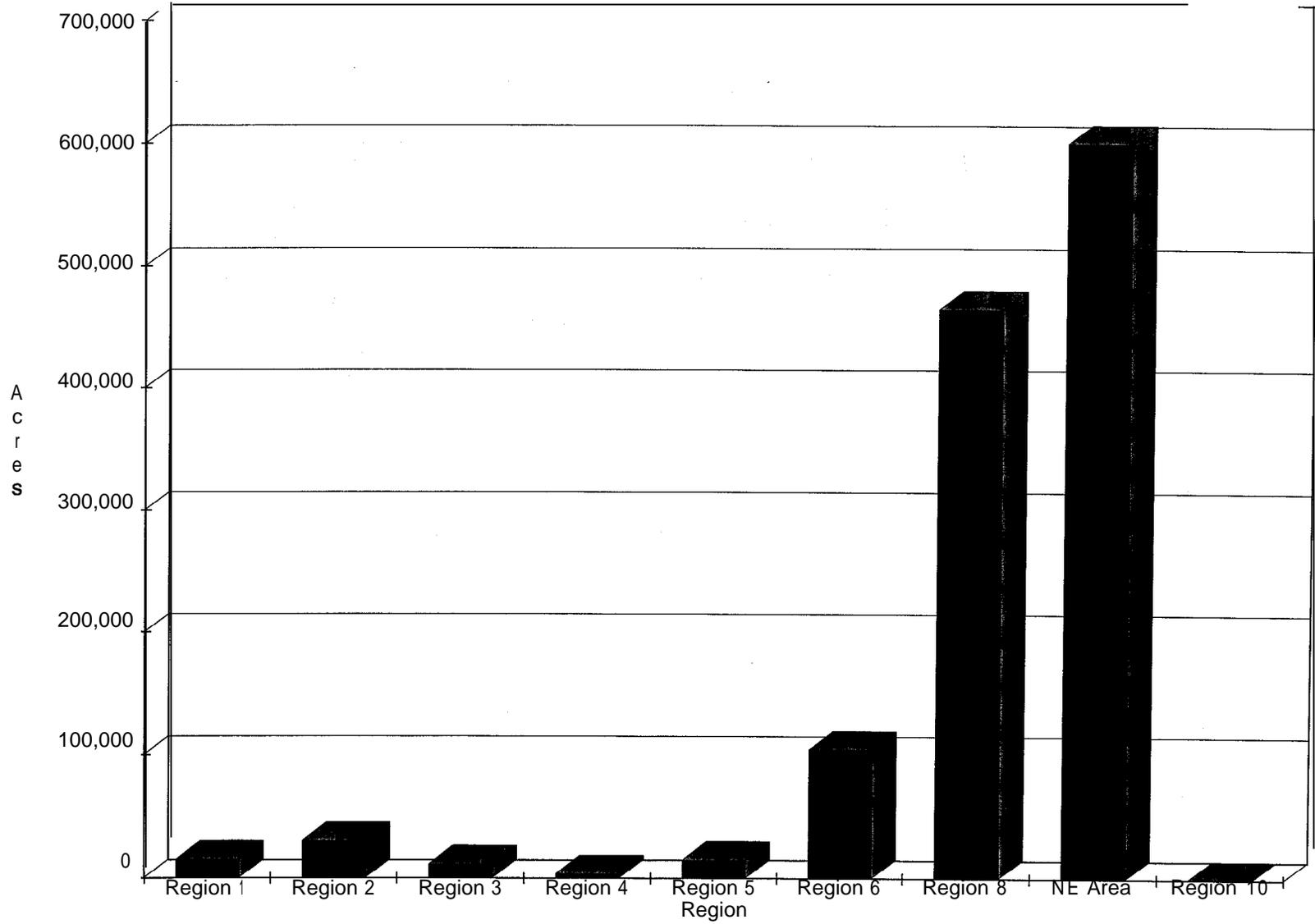


Figure 2. Map of USFS Regions

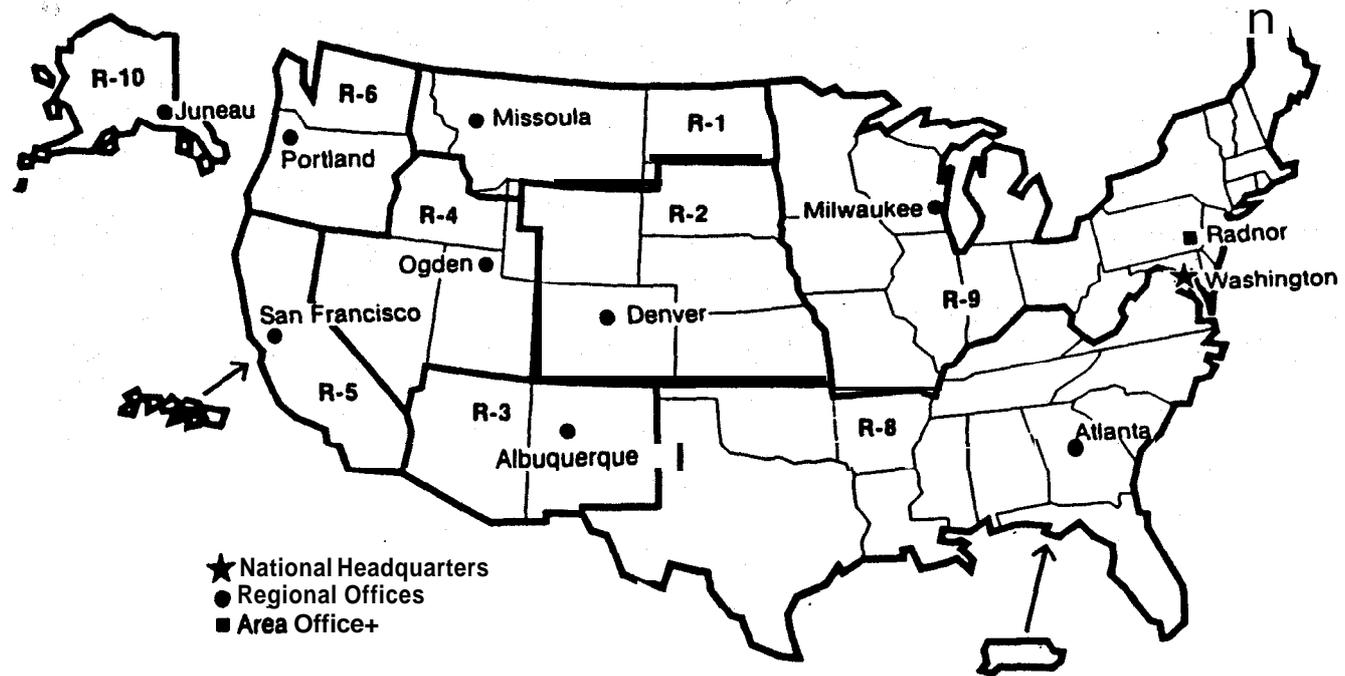


Table 3. SIP Accomplishments by Practice 1992-I 994

Practice	Participants	Acres	Cost-Share \$	Cost-Share Avg. per Acre
SIP-1 Landowner Forest Stewardship Plan Development	4,960	776,626	2,837,730	3.65
SIP-2 Reforestation and Afforestation	3,736	96,853	8,240,647	85.09
SIP-3 Forest Improvement	2,687	100,965	3,272,600	32.41
SIP-4 Agroforestry Establishment, Maintenance, and Renovation	1,236	14,112	1,631,813	115.63
SIP-5 Soil and Water Protection and Improvement	433	8,404	359,459	42.77
SIP-6 Riparian and Wetland Protection and improvement	200	2,849	410,040	143.92
SIP-7 Fisheries Habitat Enhancement	43	1,157	112,757	97.46
SIP-8 Wildlife Habitat Enhancement	2,632	54,451	2,651,964	48.70
SIP-9 Forest Recreation Enhancement	707	190,972	1,019,913	5.34
Totals	14,192	1,246,389	20,536,923	16.48

Note: One person may have participated in more than one year, reflecting a lower participant total.

Note: SIP-4 acres reflect acres served, all others are acres treated.

