

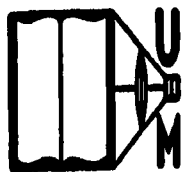
DOCTORAL DISSERTATION SERIES

TITLE COOPERATIVE AND FEDERAL
SUSTAINED-YIELD FOREST UNITS -- A
PROBLEM IN RESOURCE MANAGEMENT

AUTHOR THOMAS COOPER ADAMS

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COOPERATIVE AND FEDERAL SUSTAINED-YIELD FOREST UNITS
--A PROBLEM IN RESOURCE MANAGEMENT

by
Thomas C. Adams

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of the requirements for the degree of
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CHAPTER I

INTRODUCTION

This is a study of forest organization and management under the Act of August 28, 1937 (50 Stat. 874) and the Sustained Yield Forest Management Act of 1944 (58 Stat. 132). These two acts have been regarded by many persons as major accomplishments in constructive forest legislation. On the other hand, some of their provisions have received vigorous and widespread condemnation. The history of these two pieces of legislation, in the unfolding of events leading to their passage, in the review of efforts to secure or to prevent their application, and in the evolution of the social philosophy behind them, provides an unusual example of social action directed toward the economic management of a fundamental resource.

A major problem in forest management is that all too often the size, location, and composition of individual forest properties have been unrelated to the technical requirements of true sustained-yield operation.¹ In addition, the depletion of the forest in cutover regions has all too often brought with it the abrupt and painful decline of

¹For a discussion of the meaning of "sustained yield," see pp. 32-34.

forest communities. These facts led to the suggested formation of rational producing units, either by pooling federal timberland with adjacent or intermingled private lands, or, where appropriate, by administering units of federal timberland alone, so as to contribute toward a permanent supply of raw materials for the support of dependent communities. Such a program was embodied in the acts of 1937 and 1944.

Act of August 28, 1937

This act provides for a permanent program of forest management on the 2.5 million acres of the Revested Oregon and California Railroad and Reconveyed Coos Bay Wagon Road Grant lands in the state of Oregon.

These "O. and C." lands were the unsold portions of federal land grants made in 1866 to the Oregon and California Railroad for construction of a railroad from Portland, Oregon, to the California state line, and in 1869 to the State of Oregon for construction of a military wagon road from Coos Bay to Roseburg. They comprised alternate sections of land, in a checkerboard fashion, and were to be sold to settlers in blocks of not more than 160 acres to each settler and at not more than \$2.50 per acre.

These two grants later passed into ownership of the Southern Pacific Railroad and the Southern Oregon Company, respectively, both of which failed to live up to the terms of the grants, and in 1916 and 1919 what remained of the grants was repossessed by the federal government.

Under the act of 1937 all O. and C. lands classi-

fied as (a) timberlands, and in the opinion of the Secretary of the Interior not suitable for homestead entry, and (b) power-site lands valuable for timber, are to be managed for permanent forest production. The timber thereon is to be "sold, cut, and removed in conformity with the principle of sustained yield, for the purpose of providing a permanent source of timber supply, protecting watersheds, regulating stream flow, and contributing to the economic stability of local communities and industries, and providing recreational facilities."

The act authorizes the Secretary of the Interior, after public hearings in the vicinity of the lands concerned, to subdivide the O. and C. lands into sustained-yield forest units. "Timber sales from a forest unit shall be limited to the productive capacity of such unit and the Secretary is authorized, in his discretion, to reject any bids which may interfere with the sustained-yield management plan of any unit."

The act further authorizes the Secretary of the Interior "to make cooperative agreements with other Federal or State forest administrative agencies or with private forest owners or operators for the coordinated administration, with respect to time, rate, method of cutting, and sustained yield, of forest units comprising parts of revested or reconveyed lands, together with lands in private ownership or under the administration of other public agencies. . . ."

Sustained Yield Forest
Management Act of 1944

The purpose of this act, as stated in its preamble, is "to promote sustained-yield forest management in order thereby (a) to stabilize communities, forest industries, employment, and taxable forest wealth; (b) to assure a continuous and ample supply of forest products; and (c) to secure the benefits of forests in regulation of water supply and stream flow, prevention of soil erosion, amelioration of climate, and preservation of wildlife."

The act authorizes the Secretary of Agriculture and the Secretary of the Interior to establish two types of sustained-yield units: first, cooperative sustained-yield units, consisting of federally owned or administered forest land under their jurisdiction and, in addition, land in private ownership, managed jointly with the federal land, under a cooperative agreement; and second, what are known as federal sustained-yield units, consisting wholly of federally owned or administered forest land.

In a cooperative unit, the cooperative agreement may give the cooperating private landowner the privilege of purchasing timber or other forest products on federal land within the unit, without competitive bidding, at prices not less than their appraised value. Such purchases are to be made in accordance with the provisions of sustained-yield management plans formulated or approved by the Secretary for each unit. Each cooperative agreement shall limit the time, rate, and method of cutting on the land of the cooperating

private landowner, and shall prescribe the terms and conditions, but not the price, upon which the cooperating private landowner may sell timber or other forest products from his own land committed to the unit. It shall also contain such other provisions as the Secretary believes necessary to carry out the purposes of the act and to protect the reasonable interest of other owners of forest land within the unit.

Lands of more than one private owner may be included in any cooperative unit, although of course no owner can be required to enter. The Secretaries of Agriculture and of the Interior are further authorized to enter into cooperative agreements with other federal agencies, with each other, and with state and local governments, for inclusion of forest land under their respective jurisdictions in any cooperative unit with private owners.

A federal unit may be established whenever in the judgment of the Secretary concerned the maintenance of a stable community or communities is primarily dependent upon the sale of timber or other products from the federal land, and when such maintenance cannot effectively be secured through the usual sales procedures. In a federal unit, the federal timber or other forest products may be sold without competitive bidding, at prices not less than their appraised value, to responsible purchasers within the designated community or communities.

It is important that the distinction between cooperative units and federal units be clearly understood. It

is also important to note that they both represent a departure from the usual method of selling federal timber only under competitive bidding.²

The cooperative agreements, and for the federal units the statements of policy, which have been drawn up by the Forest Service under this act have specified that the appraised price at which national forest timber will be offered for sale will be determined according to standard appraisal principles and methods currently in use by the Forest Service at the time they are made. Appraisals for federal timber administered by other agencies would similarly be made under the standard appraisal methods of the agency concerned.

Before establishment of any sustained-yield unit under this act, a public hearing is to be held to present the advantages and disadvantages of the proposed unit to the community or communities to be affected.

Advance notice of non-competitive timber sales of over \$500 valuation made pursuant to this act is to be published in one or more local newspapers, stating the quantity and appraised value of the timber, whereupon any person having a reasonable interest in the proposed sale or its terms may request a public hearing.

Upon failure of any cooperating private landowner to comply with the terms of his cooperative agreement, the

²Except for very small sales (e.g., sales under \$500 on the national forests), for free use by individuals for domestic purposes, or in the case of emergencies.

Attorney General--at the request of the Secretary concerned--is authorized to institute against such owner a proceeding in equity in the proper federal court, to require compliance with the terms and conditions of the agreement.

The act itself does not cover any specific complaint and appeal procedure; that is left to be worked out in the individual agreements. The cooperative agreements so far prepared by the Forest Service have stated that appeal may be made from administrative action or decision of forest officers by filing with the officer who rendered the decision a written request for reconsideration thereof or notice of appeal. Decisions of forest officers shall be final unless appeal is taken within a reasonable time. Any decision appealed shall be reviewed by the immediate superior of the officer by whom the decision was rendered, in the following order: Forest Supervisor, Regional Forester, Chief of the Forest Service, and Secretary of Agriculture. Other sections have stated that in the event of failure to agree on plans and methods of cutting, fire protection, slash disposal, or road construction, the decision of the Chief of the Forest Service will be accepted and followed.³ Similar provisions

³Cooperative agreements for the proposed Kootenai and Woodleaf sustained-yield units further provided that with such appeal the private cooperator might request an advisory board to review the problem under dispute and to make recommendations which would be considered by the Secretary. This board would consist of three qualified logging operators, logging engineers, or technical foresters, one to be selected by the cooperator, one by the Secretary, and one by the other two. The Shelton agreement (the only one now in effect) does not have this provision, although it could probably be added easily.

would be contained in any cooperative agreement pertaining to O. and C. lands, or other federal lands, giving power of decision, in case of disagreement, to the Bureau Chief, with appeal permitted to the Secretary having jurisdiction.

It is not certain what relief is available from an adverse decision of one of the Secretaries; this would have to be determined when such a situation arose. Presumably, ultimate appeal could always be made to the courts on grounds of confiscation (under the due process clause of the Fifth Amendment), exercise of arbitrary power, or abuse of administrative discretion.

Statement of the Problem

As soon as P.L. 273⁴ was passed, both the Forest Service and the O. and C. Administration (now organized as a part of the Bureau of Land Management) prepared to make establishment of cooperative units a major element in their over-all forestry programs.⁵ The Indian Service also showed an active interest.

From the start, it was recognized that the marking out of sustained-yield units, and the drawing up of cooperative agreements, would demand a good deal of judgment and

⁴The Sustained Yield Forest Management Act of 1944 will be referred to hereinafter as "P.L. 273," to conform to current usage.

⁵The O. and C. Administration had since 1937 been engaged in initiating a broad program of forest management, and had made preliminary studies leading toward establishment of individual sustained-yield units under the 1937 legislation.

professional skill. Moreover, the establishment of cooperative units might meet with a certain amount of resistance, for major adjustments to established industry would often be required, and these would almost inevitably bring hardships to a few operators. However, neither private industry nor the government agencies were prepared for the veritable storm of opposition which developed at the public hearings held in connection with these units.

This opposition has been directed primarily against cooperative units; establishment of federal units has, in principle, received rather widespread approval. This approval has not, however, been universal, and the ultimate extent to which either cooperative or federal units will be established remains uncertain.

In the eight and more years since passage of these acts, only one cooperative unit and five federal units have been established.⁶ Others have been proposed, but have not

⁶The Shelton Cooperative Sustained Yield Unit, Olympic National Forest (Washington), established Dec. 12, 1946.

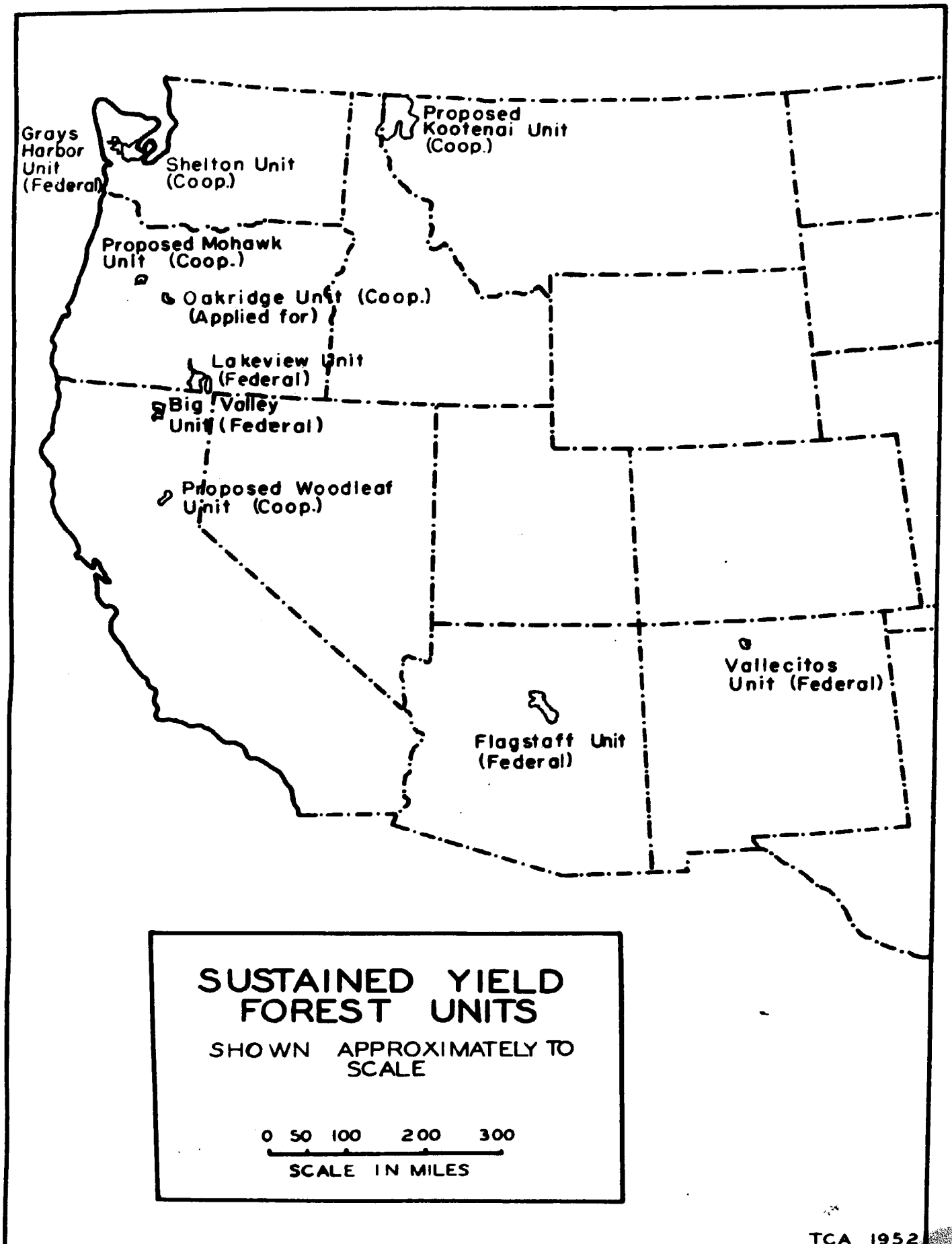
The Vallecitos Federal Sustained Yield Unit, Carson National Forest (New Mexico), established Jan. 21, 1948.

The Flagstaff Federal Sustained Yield Unit, Coconino National Forest (Arizona), established May 6, 1949.

The Grays Harbor Federal Sustained Yield Unit, Olympic National Forest (Washington), established Nov. 2, 1949.

The Big Valley Federal Sustained Yield Unit, Modoc National Forest (California), established Jan. 27, 1950.

The Lakeview Federal Sustained Yield Unit, Fremont National Forest (Oregon), established Oct. 10, 1950.



been placed in operation because of opposition which has arisen in each case. Despite prolonged discussions in the public hearings, and elsewhere in professional circles, there seems to be a serious lack of objective study on this question; too many persons have seemed to regard the whole issue simply as a political one, in which everyone is in favor of these units except the small sawmill operators, often entirely dependent upon public timber, who might be left out.

Unfortunately, it is not as simple as that. Those who have argued against cooperative units have done so not merely for selfish reasons, but rather on grounds of principle. It is a relatively easy matter for government, in taking positive measures to further conservation or the general welfare, to place the over-all public interest above the particular self-interest of any individual or any minority group. In fact, that may almost be said to be one of the functions of government, and we would hardly wish it otherwise. But it is quite another thing for government to act counter to what are made to appear to be established institutions and traditional national ideals. In effect, the opposition to cooperative units has been made a fight for free competitive enterprise, as against alleged privilege and monopoly. Moreover, what once appeared to be simply opposition to a worthwhile public program by a few individuals who would be adversely affected has now become one of the many joining together against the few--the minority has, it seems, become the majority.

Some persons now believe there will be no more cooperative units. It is not proposed here to engage in any special pleading either for or against cooperative units. It does appear, however, that P.L. 273, and the authorization contained in the O. and C. Act of 1937 for cooperative agreements, originated in response to a generally recognized need, and if they do not provide a satisfactory answer, then either the underlying problem remains unanswered, or else it has somehow disappeared, or faded into insignificance. Or perhaps some other remedy has emerged.

The problem is not an easy one to define. It is in part a problem of achieving a unity of purpose and a unity of control over areas of mixed ownership, within what appear to be natural producing units. This raises the question, of course, of what is meant by a natural producing unit. It is, in addition, a problem of whether, or to what extent, one should include the sawmill, or other manufacturing plant, along with the forest as an integral part of the producing unit.

All this may be considered as part of an even larger problem, that of organizing the forest for sustained yield. This is an important problem in public policy because the public owns a substantial portion of our forest resource and because the public authority has a certain obligation to protect such a fundamental resource and to see that it is wisely used. With parts of the forest economy becoming more and more dependent on public timber, the question

arises as to what social arrangements may be best suited to the bringing of this public timber into productive use. That is, in view of this nation's long-established policy of public ownership and private operation of a significant part of its forest resource, to what extent should the management of these public forests be integrated with management of private forests, and with management of private industries which are dependent upon them for their source of raw material, and how can the proper degree of coordination be brought about?

Objective and Scope of the Present Study

The objective of this study is to examine the arguments both for and against the concept of sustained-yield units; to explore selected foreign experience in dealing with similar forest problems; and to bring to bear on this problem the general body of economic doctrine as it has developed with respect to economic organization in other fields of endeavor. The study is undertaken with the conviction that a clearer understanding of the facts and implications of such a program should enable a more rational judgment to be reached on its effectiveness as a tool of public policy.

The problem of sustained-yield units will be approached not so much as a problem of technical forest management as a problem in land economics, in the structure of industry, in location theory, in community planning, or, using the term in its more general sense, as a problem in resource management. It involves questions not

merely of government custodianship of an essential resource, and of prudent control of a segment of private enterprise, but also those more fundamental questions of active governmental participation and deliberate guidance in our over-all economic life.

Procedure

The method of this study has been primarily one of logical analysis and interpretation, based both on reference to library source material and on field work to acquaint the writer with actual field conditions and with the thinking of practicing foresters in the areas which have been affected. Nearly all proposed or established units were visited, and a week was spent in British Columbia investigating their experience with forest management licenses and farm woodlot licenses. Three terms were spent at the University of Washington during early preparation of this thesis.

The writer is acquainted with western forest conditions through long residence in California, and through four months' employment with the U.S. Forest Service in western Oregon during the summer of 1951.

CHAPTER II

PRESENT FOREST SITUATION

Any meaningful evaluation of sustained-yield units requires, first of all, an examination of the present situation, taken as a whole. It is only after a general awareness of what has gone before, and a general appreciation of our over-all position, that the necessary perspective may be reached.

In many areas, especially in the western states, operation of our federal land-disposal laws has brought about an irregular and often haphazard pattern of land ownership. Up to 1891 our policy was, in general, to facilitate the transfer of public-domain lands into private ownership. Among the objectives sought were the encouragement of settlement, agriculture, education, construction of railroads and other public improvements, exploitation of mineral resources, and financial support of individual states. It is significant that there has never been any lawful method for individuals to gain direct title to timberlands of the public domain for the express purpose of harvesting timber on a commercial scale. This has hindered the assembly of consolidated holdings for long-term forest management.

In 1891 the federal government turned to a policy of retaining a portion of the public-domain lands in public own-

ership, in the interest of conservation. In that year certain of the land-disposal laws were repealed, and the President was given authority to set aside forest reserves. The Act of 1897 (30 Stat. 34) provided for the administration of these reserves, and authorized the sale, after advertisement, and at not less than its appraised value, of so much of their timber as might be compatible with the utilization of the forest. In 1905 these forest reserves became our national forests, which now, with subsequent additions through purchase, donation, and exchange, include over 160 million acres, plus an additional 20 million acres in Alaska.

Several recent investigations have been made to determine the extent and condition of our forest resource: the 1944-45 Forest Service Reappraisal of the Forest Situation (162), the 1946 American Forestry Association Forest Resource Appraisal (198), the 1947 study of the Joint Committee on Forestry of the National Research Council and the Society of American Foresters (79), and the American Forestry Association report The Progress of Forestry 1945 to 1950 (19).

Findings of the first two are in substantial agreement,¹ although they are divided in recommendations concerning extension of public ownership and regulation. The third tends to support the position of the Forest Service, and the last emphasizes improvements in the private sector since 1945. All four urge a greater application of practical forestry in

¹This is partly explained by cooperation of the two agencies in securing their basic data.

the woods. The following remarks are based primarily on the 1944-45 study of the Forest Service.

Ownership, Location, and
Condition of our Forests

A summary of the ownership and location of forests in the United States is presented in Tables 1 and 2, for 1945. From these it is seen that (a) 40.3 percent of our total sawtimber is on public lands in the West, as contrasted to 2.7 percent on public lands in the remainder of the United States; (b) 24.8 percent of our sawtimber is on private lands in the West; (c) three-fourths of our commercial forest land is privately owned; and (d) while three-fourths of our commercial forest land is in the North and South, nearly two-thirds of our sawtimber is in the West.

The reappraisal report of the Forest Service points out that (a) about 35 percent of the commercial forest area is deforested or has less than 40 percent of full stocking; (b) age-classes are not well balanced; (c) quality of the timber is declining; (d) some of the timber is not merchantable under present economic conditions; (e) almost 80 percent of the sawtimber in the West is in virgin stands; (f) almost one-half of the sawtimber in the West is in the national forests, with 15 percent in other public ownership, and less than 40 percent in private ownership, while in the East 93 percent of the sawtimber is privately owned; and (g) privately owned forests furnish some 90 percent of the timber cut.

TABLE 1

DISTRIBUTION OF OWNERSHIP OF SAWTIMBER^a
ON COMMERCIAL FOREST LAND^b IN THE UNITED STATES, 1945^c

Ownership Class	Region			
	North ^d	South ^e	West ^f	U.S.
Public	Percent of board-foot volume			
National forest	0.5	0.9	31.0	32.4
Other federal	0.1	0.3	6.1	6.5
State and local	0.7	0.2	3.2	4.1
Total	1.3	1.4	40.3	43.0
Private				
Farm	4.8	8.4	2.1	15.3
Other private	7.7	11.4	22.7	41.8
Total	12.5	19.8	24.8	57.1
All owners	13.8	21.2	65.1	100.1 ^g

^aSawtimber is defined as trees large enough to yield logs suitable for the production of lumber, in accordance with practice of the region. Because the minimum size of logs acceptable for lumber varies, the minimum size of sawtimber trees varies from 9 to 23 inches, d.b.h., depending on species and region.

