

by David A. Gansner
and Owen W. Herrick

COOPERATIVE FORESTRY ASSISTANCE in the Northeast

**FOREST SERVICE RESEARCH PAPER NE-464
1980**

FOREST SERVICE, U.S. DEPARTMENT OF AGRICULTURE
NORTHEASTERN FOREST EXPERIMENT STATION
370 REED ROAD, BROOMALL PA 19008

The Authors

DAVID A. GANSNER and OWEN W. HERRICK are research foresters, Regional Forest Resource Economics Research, Northeastern Forest Experiment Station, U.S. Department of Agriculture, Forest Service, Broomall, Pa.

MANUSCRIPT RECEIVED FOR PUBLICATION 14 APRIL 1980

Abstract

Summarizes results of a recent inventory of service forester activities in 20 Northeastern States. Each year some 500 local state foresters give one-half million hours of technical assistance and advice about the management of forest resources to nearly 50,000 woodland owners. Yearly on-the-ground help with activities ranging from timber sales to shade tree protection involves more than 2 million acres of nonindustrial private forest.

STATE SERVICE FORESTERS are the “main men and women” of the overall forestry assistance effort in the Northeast. Each year some 500 of these local public foresters give one-half million hours of technical assistance and advice about the management of forest resources to nearly 50,000 woodland owners. Yearly on-the-ground help with activities ranging from timber sales to shade tree protection involves more than 2 million acres of nonindustrial private forest. The cost to Federal and state taxpayers is about \$9 million per year.

These findings are among the results of a recent inventory of service forester activities in 20 states (Connecticut, Delaware, Illinois, Indiana, Iowa, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, West Virginia and Wisconsin). Data for the analysis were derived from a sample of more than 2,500 case records drawn from service forester files.

Results have been summarized to give a comprehensive, up-to-date look at service forester activities in the region. They provide information needed for judging the current worth and effectiveness of the Cooperative Forestry Assistance program and for identifying ways to improve its operation.

The 506,000 hours spent in service forestry each year averages about 10 hours per case. But, this average is not the best measure of the typical situation. Two-thirds of the cases require less than 10 hours while a few require 50 hours or more (Fig. 1). For skewed data distributions like this, the median (the value that divides the range of values into two equal parts) better describes what is “typical.” The median number of service forester hours spent per case is 7, as indicated at the 50 percent level in Figure 1. Clients own woodlands ranging in size from one to several thousand acres. The median amount of woodland owned is about 50 acres (Fig. 2).

Figure 1.—Time spent on cases.

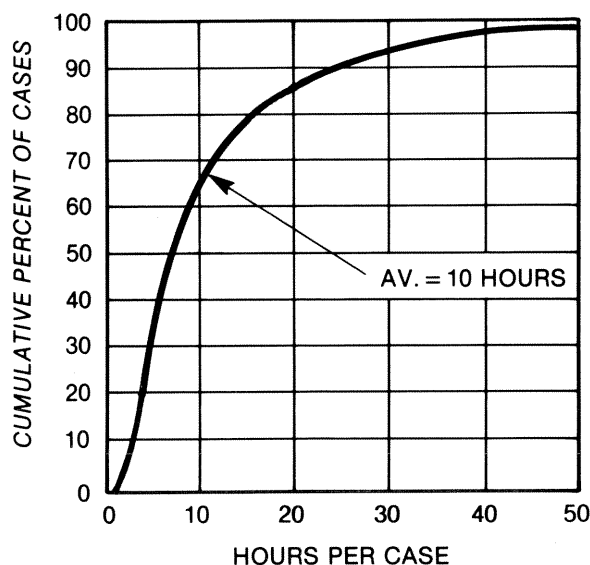
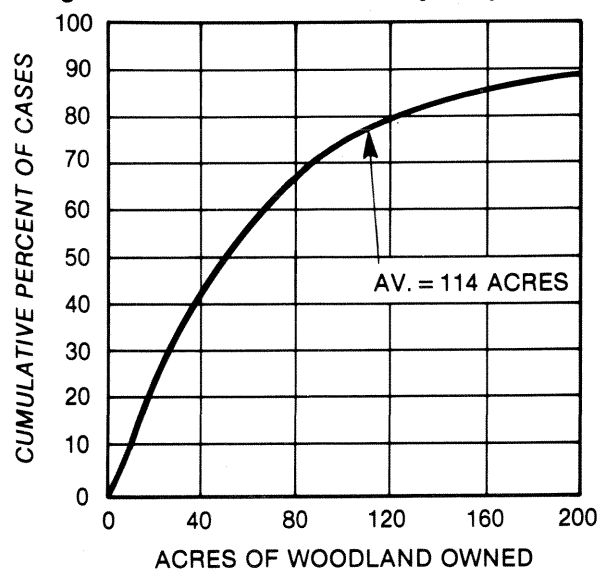


Figure 2.—Woodland owned by recipients.