Figure 3. Stewardship Incentive Program

Accomplishments by Practice, 1992-1994

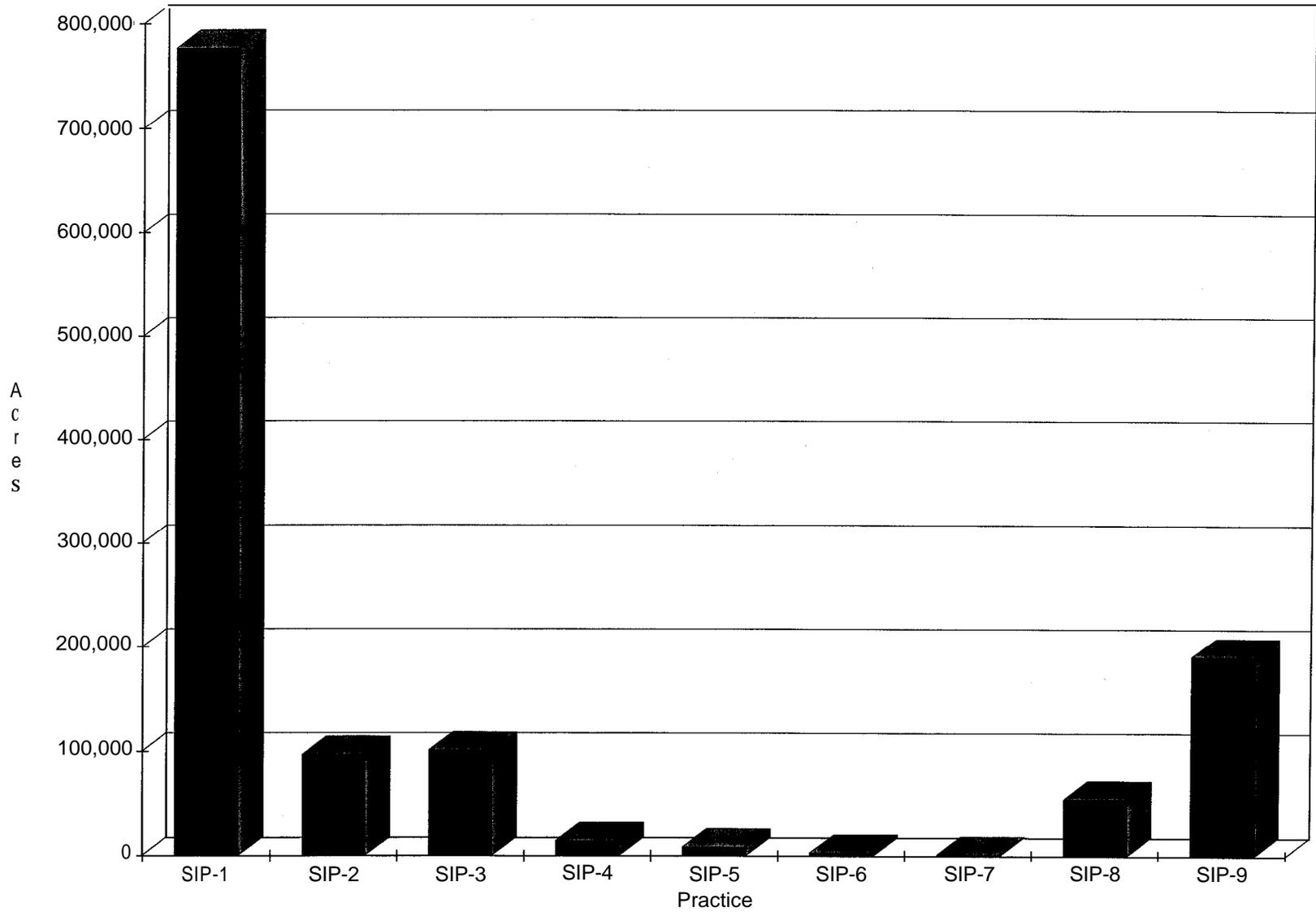


Figure 4. Stewardship Incentive Program

Number of Participants, 1992-1 994

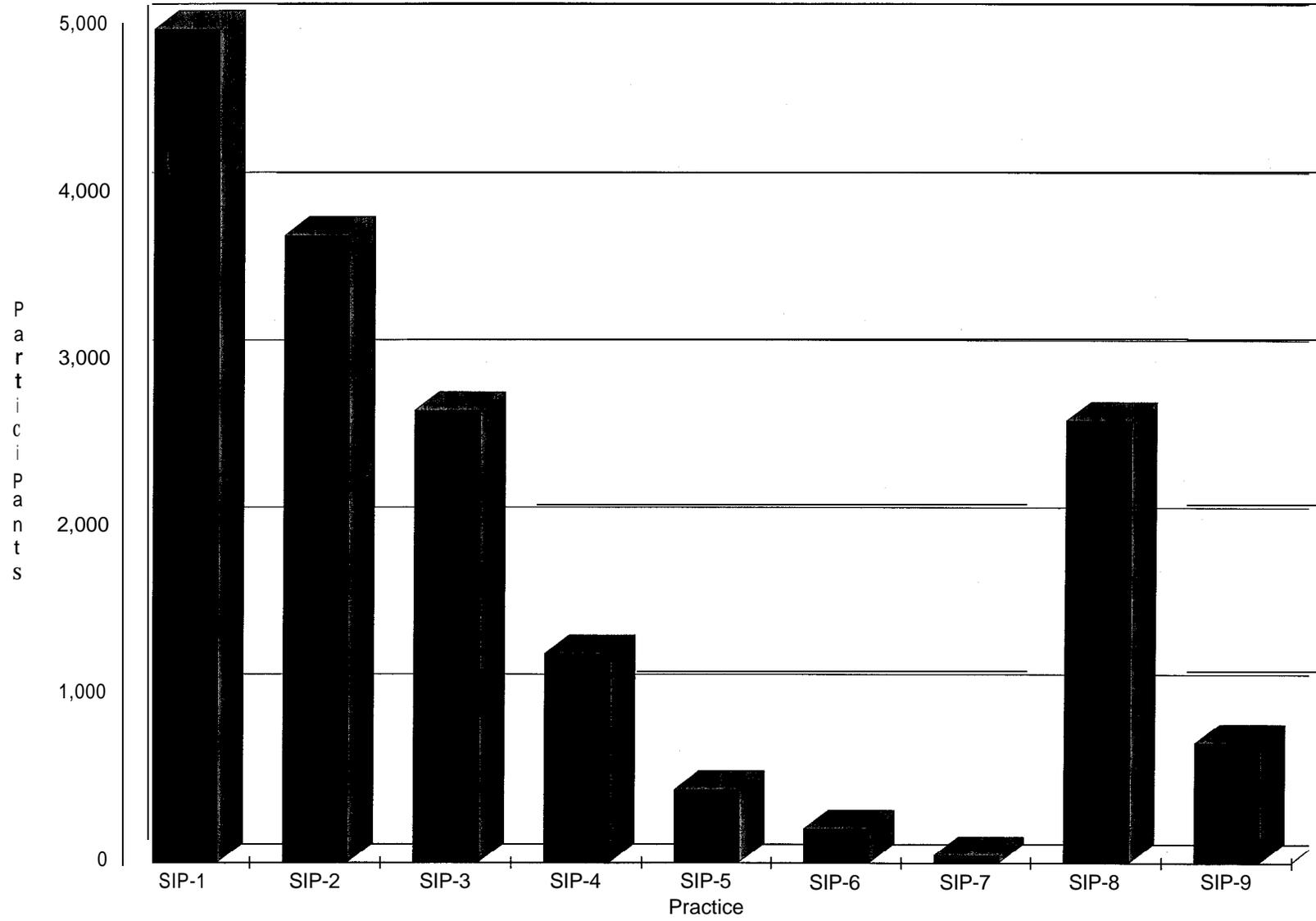


Figure 5. Stewardship Incentive Program

Total Cost-Shares, 1992-1994

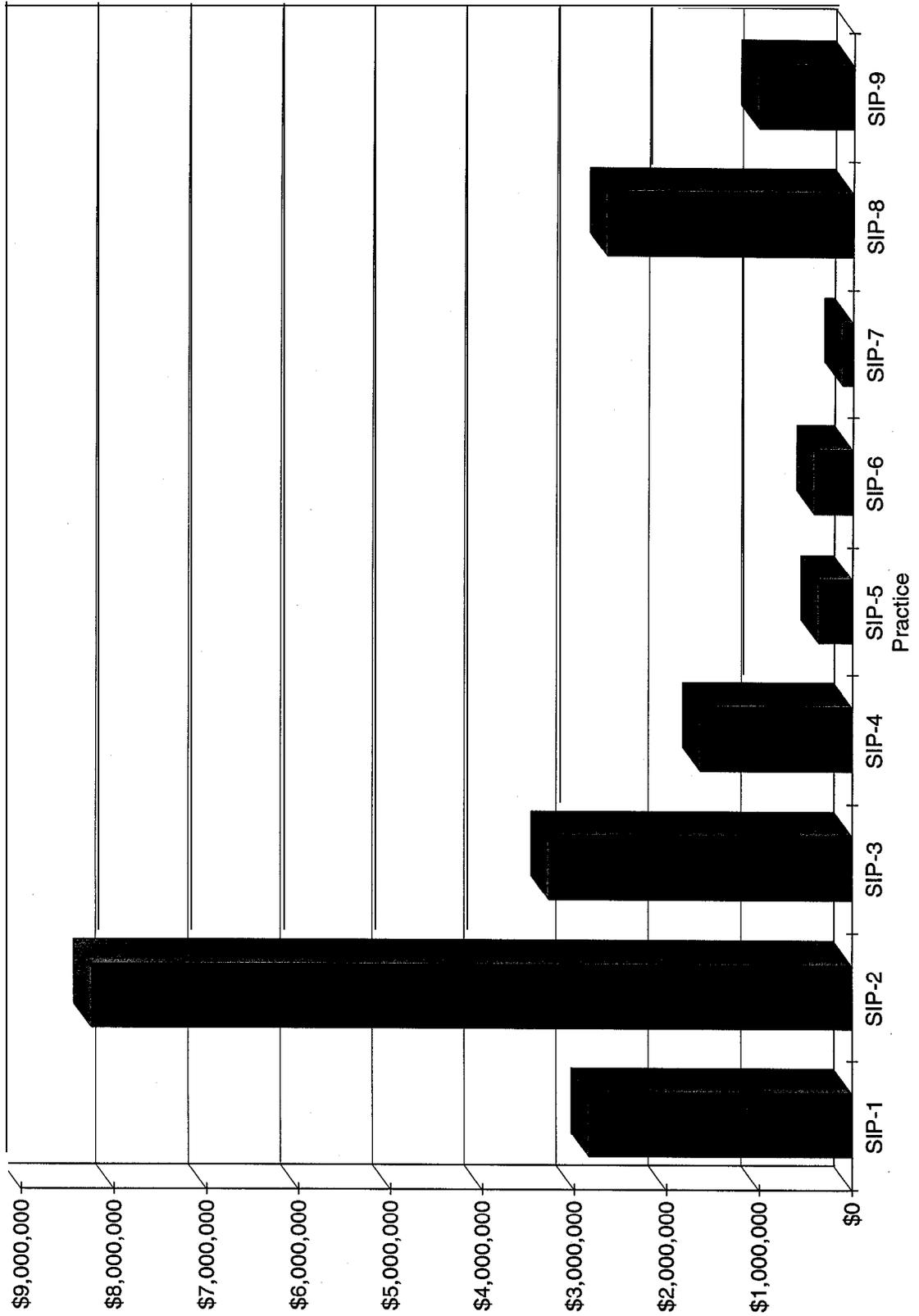


Figure 6. Stewardship Incentive Program

Average Cost-Shares per Acre 1992-1994

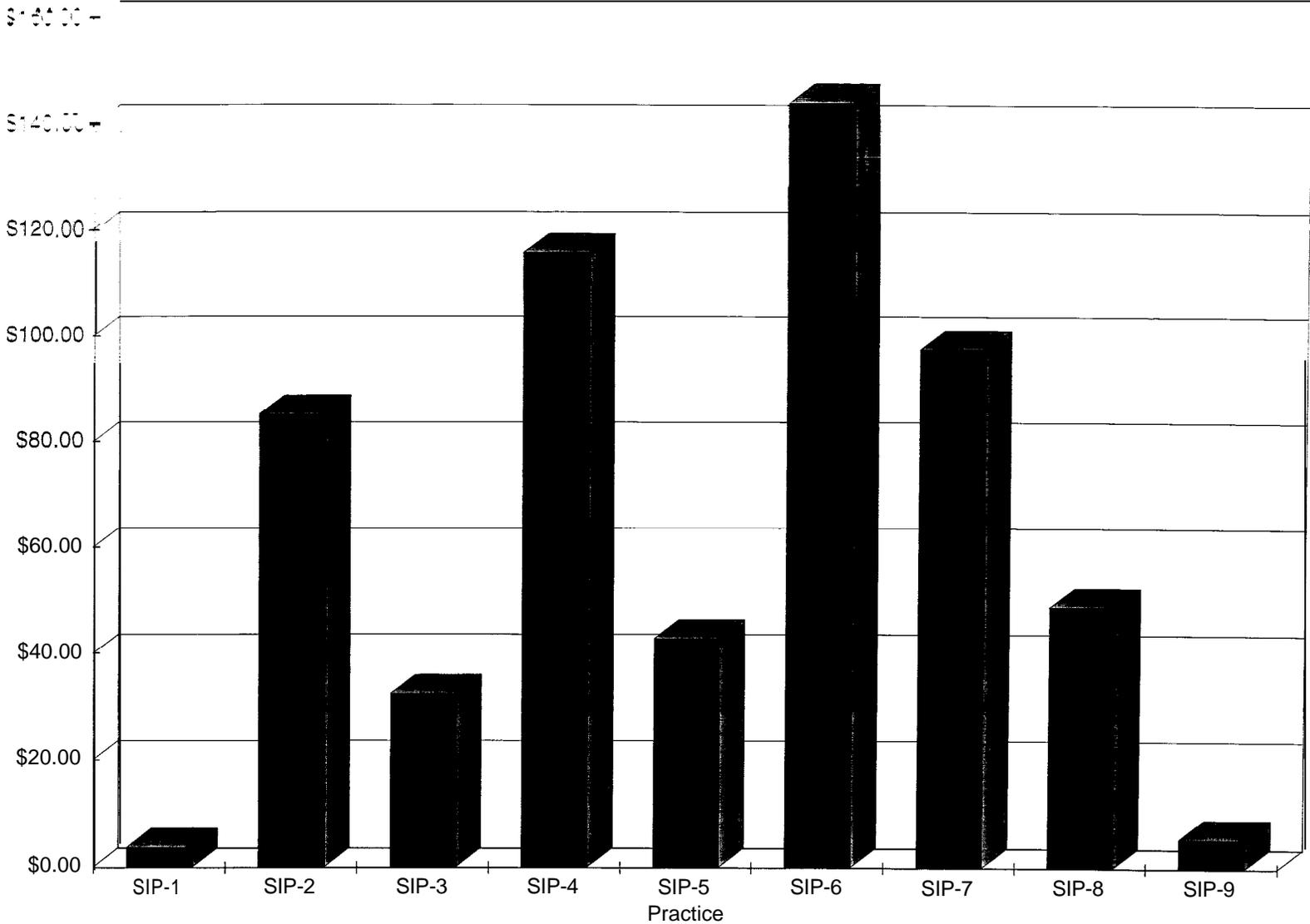


Table 4. Forest Stewardship Plans and Acres, 1990-1994.

Region	FSP			SIP-1		
	# Plans	Acres	Ac./Plan	# Plans	Acres	Ac./Plan
Region 1	1,683	322,065	191	66	12,267	186
Region 2	3,703	421,751	114	157	19,982	127
Region 3	190	396,504	2,087	25	9,350	374
Region 4	201	109,226	543	1	58	58
Region 5	394	194,588	494	62	11,341	183
Region 6	1,660	207,545	125	538	90,191	168
Region 8	13,046	2,542,349	195	273	218,255	250
NE Area	62,388	4,080,519	65	3,242	415,142	128
Region 10	64	1,767,745	27,621	1	40	40
Totals	83,329	10,042,292	121	4,965	776,626	156

Sources: (Hoge 1995a, USDA Forest Service 1995, 1994, 1993)

A number of methods are used to develop and fund landowner forest stewardship plans, with each state taking a somewhat different approach. Listed below are four approaches that have been utilized:

1) State forestry and cooperating natural resource agencies may prepare plans for landowners at no cost to the landowner. Plans are prepared by government agency employees, usually state service foresters and other state and federal natural resource agency employees. Funding for this type of arrangement usually comes from the state's yearly FSP allocation from the Forest Service.

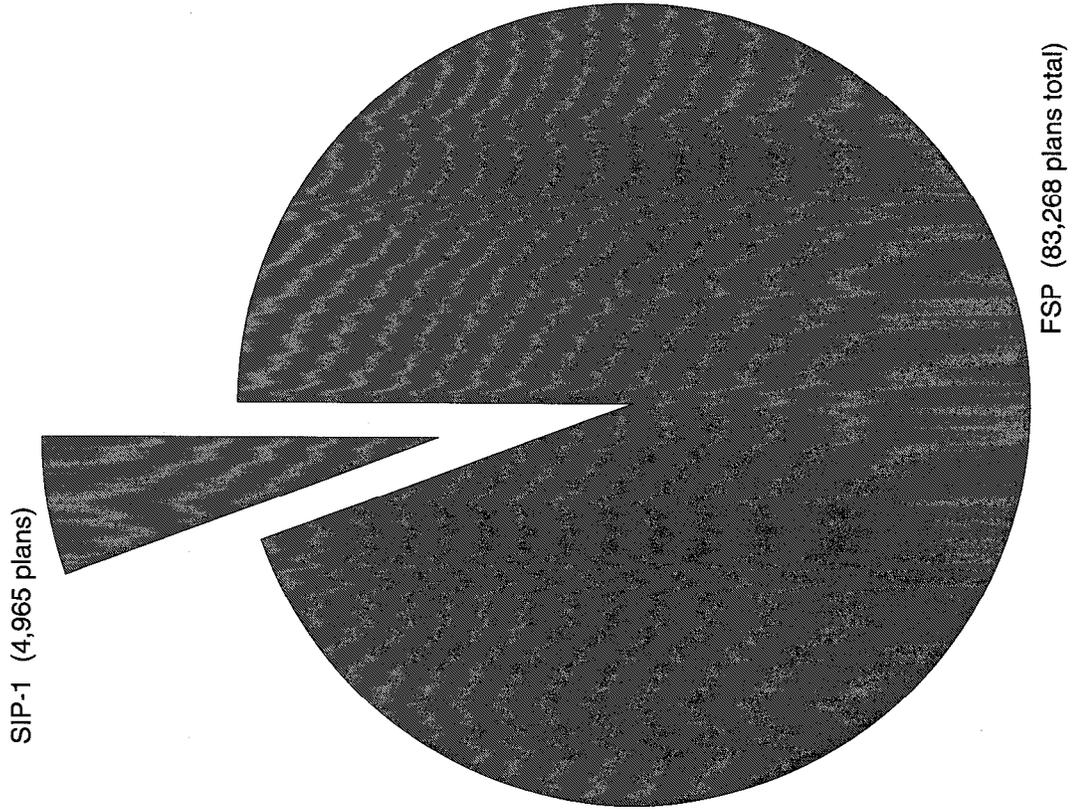
2) Rather than use government foresters to prepare the plans, some states have opted to contract directly with private forestry and natural resource consultants to prepare forest stewardship plans. One advantage to this arrangement is that additional state supported positions are not needed, nor are existing programs jeopardized by assigning additional stewardship responsibilities to existing staff.

3) States may also opt to include SIP-1 as an available practice. A few states have excluded SIP-1 as an option. As mentioned previously, landowners may apply for cost-sharing funds under the SIP-1 practice to help offset the cost incurred in hiring a private forestry or natural resource consultant to prepare a forest stewardship management plan.