^bCommercial forest land is defined as land capable of producing timber of commercial quantity and quality and available now or prospectively for commercial use.

^cPrepared from data contained in U.S. Forest Service report Gaging the Timber Resource of the United States (159), p. 54.

^dRoughly, that portion of the United States comprising the Great Plains and states east of the Great Plains, except those listed under note e.

^eThe states of Arkansas, Tennessee, Virginia, North Carolina, South Carolina, Louisiana, Mississippi, Alabama, Georgia, Florida, and the eastern portions of Oklahoma and Texas.

^fRoughly, that portion of the United States west of the Great Plains, and including the Black Hills of South Dakota.

^g(0.1 rounding error).

TABLE 2

DISTRIBUTION OF OWNERSHIP OF COMMERCIAL FOREST LAND^a
IN THE UNITED STATES, 1945^b

Ownership Class	Region ^c			
	North	South	West	U.S.
Public	Percent of area			
National forest	2.1	2.2	11.7	16.0
Other federal	0.4	0.9	2.1	3.4
State and local	4.2	0.5	1.2	5.9
Total	6.7	3.6	15.0	25.3
Private				
Farm	13.2	15.0	1.9	30.1
Other private	17.0	21.2	6.4	44.6
Total	30.2	36.2	8.3	74.7
All owners	36.9	39.8	23.3	100.0

^aFor a definition of "commercial forest land" see note b to Table 1.

^bPrepared from data contained in U.S. Forest Service report Gaging the Timber Resource of the United States (159), p. 53.

^cFor definition of regions, see notes d-f to Table 1.

Over-all Growth and Drain

Although, on the basis of cubic-foot volume current annual forest growth is about equal to annual drain,² much of this growth is in small, low-grade material, and the annual drain of sawtimber is half again as much as current

²This drain includes not only cutting, but loss by fire, wind, ice, insects, and disease.

sawtimber growth³ (162). As the national economy expands, potential demand for forest products is expected to increase. The Forest Service sets as a national goal the stepping-up of annual growth of all timber by one-half, and the doubling of sawtimber growth, within the next sixty to seventy years. It believes we have plenty of forest land to supply such requirements, provided we increase the protection of our forests, reduce waste in logging and manufacturing, and take steps to improve stocking, quality, and age-class distribution.

Quality of Forest Management

The Forest Service reports that as of 1945 more than one-half of all cutting either left only a limited means for securing natural reproduction (and this often of the less desirable species), or left no means at all. It found cutting on public lands to be notably better than on private lands, although (a) much room for improvement was noted on some of the public lands, and (b) some of the

³These figures are for 1944. Greeley (61) and the American Forest Products Institute (18) consider that when compared with several earlier estimates of the Forest Service these figures show a steady increase in growth relative to drain, and they conclude that growth and drain are approaching a balance. Greeley, moreover, now regards the 1944 figures as inadequate to describe the present situation in that they do not reflect recent improvements in protection, rapid expansion of industrial forestry, nor the increased growth attainable with better management. While some of Greeley's views may be well founded, caution is required in comparing the 1944 estimates of growth and drain with earlier estimates, which have had different standards of accuracy and of coverage with respect to tree size and species.

private lands received just as high a rating as any of the public lands.

Furthermore the large private owners,⁴ particularly the pulp companies, generally observe better cutting practices than do the smaller owners, and the poorest showing of all is on the small holdings of less than 5,000 acres, which comprise three-fourths of the private commercial forest land. It is to be pointed out, however, that the poor showing of these smaller holdings is due not so much to a lack of interest in better forestry on the part of the owners or managers of these lands, as it is to the handicap most of them have in being aware of neither the opportunities nor the methods of improved practice, and to their being preoccupied with other work.

To judge quality of forest management one should examine not only cutting practices, but in addition the extent of sustained-yield planning and the adequacy of forest protection.

In this respect, the Forest Service found that about three-fifths of the operating acreage in public ownership and over one-fourth of that in the medium⁵ and large private holdings is on a sustained-yield basis.⁶ Most of

⁴Those owning 50,000 acres or more.

⁵Those of 5,000 to 50,000 acres.

⁶Lands were classified in the sustained-yield category wherever there was evidence of a planned flow of products in substantially regular quantities on a continuous basis--provided the planning was definitely recognizable and the cutting was rated at least as a beginning which would maintain on the land a reasonable stock of growing timber of desirable and marketable species.

the sustained-yield management on private holdings was found to be in the South, although significant progress was recognized in the Douglas-fir region of the Pacific Northwest. The Forest Service combined its survey of cutting practices with that of fire protection. The resulting figures are rather difficult to summarize and will not be repeated here; it is sufficient to remark that (a) there has been much more progress in fire protection than in the adoption of good cutting practices, (b) public lands are fairly well protected in comparison with private lands, and (c) private lands in the South generally receive poorer fire protection than private lands in the North or West (160).

Federal Assistance to Private Forestry

Even before establishment of the Forest Service in 1905, the Bureau of Forestry, in the Department of Agriculture, had made efforts to bring about better private forestry, in a series of working plans prepared for private forest lands.⁷ These efforts were ineffective, however, and were later discontinued.

Under the Weeks Act of 1911 (36 Stat. 961) the federal government began a program of cooperation with the states in forest-fire control on the watersheds of navigable streams, appropriating \$200,000 for this purpose, provided the annual expenditure in any state should not exceed the

⁷E.g., Henry S. Graves, Practical Forestry in the Adirondacks, U.S.D.A. Div. of Forestry Bull. 26, 1899.

amount appropriated by that state for the same purpose during the same period.

This program was considerably enlarged by the Clarke-McNary Act of 1924 (43 Stat. 653) which authorized the Secretary of Agriculture (a) to set standards for forest-fire prevention and suppression in the various states; (b) to cooperate in forest-fire protection, not only with the states but also, through state officials, with private protection agencies; (c) to extend such cooperative fire protection to any forest land whether on the watershed of a navigable stream or not; (d) to investigate and encourage tax laws and methods of forest insurance conducive to the conservation and growing of timber; (e) to cooperate with the states in the growing and distribution of forest-tree seeds and plants, for the purpose of establishing wind-breaks, shelterbelts, and farm woodlots upon denuded or nonforested lands; and (f) in cooperation with the states, or other suitable agencies, to assist farmers in establishing, improving, and renewing woodlots, shelterbelts, wind-breaks, and other valuable forest growth, and in growing and renewing useful timber crops.

An annual appropriation of \$2,500,000 for items (a)-(d) above, and of \$100,000 each for items (e) and (f), was authorized. All but item (d) were to be on the basis of an equal matching of funds by each state, or under item (b) by each state and its private agencies taken together. The authorization of \$2,500,000 was raised in 1944 to not

more than \$9,000,000 annually and in 1949 the upper limit was raised in steps so as to reach \$20,000,000 annually by 1955. The 1949 law also authorized increase of appropriations for item (f) to \$500,000 annually, and authorized the providing of planting stock under item (e) to small non-farm owners as well, with appropriations increasing up to \$2,500,000 annually for this purpose by 1953.

Beginning in 1908, the Forest Service established a system of forest experiment stations throughout the country, and in 1910 it established the Forest Products Laboratory at Madison, Wisconsin. The research findings of these agencies have been invaluable in providing knowledge upon which improved practice and improved utilization might be based.

Under the Norris-Doxey Act of 1937 (50 Stat. 188) annual appropriations of \$2,500,000 were authorized for the promotion of farm forestry, in cooperation with the states. This act has been superseded by the Cooperative Forest Management Act of 1950 (64 Stat. 473), which authorizes the Secretary of Agriculture to cooperate with the states in providing technical services to private forest landowners and operators, and to processors of primary forest products, with respect to the management of forest lands and the harvesting, marketing, and processing of forest products. Annual appropriations of \$2,500,000 are authorized for this purpose, again on the basis of equal matching of funds by the participating states. It is to be noted that these services may be made available to all private landowners

and processors, not just to farmers, as had been the case under previous legislation. However, this act is aimed primarily at the small forest landowners and processors, and it is not intended that the technical services furnished should duplicate the efforts of private consulting foresters.

The Forest Pest Control Act of 1947 (61 Stat. 177) authorizes the Secretary of Agriculture, either directly or in cooperation with other federal agencies, state or local agencies, or with private concerns or individuals, to protect all forest lands, irrespective of ownership, from destructive forest insect pests and diseases, with appropriation of "such sums as the Congress may from time to time determine to be necessary."

Additional federal aid to private forest landowners has been recommended by the Forest Service, to include (a) establishment of a federally sponsored credit system to make long-term forest loans; (b) establishment of a federally sponsored insurance system to distribute the risks in forestry enterprises; (c) encouragement of cooperative marketing and processing associations, particularly among the smaller forest owners; (d) provision of federal advisory services to state and local governments for encouragement of tax reforms; and (e) the strengthening and expansion of all forms of forest research (162).

Public Regulation of Private Forest Practices

Primarily as a result of a report on "Forest Devastation" by a committee of the Society of American

Foresters (141), several bills were introduced in Congress during the period 1920-24, to provide a comprehensive program for direct federal regulation of cutting practices on private forest lands. These bills were rather strongly worded, and although none of them were ever reported out of committee, they accomplished a certain purpose in that the Clarke-McNary Act of 1924, built around a cooperative rather than a regulatory approach, is a direct result of their efforts.

The public regulation now recommended by the Forest Service would take the form of basic federal legislation authorizing (a) financial assistance to states undertaking regulation of forest practices on private forest land, provided such regulation met the over-all requirements laid down by the Secretary of Agriculture; and (b) direct federal regulation in states which failed to do so.

The recent Anderson Bill⁸ would have provided such basic federal legislation; for the most part it failed, however, to gain popular support.

Several individual states have enacted regulatory laws dealing with such matters as fire protection, slash disposal, snag felling, reforestation, protection of the residual stand in logging, and the leaving of a reserve stand for future use. Such laws have achieved a high degree of initial success in the states of Oregon, Washington, California, and Maryland. The fact that the forest laws in

⁸S. 1820, 81st Congress.

these states have generally received wholehearted support of the forest industries indicates a strong preference for state rather than federal regulation.⁹

Forestry on Public Lands

The national forests are managed under a policy of multiple use, which includes timber production, watershed protection, grazing, recreation, and wildlife management. Since 1940 cutting has greatly increased on the national forests, and would now increase even further if more access roads were built into the less accessible areas. - The Forest Service has always endeavored not to overcut the national forests, and is now giving increased attention to the preparation of management plans for individual working circles.

The Bureau of Land Management, in the Department of the Interior, has undertaken a program of sustained-yield management on the O. and C. lands. Some of the forests on public-domain lands under the Bureau of Land Management have received heavy cutting in recent years; most of these lands, however, are not of sufficient quality for commercial timber production.

Federally administered Indian Lands contain over 6 million acres of commercial forest land, managed, to a large extent, in a manner comparable to the national forests.

⁹As an alternative to direct regulation, New York and Massachusetts encourage better forest practices by providing free technical services to forest landowners. New Hampshire grants tax-abatement privileges for approved forest practices, in connection with their recently-enacted yield tax on forest products.

Many states and local governments own forest land, much of which is scattered and unorganized, often as a result of tax reversion. Some states, however, do have well-organized state forests which are often given excellent administration.

Diversified Forest Utilization

One of the greatest problems in bringing about improved forest practices has often been a lack of suitable market outlets for the small and low-grade material which now occupies much of our forest land. Although pulp mills often provide a ready market for small logs of certain species, this has sometimes resulted merely in forests being cut more destructively than ever.

In the Douglas-fir region, several of the larger companies have begun pre-logging and re-logging, in connection with their regular cutting program, to salvage material that would either be knocked down in the main cut, or else left on the ground afterward.

It is rather common, especially in the smaller mills, for slabs, edgings, and trimmings to be wasted. Because of its bark content, most of this material is generally not suitable for pulping. Some of the larger sawmills put such material through hydraulic barkers and chippers, for delivery to a pulp mill. A few mills now put full-sized sawlogs through hydraulic barkers for this purpose.

The communities of Cloquet, Minnesota, and Spokane, Washington, and the Grays Harbor area in Washington offer

outstanding examples of coordination of independent forest-products industries to produce such items as lumber, pulp and paper, fibreboard, millwork, wood-flour, Pres-to-logs, fruit boxes, and semi-finished specialty pieces, such as tool handles and furniture parts.

The Weyerhaeuser Timber Company, at Longview, Washington, operates three sawmills, two pulpmills, a plywood plant, bark products plant, wood briquette plant, planing mill, and an experimental fibre plant, all using material from its St. Helens Tree Farm.

Garratt (48) reports that the problem of increased utilization of manufacturing waste, and of small, low-grade logs, is primarily an economic one; that this task is generally beyond the individual capacity of most small timberland owners and small mill operators; and that a possible solution lies in the establishment of cooperative activities to facilitate the procurement, harvesting, processing, and marketing of forest products.

Forest Cooperatives

Since three-fourths of the nation's privately owned commercial forest land is in small tracts (161), and since most owners of these properties lack the skill and experience necessary to manage them effectively, the formation of forest cooperatives has been suggested. A few forest cooperatives have been established and have enjoyed a certain success in securing better markets and in providing competent technical services to their members. However, they

seem to lack some of the inherent characteristics, such as a homogeneous product, the opportunity for product differentiation in selling, and at least a partial control of the market, which have made agricultural cooperatives so successful. The long period of production, the common delay of several years between successive cuttings, and the fact that forestry is usually far removed from the work and thinking of the small owner, make it difficult for a forest cooperative to gain and hold such owners' loyalty. Moreover, it is often hard for the cooperative to keep from being regarded simply as "another middleman." Nevertheless, forest cooperatives have rendered an important service to their members, and they may be expected to increase in number and in the scope of their services.

Industry's Program; Tree Farms

The American Forest Products Industries, Inc., a federation of trade associations and individual firms, has undertaken a comprehensive program of conservation education and promotion of better forest management on private lands. This includes (a) distribution of educational material to schools, libraries, and civic groups, (b) preparation of editorial material for the press and radio, (c) sponsorship of "Keep Green" programs for fire prevention, (d) sponsorship of a "More Trees" program for arousing interest and providing ground instruction in better forest management on small woodlands, and (e) over-all guidance of the Tree Farm movement.

A Tree Farm is a privately owned forest dedicated to commercial timber growing, and so certified, after inspection, by the sponsoring agency, usually a member association of the A.F.P.I. In the East and South, sponsorship is often a cooperative venture with the state forestry departments. The owner of a Tree Farm must endeavor to protect his property from fire, insects, disease, and excessive grazing, to harvest his timber so as to assure reforestation, and to furnish information, when requested, on the progress of his Tree Farm.

The philosophy behind the Tree Farm movement has been stated as follows (8):

Managed forests, or Tree Farms, are the lumber industry's objective. There must be a definite end to the supply of old growth, and forests raised under management are the only possible source of raw material when the virgin forest is gone. No reasons appear why an industry based on managed forests should not be as successful as one based on virgin stands. As in any other business, good management is more likely to bring success than any other kind. To protect and administer forest lands that are half productive may be as much of a business error as to run the mill at half its capacity.

By March 1, 1952 there were 3,541 Tree Farms, totalling 24,863,238 acres, in thirty-three states (3).

The program, for the most part, represents a sincere and determined effort toward bringing about good forest management on the land, not by regulation, but through convincing timberland owners of its advantages. Ramsdell (130) reports that while all Tree Farms are not what they should be, the program as a whole justifies optimism and considerable pride in its accomplishments.

CHAPTER III

GOAL OF SUSTAINED-YIELD MANAGEMENT

Sustained-yield management has often been taken to mean such things as simply the opposite of forest liquidation, on a local or a national scale, and management which encompasses selective cutting and "everything good" in forestry. Without more precision than this, use of the term merely invites confusion.

Defining Sustained Yield

Sustained yield is a difficult term to define. There are two general senses in current usage: Sense A, involving a balance of out and growth, and Sense B, involving "continuous production."

Three situations may be distinguished under Sense A: (1) where net growth and harvest are in approximate balance, either by annual or somewhat longer periods; (2) where the same balance exists, but at a level commensurate with the productive capacity of the land, under reasonably good management;¹ and (3) where the balance under (1) or (2) has

¹E.g., (a) U.S. Forest Service, Forests and National Prosperity (162), p. 49: "Under sustained-yield management, the volume of cutting is planned so that, barring catastrophe, there will be annual harvests commensurate with the productive capacity of the land."

(b) U.S. Forest Service, The Management Status

not been reached, but exists as a definite objective.²

Sense A(1) has the merit of being more precise than the others. Sense A(2) invites confusion by bringing in silvicultural objectives as a part of sustained-yield objectives. The present writer feels that the two should more properly be given coordinate and independent places under the broader concept of forest management. Under present conditions in this country both A(1) and A(2) usually have the disadvantage of offering only an ultimate goal for some remote period in the future. Sense A(3) offers a working

of Forest Lands in the United States (160), p. 12: "A mere balance of growth and drain at some low level of productivity does not suffice. The average annual drain should be roughly in balance with growth when reasonably good management is attained."

²E.g., (a) Society of American Foresters, Forestry Terminology (142): "Sustained-yield management [*is*] management of a forest property for continuous production with the aim of achieving, at the earliest practicable time, an approximate balance between net growth and harvest, either by annual or somewhat longer periods." [*Italics supplied*].

(b) U.S. Forest Service Manual, Vol. III, Title 7, Sect. 103.3: "The principle of sustained yield is that timber should be cut from a forest in amounts equal to but not in excess of its replacement by growth. . . . Few areas, however, have trees and stands of different age classes in the right proportions to make complete application of this principle immediately feasible. There is often too much old timber which is making little or no growth or too much young timber which as yet lacks the size necessary for the accumulation of immediately usable growth. Part of the application of the principle is therefore the gradual reduction of any excess of old timber or the retention of some of the current growth as an addition to the stocking. In either case, what is sought is ultimate and permanent stability of yield at the highest level practically attainable. . . ."

goal which may be attained immediately, and it is in this meaning that the term "sustained-yield capacity" seems to be used, in the cooperative agreements so far proposed under P.L. 273, in calculation of the allowable annual cut.

Under Sense B the concept of sustained-yield is separated from any "out-equal-to-growth" requirement, and all that is required is continuous production without serious interruption.³ This concept of sustained yield suffers because "continuous production" may mean either continuous forest growth or continuous forest harvest. The writer believes that the term "sustained yield" should be reserved for use with the various meanings under Sense A, should be definitely tied to a given area of management, as a working circle, and should be kept independent of silvicultural objectives.

³E.g., (a) Hiley (69), p. 223: "This principle [of sustained yield] need not be interpreted in any narrow or restricted sense, and it may be permissible, or even desirable, to cut in any one year, or in a series of years, more timber than is grown in that space of time; areas in which the timber is over-mature or which for other reasons are unproductive may justifiably be felled in the shortest convenient time in order that the land may be made to yield a higher increment; or a period of good markets may be exploited by means of heavy fellings. What the principle of sustained yield does demand is that after timber is felled the forest shall by some means be regenerated. . . ."

(b) Chapman (30), p. 59: ". . . a sustained yield requires, first, that reproduction be established on out-over areas, and second, that as far as possible the standing timber or forest capital be cut in such quantities that no complete break in yield will occur which is serious enough to disrupt the dependent industries and communities and change the habits of consumers of wood." And p. 335: ". . . sustained yield signifies reasonable stabilization of yield over the present rotation, and does not demand equal annual cuts equivalent to annual increment. . . ."

Sustained Yield and Conservation

Conservation as a national objective requires that our resources be used wisely, without undue waste, and with proper regard to the needs of future generations.

As a young nation strikes out to expand its economy and develop its resources, there may be no need for such a thing as forest conservation. A nation still in the pioneering stage may regard its forests as a storehouse of wealth to be liquidated as fast as possible so as to provide for other needs of the people. It is only when accumulated drains have reduced the timber supply to a point where deliberate effort is required to replenish it that serious attention is given to the principle of sustained yield. It is only then that a nation endeavors to bring out into balance with growth, and growth into balance with demand, to provide a timber supply adequate for the optimum satisfaction of human wants.

A national objective of sustained yield of the forest resource might conceivably require only that the proper amount of land be kept in forest production. This would permit any timber to be cut so long as it was mature, and so long as regeneration was secured. However, the term "sustained yield" loses most of its meaning unless tied to a given area of management.

Forestry and Economic Theory

Under competitive price theory, market forces determine the allocation of resources among different fields of economic activity. Two factors should be noted,

however, which interfere with operation of these competitive forces in forestry, namely, (a) the extreme length of the production process, often a hundred years or more, and (b) the indefinite maturity date of the timber crop, permitting its time of harvest to be varied over a wide range, depending on market conditions.

These two factors may cause a market disequilibrium to persist over fairly long periods of time, with changes in demand met, not by increasing or decreasing the total amount of effort devoted to forestry, but simply by over-cutting or undercutting of the growing stock. Zivnуска (205) emphasizes that this short-period adjustment typically runs counter to what is required in the long-period adjustment. That is, when demand declines, inventories of uncut growing stock accumulate, while the long-period adjustment would require a reduction in the growing stock; similarly, when demand increases, increased cutting tends to deplete the growing stock whereas the long-period adjustment would require an increase in growing stock. This analysis applies especially to so-called "wild" forests, either virgin or second-growth, which have grown up without benefit of any conscious human effort, save perhaps protection. Now that industry is beginning to recognize values in cutover land it may be admitted that fluctuations in demand will, to a certain extent, cause corresponding fluctuations in efforts toward planting or otherwise securing regeneration, and toward increasing volume- and value-production on areas already stocked. The essential point remains, however, that

changes in demand have their primary impact on the already existant inventory of mature timber, and that this is an inverse relationship.

The long period of production provides one of the traditional justifications for government effort in forestry, either directly as a producer of forest crops, or indirectly as a guiding hand in private forestry, which otherwise, it is reasoned, might not be sufficiently interested in such a long-term venture as to provide an adequate timber supply for the nation. This argument, however, is beginning to lose weight as forest industries become more concerned over future security of their plant investment, more conscious of long-range opportunities for profit, and more actively aware of latent values in immature stands.