A WIDE RANGE OF ACTIVITIES

Management planning

Management planning is the key to successful service forestry. The process usually goes something like this. The forester first talks with the landowner to find out what he wants to do with his tract. Then an analysis of woodland condition is conducted. If the owner is agreeable and the tract lends itself to management, a plan is prepared. The typical plan is a simple document with a map and other relevant attachments designed to help owners make decisions in managing their forest. It summarizes results of the forester's analysis and spells out recommendations for particular practices that are consistent with sound forestry and owner needs. Plans are revised periodically to keep pace with changes

in landowner desires, woodland condition and resource use (Fig. 3).

Each year more than 20,000 plans are prepared or revised for 1.2 million acres of forest land (Table 1). Few plans include more than 100 acres; the median covers about 30 (Fig. 4). Woodland reconnaissance, which is often done in conjunction with management planning, involves about 341,000 acres.

Timber stand improvement

Foresters prescribe timber stand improvement (TSI) for woodlands in which non-merchantable vegetation is impeding timber development. Unwanted trees that are too small or too low a grade to sell are eliminated to shift timber growth to fewer trees of better form and higher value. In some cases, competing vines are killed and undesirable branches are pruned to improve tree quality.

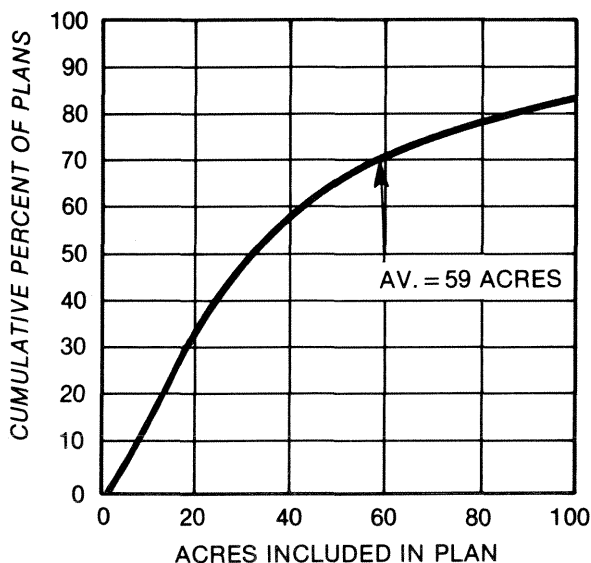
Figure 3.—On-the-ground planning—the key to successful forest management.



Table 1.—Summary of annual cooperative forestry assistance in the Northeast, 1977-78

Activity	Number of cases	Acres involved	Percent of acres on which job is:	
			Done or likely to be done	Not done and not likely to be done
Management planning	20,100	1,183,800	100	—
Timber stand improvement	19,200	362,600	85	15
Timber sales and marketing	14,700	415,500	94	6
Tree planting	12,600	106,700	88	12
Wildlife habitat improvement	6,100	91,300	94	6
Site preparation	4,100	48,000	95	5
Recreation and esthetic improvement	2,700	47,600	98	2
Erosion control and streambank improvement	2,000	34,400	96	4
Pest or disease control	1,500	26,100	95	5
Natural regeneration establishment	1,100	27,600	97	3
Reconnaissance	5,800	341,100	100	—
Other	5,100	343,100	91	9