4) Montana has developed a unique approach which involves training and educating forest landowners who in turn develop a forest stewardship plan for their own property. Participating landowners learn to how to conduct an inventory of their property, set goals and priorities for their lands, analyze trade-offs and environmental consequences of various management decisions and ultimately develop and implement their own plan (Logan 1994).

Figure 7. Forest Stewardship Plans

Number of Plans, 1990-1994



In some states, industry foresters, usually those associated with forest industry landowner assistance programs, have prepared stewardship plans for their cooperators, which are then submitted to the State forester for approval. Plans prepared by industry foresters may or may not be contracted or cost-shared, depending on state policy.

Considerable variability exists among states and regions in the availability of funding for SIP-1 and the use of SIP-1 cost-shares to encourage forest stewardship plan development. As a percentage of total forest stewardship management plans prepared, Region 6 (Washington and Oregon) has used SIP-1 funded plans more than any other region. Over 32 percent of all forest stewardship plans written in that region have been funded through SIP-1, indicating a large reliance on private consultants.

Several states have relied on the SIP-1 practice to fund a significant portion of their stewardship plans. In Pennsylvania, 97 percent of all stewardship plans prepared (523 total) have been cost-shared under SIP-1. Similarly, over half of Oregon's 621 stewardship plans have been funded under SIP-1. Other states with significant percentages of SIP-1 plans to total stewardship plans include: Michigan (42%), Mississippi (40%), Georgia (39%), Vermont (35%), and Arizona (31%).

Other states that apparently have either chosen not to include SIP-1 as a practice option or do not have the demand for or the availability of private consultants to write cost-shared stewardship plans include Arkansas, Delaware, Kansas, Kentucky, Montana, North Dakota, South Carolina, Tennessee, Utah, and Virginia. To date, none of these states has used SIP-1 cost-shares for plan development.