Technical Forest Management; Working Circles

It has been indicated that sustained-yield management should involve organization of forest properties into clearly defined units of management. Any such area, managed under a single plan, may be termed a working circle. However, the term "working circle" is more often used to describe a forest area tributary in a more or less "natural" way to a central marketing or manufacturing center, without any requirement of unified ownership or control.⁴

⁴Forestry Terminology (142) uses the terms "administrative working circle" and "economic working circle" to distinguish between these two concepts.

"Natural" determinants of a working circle may include topography, transportation routes, and tradition (i.e., a social orientation toward existing communities).

On the national forests working circles are administratively determined, considering, besides these "natural" factors, such things as timber-growing potential and any established requirements for community support. It is important that the working circle be large enough to permit a sustained yield of forest products under efficient logging operations, and at the same time small enough to permit adequate administration. A minimum size of from 15,000 to 500,000 acres, depending on conditions, has been suggested for working circles on the national forests (64). It is often possible to establish working circles around individual sawmills and their dependent communities, with special products such as pulpwood or peeler blocks going to an outside mill which might draw from several working circles. On the other hand, it is conceivable that working circles could be established around individual logging communities, with logs from two or more such working circles going to a single processing plant. In so far as possible the Forest Service wishes to encourage stable communities, and to avoid alternate periods of high and low levels of economic activity over sizeable areas. A possible criterion is that within any one working circle there should be no logging operation beyond commuting distance from a permanent community.

The difficulty of most working circles is that the

land within them is usually under more than one ownership, and in such cases it may often appear impossible to apply any organized plan of management unless the various ownerships can be blocked up or somehow brought under a unified control.⁵

The task of forest management for timber production may be considered as having three objectives: (a) a sustained-yield objective, of securing a proper age-class distribution of trees to permit approximately equal annual or periodic cuts; (b) a silvicultural objective, of securing an optimum condition of growth, stocking, quality, and reproduction, of the most desired species; and (c) a financial objective, of securing optimum value-increment and an optimum rate of return on invested capital. This latter objective means that the less desirable trees whose rate of value-increment is low should be removed to make room for those promising a high value-increment.⁶

Forestry as a Business Enterprise

The forest manager should regard the business management of his forest as no different in principle from that of any other business enterprise. The essential goal is that land, labor, capital, and entrepreneurial skill be

⁵ This applies more in the West, with its rugged terrain and lack of well-developed roads. It is, admittedly, less of a problem in the South and East, where the ground is frequently level and an established network of roads may already be in place.

⁶ Strictly speaking, provided the cost of removal is less than the corresponding return plus the discounted increase in value-increment of the trees that take their place.

combined in optimum proportions or intensities, to secure maximum efficiency and profit in production. Profit maximization calls for additional investment and expenditure so long as the marginal rate of return exceeds that obtainable elsewhere. On the other hand, disinvestment is in order if the marginal rate of return is lower than elsewhere.

Public forests should be managed for optimum beneficial use, with additional investment and expenditure justified the same as in private forestry.

The forest manager should give particular attention to the capital structure of his forest enterprise, and to the age-class distribution of his forest stands. As contrasted to most other forms of enterprise, forestry requires a high ratio of forest capital, or growing stock, to annual cut, or sales. This ratio of "inventory" to sales has been reported as ranging from around 20 to 1 to over 50 to 1 (110). This is a serious drawback to the practice of forestry by many private firms, both small and large, who lack the financial resources to acquire anything beyond a few years' supply of mature timber for their mill.

Other firms, having a large backlog of mature timber, may find it advisable to go through their entire forest rather quickly, taking only the largest and poorest-risk trees, so as not only to salvage what would otherwise be losses if such trees were left, but perhaps even more important, to release large amounts of business capital for use in purchase of additional lands or timber, or for increased protection, road construction, or other improvements.

Sustaining the Forest

This discussion has regarded the forest--the soil and the growing stock--as a productive source of economic wealth. The essential task of forest management is to perpetuate the forest and to manage it wisely for an optimum amount of products and services. The essential task of sustained-yield forest management is to adjust the cutting budget so as to secure a proper age-class distribution and permit approximately equal annual cuts in future periods as well as in the present. Such a view presupposes a ready market for as much as the forest will produce, and regards the forest itself as a self-contained unit of management and of business enterprise.

Sustaining the Sawmill

To practical foresters the above view seems rather restricted and unrealistic. To them, sustained yield on the forest is only half the problem. As practical businessmen they see the unit of production as being not simply the forest, but the forest taken in conjunction with the sawmill, or other manufacturing plant. Hiley (69) has pointed out that independent forest owners are to some extent at the mercy of companies which are favorably placed for using their timber, and that for efficient utilization very close cooperation is desired between the management of forests and management of the mills which use the timber.

In a region where liquidation has been the rule, it may be reasoned that if the timber is to be cut on a sustained-yield basis then the industry dependent on this timber supply

must also be placed on a sustained basis.

A persistent problem of forest industries has been overcapacity in relation to the amount of timber permanently available. To many observers, the problem of setting up individual producing units, for a sustained yield, has been more of an industrial problem of readjustment of plant capacity and design than simply a problem of calculation of the allowable annual cut.

Sustaining the Community

Primary forest industries, oriented toward the source of their raw material, often give rise to forest communities having major dependence on this one resource. Such communities, whose location may be uneconomic for other forms of activity, suffer a great deal when this one resource is depleted. Entire regions may suffer depression from this cause, threatening not only personal discomfort and loss of income, but in addition, disruption of local governmental services and in extreme cases a disintegration of the social establishment. These may be considered public problems, justifying public efforts toward organization and management of the forest resource--especially the public forests--so as to achieve stability in communities so threatened now or in the future.

Thus the goal of sustained-yield forestry may be regarded as more than one of simply assuring the nation's future wood supply, or of contributing toward stable forest industries. In addition, it may be considered a social goal, serving to promote stable and prosperous communities.

CHAPTER IV

STORY OF THE SUSTAINED-YIELD UNIT LEGISLATION

Early Advocates of Cooperative Sustained-Yield Units

No single person can be given credit for originating the idea of cooperative management of public and private timberlands. This concept gradually emerged in the Pacific Northwest as timber-cutting operations moved up into the mountains and into the national forests.

An irregular pattern of land ownership, the result of uncoordinated land disposal under various provisions of the general land laws which were in many respects ill-adapted to their purpose, often interfered with cutting operations and made difficult any long-range planning for forest management. It seemed evident to many persons that in the mountainous country of the West it should be possible for all the timber in one valley or one watershed to be managed as a single unit of operation, irrespective of ownership. Haphazard location and mixture of national forest with adjacent or intermingled private land seemed to prevent any possibility of making sensible plans for sustained-yield management on either the national forest lands or the private lands, taken by themselves.

It was proposed that such lands be combined to form self-contained productive units, sufficiently large to supply

continuously one or more sawmills of efficient size; usually this meant they would each have to cover an area of at least 25,000 acres.

The common practice in the lumber industry of rapid liquidation of private timber and abandonment of the land as it was cut over was recognized as an improper use of the forest resource and a hindrance to the development of stable and permanent communities. In 1917 Greeley (59) stated:

Stable forest ownership might be secured by administering public and private lands as a single holding, publicly controlled as to rate and methods of cutting. Most of the advantages of outright public ownership could thus be assured. The ultimate solution of the whole problem must come through the general practice of Forestry, cutting in each region no more than the current growth of its woodlands. Public regulation of private forest lands will have a necessary and important part in this development. But in the face of many economic, business, and legal obstacles the process must be one of gradual adjustment.

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The public timber should be a stable factor in the situation, not an uncertain one. Public opinion should support a settled policy for its disposal. . . .

This sentiment was reflected in an address made in 1919 by Henry S. Graves (57), Chief Forester of the U.S. Forest Service, who said:

It is possible that where public and private lands are intermingled and economically interrelated, as in the West, a still more far-reaching principle may be desirable--one that would coordinate all forest lands within economic groups so that they can be developed in a way best to meet the needs of the country and the communities. It has already been found necessary to coordinate and handle jointly all forest lands, regardless of ownership, with respect to protection from forest fires. A joining of hands of the public with industry in carrying out and administering the great private resources of timber so as to prevent the present waste and uneconomic over-production and at the same time to insure forest renewal is a distinct possibility. Under such a plan there would be public control of such

features as concern the public welfare, and the industry would handle its part under conditions that would permit full play of individual initiative and enterprise. At the present time the mixed character of ownership tends to prevent an orderly development that builds up and sustains communities.

During the next fifteen or twenty years various forward-looking persons published papers favoring some sort of combined management of these adjoining lands. Prominent among these persons were Burt P. Kirkland, then Professor of Forestry at the University of Washington, and David T. Mason, of Portland, Oregon, an independent consulting forester. These early papers give the impression not so much of being original, independent proposals, as of being simply extensions of informal discussions that were probably going on in many quarters during that period.

As far as any single area was concerned, the need for good forest practices was often recognized, but the need for permanent management of these lands, taken as a whole, was still a rather remote one in the minds of most persons. Sawmills everywhere were still cutting on a liquidation basis, and there was too much virgin timber readily available for many persons to give serious thought to the problem of long-range cooperative forest management.

Development of the Concept

The whole idea of continuous forest production has generally been tied to continuous operation of a given individual sawmill or other wood-using industrial plant. Since most of the existing mills had a large excess capacity in relation to the amount of timberlands they controlled, the

problem of sustained yield was usually one of increasing the backlog of uncut timber available to a given mill, and where the mill was adjacent to a national forest the logical solution was to allocate some of this national forest timber to it.

In 1918 Kirkland (86) stated that while the ultimate ideal would be in each case to get sufficient land under one ownership to support continuously a single mill, where the lands in any such unit were part national forest and part privately owned some sort of cooperative agreement would provide the best method of achieving good forest management pending the time ownership could be transferred in whole to one party or the other. Recognizing the element of monopoly in any such agreement for long-term allocation of public timber, he offered the suggestion that perhaps some sort of public or quasi-public corporation could be formed to purchase the assets of the cooperating private mill and to purchase and manufacture the national forest timber (87).

In 1927 D. T. Mason (108) outlined a proposal whereby permanent "cooperative sustained-yield units" would be established under a contract in which the government would sell its timber to the private operator, to be cut as it was reached in the ordinary course of operations, and in which the private operator would in good faith manage his own private lands on a sustained-yield basis. It was his feeling that the federal government should encourage this form of cooperative management not just in a few particular locations, but should make all of its timber available for such cooperative units.

The same author, in collaboration with Donald Bruce (109), further developed the possible operation of such a plan, to include accomplishment of mergers of ownership of private timber and mills as completely as practicable in any one unit into a single company, whose contract with the government would provide for (a) sale to the "company" of national forest timber within the unit, (b) limitation of the maximum annual cut for the entire unit to its sustained-yield capacity, (c) cooperative protection of the land against fire, insects, and disease, (d) reforestation of cutover land, (e) a fifty-year contract period, and (f) the charging of "reasonable" stumpage prices for the public timber, to be readjusted periodically.

As more and more of these units were established, on which cutting would be limited to the sustained-yield productive capacity of the land, it was anticipated that the then chronic "over-production" of timber would be corrected and that the resultant increased prices expected to occur would have a beneficial effect on the industry as a whole. It was reasoned that any increased price to the consumer as the result of thus limiting production could properly be considered the fair price paid for assurance of a future timber supply. .

However, it is by no means evident that any reduced over-all production would occur, for any reduction in cutting on cooperative units might be offset by increased production elsewhere, and the hope of higher prices can perhaps be regarded simply as wishful thinking.

In 1934 the Oregon Planning Council published a report (119) of its Forest Management Committee rejecting the plan of pooling ownerships in a single corporation, favoring instead some form of cooperative association. Such associations would operate under state charter, somewhat after the pattern of a drainage district or irrigation district, with their directors given power to enforce rules and decisions on non-cooperating owners within each unit.

The above report adds:

The size and location of these units will not necessarily be influenced by ownership of manufacturing facilities, and the component parts of a unit may not necessarily be contiguous. In other words, we are dealing with the management of forest land for the production of forest products. . . . Not infrequently the production of forest products from a sustained-yield unit will be tied directly to one or more industries in a definite location and these manufacturing facilities will be an integral part of the plan for a given area. It is not essential, however, that the manufacturing point be definitely located or tied in with the sustained-yield unit. . . . Competition between different manufacturing plants in the utilization of the sustained-yield output might be desirable rather than objectionable. Frequently, as in the Columbia and Willamette river territory and in many other locations, several different sustained-yield units may contribute to the supply of forest products needed to sustain large groups of manufacturing facilities already established. Ordinarily the component parts of a unit would be contiguous, but to fully promote the purposes of sustained-yield forest management the proper balance of age classes or other factors might call for scattered component parts to make up a natural sustained-yield unit.

The 1936 meeting of the Society of American Foresters had a general session on integrating private and public lands for sustained yield (24, 146), at which the need for cooperative units, and some of their problems, were discussed.

In 1938 the Pacific Northwest Regional Planning Commission of the National Resources Committee (122) reported:

It is generally considered impracticable by most of the industry under present conditions to own more than twenty years' supply of timber; most of them own much less. But sustained-yield management requires a timber supply which will last long enough to permit new growth to replace what is cut, and, according to local conditions, this may require from forty to eighty years' supply of old-growth timber. . . . It is desirable, insofar as possible, to bring about conditions which will make it practical and economical for more of the industry and non-operator owners to continue to own timberland and manage it on a sustained-yield basis. Nevertheless, there will be many instances where private owner-operators will not be able to carry sufficient land for this purpose. This condition, and the large amount of publicly owned forest land in many of the prospective sustained-yield units, points to the desirability of cooperation between private and public owners in setting up and managing such units. Such cooperation will require careful planning and long-term contracts between the several parties to secure the necessary continuity of policy. . . .

Although these proposals arose primarily as an effort to bring better management to the forest, they all recognized social benefits that would accrue through assuring stable and permanent communities centered around the mills, and they further recognized the sustaining effect such communities would have on the regional economy.

Emergence of Legislation

The substance of Mason and Bruce's recommendations was included in the report of President Hoover's Timber Conservation Board, a fact-finding body appointed to look into the then serious situation of losses and business failures in the lumber industry. Although the main effort of the Board was directed toward finding ways of restricting "over-production" in the lumber industry, it did recommend:

. . . that the owners of privately owned timber seriously study the possibilities of sustained yield and that the managers of the timber publicly owned or controlled, wherever in their judgment it is in the public interest, manage such timber in cooperation with

private timber so as to bring a maximum of private timber under sustained yield management. Suitable legislation should be enacted wherever and to the extent necessary to permit effective cooperation for this purpose.¹

Article X of the N.R.A. Lumber Code called for a conference of public and private industry representatives to prepare a broad program of public and private action to deal with American forest problems. Among the recommendations of the ensuing conference was the following statement:

The disposal of Federal and State timber, to be of the highest use, must contribute to sustained-yield production, including the participation therein of private forest lands, through supplying raw material for those private operations which may have the desire but not otherwise the means to sustain ownership and productive management of forest lands.

Such a policy may require in any unit of public timber a sustained yield, or an over- or under-cutting program temporarily. More specifically it is recommended that . . . first, all forests owned or controlled by the public be managed on a sustained-yield basis, if not already so managed, and, second, such public forests be managed in cooperation with the private forests so as to place a maximum of private forests also on a sustained-yield basis.

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To this end, public forest acquisitions should be designed . . . to promote the maximum development of sustained-yield forest management on both public and private lands. This should be sought through public acquisition in areas where through the forms of cooperation recommended in connection with the disposal of public timber, sustained yield can be brought about on economic units comprising both public and private holdings.²

¹ Cited by D.T. Mason in statement appended to U.S. Congress, Senate Committee on Interior and Insular Affairs, Sustained Timber Yield (155).

It is to be noted, however, that an earlier report of a sub-committee of the Timber Conservation Board (189) contained a strong statement against cooperative units, by Graves.

² Cited by D.T. Mason in Sustained Timber Yield (155).

The N.R.A. conference further recommended that the Secretary of Agriculture appoint a joint committee of public and industry representatives to take action on its recommendations. This joint committee was appointed, and met frequently from 1934 to 1937. As part of its work, it prepared bills for congressional enactment, out of which grew the 1944 legislation (P.L. 273).

On recommendation of this joint committee, a Forest Conservation Conference was held in Washington, D.C., in 1937, composed of representatives from the lumber industry, conservation societies, forest schools, and various federal and state agencies. This conference gave consideration to many forest problems, and among its recommendations was one for legislation authorizing cooperative sustained-yield units.

Studies by the Washington State Planning Council in the mid-1930's (190, 191) recommended joint management of public and private lands for sustained yield, partly to overcome complexities of intermingled ownership, and partly, by having the federal government take over a backlog of mature timber, to improve the financial position of operators so they could operate at a sustained-yield rate.

Meanwhile, cooperative units were authorized on O. and C. lands by the Act of August 28, 1937. However, this came more as part of a general revision of policy to provide for permanent management of O. and C. lands and for an improved basis for payments to counties in lieu of taxes, than as a specific authorization for cooperative units per se.

The 1938 report of the Pacific Northwest Regional

Planning Commission, previously noted (122), recommended a vigorous federal program of forest acquisition, primarily of tax-reverted outover lands within prospective units, "in order to make such cooperative sustained-yield units more widely practicable through establishment of a reasonable balance between public and private forest ownerships within each unit."

A Joint Congressional Committee on Forestry was formed in 1938. This committee held hearings throughout the United States and in 1941 submitted its report (154), which included in its recommendations the establishment of cooperative sustained-yield units along the lines which have been discussed.

In 1942 the Pacific Northwest Regional Planning Commission (123) recommended a system of sustained-yield units embracing all or at least a major part of the commercial forest land in that region, and indicated that most of such land should have been definitely tied into sustained-yield operating units within ten years.

The legislative history of P.L. 273 began in 1936 when Senator McNary of Oregon introduced a bill to amend the Clarke-McNary Act of 1924, in which the proposed authorization for cooperative sustained-yield units was buried among other provisions to extend federal cooperation in fire protection and research.³ A provision was also included to authorize sustained-yield units consisting wholly of federal land. This bill died in committee.

³S. 4507, 74th Congress, 1936.

In the next Congress (the 75th Congress, 1937-38), a separate bill was introduced to authorize sustained-yield units, with similar wording to the relevant portion of the previous bill. There was also a separate bill to authorize sustained-yield units on the Deschutes National Forest and the Fremont National Forest, in Oregon. These bills, and the previous one, pertained only to the national forests; timberland under jurisdiction of other government departments was not included. These bills likewise died in committee.

The basic sustained-yield unit bill was reintroduced, with very little change, in each of the next three Congresses. In its final form it authorized sustained-yield units on lands under jurisdiction of the Secretary of the Interior as well as the Secretary of Agriculture. In the 78th Congress, after receiving a favorable report by the House Committee on Agriculture, it was passed by both houses without debate and became law on March 29, 1944.

State Legislation

Even before enactment of P.L. 273 both Washington, in 1939, and Oregon, in 1941, adopted legislation authorizing commitment of state lands to sustained-yield units under cooperative agreements with other landowners. At the present time, however, the rapid progress of these two states in managing state-owned forest lands, along with a strong reaction against the growing power of the federal government in general, seems to indicate that these states now have no intention of participating in federally-dominated cooperative units.

CHAPTER V

APPLICATION OF PUBLIC LAW 273

There were early hopes for widespread application of P.L. 273. On enactment in 1944 it was described as a "sustained-yield magna charta," "skillfully drawn to meet a complex situation" (55). Two years before its enactment Wohlenberg (195) reported that the Simpson Logging Company, the St. Paul and Tacoma Lumber Company, and the Soundview Pulp Company were interested in cooperative units, and that the Biles-Coleman, Edward Hines, and J. Neils companies were already accomplishing cooperative sustained yield on an informal basis. Sustained-yield units were a main topic of discussion at the 1946 annual meeting of the Western Forestry and Conservation Association, where Horning (73) estimated that 60 percent of the O. and C. lands were likely to be committed to cooperative units. In 1948 the Forest Service (159) tentatively estimated that from 20 to 25 percent of the total commercial forest area of the national forests might eventually be included in cooperative and federal units. In that year about a hundred applications, formal and informal, were on file (56).

In 1949 Kirkpatrick (88) stated that cooperative units in the Pacific Northwest probably would not involve more than one-fourth of the allowable annual cut on national forests of that region, perhaps much less, and that except

for a few opportunities in California and the northern Rocky Mountains, extensive establishment of cooperative units in other regions did not seem likely. He estimated that federal units might ultimately cover a maximum of 30 percent of the allowable annual cut on national forests in the Pacific Northwest and California, and a small amount in the Southwest.

At the present time neither the Forest Service nor the Bureau of Land Management is actively promoting any cooperative units, primarily because of the large amount of opposition which developed in the 1948 hearings.