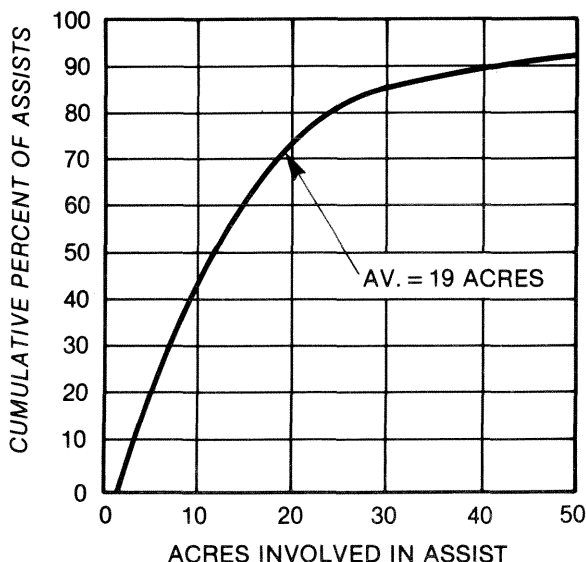
Figure 4.—Acres included in management plans.



While the primary goal is greater timber yields and dollar returns, special consideration is given trees with high nontimber values. For example, a large white oak cull with no potential for timber products but highly valuable as a source of food and habitat for wildlife might well be spared in a TSI operation. Our survey indicates that,

annually, 19,000 land owners receive TSI advice and assistance for 363,000 acres of forest land. Only 10 percent of the jobs are larger than 45 acres. The median size TSI assist is 11 acres (Fig. 5).

Figure 5.—Acres involved in timber stand improvements assists.



Not all of the TSI work is completed. During the course of our study, service foresters were asked to separate jobs that were “done or likely to be done” from those that were “not done and not likely to be done.” Results indicate that 15 percent of the TSI acres fall into the latter category (Table 1). This lower rate of accomplishment for TSI, compared to other activities, is not surprising; TSI is a relatively high-cost operation with a long wait until payoff. Many owners apply for forestry incentive payments (FIP) to help get the job done. Some are not approved for financial assistance and decide against TSI. Others, who start TSI jobs on their own, stop if they come to feel that the project is not worth the effort.

Timber sales and marketing assistance

Service foresters can be of great help in selling timber and other forest products. They select, mark, and estimate the volume of trees to be harvested and help the owner find reliable loggers and consultant foresters to negotiate sales. They do their best to satisfy landowner objectives while recommending cutting practices that are environmentally sound. Top dollar returns or optimum timber yields are not always of prime concern.

Each year the region’s service foresters give timber sales and marketing assistance to some 15,000 landowners. The work involves 416,000 acres of forest and includes recommended harvests of 820 million board feet of sawtimber plus 460,000 cords of roundwood worth a total of \$68.4 million.

Few sales and marketing assists involve more than 100 acres or more than \$10,000 worth of timber. The median job involves 18 acres and \$2,500 (Figs. 6-7). Almost 90 percent of the assists include sawtimber as a product; the median amount of sawtimber involved in these assists is 40 Mbf (Fig. 8). Only 25 percent of the assists include cordwood as a product; the median amount of cordwood involved is nearly 80 cords (Fig. 9). Study results show that, in general, sawtimber has a much better chance of being marketed than cordwood. Recent resurgence of the fuelwood market may change this somewhat.

Figure 6.—Acres involved in timber sales and marketing assists.

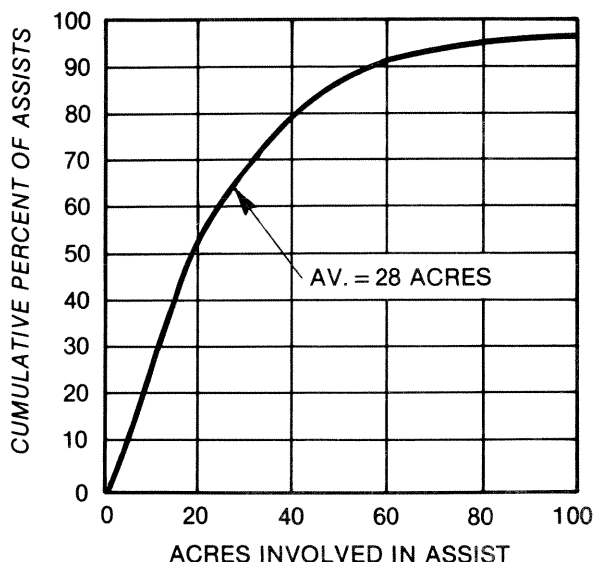


Figure 7.—Value involved in timber sales and marketing assists.