The average tract size for all forest stewardship plans prepared under all three options is 121 acres. The average tract size increases to 156 acres for those stewardship plans cost-shared under SIP-1. This is reasonable, since private consultants and industry foresters may find it more efficient to plan larger acreages than small acreages.

Forty percent of all SIP cost-shares distributed have gone to the SIP-2 tree planting practice, which also includes site preparation and follow-up maintenance costs. Over 96,000 acres were reforested under SIP-2 between 1992 and 1994. Following the trend of other federal cost-share programs such as the Forestry Incentives Program, Conservation Reserve Program, Agricultural Conservation Program, and Soil Bank Program, most of the tree planting accomplished under SIP has occurred in the South (75,000 acres, 78 percent of the program's total tree planting acreage). As expected, cost-shares paid per acre in the South averaged below that of any other region (\$69.18 compared with the national average of \$85.08). One reason for the South's efficiency in tree planting can be attributed to economies of scale. The average tract size planted in the South was 42 acres,

considerably larger than the national average of 26 acres. Leading states include Georgia and Mississippi, each planting over 13,000 acres. The only state outside the South with significant tree planting accomplishments was Oregon, with 4,615 acres.

In the Northeastern Area, which planted almost 15,000 acres of trees, average tract size was only 9 acres, costing the federal government \$138.01 per acre in cost-shares. The highest per acre cost-shares paid were in Region 3, averaging \$466.69, primarily due to 18 acres planted in Arizona in 1994 at a cost of \$959.94 per acre. In all regions except the South, tree planting cost-shares averaged over \$100 per acre.

Almost 101,000 acres of forestland has been improved under the SIP-3 practice at an average cost of \$32.41 per acre. Sixty-one percent of all SIP-3 acres have been enrolled in the Northeast, while 33 percent have been in the South. Average tract size enrolled nation-wide is 38 acres. This regional distribution is consistent with historical FIP timber stand improvement (tsi) trends. From 1974 to 1992, the Northeast enrolled 55 percent and the South 38 percent of all FIP tsi acres (Gaddis et al.).

As expected, the agroforestry/windbreak practice, SIP-4, has been most heavily used throughout the plains states, comprised primarily of states in Region 2. Over 14,000 acres were enrolled at an average cost-share of \$115.63 per acre. This practice accounts for only 1 percent of the total enrollment nation-wide, but amounts to 23 percent of enrolled acres in Region 2. There were, however, significant accomplishments outside this region, most notably Ohio, which enrolled 2,240 acres, the leading state for SIP-4, and New Mexico, which enrolled 1,692 acres.

The Northeast has led the nation in acres treated under the soil and water conservation practice, SIP-5, accounting for 57 percent of the 8,404 acres enrolled nationally. The leading state, however was Oregon, treating 1,475 acres. Average cost-share for this practice was \$42.77 per acre.

The protection and improvement of riparian and wetland areas under SIP-6 was led by the states of Wyoming and California, each treating over 600 acres. Total practice enrollment of 2,849 acres accounted for only 0.2 percent of the program's total, however. SIP-6 was the most costly practice, averaging \$143.92 in cost-shares paid per acre.

The least used practice was SIP-7, enhancement of fisheries habitats. A total of only 1,157 acres have been enrolled to date by 43 participants. Cost-shares have averaged \$97.46 per acre. The leading states have been Minnesota with 495 acres, and Washington with 432 acres.

The wildlife habitat enhancement practice, SIP-8, has been the most widely distributed practice among the states. Every state except Montana reported accomplishments. Over 54,000 acres have been treated to date, 4 percent of the program total. The practice has been most heavily used in the South (32,404 acres) and the Northeast (14,639 acres). Leading well above all other states was North Carolina, which enrolled 11,705 acres, 21 percent of the total acres enrolled under this practice. In the West, significant accomplishments occurred in Utah (2,144 acres) and Washington (1,976 acres). Cost-shares averaged \$48.70 per acre.

Second only to the cost-sharing of forest stewardship management plans in acres enrolled was the forest recreation practice, SIP-9. Almost 191,000 acres have been treated to date, 15 percent of the total SIP enrollment. Fifty-four percent of the recreation enrollment has been in the South. Leading states include Massachusetts, Virginia, North Carolina, and Tennessee, all reporting over 30,000 acres treated. Cost-shares paid under this practice have been quite low, averaging only \$5.34 per acre.

Annual Accomplishments

Landowners were first allowed to apply for SIP cost-shares during the first of several “batch periods” , beginning in February of 1992. By this time, almost half of fiscal year 1992 had passed. Additionally, the late signup left many states too little time to develop practice project outlines for work to be done that year, especially spring site preparation and tree planting. As a result, only 109,026 acres were enrolled in 1992. Six states showed no enrollment for the entire year. Participation increased five-fold in 1993, with over 563,000 acres enrolled. Enrollment steadily increased to 574,240 acres in 1994 (Table 5, Figure 8).

Table 5. SIP Enrollment by Year

	1992	1993	1994	Totals
Acres	109,026	563,123	574,240	1,246,389
# Participants	1,532	5,406	7,254	14,192
\$ Cost-Share	1,759,966	7,834,022	10,942,935	20,536,923

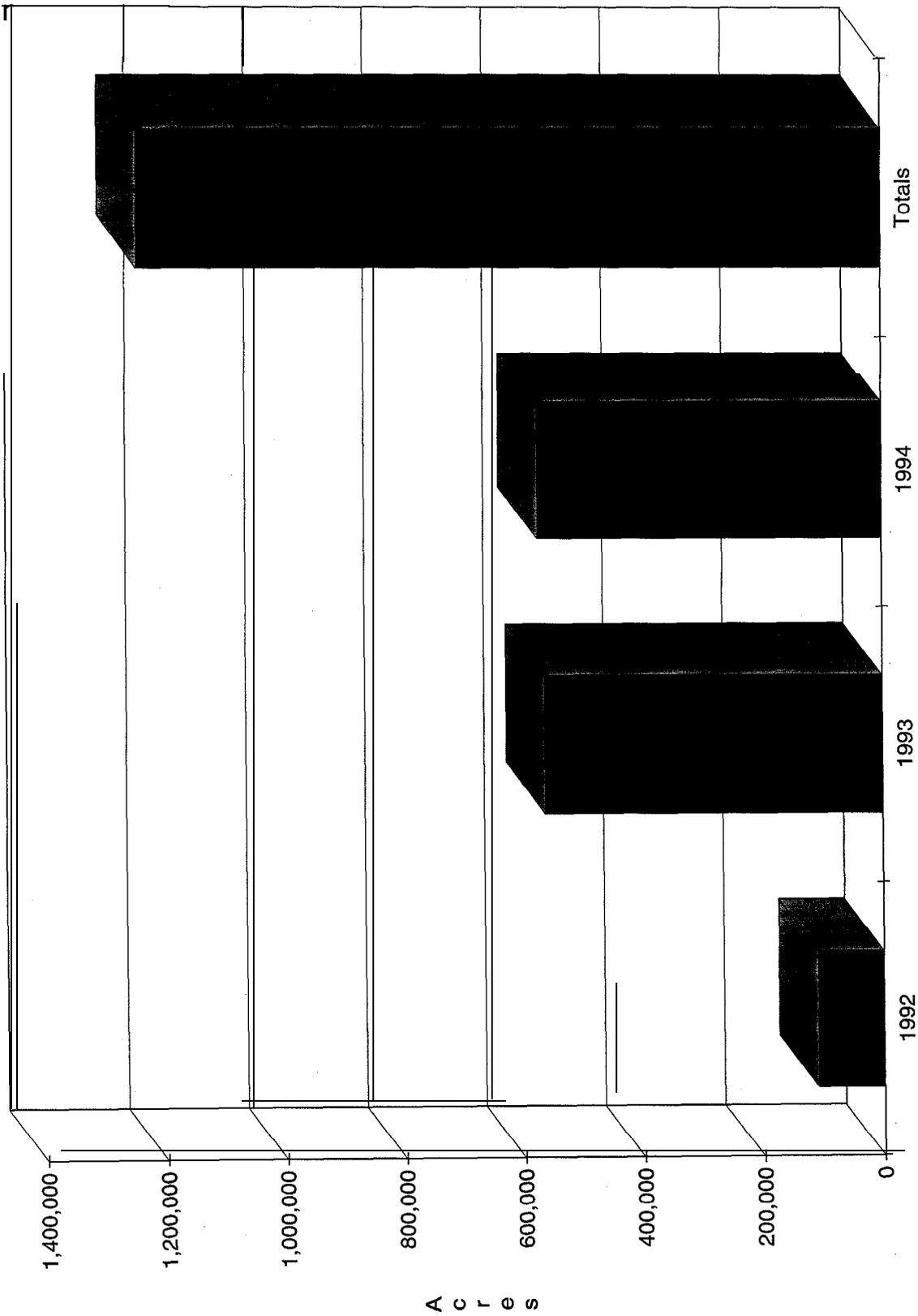
Sources: (USDA Forest Service 1995, 1994, 1993)

Relationship to the Forestry Incentives Program

The Forestry Incentives Program (FIP), which has been available since 1974 was designed with a much narrower focus than that of SIP. FIP is also a federal financial cost-share assistance program, however, its principal purpose is to increase the nation’s supply of timber on NIPF lands. FIP offers incentives to plant trees, improve timber stands, and prepare sites for natural regeneration of trees. FIP, however, is not directly linked to a technical assistance program in the same

Figure 8. Stewardship Incentive Program

Accomplishments by Year, 1992-1994



way SIP and the FSP are linked. A forest management plan is required for participation in FIP, however, the plan need not address the total resource as with SIP.

Although the two programs share many common goals, two additional areas of distinction between SIP and FIP are worth noting. FIP practices must be at least 10 acres in size, unlike SIP which carries no nationally designated minimum. FIP also requires that the land meet a minimum productivity standard (capable of producing at least 50 cubic feet of wood per acre annually). SIP does not carry a minimum productivity standard, however, states may impose site specific requirements for tree planting, forest improvement and other practices.