Cooperative Units

Shelton Cooperative Sustained Yield Unit.--Two days after passage of the 1944 act, application for a cooperative unit was made by the Simpson Logging Company, of Shelton, Washington. The mills of this company provide the principal industrial support for the communities of Shelton and McCleary, whose populations in 1946 were estimated at 4,700 and 1,400, respectively (171). Shelton is the county seat and principal community of Mason County, Washington. The Simpson Logging Company had been operating for about forty years, and had only about ten years' supply of timber left on its own lands. The president of the company has stated that without the cooperative agreement committing to it the adjoining national forest timber, they probably would have been forced to close their plant at McCleary and reduce their operations at Shelton by about two-thirds. In his words (90), "On the first occasion of our having not been a successful

SHELTON

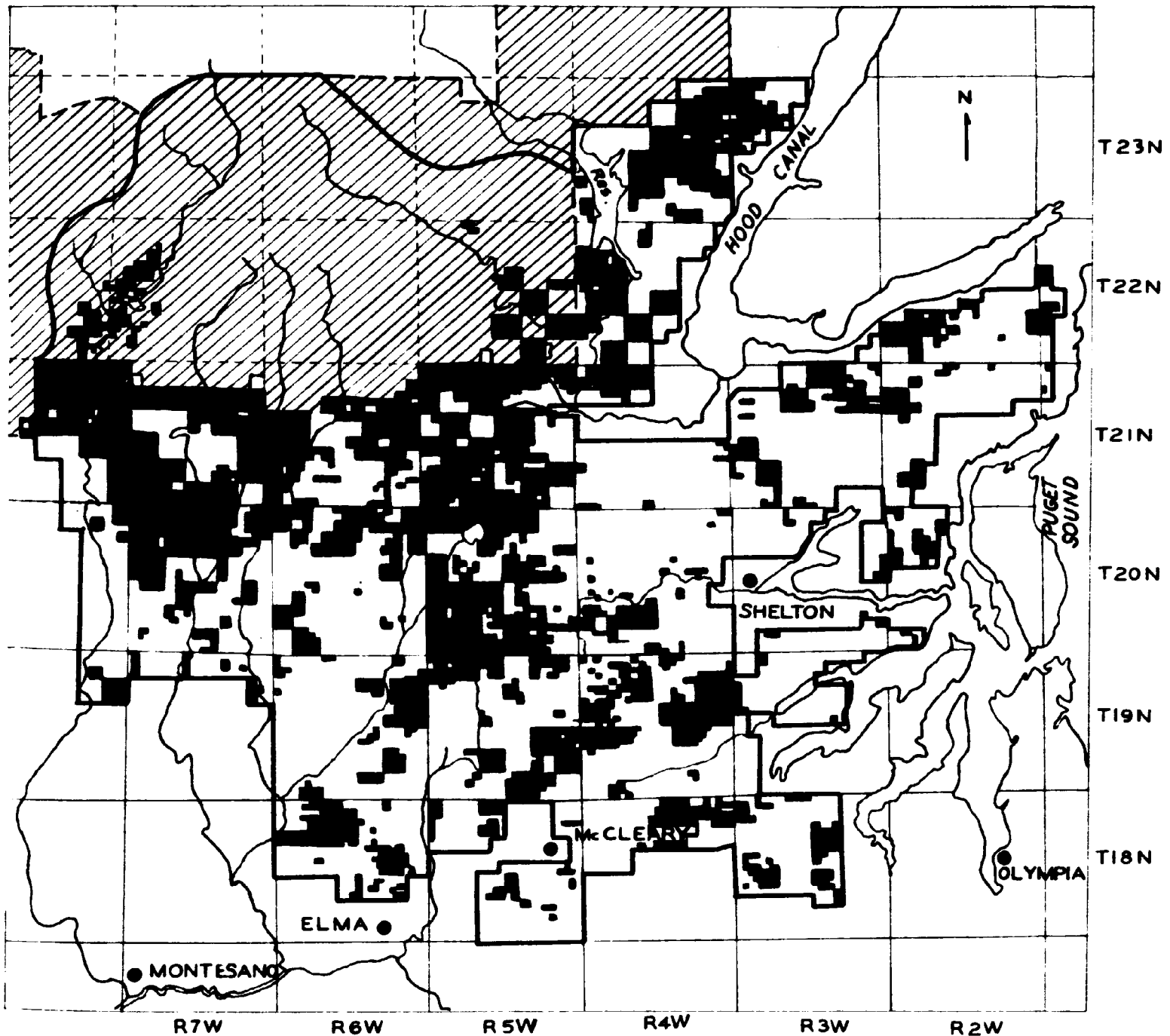
COOPERATIVE SUSTAINED YIELD UNIT

WASHINGTON

 OLYMPIC NATIONAL FOREST

0 6
MILES

 SIMPSON LOGGING COMPANY LANDS (1945)



bidder for Government timber from the national reserve in the Shelton working circle, we would then immediately start the liquidation of our last sawmill. In this event we would have in the area only the small softboard mill operating from such cordwood as we could obtain from our second-growth lands."

The agreement with the Simpson Logging Company was signed on December 12, 1946. It covers land and timber as indicated in Table 3. Its terms may be summarized as follows:¹

TABLE 3
LAND AND TIMBER COVERED IN SHELTON
COOPERATIVE SUSTAINED YIELD UNIT

Land Covered	Area, Acres	Percent of Land	Percent of Merchantable Timber (b.f. Volume)
National Forest Land	111,466	41.2	81.8
Simpson Logging Co. Land	<u>158,760</u>	<u>58.8</u>	<u>18.2</u>
	270,226	100.0	100.0

1. The duration of this agreement is to be 100 years, from Jan. 1, 1947 to Dec. 31, 2046.
2. The rate of cut is set at an average of 100 million board feet per year for the first ten years, and is to be determined every ten years thereafter by formula,

¹What follows is the writer's condensation of the original text of the agreement. It is obviously open to the criticism that any change or omission from the original wording may alter the meaning originally intended. For an exact statement of the terms and conditions of the agreement reference must be made to its complete text, which is contained in references (155) and (171).

which is estimated to permit an allowable annual cut of 90 million board feet from 1957 onward. When major cutting operations shift to second-growth stands, consideration will be given to the adoption of a formula that will more adequately meet the forest management requirements which prevail at that time. In any five consecutive years cutting will comprise not less than two-thirds of the volume budgeted for that period, and not more than 60 percent of the total amount allowed during the decade for which the cut has been calculated.

3. The Company is given the opportunity to buy national forest sawtimber at its appraised value, in such amounts and at such times as will be determined by the Forest Service in accordance with cutting plans established as provided in the agreement. Material from salvage or thinning operations will be offered first to the Company, then, if not taken by the Company, to other operators, who shall have the privilege of removing it over any roads within the unit controlled by the Company or the Forest Service, under terms and conditions set by the Forest Service.
4. The appraised price at which national forest timber will be offered will be determined by appraisals made according to standard appraisal principles and methods currently in use by the Forest Service at the time they are made. Appraisals will include consideration of the quality of the timber and analysis of operating costs and lumber or other product prices in the region, and shall include an equitable margin for profit and risk.
5. In the event of failure of the two parties mutually to agree on rate and methods of cutting, the plans and methods of cutting prescribed by the Chief of the Forest Service will be accepted and used.
6. On its lands committed to the agreement the Company will permit no grazing or other use incompatible with the objective of growing merchantable timber, without approval of the Chief of the Forest Service.
7. Standards for fire protection and slash disposal on Company lands shall at least equal those on national forest lands. In the event of failure to agree on such plans the decision of the Chief of the Forest Service shall control.
8. If insect and disease control is deemed necessary, the Company will modify its logging plans so far as practical to remove infected trees and will, if economically feasible, adopt such other accepted control measures as will prevent the spread of epidemic outbreaks. The Forest Service will exert every reasonable effort to secure public assistance to combat the spread of the epidemic.

9. If natural restocking is not obtained on lands of site quality III or better, artificial reforestation is required by planting of nursery stock or other means, to be done by the cooperator owning the land in question, and in accordance with standards currently employed by the Forest Service on similar national forest land.
10. Roads built by the operator, which provide access to national forest land, shall be made available for such degree of public use as in the judgment of the Chief of the Forest Service are consistent with local circumstances and the objectives of the agreement. The road plan will be jointly prepared, and in the event of failure to agree on the provisions of such a plan, where crossing or access to national forest land is involved, the decision of the Chief of the Forest Service shall control.
11. The Company shall maintain at Shelton and McCleary or within a ten-mile radius thereof sufficient primary manufacturing plant capacity to use as a minimum 80 percent of the forest products removed from the cooperating lands, and a volume at least equivalent to that percentage of the total volume removed annually shall be processed in those plants.

Development of facilities for more complete utilization and refinement of the product shall, in so far as it is economically possible, keep pace with advances made in this field by the lumber industry of the region.

In the provision of additional major facilities for manufacture or refinement of forest products yielded by the cooperating lands, locations either at Shelton or McCleary or within a ten-mile radius thereof will be selected and principal manufacturing or remanufacturing plants will not be established elsewhere.

Although it shall be the responsibility of the Company to see that adequate wood-using plants are built, maintained, and operated for the conversion of the raw forest material harvested from the cooperating lands, this responsibility, if the Company does not find it expedient to construct and operate the plants, may be redeemed through collateral arrangements between the Company and the owners or operators of manufacturing facilities. In this event the Company shall to the full extent of its ability regulate the size, type, location, and operation of such plants in accordance with the terms and objectives of the agreement.

12. It shall be the Company's obligation, economic conditions permitting, to distribute its operations so that current employment opportunities in Shelton and McCleary will not be diminished.

13. The Forest Service may withdraw any national forest land needed for other specific public uses, including recreation; the Company may withdraw its land for a higher use, but only with approval of the Forest Service. It is not expected or intended that reservations made for these purposes will sufficiently reduce the out of the unit to appreciably affect employment or community stability.
14. Any additional lands acquired by either party within the unit shall come under the agreement.
15. Either party may make formal complaint to the other. Decisions of forest officers shall be final unless appeal is taken within a reasonable time. Any decision appealed shall be reviewed by the immediate superior of the officer by whom the decision was rendered, in the following order: Forest Supervisor, Regional Forester, Chief of the Forest Service, and Secretary of Agriculture.
16. The agreement shall be binding upon the successors and assigns of the cooperators.
17. The agreement may be amended or terminated by mutual consent.

The Shelton agreement has been in effect for five years, and its operation has generally been considered highly satisfactory. The Simpson Logging Company has installed a large fibreboard plant at Shelton, and with their permanence assured the communities of Shelton and McCleary have made many civic improvements in the form of new homes, streets, utilities, public buildings, and commercial establishments.

Proposed Kootenai Sustained Yield Unit.--Upon passage of P.L. 273 the Forest Service made extensive study of the desirability of establishing a cooperative sustained-yield unit with the J. Neils Lumber Company, of Libby, Montana.²

²As a matter of fact, an informal cooperative agreement, or "gentlemen's agreement," had been signed in 1943 (89) by representatives of the Forest Service, the J. Neils Company, and the State Forester, which declared a

Libby is the county seat and principal community of Lincoln County, Montana. Within the same county, and just eighteen miles to the west, is the town of Troy. These communities had populations in 1940 of 1,837 and 796, respectively (179). Beginning in 1906, four large sawmills had been in operation in the county, but by 1929 they had all closed down, for one reason or another, except the mill of the J. Neils Company at Libby, with a daily capacity of 150,000 board feet per eight-hour shift. In spite of the activities of these earlier mills, much of the forest resource of Lincoln County remains untapped. Troy had previously had a large mill, but in 1945 its source of income was mainly the Great Northern Railroad (Troy is a division point on

desire to stabilize the forest industry of the county by assuring a permanent supply of timber to the wood-using industries then located there. It estimated that from the combined lands enough timber was available to maintain an annual cut of about 55 million board feet at the Company's mill, and added: "Consequently, it is not desirable to encourage installation of additional mills in the unit except in some cases small mills cutting chiefly species other than pine."

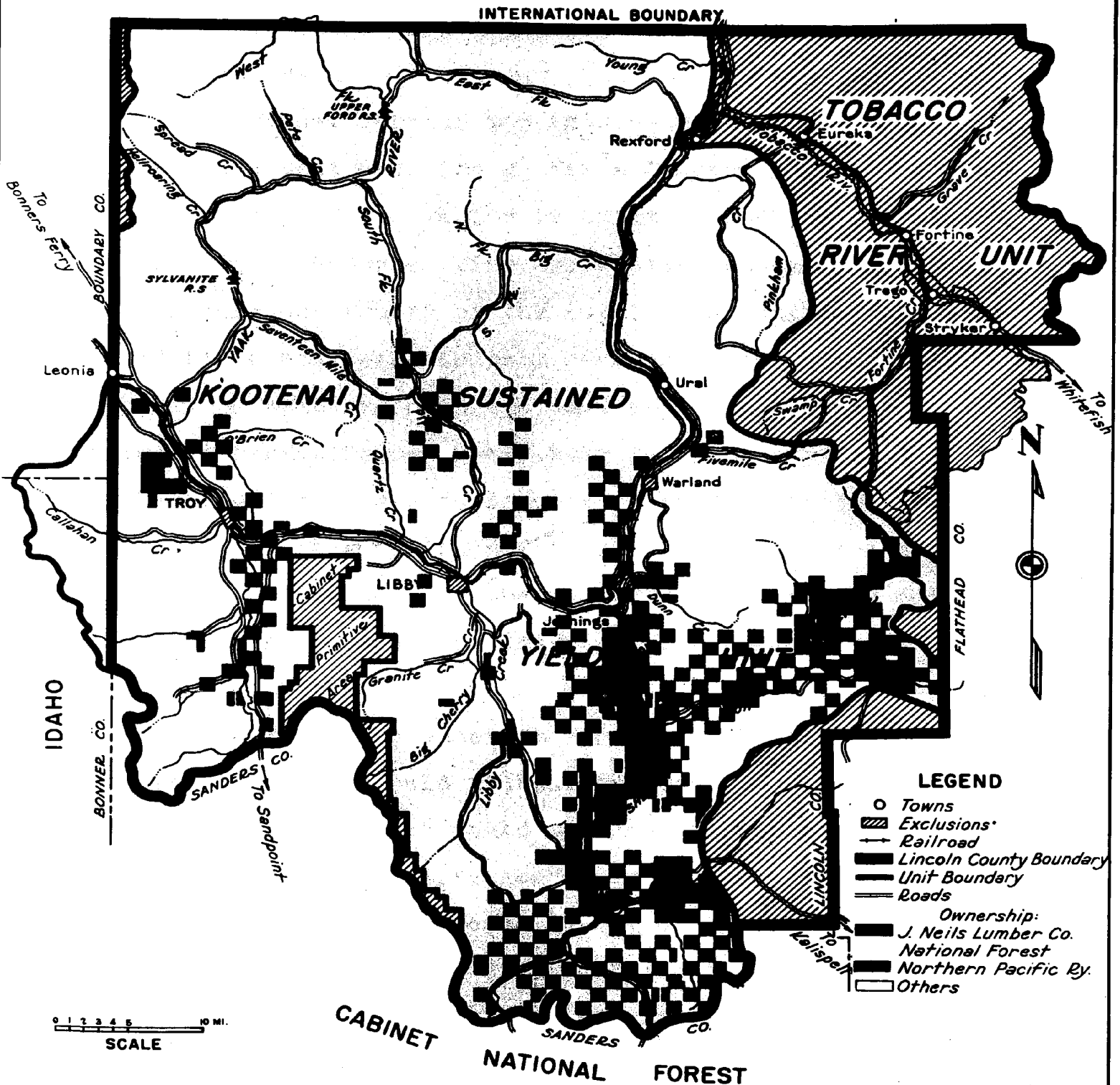
The Company agreed "to cut its timber selectively in accord with agreed-upon silvicultural practice, and to protect and maintain its forest lands in good productive condition. . . ."

The Forest Service agreed to "offer timber for sale from time to time, at such times and in such locations and quantities as will best coordinate the cutting of private and public timber within the limits of the allowable annual cut. . . ."

The State Forester agreed that new mills within the area would not be encouraged to operate on state timber, but that all applications for the purchase of timber would be considered in compliance with the law.

So far as the writer knows, this agreement is still in effect.

LINCOLN COUNTY - MAP 3 **INFORMATION CONCERNING PROPOSED** **KOOTENAI SUSTAINED YIELD UNIT**



the railroad), the E.E. Drury & Sons pole yard, and a few small forest operators. Since that time the Drury & Sons pole yard has gone out of business, and a new mill, with a daily capacity of 25,000 board feet, has been established in Troy. However, in 1951 this mill was purchased by the J. Neils Company.

The Forest Service was interested in establishing a cooperative unit with the J. Neils Company because (a) the forest industry of the region is built around the two high-value species, ponderosa pine and western white pine, which comprise only one-fourth of the total merchantable volume, much of it in the Neils Company ownership, and which generally must be combined with the more abundant secondary species if harvesting of the latter is to be profitable; (b) planning for year-long logging operations in the area could hardly be accomplished without taking into account the land of the J. Neils Company, which includes the majority of the more accessible winter logging chances; (c) failure of the J. Neils Company to be the successful bidder for national forest timber under the traditional method of competitive bidding could ultimately result in closing of its mill at Libby, which would be a major economic calamity for Lincoln County; and (d) such a long-term assurance of cutting rights on the national forest would encourage the J. Neils Company to make additional industrial investment for increased utilization of the forest, thus adding substantially to local employment and community stability.

During 1945 a sociological study was made by

H.F. and L.C. Kaufman (81) of the potential effect of such a cooperative unit on the local social and community structure. This study recommended (a) that efforts to achieve community stability include integration of the forest objective [i.e., "sustained yield"] with broader industrial and social objectives;³ (b) that additional planning, much broader than the assuring of one plant of the necessary raw materials, be undertaken, before any decision on the unit be made; (c) that a study be made of the over-all pattern of industrial organization most likely to survive in the area; (d) that additional attention be given to the desirability of encouraging a stable timber industry in Troy; (e) that the public be given a greater share in determining forest policy, rather than for this to be worked out chiefly or entirely by the Forest Service and the one large operator; and (f) that more emphasis be placed on the public-policy function of Forest Service activities.

The more liberal view of the above report, that perhaps several operators would be more desirable than one, was challenged by Walter H. Meyer, Professor of Forest Management at the Yale School of Forestry, who stated that the difficult character of the logging chance, the neces-

³(a) The industrial objective: maximum local manufacturing and employment, within the limitations of raw materials, costs of production, and markets; (b) the social objective: democratic determination of forest policy, so that the best interests of all major groups in the community be served and the rewards from the forest be equitably distributed among those dependent upon it.

sity of balancing winter and summer logging, the necessity of logging high-value species along with low-value species, the necessity for cutting private timber in the unit during depression periods, the greater opportunities for increased utilization in a large mill, and the necessity, in the interest of community support, for efficient, well-financed operation, all pointed to the desirability of allocating the national forest timber to the one large operator present (112).

The Forest Service proposal included (a) restriction of timber sales under the cooperative agreement to cover only sawtimber;⁴ (b) establishment of a federal unit covering the same area as the national forest lands committed to the cooperative agreement, to provide for competitive sale of poles and their processing in the dependent communities of Libby and Troy;⁵ (c) reservation on national forest lands of posts, shingle bolts, pulpwood, and other minor products, for competitive sales; (d) reservation of an average of 6 million board feet of the allowable annual cut of sawtimber on the national forest lands for competitive sales to small

⁴Except where, in the judgment of the forest officer approving the sale, other associated timber should be removed concurrently.

⁵The Forest Service had previously denied two requests for a federal unit (for all products, including sawtimber) to stabilize the town of Troy, because there was in Troy at that time no prospect of a stable operator who could assure dependable community support from harvesting the character and amount of timber that was felt could be made available to it. See Kootenai National Forest, Management Plan for the Kootenai Sustained Yield Unit (168).

mills;⁶ (e) the requirement that the J. Neils Company construct in Troy a small band mill with an annual capacity of 10 million board feet, and operate this mill the same number of days each year as the mill at Libby;⁷ and (f) provision for public recreational use of company lands along with national forest lands, under jointly prepared recreation plans.

Area of the Kootenai Sustained Yield Unit would be 1,376,000 acres [or 2,150 square miles], composed of approximately 88 percent national forest land and 12 percent land of the J. Neils Company.

The agreement was to run for sixty years. This period represents the estimated adjustment period required to place the forest in a thrifty condition, with a more normal distribution of age classes, and covers the period of the first cut in most of the mature and overmature stands within the area.

The proposed cooperative agreement further differed from the Shelton agreement in that (a) the Company would not be allowed to purchase national forest sawtimber from outside the unit for manufacture within the unit; (b) the Company

⁶This would be composed mostly of the less valuable species, and was reported as more timber than such mills had out in the past.