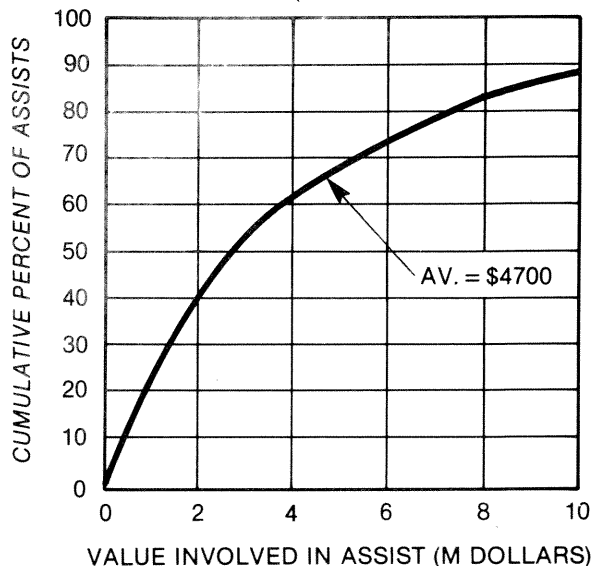


Figure 8.—Mbf in sales and marketing assists involving sawtimber.

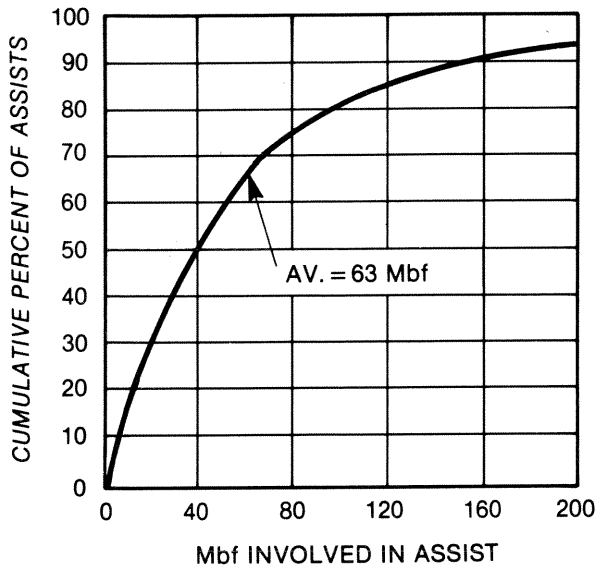
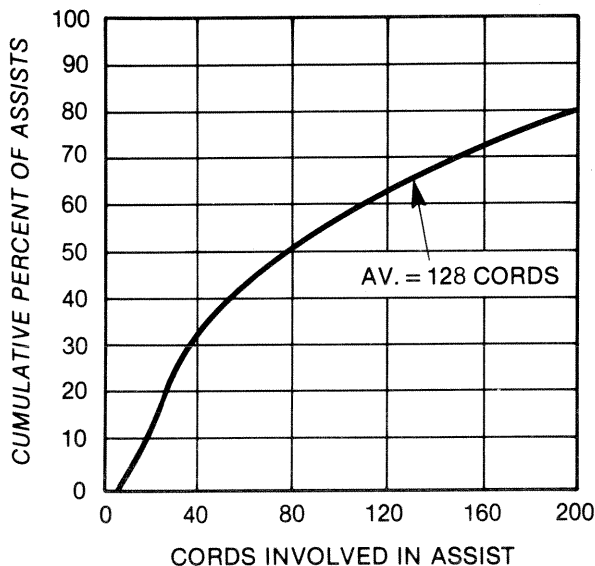


Figure 9.—Cords in sales and marketing assists involving cordwood.