Under the provisions of the Forestry Title of the 1990 Farm Bill, FIP was reauthorized for an additional five years, but was scheduled to sunset (terminate) on December 31, 1995. This was a compromise by the members of Congress, some of whom favored continuing with both FIP, as a targeted program to increase timber production on NIPF lands, and SIP for its multi-resource dimensions, and those members who favored the immediate replacement of FIP by SIP because SIP also includes timber production practice (tree planting and timber stand improvement). In this compromise, the pro-FIP members gained the 5-year extension of FIP, but gave up the protection of permanent authorizing legislation under which FIP had operated since 1974, and indeed, assumed the more difficult position of getting FIP reauthorized in the next Farm Bill or in other legislation prior to the December 31, 1995 expiration date. Ultimately, Congress decided to extend FIP to the year 2002 in the 1996 Farm Bill.

The legislative connection between FIP and SIP invites further consideration of the overlap and differences between these two programs, and the experience of concurrent operation of the two programs over the past five years provides a basis for empirical observations.

Tree Planting Comparisons

Tree planting has historically been the most widely cost-shared forestry practice among federal incentive programs, with the exception of SIP. Part of this can be attributed to the multiple-use/total resource management intent of the Forest Stewardship Program and SIP. In contrast, practices cost-shared under FIP must be designed with timber production as the primary intent. Since participation in the Forest Stewardship Program is a prerequisite to obtaining cost-share funding under SIP, many landowners who are primarily interested in reforestation, without committing all their land under stewardship management, are opting to obtain financial assistance- under FIP rather than SIP.

In comparing tree planting under SIP (SIP-2 practice only) and FIP (FP-1 practice) for years 1992-1994 (Table 6, Figure 9), it is apparent that FIP has planted over five times as many acres (525,375) as SIP (96,853). Cost-shares paid per acre were also considerably less under FIP (\$59.93), compared with \$85.09 under SIP. The average acreage planted per participant was considerably more under FIP (41 acres), compared with 26 acres under SIP. SIP tree planting has been more widely distributed than FIP. Ninety-three percent of all FIP tree planting occurred in the South, while under SIP, only 78 percent was in the South.

In analyzing tree planting data for both programs in the South, the average tract size planted was almost identical, 42 acres under SIP and 43 acres under FIP. Average cost-shares paid in the South were lower under FIP, \$56.03 per acre compared with \$69.18 under SIP.

The data suggest that tree planting under SIP is more costly than tree planting under FIP both in the South and nation-wide. Economies of scale may also play a part since it is generally more efficient to plant larger tracts. The average FIP planting was 63 percent larger than the average SIP planting nation-wide. Additionally, a larger percentage of FIP tree planting occurred in the South, which has generally enjoyed lower tree planting costs due to a number of factors including: the availability of low cost Southern pine seedlings; the availability of site prep and tree planting contractors; more gentle terrain; more favorable growing conditions; and longer planting seasons than many other regions of the country.

CONCLUSIONS

In its first three years, the Stewardship Incentive Program has been responsible for cost-sharing a variety of natural resource enhancements on 1,246,389 acres of stewardship forests. Most of the acreage enrolled (62%) has been for the development of landowner forest stewardship management plans under the SIP-1 practice. The remaining eight practices (SIP-2 through SIP-9) have accounted for 469,763 acres of actual on-the-ground improvements, including: Forest Recreation Enhancement (190,972 acres); Forest Improvement (100,965 acres); Reforestation and Afforestation (96,853 acres); Wildlife Habitat Enhancement (54,451 acres); Agroforestry Establishment, Maintenance, and Renovation (14,112 acres); Soil and Water Protection and Improvement (8,404 acres); Riparian and Wetland Protection and Improvement (2,849 acres); and Fisheries Habitat Enhancement (1,157 acres). A total of \$20,536,923 in cost-share funds have been paid to approximately 14,000 qualifying private forest landowners.

On a regional basis, the Northeast and North Central states have enrolled more acres under SIP than any other region (600,596 acres), followed by the South, with 465,323 acres. SIP has been more limited in the West, where only 180,469 acres have been enrolled.

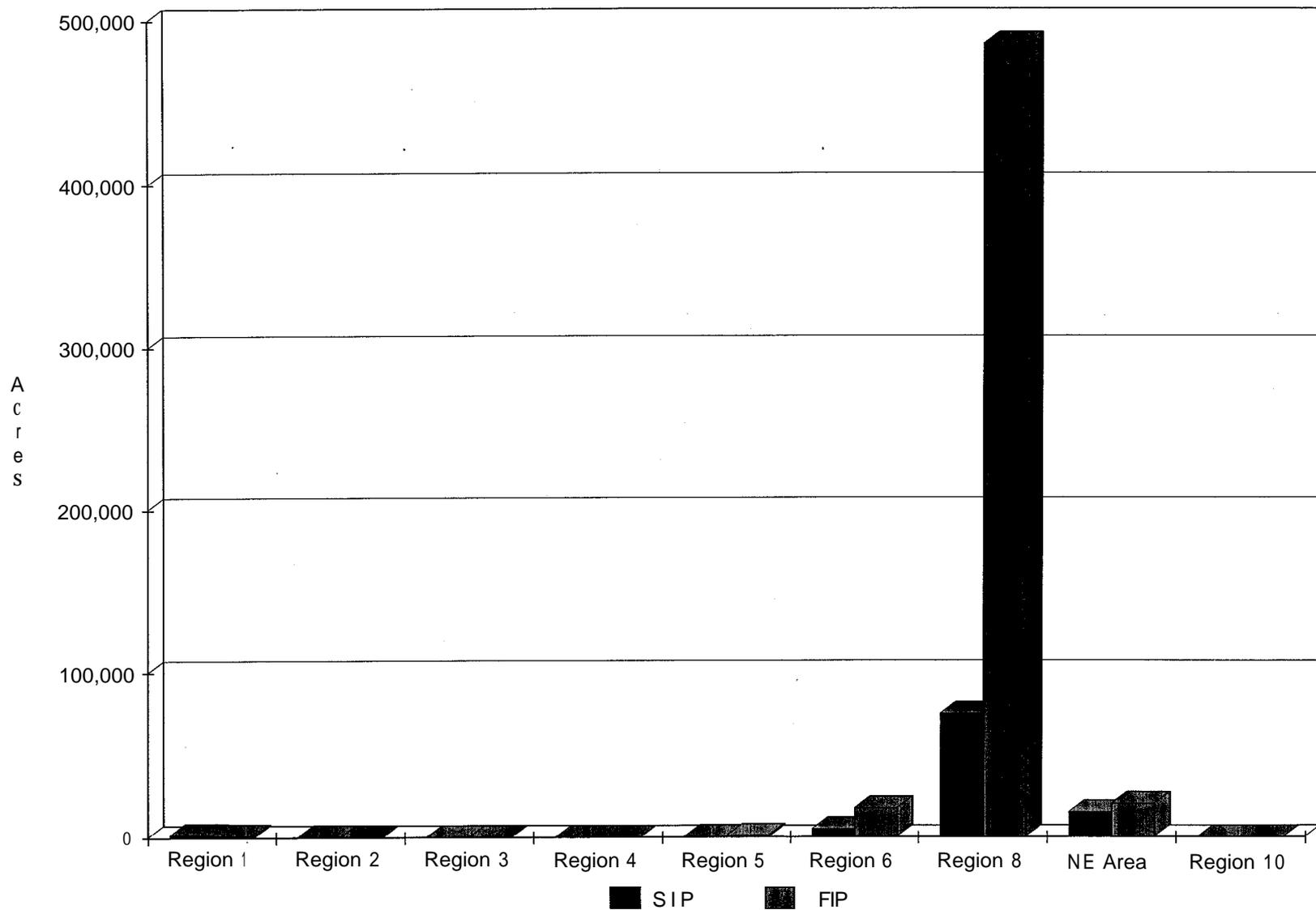
Table 6. SIP/FIP Tree Planting Comparison, 1992-I 994

Region	Acres		Cost-Share \$		Cost-Share \$ Avg. per Acre		# Participants	
	SIP	FIP	SIP	FIP	SIP	FIP	SIP	FIP
Region 1	1,209	860	180,935	108,656	149.66	126.34	89	51
Region 2	166	40	35,664	6,155	214.84	153.88	54	4
Region 3	48	0	22,401	0	466.69	0	6	0
Region 4	5	0	785	0	157	0	1	0
Region 5	330	988	92,850	175,607	281.36	177.74	23	53
Region 6	4,902	17,382	643,517	2,230,361	131.28	128.31	155	506
Region 8	75,295	486,127	5,209,102	27,236,874	69.18	56.03	1,799	11,248
NE Area	14,882	19,978	2,053,810	1,710,448	138.01	85.62	1,603	962
Region 10	8	0	1,156	0	144.5	0	5	0
Totals	96,845	525,375	8,240,220	31,468,101	85.09	59.90	3,735	12,824

Sources: USDA ASCS, CFSA, Forest Service, Annual Reports for FIP and SIP, 1992-I 994.

Figure 9. SIP/FIP Tree Planting

1992-1 994



Both SIP and FIP contain practices that cost-share tree planting and timber stand improvement. This paper attempted to compare raw accomplishment and average cost data for the tree planting components of each program. FIP has been much more effective in encouraging tree planting on NIPF land, planting over five times as many acres as SIP from 1992 through 1994. Over \$8 million in SIP cost-shares funded almost 97,000 acres of tree planting, while over 525,000 acres were planted under FIP at a cost of approximately \$31.5 million. SIP cost-shares paid for tree planting averaged 42 percent higher than for FIP.