⁷The Forest Service considered that the community of Troy would benefit most if any new mill there were to be constructed by the J. Neils Company, because this company owned a majority of the private forest land in the Troy area, had an advantage in winter logging chances, and could integrate operations and marketing activities with those of its mill in Libby.

would maintain the Troy mill and sufficient manufacturing and remanufacturing plant capacity at Libby to process the entire volume of sawtimber removed under the terms of the agreement; (c) additional major facilities for manufacture or refinement of such sawtimber could be provided by the Company or through arrangements by the Company with other parties, but would be located in Libby or Troy, or in such other locations as might have the approval of the Chief of the Forest Service; (d) grazing would be permitted on Company lands committed to the agreement under standards of range management and use applicable to comparable areas of national forest land; (e) financial obligations on the part of the Company for planting, hazard reduction (other than logging slash removal), and stand improvement work would be limited to a reasonable level, but in case of disagreement the Chief of the Forest Service would make the final decision as to what a reasonable level would be; and (f) if and when an appeal from the Company against any administrative action or decision of the Forest Service were carried to the Secretary of Agriculture, the Company might request the appointment of an advisory board of three men to review the problem and make appropriate recommendations, which would be considered by the Secretary.⁸

A public hearing on this unit was never scheduled because (a) residents of Troy were generally dissatisfied

⁸ These men would be qualified logging operators, logging engineers, or technical foresters, of whom one would be selected by the Company, one by the Secretary, and the third by the other two.

with the terms of the proposal; (b) substantial public opposition was developing in Oregon, and other parts of the West, to the principle of cooperative units in general; and (c) the U.S. Army Corps of Engineers proposed a major dam on the Kootenai River eleven miles east of Libby, which would necessitate major changes in the plan of forest management and the pattern of timber sales, and more important, which would bring major changes to the community itself, in the form of sharply increased population, payrolls, and business opportunities, and a possible influx of new industries entering in response to increased availability of electric power.⁹

Proposed Woodleaf Cooperative Sustained Yield Unit.---

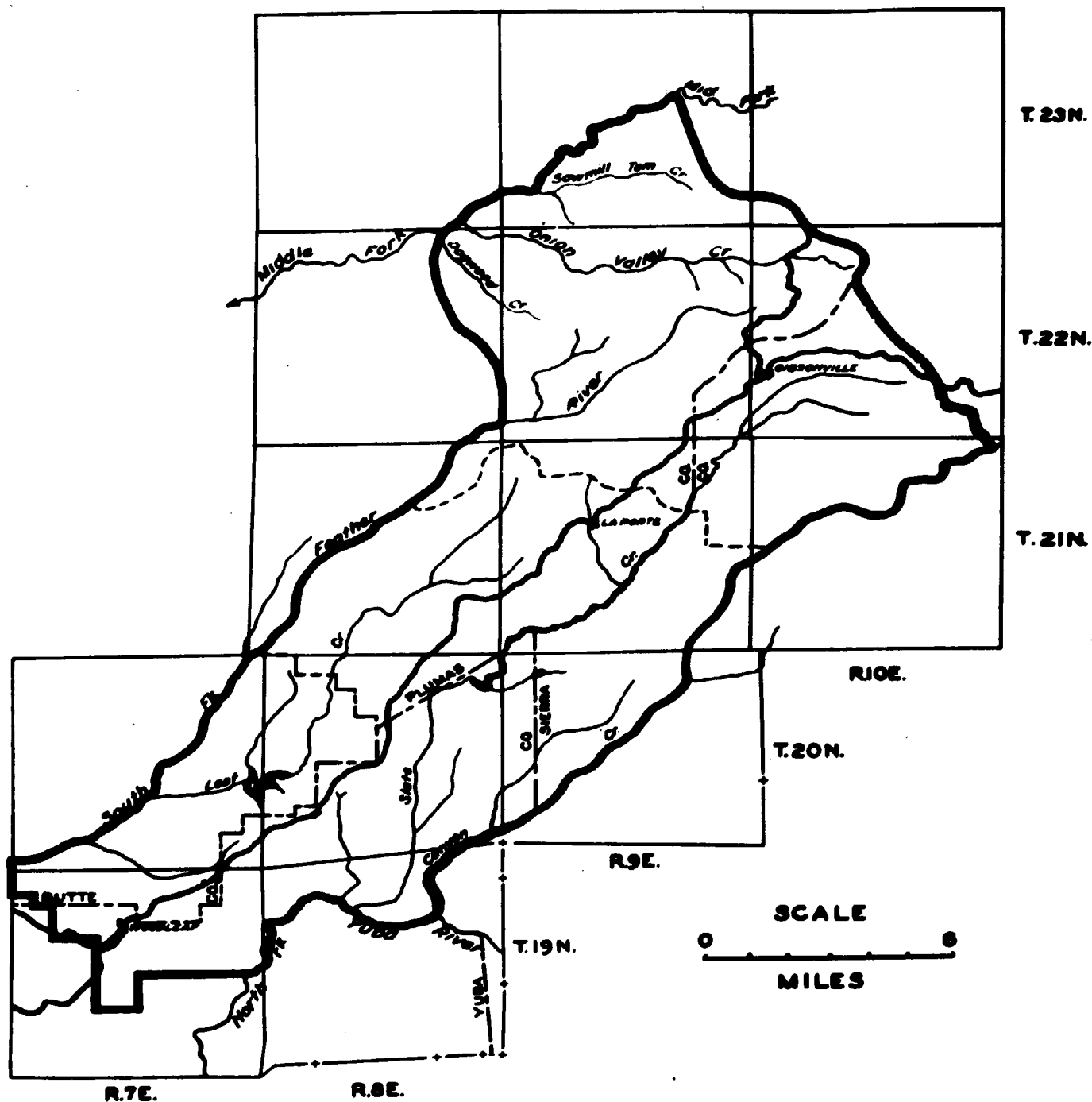
In 1948 the Forest Service proposed establishment of a cooperative unit in the vicinity of Woodleaf, California, and in connection with it a cooperative agreement with the Soper-Wheeler Company, a non-manufacturing company which owned most of the private forest land within the boundaries of the proposed unit. Combined lands of the unit included a total of 106,382 acres, of which 84 percent was national forest land.

Primary manufacture of at least 80 percent of the forest products from the unit was to be done within ten miles of the community of Woodleaf, under an agreement between the Soper-Wheeler Company and the Sacramento Box

⁹The building of this dam was authorized on May 17, 1950, but no money has as yet been appropriated for its construction.

MAP OF PROPOSED WOODLEAF COOPERATIVE SUSTAINED YIELD UNIT

U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE



and Lumber Company. The latter company had held cutting rights on Soper-Wheeler lands for several years. It was already operating a large mill in Woodleaf, employing about 175 men, and a box factory and planing mill in Sacramento, ninety-three miles away, where all of their Woodleaf lumber was processed and shipped (164).

The cooperative agreement followed very closely the pattern of the Shelton agreement, with the following exceptions: (a) the agreement was to run for fifty years, and, after a twenty-year adjustment period, the allowable annual cut would be calculated every ten years by methods currently in use by the Forest Service at the time the calculations were made; and (b) an advisory board might be appointed to review appeals, as in the proposed Kootenai agreement.

Allowable annual cut for the combined lands was calculated initially as 25 million board feet.

A public hearing on this unit was held in Quincy, California, on March 8, 1948, where the proposal met with strong and concerted opposition.¹⁰ After the record of the hearing was reviewed by the Chief of the Forest Service, it was announced that, due to predominant local opposition, the proposed unit would not be established, and the proposal would be officially dropped.

¹⁰ See pp. 102-104.

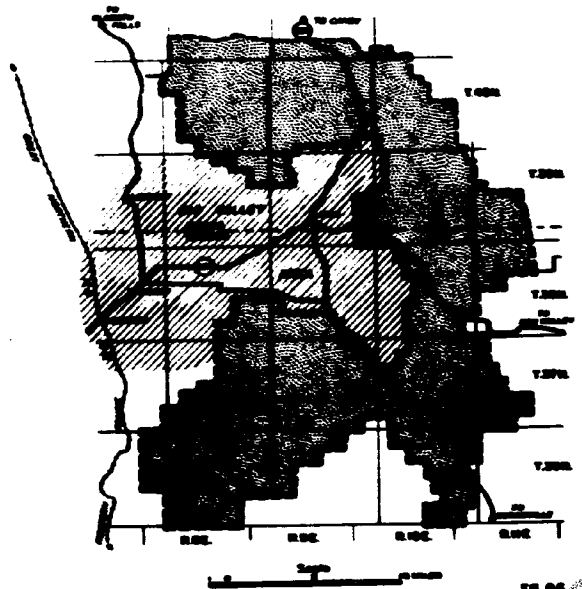
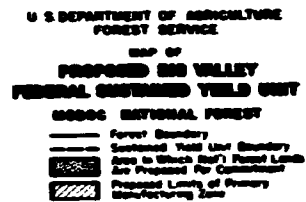
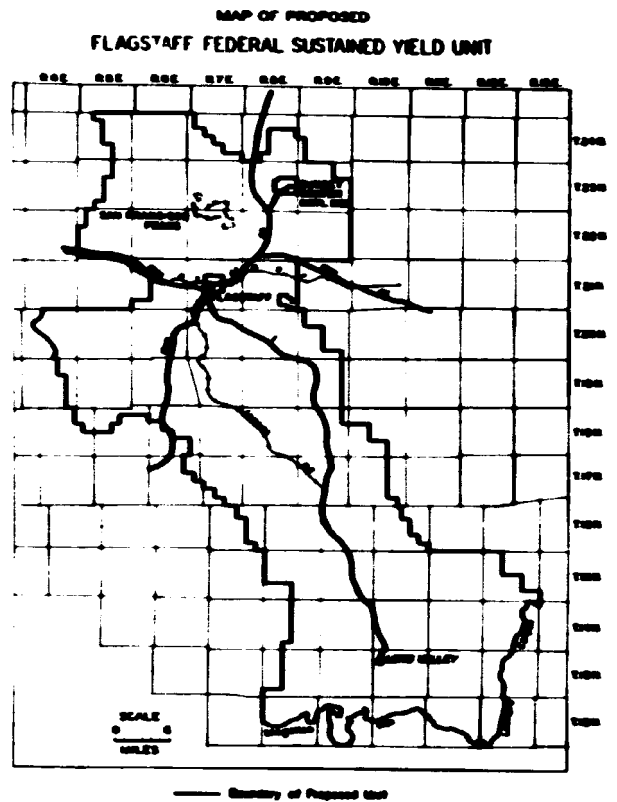
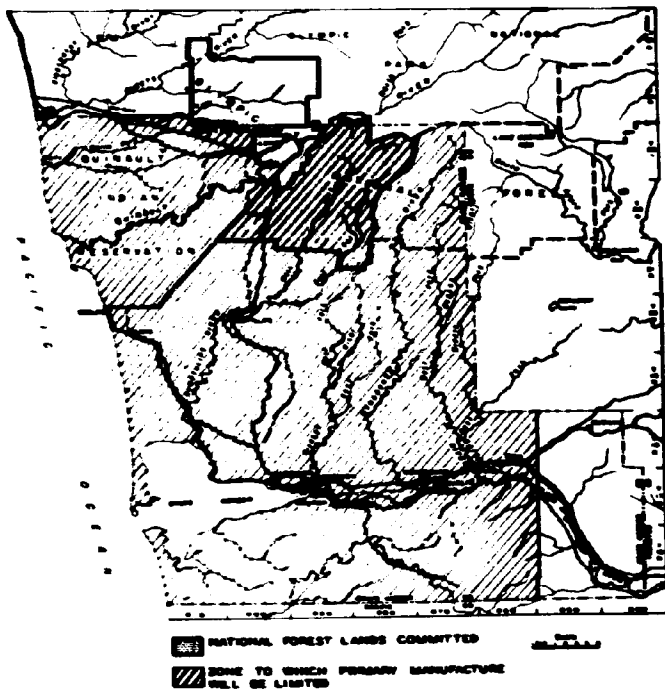
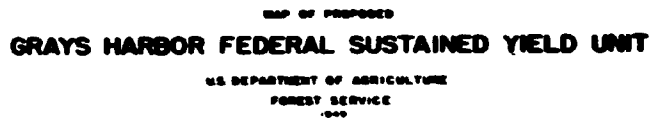
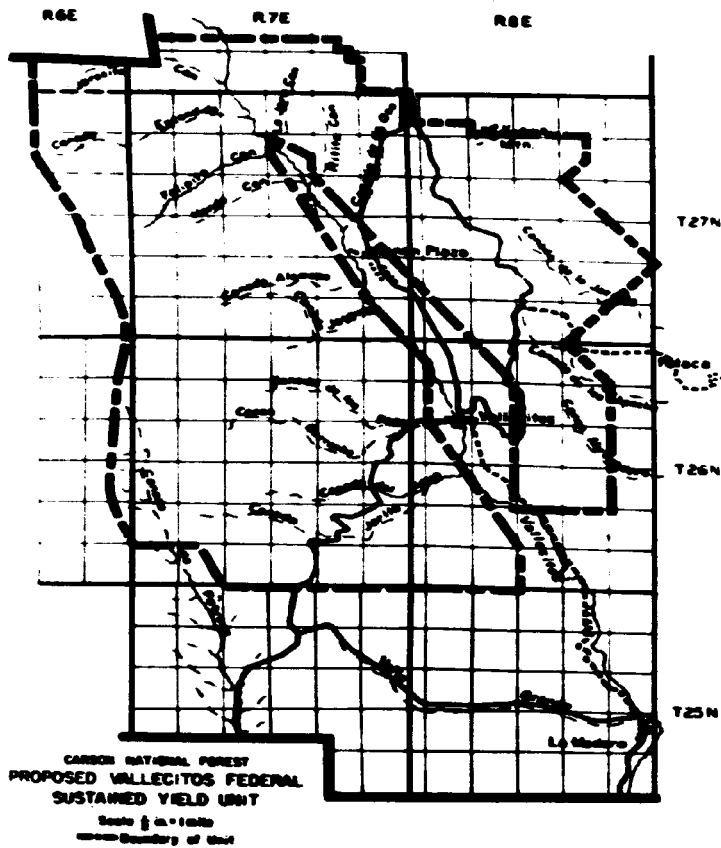
Federal Units

Vallecitos Federal Sustained Yield Unit.--This unit, in the Carson National Forest in New Mexico, was established on January 21, 1948. At that time the estimated population of the three communities to be stabilized, Vallecitos, Canon Plaza, and Petaca, was 760. The only industrial activity was a small sawmill which had operated intermittently, and an urgent need was felt for a more stable and substantial lumbering enterprise (181).

The Regional Forester's policy statement (183) issued November 6, 1947, and made effective with establishment of the unit, provides that all national forest timber sold from the unit must be given primary manufacture within one mile of Vallecitos,¹¹ and that such timber might be allocated to an approved responsible operator or operators,¹² under conditions designed to promote the objectives of (a) steady employment; (b) employment of local labor; (c) refinement of manufacture for production of box shook, mill work, and related articles; (d) reduction of waste in logging and milling in line with technical developments and market conditions; and (e) maintenance of and additions to plant facilities, as feasible, to keep in step with

¹¹Except minor amounts of special products, and certain salvage material.

¹²Designation of approved responsible operators is made by the Chief of the Forest Service, on the basis of their willingness and ability to meet the objectives stated, and may be rescinded in his discretion.



technical advances in the industry.¹³ The one sawmill in Vallecitos has a daily capacity of 15,000 board feet. Allowable annual cut from the unit was calculated initially as 1.5 million board feet.

Flagstaff Federal Sustained Yield Unit.--This unit was established on May 6, 1949, and covers 905,000 acres of national forest land in Arizona, chiefly in the Coconino National Forest. The community of Flagstaff¹⁴ has two large band sawmills, one medium-sized circular sawmill, several small circular mills, an excelsior plant, and a sash and door factory. Most of the private timber in the area has been cut, and the established lumber industry of Flagstaff is now almost completely dependent on national forest timber from within the unit (182).

The policy statement of May 6, 1949 (185) declares

¹³The declaration establishing the unit makes no mention of its duration. The statement of Policy and Instructions Governing the Establishment of Sustained Yield Units Under the Provisions of Public Law 273 (158) states:

"The designation of a specific community or communities as the beneficiary or beneficiaries of the Act will ordinarily continue indefinitely but may be terminated if the degree of dependence changes from primary to minor because of changes in the community's industrial situation.

"The designation of a specific purchaser allowed to buy timber without competition will ordinarily continue long enough to allow reasonable amortization of the operator's plant and may continue thereafter if there is no important reason to open the unit to competitive bidding. The decision will usually turn on what will best assure community stability and maximum employment. Continuing purchasers (without competition) will be expected to keep their plants and operating methods reasonably up to date."

¹⁴Defined as the City of Flagstaff and the area within three miles thereof, and including in 1948 an estimated population of about 8,500.

that not less than 85 percent of the sawtimber cut from the unit must be given primary manufacture within the community of Flagstaff¹⁵ and that

The Regional Forester may offer sawtimber for sale to approved responsible operators with suitable manufacturing facilities within the Flagstaff community on a competitive basis, or in his discretion without competitive bidding at prices not less than the appraised value. In the designation of approved responsible operators and in offering timber to such operators consideration will be given to the fact that there is now established in the Flagstaff community sufficient sawmill capacity to utilize the budgeted sawtimber cut of the unit.

Approved responsible operators awarded sales under this authorization are not permitted to participate in other sales of national forest timber, either within or without the unit, for primary manufacture within the unit.

When the unit was established the policy was adopted that most, but not necessarily all, of the sales of sawtimber to approved responsible operators would be awarded without competition, at its appraised value. As a condition of its sales the Forest Service would require that the two large operators provide for joint logging and transportation of logs from the southern portion of the unit "because of the necessary high capital investment for developments and because of the efficiency and economies inherent in a joint operating enterprise" (196).

Allocation of timber to each of the approved responsible operators would be decided on the merits of

¹⁵The remaining amount, up to 15 percent of the annual cut from the unit, will be offered for sale, under competitive bidding, to small mills, without this requirement as to location of manufacture.

each case, with distribution made as equitably as possible, after considering "past practices, capital investments, utilization of forest products and what would be best in the public interest."

Allowable annual cut from the unit was calculated initially as 70 million board feet.

Grays Harbor Federal Sustained Yield Unit.--This unit, in the Olympic National Forest in northwestern Washington, covers 116,583 acres, and was established on November 2, 1949.

In 1947 the Forest Service found that the Grays Harbor area contained 106 individual forest industry plants, which provided direct employment for 6,327 persons, in addition to those employed in lumbering and forestry activities (173).

All sales from the unit are competitive, all timber must be given primary manufacture¹⁶ within the area, and it is expected that remanufacturing be done locally to the greatest possible extent. There is no restriction of sales to "approved responsible operators."

Allowable annual cut from the unit, calculated initially as 60 million board feet, is not in itself sufficient to support the dependent communities at their present level, and the major portion of the timber processed in the area

¹⁶ Primary manufacture was defined to include, essentially, the production of rough green lumber (containing the approximate percentages of the various dimensions of lumber usually produced by mills of comparable size in the sawmill industry in western Washington), rough green veneer, wood pulp, and shingles and shakes of any marketable grade. Special products, such as poles, piling, or spars were excluded from the primary-manufacture stipulations.

has continued to come from outside the unit.

The Regional Forester will review the operation of the unit at three-year intervals, to determine whether or not its objectives are being achieved. If they are not, an advisory public hearing will be held in an attempt to correct the unsatisfactory conditions. If such hearing fails to develop practical ways and means of adjusting the program to more fully meet its objectives, then the declaration establishing the unit may be revoked (174).

Big Valley Federal Sustained Yield Unit.--This unit, in the Modoc National Forest in northeastern California, was established on January 27, 1950, and covers 82,185 acres. There are five relatively small sawmills in the area. In 1948 the Forest Service estimated that nearly all private timber in the vicinity would be cut within five years, and the lumber industry of the four communities of Adin, Bieber, Lookout, and Nubieber (with a combined population of about 2,000) would then be almost entirely dependent on national forest timber (166). Even at that, it was noted that the sustained allowable annual cut from national forest lands within the unit would be insufficient in itself to support the local economy at its current level. Establishment of the unit was, however, judged to be in the public interest in that it would tend to maintain the economy of the dependent communities to the greatest extent possible and would cushion shocks of reduced population and employment as the private lands were cut out.

Timber sales from the unit are competitive, and at

least 80 percent of the timber cut under such sales is required to be given primary manufacture within the area. In addition, sufficient yard facilities to dry all the lumber, and planing-mill capacity for approximately 50 percent of the total production, will be required (167). Allowable cut from the unit was calculated initially as 8 million board feet.

Lakeview Federal Sustained Yield Unit.--Located in southeastern Oregon, this unit covers 488,010 acres in the Fremont National Forest, and has been designed to sustain, in so far as possible, the economic base of the communities of Lakeview and Paisley, Oregon, as available private timber becomes exhausted (178). Although the manufacturing area as originally proposed (177) extended to the California state line, it was reduced, following the hearing, to the Lakeview and Paisley communities (176).¹⁷ The unit was formally established on October 10, 1950, but this establishment was rendered non-effective by an appeal to the Secretary of Agriculture against it, made by Congressman Engle of California. After review of the matter, the Secretary reaffirmed establishment of the unit on February 23, 1951.

As proposed, all sales from the unit would be competitive, and all timber cut under such sales would be required to be manufactured within the given communities,

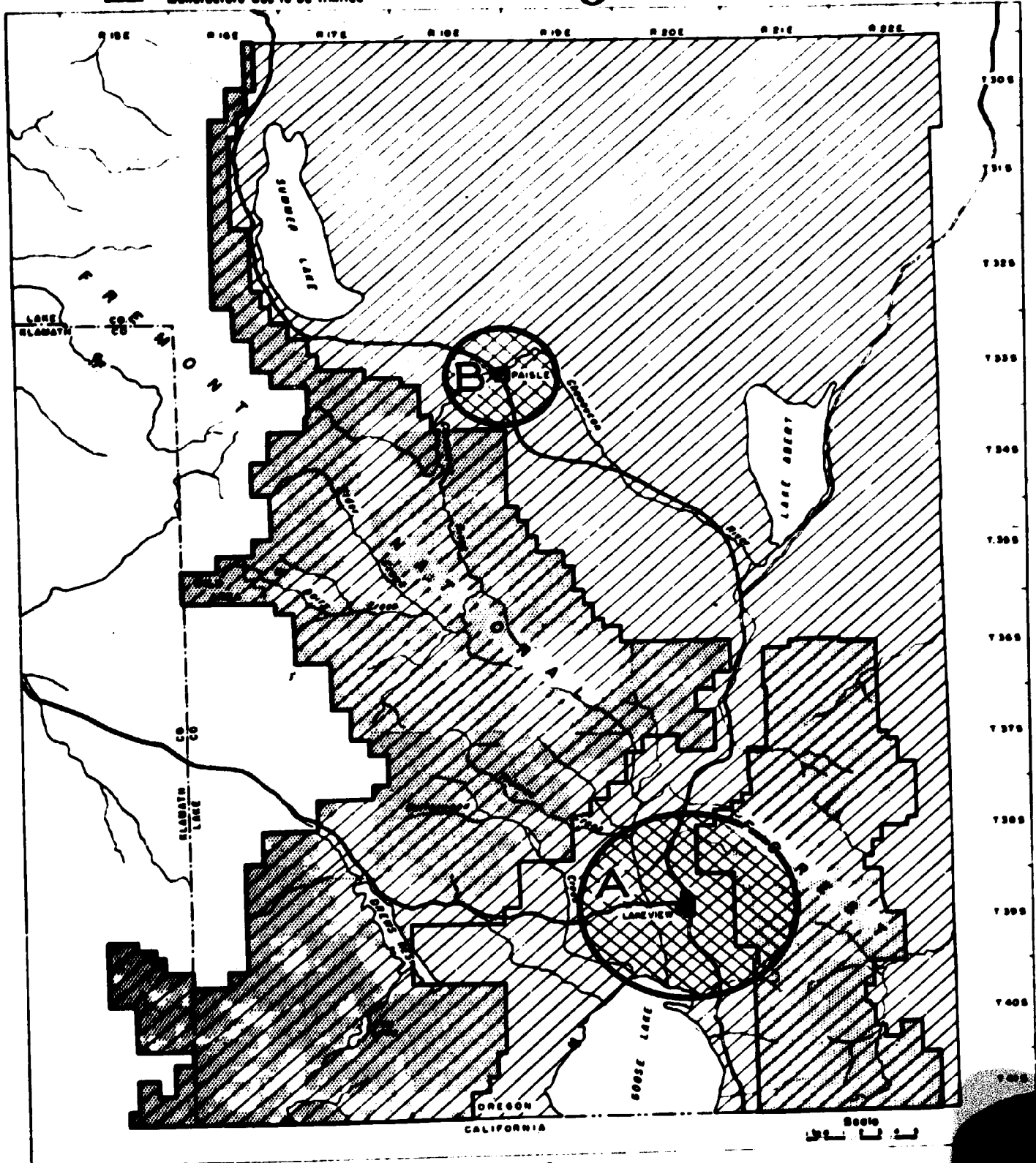
¹⁷ Defined as the town of Lakeview and the adjacent area within a radius of six miles of the Lake County Courthouse, and the town of Paisley and the adjacent area within three miles of the center of town.