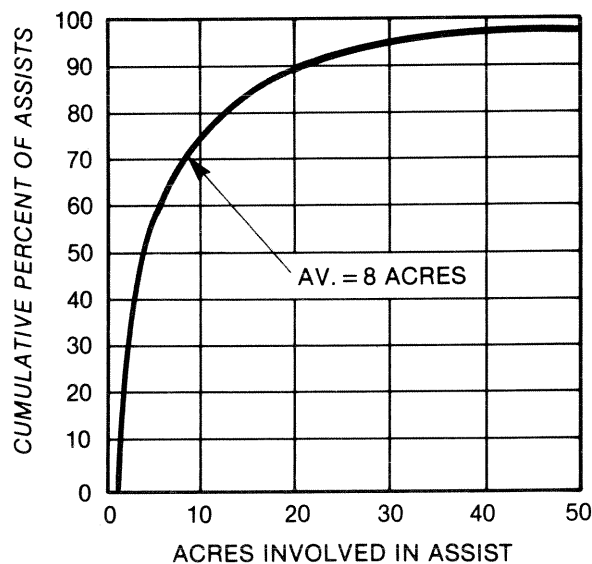


Tree planting

Tree planting assistance is another major activity of the service forester, involving more than 106,000 acres each year (Table 1). Nearly 13 thousand landowners receive this service. Foresters help the owner choose appropriate stock and planting sites and recommend species and spacing that are best suited to soil types and product objectives, and that minimize pest problems. They also help find reliable contractors to do the job.

Few assists involve plantations larger than 50 acres (Fig. 10); the median size is 3 acres. Site preparation assistance, often associated with tree planting, involves about 48,000 acres each year.

Figure 10.—Acres involved in tree planting assists.



Not just timber

A look at the overall service forester workload in the Northeast gives ready evidence that the region's forests are more than just "timber sheds." More and more requests for help are concerned with the protection and development of wildlife, recreation,

esthetic, soil, water, and other nontimber resources (Table 1, Figs. 11-13). Much of this work is done in conjunction with traditional timber management projects. It is common practice, for example, for a forester to leave productive mast trees when marking a stand for a timber sale (Fig. 14).

A few specific examples selected from case records will round out our summary of service forester activities. These include:

- Helping choose trees to leave for development of new homesites.
- Advising on the development of hiking and cross country ski trails.
- Assisting with prescribed burns for vegetation control.
- Helping set up protection zones for rare plant communities.
- Showing maple syrup producers how to manage their sugarbush and install tubing to collect sap.
- Instructing on the use of cultural practices for Christmas tree plantations.
- Helping lay out ponds and access lanes for fire protection.
- Helping owners understand and make use of forest tax laws.
- Advising against timber sales when trees are not financially mature.

Figure 11.—Acres involved in wildlife habitat improvement assists.

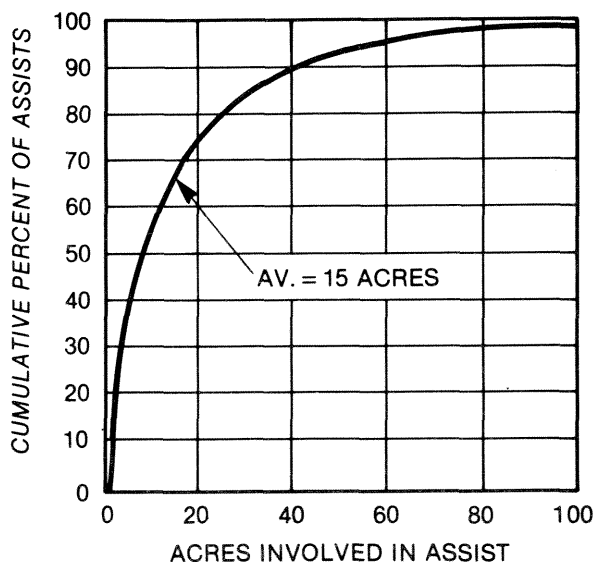


Figure 12.—Acres involved in recreation and esthetic improvement assists.

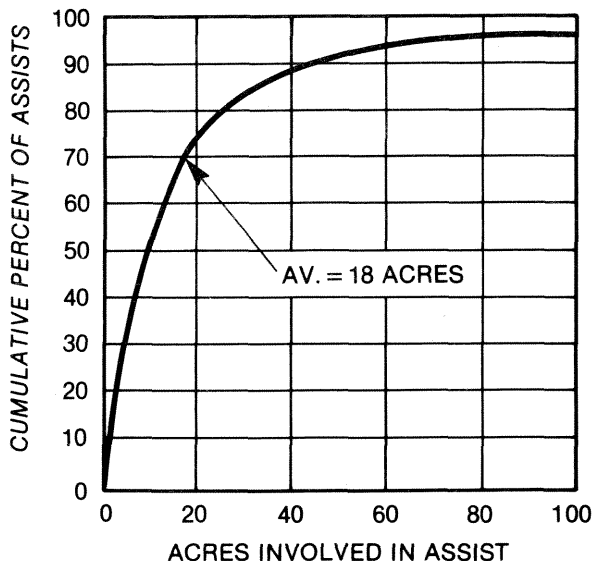


Figure 13.—Acres involved in erosion control and streambank improvement assists.