It is apparent that the stewardship approach of multiple-use management has had a profound impact on the landowners and forestlands it has reached. Never before has there been such a coordinated effort to bring together the management of all forest resources under a single consolidated plan. Before the Forest Stewardship Program was developed, landowners wanting to manage for such values as timber, wildlife, recreation, aesthetics, soil and water were faced with obtaining advice, management planning assistance, and financial incentives, if available, from a number of different federal and state agencies. The Forest Stewardship Program and SIP have made it possible to synthesize all these landowner objectives under one program, and from agencies committed to coordinating their efforts for the benefit of the landowner. SIP has ensured that amenity values as well as commodity benefits are treated equitably.

Over the long term, as more owners develop forest stewardship plans, it would, indeed, make sense to fold FIP into SIP, as this would help to integrate planning through forest stewardship plans with execution through cost-share incentive programs, and would put the focus on opportunities rather than on correcting mistakes--such as timber harvesting without provisions for stand regeneration--after they occur. The USDA Forest Service also has the authority under present law, should it so elect, to impose national requirements for minimum site productivity, minimum tract size and economic efficiency similar to those for FIP on SIP tree planting.

The downside of combining FIP into SIP is that without FIP as a dedicated timber program there very well could be increased pressure to plant more trees through SIP to meet the Nation's ever increasing appetite for timber and declining timber supplies from public lands. This pressure could cause SIP to become essentially a tree planting program with a loss of its multi-resource focus. Furthermore, SIP is only available to owners with approved forest stewardship plans, and only five percent of NIPF acres have such plans. This would concentrate a large amount of effort (plans and programs) on a comparatively small number of owners, while excluding owners of 95 percent of NIPF acres from participating.

This paper has attempted to explain the intent and administration of the Stewardship Incentive Program along with an examination of program accomplishments during its first three years. Comparisons were made between SIP

and the Forestry Incentives Program (FIP) in an effort to reveal the contributions each program has made toward improving and sustaining the nonindustrial private forest resource.

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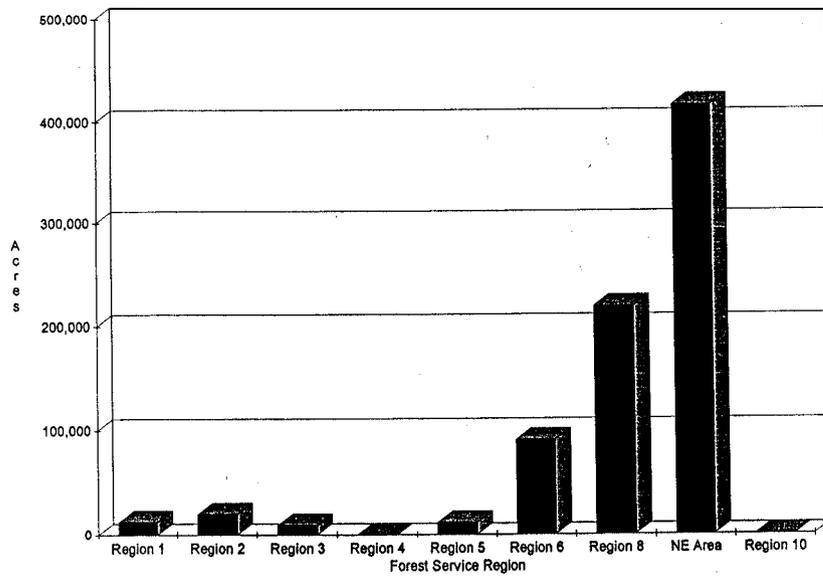
APPENDIX

1. SIP- 1 Accomplishments by USFS Region, 1992- 1994
2. SIP-2 Accomplishments by USFS Region, 1992- 1994
3. SIP-3 Accomplishments by USFS Region, 1992-1994
4. SIP-4 Accomplishments by USFS Region, 1992-1994
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16. USFS Region 8 SIP Accomplishments, 1992-1994
17. USFS Northeastern Area SIP Accomplishments, 1992-1994
18. USFS Region 10 SIP Accomplishments, 1992-1994

Sources: USDA CFSA 1995, USDA Forest Service 1994, USDA Forest Service 1993.

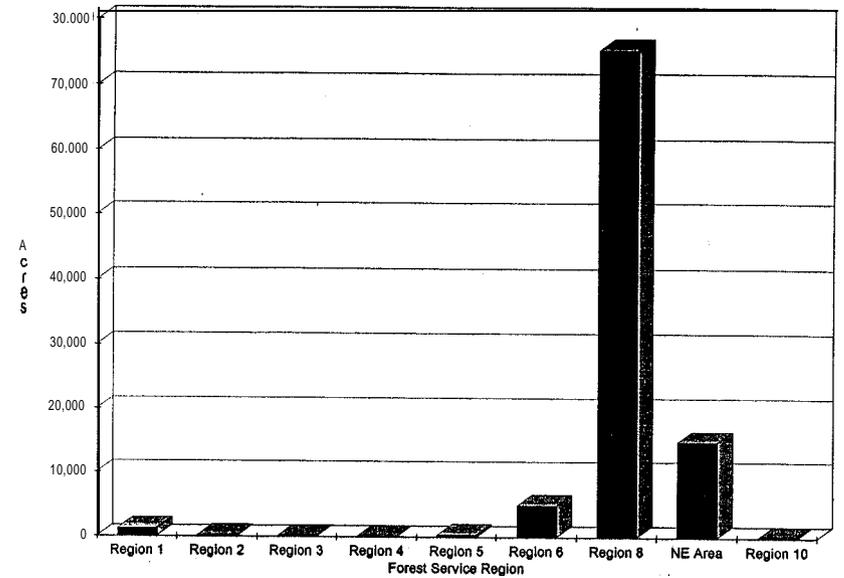
Landowner Forest Stewardship Plan Dev.

SIP-1 Acres by USFS Region, 1992-1994



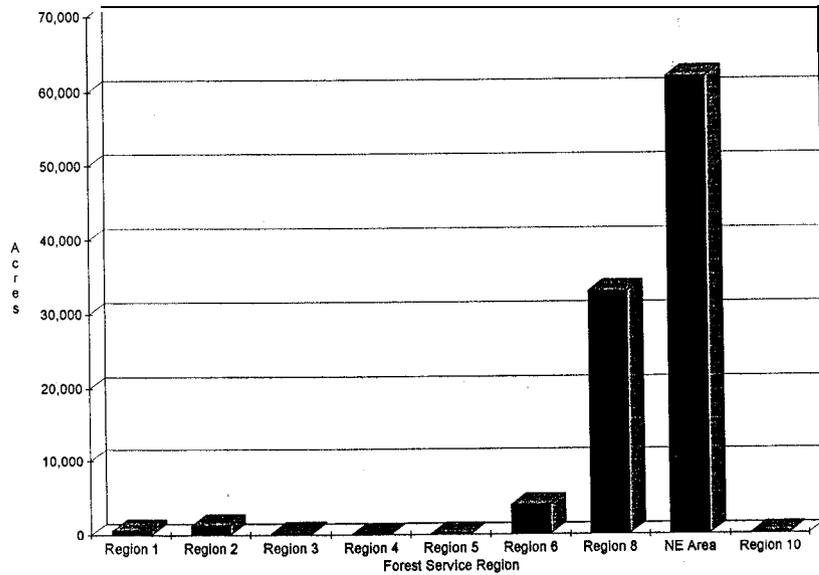
Reforestation and Afforestation

SIP-2 Acres by USFS Region, 1992-1994



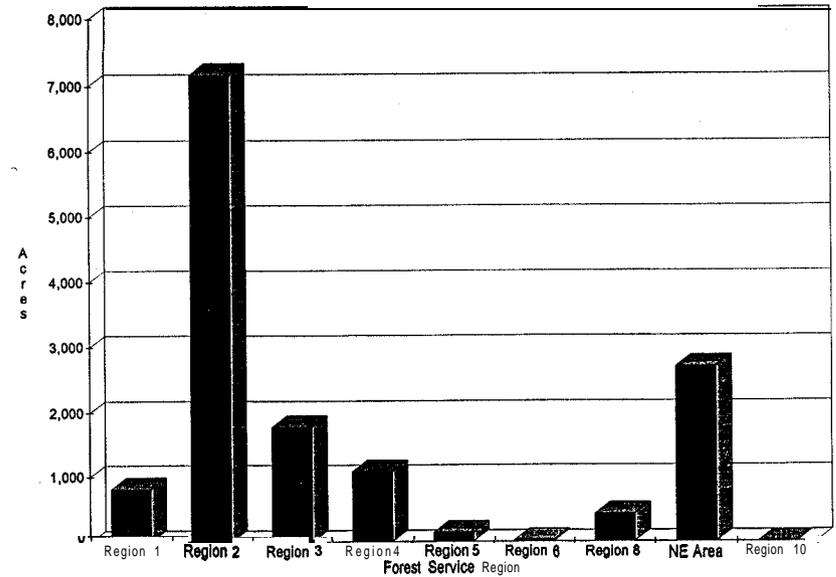
Forest improvement

SIP-3 Acres by USFS Region, 1992-1994



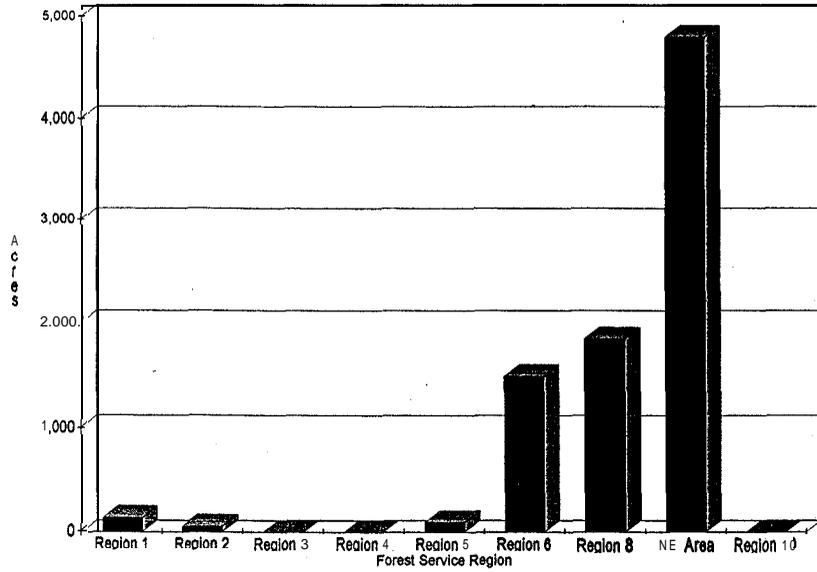
Agroforestry Estab., Maint. and Renov.