MODIFIED MAP OF PROPOSED
LAKEVIEW FEDERAL SUSTAINED YIELD UNIT
FREMONT NATIONAL FOREST, OREGON
U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

1950
LEGEND

-  Unit Boundary
-  National Forest Lands proposed to be committed
-  Originally proposed Zone to which Primary Manufacture use to be limited

- Communities to which Primary Manufacture is proposed to be limited by modification
-  The Lakeview Community
-  The Paisley Community



including expenditure of at least an average of five man-hours of work per thousand board feet in further processing beyond the rough green lumber stage.¹⁸

Allowable annual cut was calculated initially as 50 million board feet.

Provision was made for periodic review of the unit's operation by the Regional Forester, as in the case of the Grays Harbor unit, but at not more than ten-year (rather than three-year) intervals.

Other Proposed Units

Omak-Okanogan cooperative management plan.--One of the first efforts toward cooperative management for sustained yield occurred in the Omak-Okanogan district of Washington. As early as 1940 (27, 169) the Forest Service prepared a statement of policy, in joint action with the Indian Service, the State of Washington, and the Biles-Coleman Lumber Company, for cooperative forest management in this area. The accessible timber was being steadily overcut; and the intent of the agreement was to bring about a gradual reduction in the annual cut and to establish a preliminary management plan covering all, or at least a majority, of the land within the working circle. The forest was an important part of the economic base of the communities within the area, and was a primary source of income to the Indians on the Colville Indian Reservation.

The Biles-Coleman Company agreed to reduce, over a

¹⁸ Products other than sawlogs would be excluded from these manufacturing requirements.

four-year period, its annual cut of ponderosa pine from nearly 60 million board feet to 40 million board feet; to be prepared to further reduce this cut to 35 million feet the following and subsequent years if shown to be necessary at that time; to hold its outover lands for the purpose of growing another crop of trees; to add to its holdings where practicable; to encourage selective cutting on other private lands; to furnish a market for logs so cut; and to increase its own utilization not only of ponderosa pine but of the less valuable species as well.

The Indian Service, the Forest Service, and the Land Department of the State of Washington agreed to cooperate in studies of growth, boundaries, and allowable cut, and stated their intention of making timber available for sale at times and in amounts which would conform to the orderly establishment of a sustained-yield working circle.

An advisory committee was formed, composed of one representative from the company and each of the agencies concerned, together with a representative of county and community interests.

Of course, none of the public agencies could allocate timber to any single company. It is to be emphasized that this joint statement of policy was never intended to carry legal obligations such as would accompany a formal contract. The public agencies do, however, have some discretion as to size of sales and time of offering, and the intention here was to direct this discretion in a positive

way toward achieving a gradual transition to planned forest management. This effort was a recognition of the communities' need for all that sustained yield implies: a permanent forest industry with a continuing and dependable source of raw material, increased utilization species-wise and product-wise, and an incentive for better forest practice on the land.

Operation under this statement of policy has been successful; the Biles-Coleman Company has reduced its cut of ponderosa pine (although the allowable cut has been revised), increased its cut of other species, and at the same time markedly increased utilization in its mill and remanufacturing plant.¹⁹

The company must still bid competitively for its sales of public timber; however, there is no other large mill in the area, and the large sales required by heavy road-construction charges have not been suitable for purchase by small concerns. There are a few small operators in the area, and their needs for timber seem to have been fairly well met, although in October, 1950, a nearby sale of 3 million feet brought spirited bidding and went for nearly double its appraised value.²⁰ As development of the road

¹⁹Schrader (136) reports an average of 36.9 man-hours per thousand board feet expended in this mill in 1948, as against an average of 18 man-hours per thousand in all lumber mills in the Northwest.

²⁰Sale of Oct. 16, 1950, for 2.3 million board feet of ponderosa pine and .9 million feet of Douglas-fir appraised at \$18.30 and \$3.95 per thousand, respectively, awarded to the Pateros Milling Co. for \$36.00 and \$7.00 per thousand, respectively, Chelan National Forest.

system progresses, and as pressure grows for more small sales, there will be a growing ability of other operators to compete for public stumpage. The Biles-Coleman Company is in a relatively secure position, however, because of the high degree of recovery and utilization achieved in its mill.

No serious effort has been made to establish a formal sustained-yield unit, because the public agencies have preferred to start with others less complicated in their ownership and management aspects. In addition, the Forest Service (158) has set a policy that the private operator should ordinarily contribute at least 20 percent of the initial timber volume and at least one-third of the productive capacity of the combined holdings. In this instance the company owned less than 5 percent of either timber or lands.

Skagit forest plan.-- In 1948 a sustained-yield unit was proposed by the Cascade Forest Industries, Inc., of Anacortes, Washington (20). This was a group of mills formed to assist in procurement of raw materials for its members. It had recently entered into a 35-year contract with the Washington Forest Products Association, a cooperative management and marketing association of small forest landowners, for purchase of their logs and stumpage.

The plan was to assemble 150,000 acres of forest land in ownership of either member mills of Cascade Forest Industries or members of the cooperative; the Forest Service would then be asked to contribute another 150,000 acres to a permanent sustained-yield unit. Although the Forest

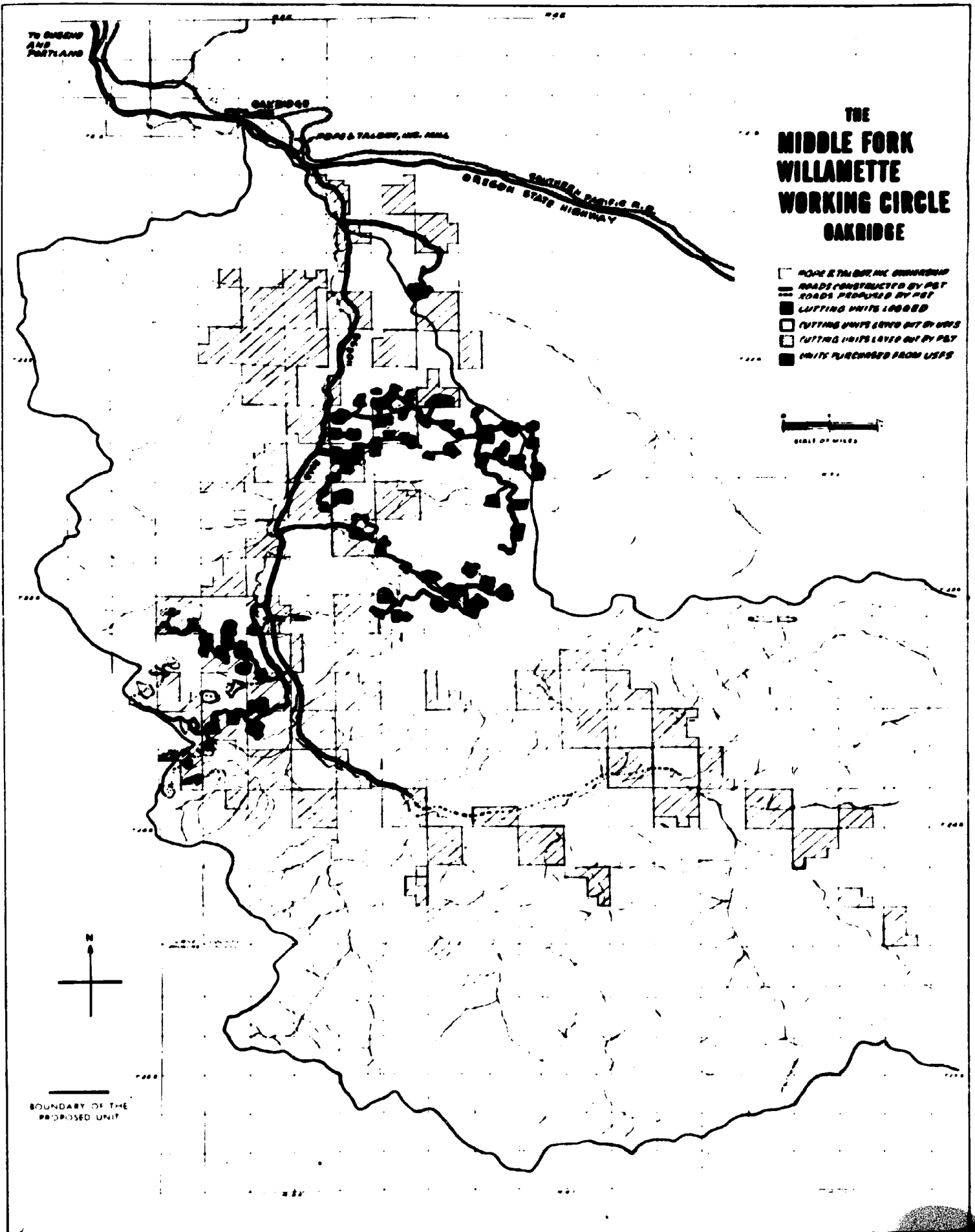
Service showed a definite interest in the plan, it could not be supported, for three reasons: (a) the cooperative could not legally control the cutting plans and practices of its members, nor assure long-term commitment of their lands to the unit; (b) logs had always moved in and out of the area freely and other Puget Sound mills had grown to depend, in part, on logs from the Skagit watershed; and (c) the corporation and the cooperative failed to assemble anywhere near the amount of land that would have been required.

Two applications for federal units in the South.--

In 1950 the Lumberman (11) reported application by forest industries for federal units on the Homochitto (Mississippi) and Kisatchie (Louisiana) National Forests. These were rejected by the Forest Service. From the present writer's limited knowledge of the facts, it appears that while perhaps motivated by an honest desire for sustained yield, these two applications more truly represented efforts of individual mills seeking chiefly to insulate themselves from competition for public stumpage.

Proposed cooperative unit at Oakridge, Oregon.--Pope

and Talbot, Inc., has made a definite bid for a cooperative unit on the Willamette National Forest in Oregon (13, 132). The company would contribute approximately 30,000 acres with 1,124 million board feet of timber to approximately 160,000 acres and 5,346 million board feet on a portion of the national forest. Outstanding features are the checker-board ownership pattern, the high road construction costs



and patchwork logging methods characteristic of the region, and the fact that the company is prepared to establish a pulp mill to use the high proportion of otherwise cull material now being left in the woods. The company's operations have trebled the population of Oakridge from an initial figure of 551 in 1947. The company has asserted its intention to encourage development of an attractive community with a permanent economic base, and to refrain from turning it into a company town.

Company and Forest Service officials have discussed this proposed unit in public meetings, and the company has requested a public hearing on it "early in 1952." The Forest Service has not yet announced its readiness to proceed that far, apparently wishing to see more general support for the unit before taking definite action.

Sustained-yield units in Alaska.--Four possible Alaskan sustained-yield units have been described by Heintzleman (67). They have not been developed under P.L. 273, but are mentioned here because the first one offered involves a similar long-term allocation (fifty years) of public timber to a single operator,²¹ and certain unusual terms of sale. These terms include (a) the requirement for construction of a 500-ton daily capacity pulpmill in the area, (b) power of the Forest Service to set logging and utilization standards, and

²¹ Awarded July 27, 1951, under competitive bidding, to the Ketchikan Pulp and Paper Company, a new company formed for this purpose by the Puget Sound Pulp and Timber Co. (Bellingham, Wash.), and the American Viscose Corporation.

(c) protection to the company, against arbitrary action by the Forest Service, through establishment of guides for Forest Service action in the periodic contract readjustment and through permitting appeal of Forest Service decisions to the Secretary of Agriculture, with the company given a right to have an independent board of specialists advise the Secretary in such circumstances.

CHAPTER VI

O. AND C. PROGRAM

Prior to 1937 the O. and C. program had been one of selling the timber and opening the lands to homestead entry. The Act of 1937 recognized that most of this land was unsuited to agriculture, and set forth a policy of retention in federal ownership and management for permanent timber production.¹

Early Plans for Sustained Yield

Sustained-yield forest units.--The initial task of placing these lands under management was one of inventory and planning. Horning (72) describes this early period, in which a scheme of operating units, or working circles, was developed to serve as a primary means of control. Since O. and C. lands were in large part checkerboarded with private forest land, initial planning recognized the capacity of both types of land, and their prospect of being combined to form cooperative units.²

Master units.--In order to contribute toward stabil-

¹ See pp. 2-3.

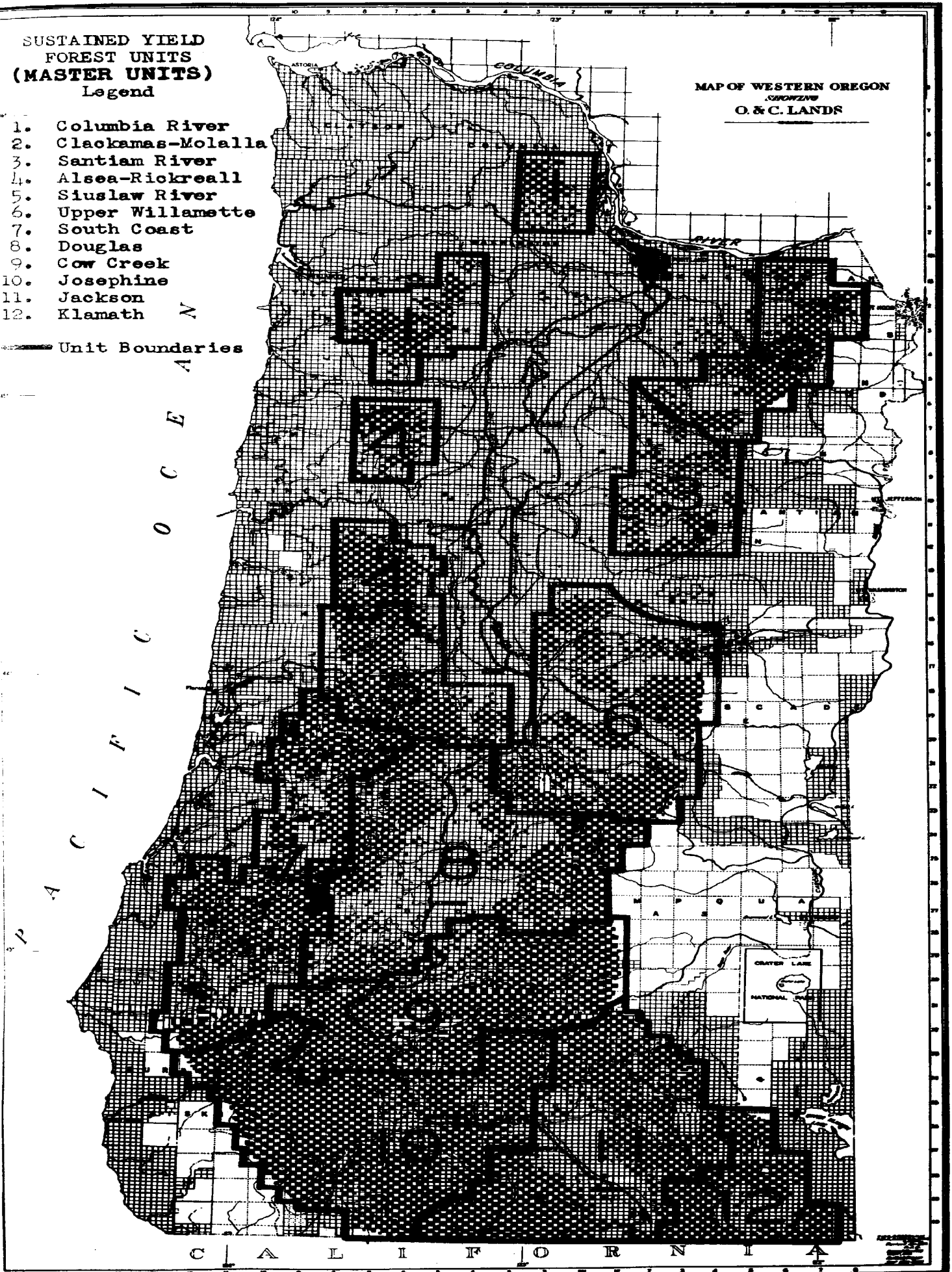
² Present planning, however, covers only the O. and C. lands, and these sustained-yield forest units, while they have never been formalized, are now employed as administrative units of control.

**SUSTAINED YIELD
FOREST UNITS
(MASTER UNITS)**
Legend

1. Columbia River
2. Clackamas-Molalla
3. Santiam River
4. Alsea-Rickreall
5. Siuslaw River
6. Upper Willamette
7. South Coast
8. Douglas
9. Cow Creek
10. Josephine
11. Jackson
12. Klamath

— Unit Boundaries

MAP OF WESTERN OREGON
SHOWING
O. & C. LANDS



ity of local communities and industries, groups of sustained-yield forest units were brought together to form master units, which could be tied to definite marketing areas logically related to these units. Although exceptions might conceivably be made for special kinds or grades of products, it is normally required that all O. and C. timber be given primary manufacture within the appurtenant marketing area.³ O. and C. lands have been divided into twelve master units, which have been in operation since 1947.⁴

Cooperative agreements.--It is important to note that although cooperative agreements have, from the start, generally been considered a device for bringing about cooperative units, as a matter of fact the 1937 law authorized cooperative agreements whenever they would aid in accomplishing the purposes of the act. This broad authorization for cooperative agreements, wholly aside from

³Primary manufacture is defined as follows (156):

- (a) In sawmills; at least through the stage of rough-green manufacture into a product including the usual percentages of the various dimensions found at the rough-green stage in what may be regarded as a typical "run-of-the-mill" product of the sawmilling industry of western Oregon.
- (b) In veneer or plywood plants; at least through the stage of rough-green veneer.
- (c) In pulp, wallboard, or chemical utilization plants; at least through the stage of marketable chips.
- (d) In other wood-processing plants; to a point equivalent in degree of refinement to those above, except that such products as poles and piling, which are marketed without extensive processing, are not included.

⁴One, the Siuslaw River Master Unit, was established in 1946.

cooperative units, may have increasing importance in the future.⁵

**Proposed Mohawk River
Sustained Yield Forest Unit**

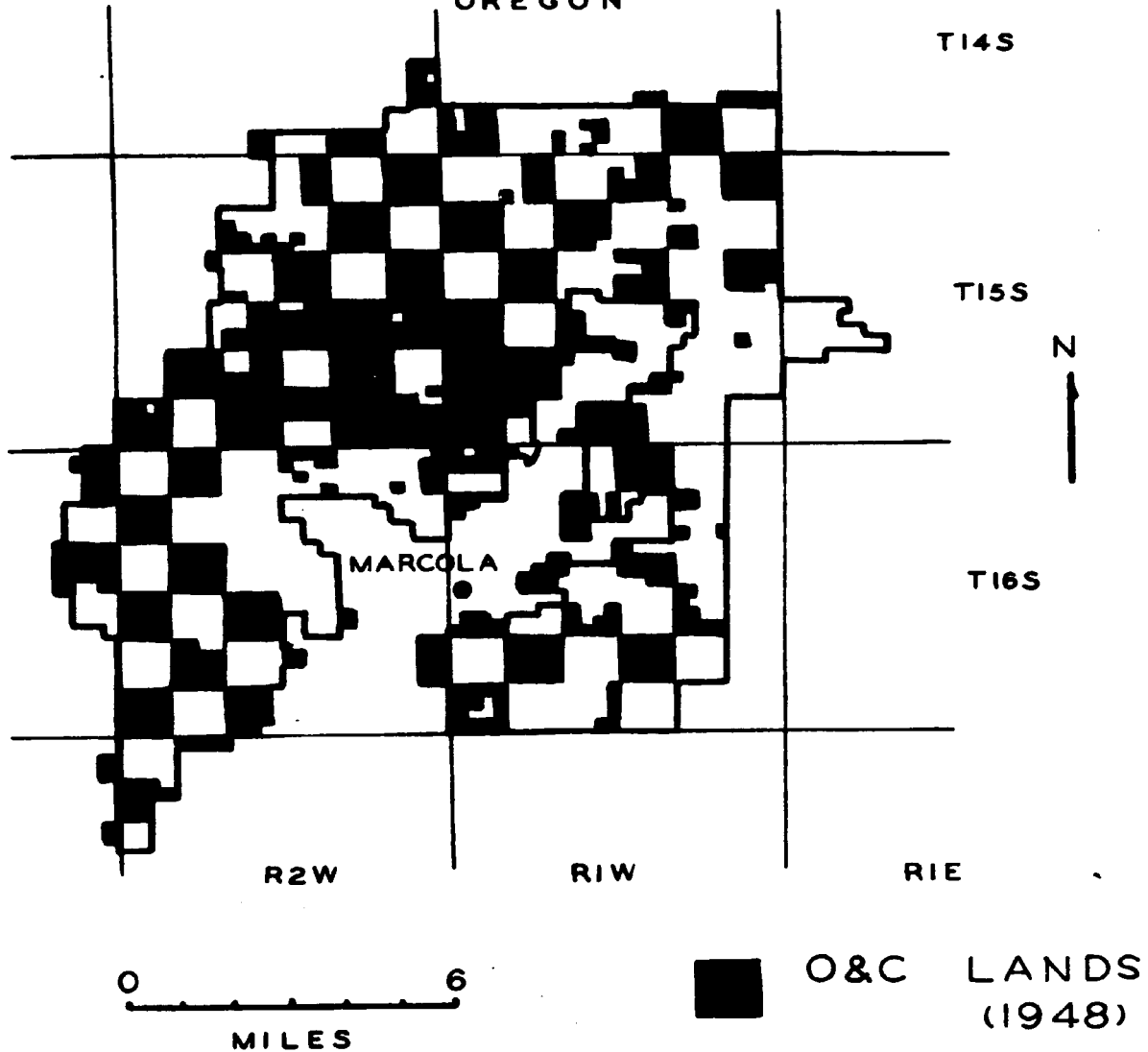
Acting under authority of the 1937 law rather than that of 1944, the Bureau of Land Management proposed establishment of a cooperative unit with the Fisher Lumber Company of Marcola, Oregon. The unit would have comprised 52,803 acres, of which 65 percent were O. and C. lands and 35 percent were lands of the Fisher Lumber Company. Other private forest owners within the area were invited to commit their lands and to participate in the cooperative agreement, but none seemed anxious to do so. The proposed agreement was, in general, similar to the Shelton agreement, except for provision that the company would lose title to its lands if it defaulted on the agreement, and that the agreement could be cancelled if the operator suffered persistent financial losses.