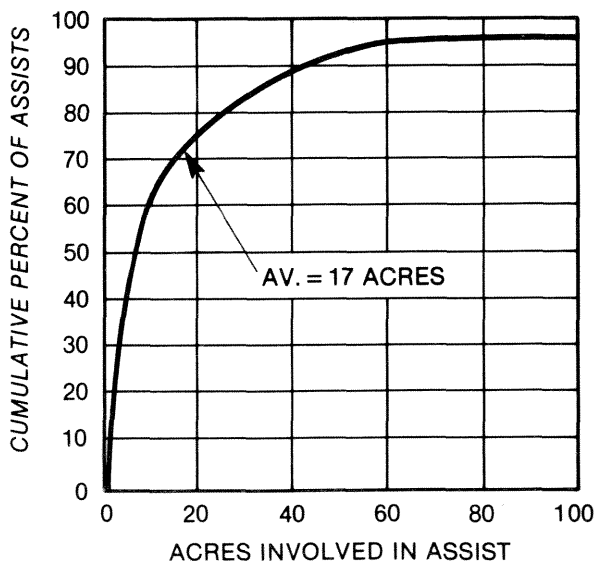


Figure 14.—This rascal's den was spared the saw in a TSI job.



A TYPICAL SERVICE FORESTER'S YEAR

Our study indicates that the median number of cases handled each year by the region's service foresters is 133. Using this median along with per-case estimates of activity results in the following profile of a typical service forester's year:

Gives 1,370 hours of technical assistance and advice to 133 forest-land owners. The work involves more than 5,600 of the 15,175 acres of forest land owned by these clients. Seventy percent of the people served are local residents and 53 percent of them have been assisted in previous years. Prepares or revises 54 management plans covering 3,205 acres of forest. Woodland reconnaissance is done on 918 acres. Gives timber sales and marketing assistance to 40 landowners for 1,130 acres.

These assists involve a total of 1,250 cords of roundwood plus 2.2 million board feet of sawtimber worth \$185,000. Fifty-two landowners receive timber stand improvement assistance for 984 acres. Tree planting help is received by 34 owners for 293 acres. Site preparation assistance is given for 133 acres. Helps 17 people with the development and protection of wildlife resources on 253 acres; 7 people with recreation and esthetic improvements on 133 acres; 5 people with erosion control and streambank protection on 93 acres; 4 people with pest and disease control on 66 acres; and 3 people with establishment of natural regeneration on 80 acres. In addition, 14 people receive help on 931 acres with a number of other activities such as access road and fire break development, Christmas tree culture, fencing, maple syrup production, and use of forest tax laws. Six of the 133 landowners served are referred to consultants for additional help.



ACKNOWLEDGMENTS

A special thanks to Don Seegrist, biometrics group leader, Northeastern Forest Experiment Station, who helped design our sample. Thanks also to Cliff Faulkner, Burl Ashley, Ken Lancaster, Rod Jacobs, and Bob Harrell of the Northeastern Area State and Private Forestry staff, who worked with some 150 state Cooperative Forestry Assistance supervisors and service foresters to collect the data.

Headquarters of the Northeastern Forest Experiment Station are in Broomall, Pa. Field laboratories and research units are maintained at:

- **Amherst, Massachusetts, in cooperation with the University of Massachusetts.**
 - **Beltsville, Maryland.**
 - **Berea, Kentucky, in cooperation with Berea College.**
 - **Burlington, Vermont, in cooperation with the University of Vermont.**
 - **Delaware, Ohio.**
 - **Durham, New Hampshire, in cooperation with the University of New Hampshire.**
 - **Hamden, Connecticut, in cooperation with Yale University.**
 - **Kingston, Pennsylvania.**
 - **Morgantown, West Virginia, in cooperation with West Virginia University, Morgantown.**
 - **Orono, Maine, in cooperation with the University of Maine, Orono.**
 - **Parsons, West Virginia.**
 - **Princeton, West Virginia.**
 - **Syracuse, New York, in cooperation with the State University of New York College of Environmental Sciences and Forestry at Syracuse University, Syracuse.**
 - **University Park, Pennsylvania, in cooperation with the Pennsylvania State University.**
 - **Warren, Pennsylvania.**
-