SIP-4 Acres by USFS Region, 1992-1994



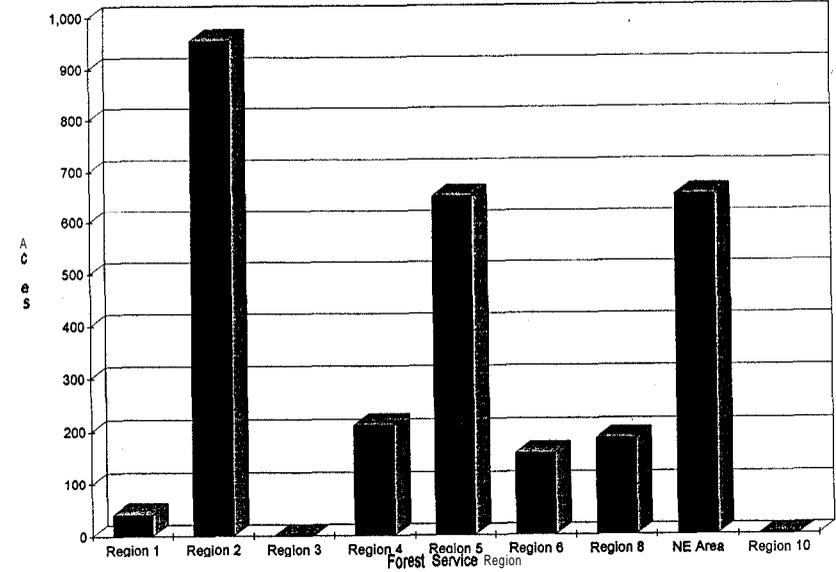
Soil and Water Protection and Improv.

SIP-5 Acres by USFS Region, 1992-1994



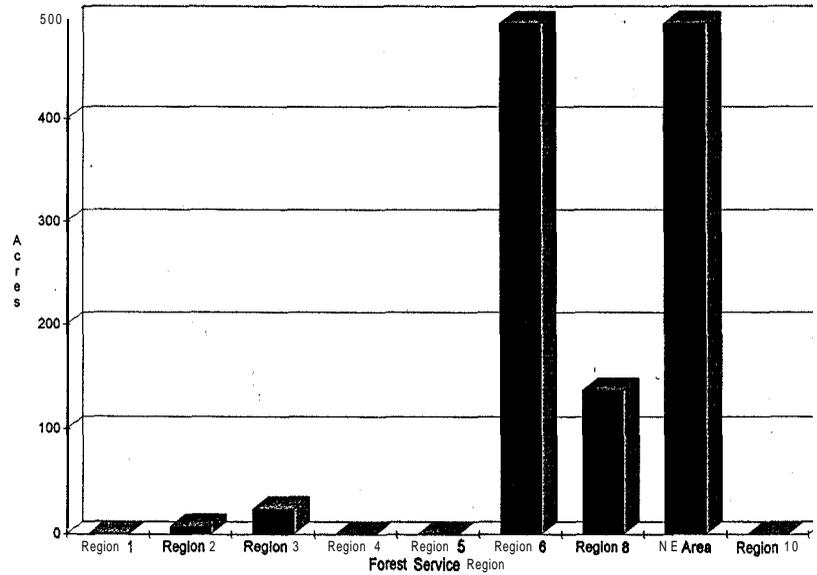
Riparian and Wetland Protect. and Imp.