A public hearing on this unit was held in Eugene, Oregon, on January 21, 1948. Vigorous opposition was presented at that time, and after review of the hearing by the Secretary of the Interior, it was announced (36) that the agreement would not be approved (partly because full agreement had not yet been reached with the company on some of the provisions--notably Sect. 29, that the company would

⁵See p. 94. It is to be noted, however, that the Forest Service, under P.L. 273, has no authority for cooperative agreements except for the purpose of establishing cooperative units.

PROPOSED MOHAWK RIVER SUSTAINED YIELD FOREST UNIT

OREGON



lose title to its lands if it should default), and that any agreement would have to be on the basis of certain revised terms.

Departmental Instructions
of June 2, 1948 (156)

At the same time disapproval of the Fisher agreement was announced, Assistant Secretary Davidson issued instructions that any cooperative agreement would be required to include the following provisions:

(a) A statement of the community or local area to be stabilized.

(b) More specific commitments from the cooperator with respect to utilization practices and, where feasible, establishment of secondary manufacturing facilities.

(c) Protection of small operators by reserving timber within each unit for sale by competitive bidding.

(d) Restriction on the amount of timber processed in a cooperator's mill, and on the amount procured from outside the unit.

(e) Review of operation at 25-year intervals, with power of cancellation by the government, but not by the private cooperator, at such times.

(f) Public access to the private lands, as well as the public lands, for recreational use, and additional safeguards for recreational values; public access to logging roads, subject to fire and traffic safety regulations.

(g) Right of the government to compel the operator's compliance with the agreement as under the 1944 act, and during periods in which the cooperator is at fault, the

right of the government to sell its timber elsewhere, with the cooperator enjoined from cutting his own timber in excess of the amount authorized under the agreement.⁶

(h) Authorization for readjustment of cutting, utilization, and other requirements if the operator finds he cannot operate at a profit.⁷ "Such adjustments will be made by mutual agreement between the government and the cooperator but, in the event of disagreement, the Department's decision shall be final."

(i) The holding of public hearings in event of outside charges of unfair stumpage prices.

(j) Right of the government to the determining voice in case of disagreement on forestry practices, rate of cutting, and logging plan.

(k) A requirement that the private cooperator undertake to contribute at least as much land as the government, or undertake to acquire this amount within the first twenty-five years; in addition, a requirement that pending further study the productive area of the private land be at least 60 percent of that of the government, with at least 30 percent of the allowable annual cut of the O. and C. lands during the initial period of regulation.

⁶In addition, Goldy reports (155) that in a revised agreement the government would have the right to cancel the agreement if the cooperator in default did not proceed with the remedial action stipulated by the B.L.M. Regional Administrator, within sixty days of receipt of such notice of default.

⁷Rather than power of the operator, under the original proposed agreement, to cancel the agreement in such circumstances.

Meanwhile, wholly apart from the above policy on cooperative agreements, regular competitive sales to any one purchaser were limited to an annual average⁸ of not more than 40 million board feet and not more than 50 percent of the allowable annual cut of any master unit, to prevent any tendency toward monopolization.

Present Program

The Bureau of Land Management has proposed no further cooperative units, partly because of the adverse opinions voiced at the 1948 Eugene hearings,⁹ and partly because private industry has not wished to participate under the revised terms of agreement.

The Bureau of Land Management is now exploring the possibility of making short-term cooperative agreements covering road use and the scheduling of cutting operations; a tentative 10-year agreement is reported with the Fisher Lumber Company (14).

The hearings brought out the fact that private lands often controlled access to O. and C. timber, and limited the extent of competitive bidding possible.¹⁰ With

⁸Based on a 5-year moving average.

⁹See p. 104.

¹⁰Horning reported (155) that during the period from November, 1946, to September, 1948, 59 percent of the O. and C. sales advertised received only one bid, 23 percent no bids, and 18 percent more than one. He attributed this only partially to lack of access across private lands, other reasons being that O. and C. timber during that period was generally offered for sale only upon application of a prospective purchaser, and that the government had at times overlooked mention of its assignable rights-of-way in timber-sales advertisements.

a change in administrative personnel, the Bureau of Land Management drew up new right-of-way regulations for logging roads,¹¹ and endeavored to make smaller sales, with advertisements a year in advance, all for the purpose of increasing competition for O. and C. timber.

The right-of-way regulations brought protests from landowners, who, in exchange for rights-of-way over O. and C. lands, were required to grant rights-of-way across their own lands for use by other operators on the O. and C. lands. These regulations have, however, helped bring about a great increase in competition.

Despite these changes in their administration, the whole question of the O. and C. lands remains a controversial one, and will probably continue to be so until they are somehow further blocked up for management purposes.

¹¹43 CFR 115.154 (1950 Supp.)

CHAPTER VII

REVIEW OF HEARINGS

A wealth of material is contained in the record of hearings covering the original legislation and the individual sustained-yield units that have been proposed.

Hearings on Original Legislative Bills

Congressional hearings (153) held in Washington on the 1937 O. and C. bill¹ dealt primarily with two urgent problems: first, the immediate need of the land-grant counties for revenue from these lands,² and second, recogni-

¹ H.R. 5858, 75th Congress.

² When the O. and C. railroad lands were repossessed in 1916 income from timber sales and homestead fees was to go, first, to the railroad as payment for the lands (representing the difference between the value of the original grant at \$2.50 per acre and what the railroad had received from land and timber sales); and second, to the Treasury as reimbursement for moneys paid to the counties by the government in lieu of the railroad's taxes for 1913-15 (the years of litigation); and finally, after the above obligations were met, to be divided 25 percent to the counties, 25 percent to the State school fund, 40 percent to the Reclamation fund, and 10 percent to the Treasury. This resulted in no payment to the counties after 1915. The Stanfield Act of 1926 (44 Stat. 915) brought about tax-lieu payments for 1916-26, and authorized continuing annual payments, all to be repaid to the Treasury. Money was not appropriated for these continuing payments, however, and by 1937 the counties were again in distress. The Coos Bay Wagon Road lands had been governed by separate legislation, and while they had been able to provide some income to their counties, their administration and fiscal arrangements were still far from satisfactory.

tion of the fact that these lands were for the most part wholly unsuited to agriculture, and that they should be placed under management as forest land.

Overshadowed by these two problems, the matter of cooperative agreements and coordinated management of O. and C. lands with lands in other ownerships was discussed only in the most general terms, and these provisions were never seriously questioned.

The hearing (152) on the 1944 bill³ was before the House Committee on Agriculture, sitting in Washington. It opened with a general presentation of the problem as it applied to western forests.⁴ Several witnesses gave the impression that a similar arrangement was already in operation on the O. and C. lands and that this would merely extend the same procedure to other federal lands. There was a brief discussion of the possible monopolistic aspects of the bill, in which the committee was reassured that although a certain amount of monopoly was necessary to achieve the broader objectives of the bill, there would be adequate safeguards to protect the public interest. The bill was presented as a conservation measure. It was the outgrowth of a specific recommendation by a Joint Congressional Committee on Forestry that had made extensive study over a three-year period (154). Benefits to forest communi-

³S. 250, 78th Congress.

⁴Members on this committee were predominately from the East, South, and Middle West. Their remarks give the impression that for most of these men the problem to be settled was far removed from their everyday experience.

ties and to the nation seemed assured, and, as no one spoke against it, the bill was quickly approved. The hearing lasted one hour and a half.

Hearing on Shelton Unit⁵

In this hearing (170) H.J. Andrews, the Regional Forester, described the objectives of the proposed unit, in which national forest timber would be made available to support local communities in an area badly depleted by past cutting and repeated fires. By combining into a single management unit national forest land of mature timber, with Simpson Logging Company land mostly cut over, a far greater (by approximately 40 percent) annual cut on the national forest land would be allowed, but this could be permitted only if the cut were calculated for the unit as a whole.

Representatives of sawmills, chambers of commerce, and labor unions of the Grays Harbor area lodged strong protests against the proposed unit. Communities of the Grays Harbor area (combined population 38,000 in 1940) were highly dependent on manufacture of lumber and wood products, and had repeatedly since the 1920's sought allocation of national forest timber to themselves. Their principal objection was that some of the timber in the proposed unit was by its location considered more properly tributary to Grays Harbor plants, and had in fact been spoken for in their own earlier requests for allocation.

Frank Neil of Tacoma protested that tidewater mills in Tacoma and elsewhere on Puget Sound were just as dependent

⁵ Held Sept. 18, 1946, in Shelton, Washington.

on public timber as Shelton and McCleary mills, and were equally well situated to give it economic manufacture. Furthermore, he stressed that many Puget Sound mills had been located on tidewater for the very purpose of having logs available to them from anywhere on the Sound.

Others spoke either for or against the unit, and it is significant that there seemed to be no middle ground; witnesses either strongly backed the proposal or strongly opposed it.

In the ultimate establishment of the Shelton unit, it is easy to see how the principal objections, stemming from Grays Harbor and Tacoma, were overridden. Representatives from Grays Harbor had complained only that the western boundary overlapped what they themselves had already spoken for, and tidewater mills of Tacoma and elsewhere, by their own arguments, would be able to draw on the entire remaining region around the Sound for logs.

Hearings on O. and C. Master Units⁶

These hearings presented the over-all O. and C. program of sustained-yield management. While they brought out some complaints over boundaries of the marketing areas, the principle behind establishment of master units was not seriously questioned.

The first master unit was established on December 11, 1946, and the remaining eleven on November 29, 1947.

⁶ Held Dec. 3, 1945, Jul. 21, 1947, and Jul. 23, 1947, in Eugene (one unit), Roseburg (six units), and Salem (five units), Oregon, respectively.

Hearing on Mohawk River Unit⁷

This hearing (151) voiced a number of lively arguments both pro and con. Ellery Foster, representing the CIO-International Woodworkers of America regional headquarters, attacked the premise, as he stated it, "that a wood manufacturing plant needs to control the forest if the community is to enjoy the benefits of sustained yield," and he proposed alternative methods for the government to bring about proper management of private forest land. These included provision of technical assistance, low-cost forest credit facilities, and a "requirement by law that a competent forestry expert develop the timber harvesting plans for every commercial logging operation." He added that some shifts in location of mills and flow of logs to market would occur, but considered that these would not be serious if both public and private lands were managed to produce steady supplies of logs.

R.T. Titus, representing the small operators, challenged the philosophy behind the whole cooperative-unit program, asserting that it would lead to private forest lands falling under federal regulation, or to monopoly of public forests by a few operators, with a resultant suppression of "free competitive industry" and of opportunities for young men ". . . not just to fill jobs, but to develop their own ideas and build businesses of their own."

A representative of the Brownsville Timber Company objected on grounds that some of the O. and C. timber in

⁷Held Jan. 21, 1948, in Eugene, Oregon.

the unit lay in their own "natural" logging area, that they had been adding to their holdings as part of a long-range program of their own, always expecting a reasonable competitive chance for the adjacent O. and C. timber, and that establishment of the unit would preclude any possibility of keeping their own operation on a permanent basis.

E.G. Mason criticized the proposed agreement for not making specific provision for protection of recreational and watershed values, and for not making the roads available to the public, charging that allowing operators to construct and own roads paid for by deductions from the price they paid for public timber gave them an "unearned increment." He stated that 100-year cooperative agreements would tend to create a "landed aristocracy" which would give future generations a weakened social order, and would simply force overcutting elsewhere. He added that if fully implemented the cooperative-unit program would prevent the flexibility in social action "so essential to building a strong people in a changing world," and that there was "more involved than mere technical proficiency since the forestry program adopted must necessarily leave heavy impacts on the way in which our people live and their opportunity for productive work."

Defending the Bureau of Land Management's policy of sustained yield, Regional Administrator Horning pointed out that without any limitations on the rate of cutting neither "tree-farming" nor state cutting-practice and reforestation laws would achieve sustained yield, and if community-stability objectives were to be attained both the private land and the

manufacturing plant would have to be included in the plan of operation for any given sustained-yield unit.

Answering a charge that sales at appraised value would bring substantially less revenue than if made under competitive bidding, Frank Sever, attorney for the Association of O. and C. Land Grant Counties, stated ". . . we must rest upon the assumption that public duty and the public law will be adequately and honestly administered [,]. . . that the appraisals made for the timber will be fair appraisals and that the Secretary will exact the entire amount of revenue from that timber and those sales which is proper under the circumstances." He added that he was sure the counties would protest if they thought appraisals were insufficient.

Hearing on Woodleaf Unit⁸

Regional Forester Thompson opened this hearing (163) with a statement of sustained-yield objectives, and described the benefits expected from establishment of the unit. Woodleaf is one of a number of small unincorporated communities, the largest with a population of only about two hundred, along a main road leading into the Sierra Nevada mountains. With a large part of the people in these communities dependent on work in the woods and sawmills, and with the only large mill among them that of the Sacramento Box and Lumber Company, it was felt that the prosperity and stability of the area would be enhanced by establishment of

⁸Held Mar. 8, 1948, in Quincy, California.

a cooperative unit which would assure this mill a permanent supply of timber.

The Oroville Chamber of Commerce⁹ presented perhaps the strongest protest, which included the following statement:

The proposed Woodleaf Sustained Yield Project would have an immediate and long-term adverse economic effect upon the community of Oroville, an old established lumber community . . . which already has several remanufacturing concerns, schools, churches, recreational facilities, and all of the advantages of an established community. A few benefits would accrue to a small mountain town, Woodleaf, which has been engaged in the lumbering industry only during the past five years, and which does not have schools, substantial business buildings, nor recreational facilities. The major beneficiary is a metropolitan center, Sacramento, which is not now, nor has it in the past been, dependent upon lumber for its economic security.

When P.V. Burke, of the Sacramento Box and Lumber Company, warned that failure to establish the unit would force his company into rapid liquidation of its privately controlled timber, he was charged as being insincere in his support of the sustained-yield program.

Walter Beam, of Clipper Mills, California, stated:

. . . The Sacramento Box and Lumber Company [is] a corporation. . . . The management remains what it is at the pleasure of the board of directors. The board of directors are elected annually by the stockholders. The stockholders in distant places are primarily interested in profits on their investment, and not the people or their economy on the La Porte Ridge.

Howard Mallory, of the local CIO-International Woodworkers of America, reported that his local union had found it hard to agree with the plan, yet also found it hard to disagree, as it would bring good forestry practice

⁹Oroville has a population of about 5,000, lies approximately thirty miles from the boundary of the proposed unit, and is primarily an agricultural center.

and insure regular employment and economic security for the mill's employees. The conclusion of the local union was that they wished to discuss the matter more fully before making any final decision.

Resolutions opposing establishment of the unit were filed by the Oroville Post of Veterans of Foreign Wars, Kiwanis Club, Rotary Club, Fellows Club, American Legion, and Disabled American Veterans; the City of Oroville; the City of Marysville; the Marysville District Chamber of Commerce; the Yuba County Board of Supervisors; and the Wyandotte Grange at Woodleaf.

O. and C. Hearing of September, 1948¹⁰

This hearing (155) was called to examine the overall adequacy of the sustained-yield legislation and its administration on O. and C. lands. It ran for three days, and heard sixty-four witnesses, whose remarks indicate that nearly all were motivated by strong feelings of right and wrong in the matter.

Lief Erickson, counsel for a group opposing the Kootenai unit in Montana, charged that stabilization of one community could come only at the expense of other communities; that cooperative units would give certain mills an unfair advantage in having timber reserved for them on which they would make no investment and pay no taxes; that this would have the effect of a tremendous subsidy; that the private cooperators would not be required to do anything in

¹⁰Held Sept. 7-9, 1948, in Eugene, Oregon.

return that was not to their own interest anyway; that small (portable) mills were more efficient than large mills in harvesting small logs and in being able to relog areas already cut; that the issue was not one primarily between big operators and small operators but "a fight of the people to protect their resource"; and that any program of cooperative units would be a "planned economy with a vengeance."

Representatives of the Izaak Walton League and the Oregon State Game Commission considered the program defective in that it gave insufficient protection to wildlife and recreational values.

The vice-president of the West Coast Lumbermen's Association stated that his organization had taken a leading part in securing the sustained-yield legislation, but since its members were so divided would take no official stand on the matter.

Horning defended the cooperative-unit program, holding that with the government sharing the burden of overhead and risk, smaller and moderate-sized companies could afford to undertake sustained-yield management and still meet competition from operators who continued to practice timber liquidation; that the public would realize the benefits of sustained-yield management on a large acreage of private lands which were not then receiving good management; that second-growth timber on private lands committed would be protected from premature cutting; that cooperative units would make for a better balance of age classes for sustained yield at high levels of production, with the allowable annual cut for the combined holdings greater than if they

were managed separately; that the program would accelerate a desirable trend toward integrated processing and maximum utilization of the raw material; that it would forestall growing pressure toward construction of more mills than the forest was able to support; and that there was a definite place in the program for small operators.

While a great deal more was said at this hearing, it is believed that the above remarks are fairly representative.

Hearings on Federal Units

In reviewing the record of these hearings, it should be borne in mind that while only one cooperative unit was ever put into effect, all five federal units that reached the hearing stage are in full operation.

Hearing on Vallecitos unit.¹¹--This hearing (180) consisted of a presentation of objectives of the Forest Service in proposing the unit, and a brief discussion of what it would mean to the welfare of the community. While there was some indecision, there was no opposition to the unit, and it was duly established a few weeks later.

Hearing on Flagstaff unit.¹²--At this hearing (184) a number of small operators voiced opposition, stating that they felt insufficient timber was being reserved for competitive bidding; that a small operator had comparatively

¹¹Held Dec. 9, 1947, in Vallecitos, New Mexico.

¹²Held Feb. 2, 1949, in Flagstaff, Arizona.

the same investment to protect as a larger one; and that they should be given the same degree of protection against competition in bidding as the large operators.

One person, however, pointed out that the position of the small outlying mills would be improved under the plan, as they would be relieved of competition by the more adequately financed mills in Flagstaff.

The president of the local bank called attention to the dependence of a community's financial stability on the long-term stability of its income-producing industries, and to the increased ability Flagstaff would have, under the sustained-yield plan, in financing construction of needed public utilities and other civic improvements.

Hearing on Grays Harbor unit.¹³--This hearing (172) proceeded without opposition, because all operators in the vicinity would have an equal opportunity to bid on the timber, because the people of the Grays Harbor area had long been united in seeking such a unit, and because there were no other nearby mills with any established dependency on this timber.

Hearing on Big Valley unit.¹⁴--General local interest and approval was expressed at this hearing (165). No statements were made against it, although one person stated that he felt lack of an advisory board would place too much discretion in the hands of Forest Service officials.

Hearing on Lakeview unit.¹⁵This hearing (175) brought

¹³ Held Aug. 2, 1949, in Aberdeen, Washington.

¹⁴ Held Oct. 19, 1949, in Alturas, California.

¹⁵ Held Mar. 7, 1950, in Lakeview, Oregon.

strong opposition from representatives of the Willow Ranch mill, eighteen miles from Lakeview and just six miles across the California state line, the proposed boundary of the marketing area. Officials of the Willow Ranch Company stated that they and their employees had always considered themselves part of the Lakeview community, that a large percent of their payroll was spent in Lakeview, and that their operations gave substantial employment to Lakeview loggers.

Soon after this hearing, the Regional Forester modified the proposed marketing area to within five miles and three miles from the center of Lakeview and Paisley, respectively, and without holding another hearing invited statements of briefs for or against the modified proposal. The Willow Ranch Company responded to assert that the town of Willow Ranch had a much greater dependence on the forest than the town of Paisley, and that since 1946 the only truly competitive bidding in the Lakeview area had been by the Willow Ranch Company's logging subsidiary.

The Gilohrest Lumber Company, operating primarily on private land about 125 miles to the north, filed a protest against the principle of federal units, holding that such units would serve only to preserve the status quo within artificial boundaries established by a government agency, and that "economic factors which have always heretofore determined whether one mill should prosper and another fail will no longer be controlling."

The Forest Service appears justified in restricting

manufacture to the immediate vicinity of Lakeview and Paisley in that these are true communities, with substantial homes, schools, stores, and independent local governments. Willow Ranch, in contrast, seems to have many attributes of a "company town," and it is to be doubted whether those who live there consider themselves in any real sense a part of the Lakeview community. It should be indicated, also, that the main threat to the stability of the Lakeview communities did not come from the Willow Ranch mill, but rather from mills at Klamath Falls (100 miles to the west), several of which were rapidly coming to the end of the private timber they controlled.

Educational Value of Hearings

The sustained-yield program has fallen far short of the hopes of its early backers, yet even if there never should be any additional units, it is certain that the educational value of bringing sustained-yield objectives and the possible means of achieving them into spirited public discussion has been tremendous.

CHAPTER VIII

MAJOR PROBLEMS OF THE PROGRAM

Major problems include those of monopoly, competition, and cooperation; discrimination; opportunities and incentives; the securing of better forest practices on private land; community stability; and conflict with the "American spirit." Special problems of federal units are discussed in Chapter IX.