SIP-6 Acres by USFS Region, 1992-1994



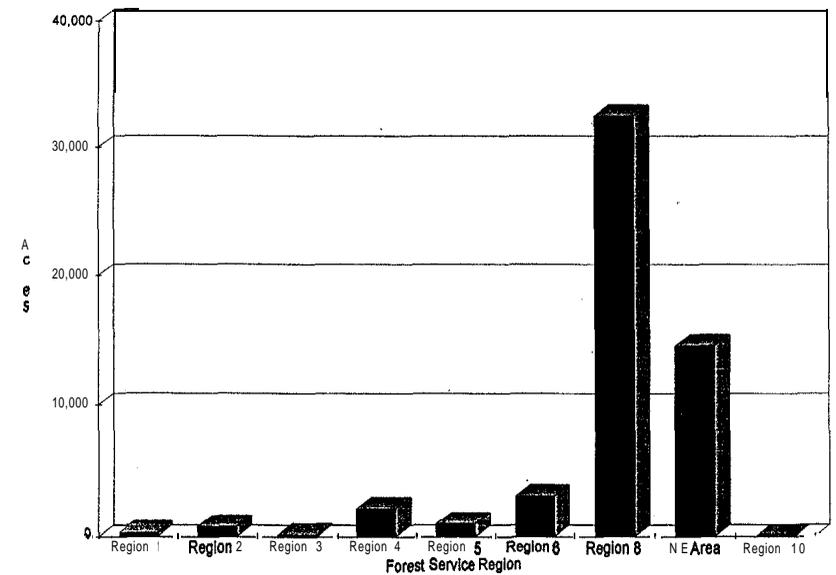
Fisheries Habitat Enhancement

SIP-7 Acres by USFS Region, 1992-1994



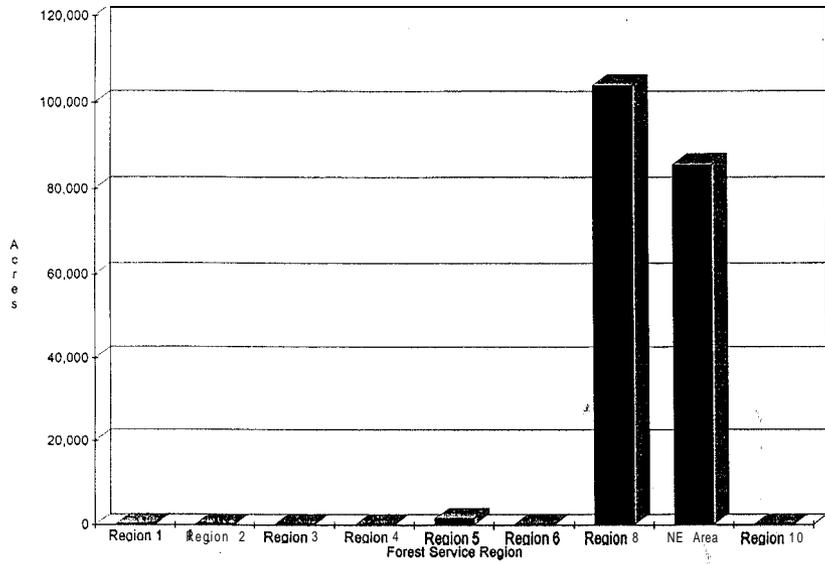
Wildlife Habitat Enhancement

SIP-8 Acres by USFS Region, 1992-1994



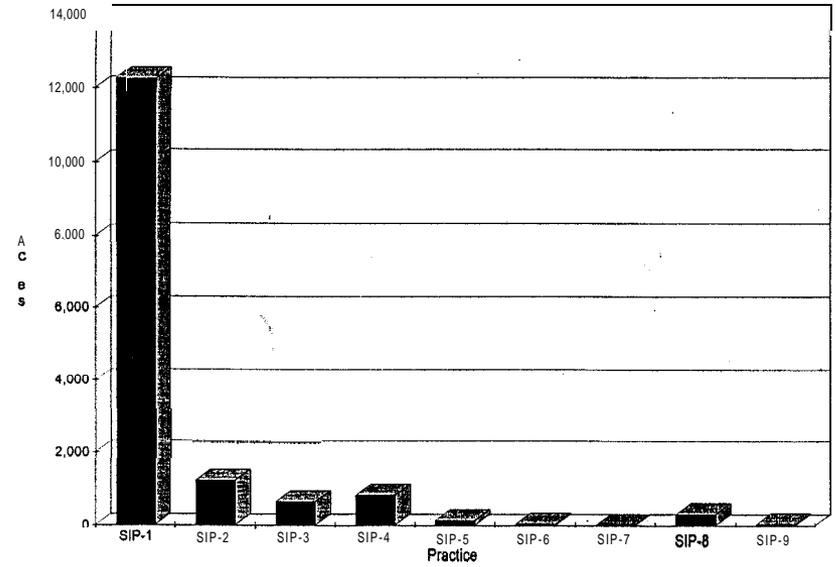
Forest Recreation Enhancement

SIP-Q Acres by USFS Region, 1992-1994



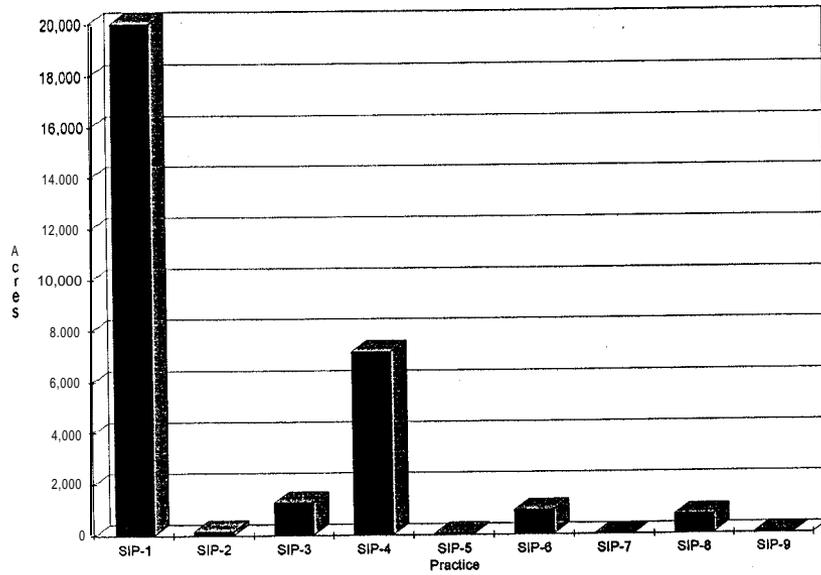
USFS Region 1

SIP Accomplishments, 1992-1994



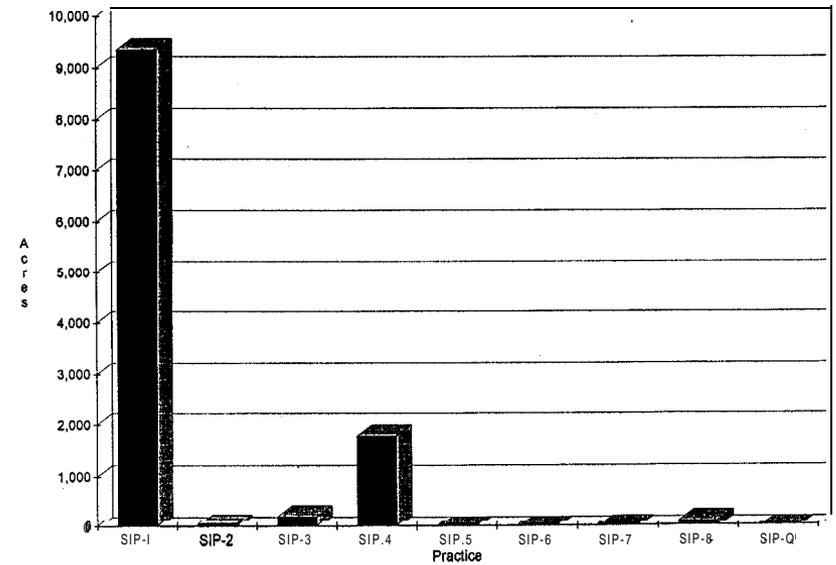
USFS Region 2

SIP Accomplishments, 1992-1994

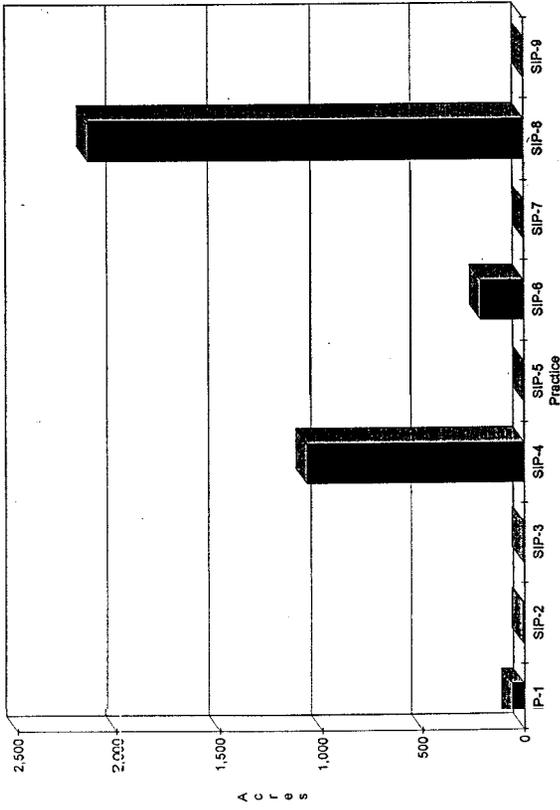


USFS Region 3

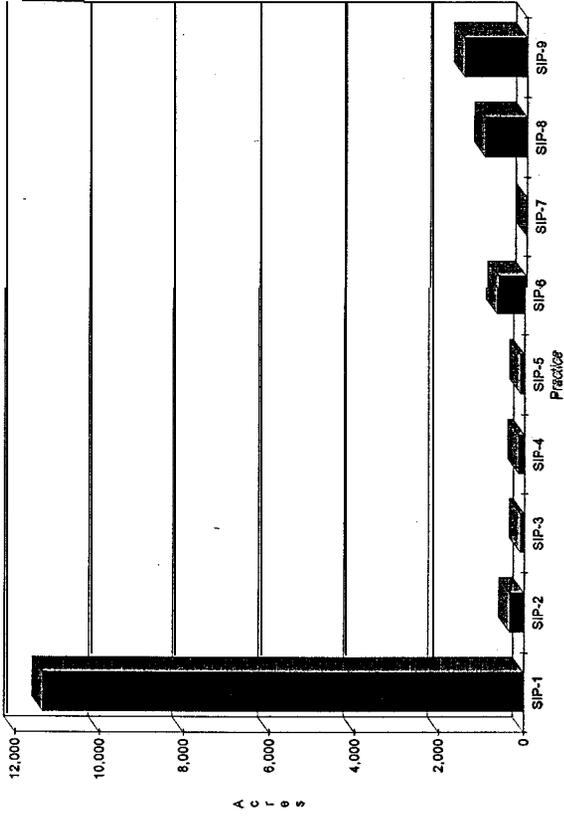
SIP Accomplishments, 1992-1994



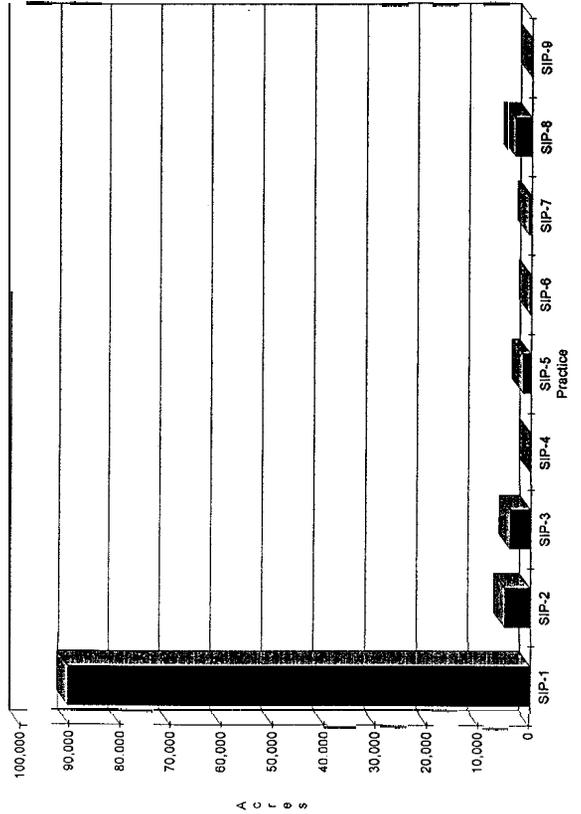
USFS Region 4
SIP Accomplishments, 1992-1994



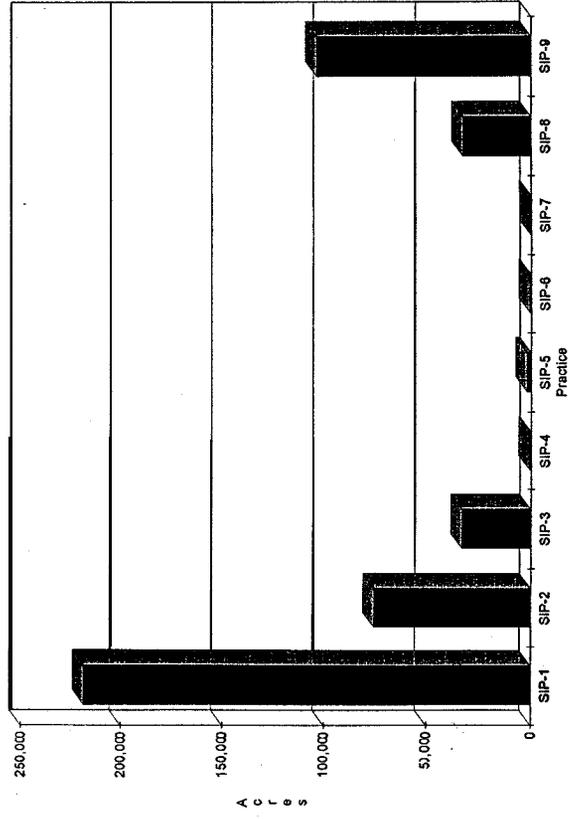
USFS Region 5
SIP Accomplishments, 1992-1994



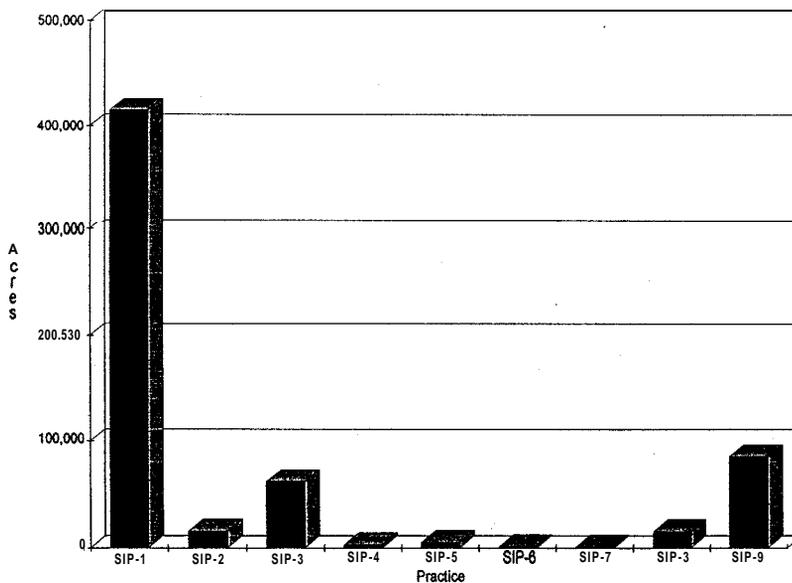
USFS Region 6
SIP Accomplishments, 1992-1994



USFS Region 8
SIP Accomplishments, 1992-1994



USFS Northeastern Area
SIP Accomplishments 1992-1994



USFS Region 10
SIP Accomplishments 1992-1994