Monopoly, Competition, and Cooperation

Monopoly is a powerful word. To most people it is an evil word. Invariable it stirs up strong emotions. To Pinchot (128) it meant a fateful step toward unfair profits, concentrated wealth, privilege, tyranny, and greed. Robbins (131) states: "Monopoly means higher gains, less effort, and more security than competition. There are few men who do not covet such a position." Graham (54) contends that "the all but inevitable aim of any enterprise is to secure some type of monopoly, either as a buyer of his materials or as a seller of his output, or both, under which he can exert power, derived from something other than productive efficiency, and command corresponding profits." Economists generally define monopoly as the condition of a single seller in a given market, yet Stocking and Watkins (143)

remark that both economists and legislators have had great difficulty in applying the concept to specific industries or firms.

Proponents of cooperative units have pointed out that such units do not give the private cooperator any control over the selling price of his products, and that any control over the supply of timber that would result is in a very limited, local sense. They assert that a reasonable number of cooperative units would have but slight effect upon the competitive structure of the industry, and that the purpose of restricting competition is not to create unfair monopoly profits but to establish workable management and production units. They seek not to exploit the forest but to maintain it, and to manage it wisely as an enduring source of wealth. They point to the railroads and public utilities, whose operations usually call for some special grant or privilege. Meyer (111) sees this monopoly as no more than that of a mining operator, who must have resources available to him if he is to make heavy investments in equipment and development.

Cooperative units may be thought of in the same sense as any licensing arrangement, or as the requirement for certificates of convenience and necessity in the transportation field, as a device to promote good service (in this case increased plant investment, stability of operations, and good management of the forest) by excluding unnecessary competing operators. The fact that some persons might be inconvenienced deserves some consideration, of

course, but this, so the argument goes, should not be allowed to prevent effort toward greater benefits under some restriction. However, this reasoning assumes that industry is suffering from excessive competition, and without cooperative units is unable to place its own lands under good management. These may have been serious, even urgent problems in the 1920's and 1930's, yet in an over-all picture they can hardly be considered so today.

Greeley has indicated (155) that from the beginning the element of monopoly was fully recognized, and that the proposal was "to substitute for competitive bidding a contract in which, in lieu of paying the highest price that might result from competitive bidding, the operator would pay the public in other ways, in growing trees himself, in employing more people and stabilizing the jobs for these people, and in bringing additional industries into the picture so as to aid the community economy and to aid in the utilization of the Government timber."

In spite of all this, cooperative units have been labelled as "monopoly," and this, perhaps more than anything, explains the hostile attitude toward them.

A point not to be overlooked is that to the extent cooperative or federal units restricted operators from bidding on timber not allotted to them they would prevent these operators from being able to squeeze out weaker operators on other competitive sales, with the result that such units could offer a certain opportunity to curb monopoly (77).

If symbolism in the term "monopoly" has hampered clear thinking, so likewise has it in the term competition, which to most people is a symbol of all that is good. Admittedly, competition will in theory secure optimum allocation of resources, lower prices to consumers, decentralized decision-making, and diffusion and balance of economic power. Admittedly, competition is a great energizing force in the economy, yet an attitude of worshipfulness toward it can effectively prevent rational judgment in real situations. Edwards (40) states:

. . . most economists have ceased to assert that competition should be the sole basis of public policy. They recognize that competition alone is not sufficient to keep production and employment at high levels or to establish productivity as the basis for income.

In forestry, competition has in the past fostered a pattern of liquidation, excess milling capacity, and irresponsibility. To some extent it does today. To a single operator pressure toward liquidation came through lumber prices set by "all the rest" of the industry, operating under conditions of high fixed logging costs per acre which kept these lumber prices at times barely above out-of-pocket costs of logging and manufacture. Excess capacity and irresponsibility came from a short-run point of view everywhere prevalent and accepted. Some of the larger mills, especially pulpmills, or sawmills that have integrated with other manufacturing or selling processes, are now taking a longer-run view, yet the short-run, exploitative operator is still abundant.

An ever-present fear in the lumber industry is that competition will drive stumpage prices up to where an operator who "bids away" part or all of his profit, and, in addition, bids a price which will not recover all of his fixed costs, will be able to drive "legitimate" operators out of business. Moreover, competition gives no protection from the operator with a fully-depreciated plant.¹ While these influences have never been as powerful in the lumber industry as in the coal or transportation fields, they have often been important, and may very well increase in importance should there be any sharp recession in demand. The federal units, in particular, have sought to insulate local communities from "ruinous" competition of this sort.

Perhaps the greatest evil of competitive timber sales is that they sometimes lead to poor practices on the land, for when an operator overbids the appraised price he often seeks to recover his chances for profit by "creaming" the forest--cutting only the higher-value trees and removing only the higher-value logs, and by trimming or "shading" expenses in road construction, erosion control, observance of safety precautions, and protection of the residual stand. This makes for progressive deterioration of the quality of

¹In addition, legitimate operators feel it unfair that they should have to meet competition of "fly-by-night" operators who, with a cheaply constructed mill, pass on added stumpage costs to the consumer in the form of poorly manufactured and poorly graded lumber. Such practices are difficult to prevent, and they give the entire industry a bad reputation.

the forest, poor utilization, and difficult sales administration.

The principle of cooperation has long been a guiding one in Forest Service policy. Some degree of cooperation is to be expected when one considers that public and private lands are so often intermingled, and that it is the private operator who harvests the public timber, often merely as an accessory operation to harvesting his own.

In addition to the agreements with the Biles-Coleman Lumber Company and the J. Neils Lumber Company,² an informal cooperative agreement was reported in 1943 (126) between the Forest Service and the Ochoco Timber Company in eastern Oregon. This company agreed to practice selective cutting to Forest Service standards and to reduce the cut on its own lands, and the Forest Service announced that it would advertise sales sufficient to prevent the total available cut for the working circle from falling below a certain figure.

In 1943 (66) it was also reported that in New Mexico the Forest Service had undertaken to supervise cutting on a large former Spanish land grant, and on certain lands of the State of New Mexico, under agreement that it would be reimbursed by the owners at cost. These arrangements were defective, however, in that they could not control management of the land once the initial cutting had stopped.

²See pp. 60-61 and 79-82.

There have also been cooperative agreements covering cutting practices on private lands to be exchanged for national forest land or stumpage.

Cooperative units, as authorized by the 1944 act, are in one sense a natural outgrowth of this early experience in cooperation.

Gulick (65) has noted the accomplishments of cooperation and "creative association" where men of the forest industries and government agencies have tackled problems together in the woods, and he believes this spirit could well be developed elsewhere in the economy. He states:

Whenever the government endeavors to enter or influence a facet of the private economy, both the government and the leaders of the economic segment affected should make it their business to see that the operation becomes a joint cooperative venture and not a contest in domination on one side and in escape from regulation on the other. The public and the press should hold both groups . . . strictly accountable for any failure to go at least halfway to establish a continuing basis of joint action.

On the other hand, any serious student of human nature should not expect too much of a "cooperation" between business and government. The thing that has brought men to positions of leadership in industry has often been a vigorous and uncompromising support of private interests and a denouncement of government "interference" of any sort--the very antithesis of cooperation. Likewise, top governmental positions have at times been filled with ambitious men just as uncompromising in their unwillingness to deal with industry. Moreover, it should be remarked in passing that many differences between business and labor elsewhere in the economy have hardly been resolved in any

spirit of cooperation.

Even so, in forestry, cooperative units might well prove to be an effective device to bring conflicting interests together. Provided there was an earnest desire on both sides to reach a workable solution, it might prove beneficial all around for these tensions to be deliberately placed together, with industry "crowding" the government agencies to grow (and sell) more timber, and these agencies "crowding" industry to practice better forestry and a higher degree of utilization.

Discrimination

The charge of discrimination has been raised on five counts: first, that the cooperator would secure an advantage in obtaining public timber at its appraised price; second, that with an assured supply, at appraised price, for the greater part of his mill's capacity the cooperator could afford to go into the market and outbid other mills in additional competitive sales; third, that large operators with timberland of their own would have an advantage in the struggle for cooperative agreements; fourth, that with no investment and no interest or tax payments on the public timber the cooperator would be in an unduly preferential position; and fifth, that through inheritance in family-controlled mills (a prominent feature in the industry) a privileged group of persons would be fostered having special social position and political power based on exclusive control of the land.

These are serious charges. Much evidence supports the first of them, for the past six years have seen a great increase in demand for forest products and a steady inflation of the general price level. With stumpage appraisals based to a large extent on past prices and past costs it is easy to see how appraisals could have lagged behind what would be fair levels based on expected or realized price- and cost-averages.

Moreover, the established policy of not allowing reappraisals (in long-term sales) to fall below original appraisals, coupled with a post-war fear of deflation, provided a conservative bias during this period. Even during inflation the public agencies have not wished to add to pressure toward spiralling wages and prices.

Both the Bureau of Land Management and the Forest Service have stated that they would make every effort to keep appraised prices in step with changes in the market, but the mechanism of appraisals makes it doubtful that this can be done completely, especially in a period of rapid change.

Public feeling has been colored by frequent published reports of public stumpage selling for two or more times the appraised value. Even though some of these have been grudge, distress, or "bonus"³ purchases, there

³As an example of a "bonus" bid, the Timberman (November, 1950) reports sale of 168 million board feet of timber on the North Kaibab working circle, primarily of ponderosa pine, at \$45.10 per thousand for the pine, appraised at \$5.50 per thousand. Here reappraisal is allowed after an initial cut of 15 million feet. This

is a good chance that appraisals have at times been set at what turned out to be unusually favorable terms.

Recognizing some validity in the second count, that a cooperator would be able to recover losses of overbidding outside competitive sales, the Bureau of Land Management and the Forest Service have sought to place restrictions on such outside purchases.⁴ These restrictions, especially those of the Bureau of Land Management,⁵ are an important reason for industry's declining interest in cooperative units, and their characterization of the government's terms as "onerous" (193).

The third count, that large operators with timberland of their own would be favored, has a great deal of validity. Discrimination in this case is not just between large and small operators, but also between one large operator and other large operators.

Both the Bureau of Land Management and the Forest Service have invited small operators to participate, yet the small operator typically has neither the land nor the financial resources to initiate any long-term program of operation, and so far has not found any satisfactory way to combine with others like himself, or to fit in with any large cooperator. Although the small operator may be

reappraisal for the remaining timber could be set as low as the original figure, \$5.50. This was a mixed-species sale and all bidding could have been made on the price of pine. In addition, the sale required construction of a sawmill, which presumably could be run at a book loss for tax purposes during the initial period.

⁴The Shelton agreement does not have this provision.

⁵See pp. 66 and 92.

sincerely interested in sustained yield and in a chance for his business to grow and prosper, the cooperative-unit program simply does not meet his needs and capabilities.

The greatest difficulty, however, would be in choosing fairly among large operators where several already exist, or in deciding where and how many units should be established where only single operators occur. No satisfactory method of avoiding such discrimination has been found.

The fourth count is plausible but contains no basis in fact.⁶

The fifth count can be met only by considering that cooperative units would be expected to bring gains to the public (protection of the future timber supply, increased utilization of the raw material) and to the local community (increased employment and stability) which would outweigh the disadvantages of whatever perpetuation of firms and families might ensue, and that close public supervision should minimize any serious abuse of power.

Opportunities and Incentives

A major objective of cooperative and federal units is to encourage greater utilization. Forestry is undergoing a process of increased industrialization, where trees provide raw material not only for lumber, but also for pulp and paper, rayon, fibreboard, plywood, plastics, and even such experimental products as stock feed and industrial alcohol.

⁶ See discussion on pp. 154-155.

Most new uses of wood require large amounts of capital investment, and the making of such investment can be accelerated by assuring new plants their raw material supply. Greeley (62) considers that part of the return to the public from sustained-yield units should be in demonstrating these advanced methods of utilization, and in testing new ideas and new manufacturing techniques. He sees sustained-yield units as a clear answer to a practical problem of working out the raw material supply "so that our forest economy of the future will encourage these new industries" (60).

From an examination of America's record of steadily increasing production, Schumpeter (137) has concluded that to a large extent this rise has been due to an innovation process where profitable exploitation of new ideas has been stimulated by monopolistic safeguards such as patent rights, secret processes, long-term contracts, and an assured access to raw materials. He sees these protective devices as a necessary condition to the type of long-run industrial growth we have experienced.

He is not referring to the traditional exploitative monopoly, but rather to a mild degree of market power which, temporarily at least, protects the firm from a competitive forcing of prices toward short-run marginal costs. He sees this element of monopoly as the spark-plug of the innovation process, which is often carried out by teams of specialists as a matter of routine, and he regards innovation as the core of effective competition.

While it would certainly be difficult to establish Schumpeter's thesis empirically, it continues to be a respected although provocative explanation of the economic process.

On the other hand, Wright (201, 202, 204) attributes our high physical productivity and our rapid economic progress to an opportunity for new enterprises, starting on modest and independent means, to survive and grow, able eventually to displace other earlier, larger, and more strongly established firms. He considers the vigor and technological creativeness of our society to come from the opportunity of new men to rise on independent terms. He sees a danger that without competitive markets those persons in high places will tend to perpetuate themselves in power, and prevent accomplishment of the changes necessary for our growth.

In the proposals for sustained-yield units it has not been sufficient that certain blocks of timber were to be reserved for small sales. What the small operators were seeking, and what Wright's theory of social progress requires, is an opportunity for small operators to rise and become medium-sized and in turn large operators according to their capabilities--not simply to be "stabilized" at a small scale of operations. J.T. Adams (1) sees a responsibility of those in power to devise adjustments to accommodate the legitimate demands of the smaller but ambitious men, and states:

The old always think the young too aggressive. The rich think the rising poor too excessive in their demands. Those who hold power yield only reluctantly a share of it to others. The situations are as old as human nature.

From examination of the hearings, nothing stands out more than the small operators' deep resentment to being treated merely as "hecklers." They approved sustained-yield and sincerely wanted to participate in it, but most of all they wished their dignity recognized, and they wished to be awarded a place of prestige in the social hierarchy.

Securing Better Forest Practices on Private Lands

Although improvement of forest practices on committed private lands is an important objective of cooperative units, this feature has been a delicate and somewhat awkward one to handle. A potential cooperator's admission of poor practices on his own lands has at times been paraded as proof that he is not entitled to the grant, yet if his practices are already good one is tempted to conclude he does not need it.

The problem of tax reversions of cutover land, serious in the 1920's and 1930's, would have been ably met by cooperative units. Today, however, such tax reversions have all but disappeared, and idle acres nearly everywhere find ready buyers anxious to put the land to use. There is little doubt, however, that cooperative units, properly administered, would accelerate the progress of management on private lands.

Community Stability⁷

Another problem of the 1920's and 1930's that cooperative units could clearly lessen, and which has all but disappeared, is the threat of abrupt community decline. Today, however, most forest communities are booming, and if they have a problem it is more likely to be one of inflated land values, crowded schools, housing shortage, and a brisk demand for goods. "Stability" is a popular objective when communities decline, but not when all the prospects are for rapid growth.

Conflict with the American Spirit

No line of attack against sustained-yield units has been more successful than the labelling of them as contrary to the American spirit and tradition. J.T. Adams (1) states that the American dream "is not a dream of motor cars and high wages merely, but a dream of a social order in which each man and each woman shall be able to attain to the fullest stature of which they are innately capable, and be recognized by others for what they are, regardless of the fortuitous circumstances of birth or position."

Dewey (37) describes the seeming conflict between freedom and organization. "Organization," he states, "tends . . . to become rigid and to limit freedom. In addition to security and energy in action, novelty, risk, [and] change are ingredients of the freedom which men desire." He concludes that the aristocratic ideal has failed

⁷Community stability is further discussed in Chapter XII.

. . . because it is found that the practical consequence of giving the few wise and good power is that they cease to remain wise and good. They become ignorant of the needs and requirements of the many; they leave the many outside the pale with no real share in the commonwealth.

Laski (93) notes in the American temperament a "passion for quick results," a "tendency to look upon the state with doubt or suspicion," a "sense of satisfaction in outwitting the lawmakers," a "sense of deep discomfort when . . . asked to support the positive state," and a skepticism of "anything that expresses itself as permanent or absolute." He adds:

Americanism is multiform, and it is also, at its very roots, nonconformist. No one can fully shape it the way he wants it to go--something is always emerging to protest that things must be done another way. . . .

Fortune magazine (15) has described the "great American love of diversity," where we often welcome the existence of people and of beliefs "that are difficult if not impossible to reconcile."

W. Adams (2) notes in America's history "a widespread feeling that in a new and growing country everyone could prosper in accord with his personal deserts unless resources, transportation lines, and channels of credit were preempted by a few."

Schumpeter (137) states that the social atmosphere of capitalism, in which the masses do not identify themselves with the business corporation, "explains why public policy grows more and more hostile to capitalist interests, eventually so much so as to refuse on principle to take account of the requirements of the capitalist engine and

to become a serious impediment to its functioning."

Americans have a strong distrust of concentrated power. Galbraith (47) observes that "free competition" is today more of a political than an economic concept. This ties it closely to our concept of liberty, and goes a long way toward explaining the feeling against cooperative units. The small operator in his day-to-day struggles is only too painfully aware of the power of the large operator, who in contrast typically has strong market outlets, ample financial resources, a backlog of private timber to fall back on, and a smooth-running operation from start to finish. The small operator does not wish to see the power of the federal government joined to this power of the large operator. He feels that if government is to step in and strengthen any element of the forest economy it should be his own.

Yet while America has idolized the common man it has at the same time paradoxically taken an unmistakable pride in the size and accomplishments of its industrial machine, with its seemingly unlimited capacity to turn out more and better products and to find better, cheaper ways of doing things. We take pride in the accomplishments of our engineers, our scientists, and, even if only in an indirect sense, our businessmen, who find the means and create the working structure for putting these energies and abilities to work promptly. On analysis, all this is really as much a part of our creed as the dignity and freedom of the common man.

Sustained-yield units in this latter sense might be regarded as fully in accord with the American tradition of willingness to remove obstacles to efficient production and of positive action to devise new institutions to meet new needs.

CHAPTER IX

ADDITIONAL PROBLEMS

Constitutionality and Administrative Interpretation of the Acts

There can be little doubt of the constitutionality of the 1937 and 1944 acts. The Property Clause of the Constitution gives Congress power "to dispose of and make all needful Rules and Regulations respecting the Territory or other Property belonging to the United States." Laws made under this authority have repeatedly been upheld.¹

These acts have been described, however, as contrary to the spirit of the anti-trust laws, and the proposed cooperative-unit program of the Bureau of Land Management has been challenged by the Western Forest Industries Association (155) as being a departure from the intent of Congress in passing the act of 1937.

Neither of these charges seems to have much validity. The Sherman Act was designed to stop abuses of monopolistic exploitation and unfair practices of market competition in the private economy, expressed in the phrase "contract, combination . . . or conspiracy in restraint of trade." Whatever restrictions are provided in respect to sustained-

¹See United States v. Grimaud, 220 U.S. 506, 521 (1911) confirming the right to delegate authority in administration of the national forests. See also discussion of the Proprietary Power in Water Resources Law (12).

yield units are clearly of a regulatory nature, administered by responsible federal agencies, and the Sherman Act was certainly not designed to prevent such arrangements. The other anti-trust laws are not pertinent to the problem.

At the Eugene hearing (155) Titus questioned interpretation of the 1937 act so as to allow elimination of competitive bidding, for the act simply states that "the Secretary is authorized . . . to reject any bids which may interfere with the sustained-yield management plan of any unit." Titus also questioned interpretation of the act so as to allow agreements with a single operator, rather than with all private landowners within the boundaries of any unit.

The discretionary power granted the Secretary, however, seems adequate to allow both these interpretations. Moreover, they are both clearly authorized by the 1944 act.

Restriction of Marketing Areas

A frequent charge raised against sustained-yield units is that restriction of marketing areas (perhaps "manufacturing areas" would be a better term) accomplishes only a transfer of economic activity from wherever market forces would otherwise direct it, so that nothing is gained on balance. This charge is answered by a reckoning of social benefits accruing from community stability and the avoidance of social costs of sharply reduced activity (80).² Forest communities are considered to warrant this special

²The problem of community stability is treated further in Chapter XII.

treatment because their heavy dependence on the forest resource makes them especially susceptible to shocks of this nature.

In addition, assurance of raw-material supply encourages investment for additional manufacturing facilities which can utilize "waste" materials that would otherwise not be utilized at all.

Encouragement of secondary manufacture may bring benefits in the up-grading of materials used. For example, the Biles-Coleman Lumber Company³ is able to cut out small pieces from low-grade lumber and assemble them to form a high-grade intermediate product. This could not be accomplished economically if the company performing this operation were forced to pay shipping charges for the low-grade lumber before cutting out the better portions.

The requirement for drying and planing-mill facilities, as in the Big Valley unit, may result in no more than a transfer, yet even this has some justification where a reduced total cut is in prospect and it is desired to cushion the shock of reduced employment, or where it is desired for social reasons to raise the level of income in an existing problem area.⁴

Administration of Cooperative Agreements

As has been indicated, primary requirements of any cooperative arrangement of this nature include an agreement

³See p. 81.

⁴As in the Vallecitos unit.

on objectives and a genuine willingness to cooperate. Each side must rely to a large extent on the reasonableness of the other.

From the administering agency's point of view, Kelso (83) foresees that cooperative agreements will bring the same pressures and conflicts that these agencies have with grazing permittees. He states:

The holder of an exclusive privilege of private use on public land, whether it be grazing land or timber land, will urge the enlargement of his privilege, will contest the rules and regulations under which he operates, and will argue the unreasonableness of them when they exist to serve other uses. . . . Those who do not hold privilege on the land but would like to do so will argue favoritism, monopoly, "currying favor with the big operators," etc.

From the operator's point of view, there is a danger that government officials will be unreasonable in their demands, and in their review of legitimate complaints.

From the public's point of view, there is a danger that controls might be perverted through undue political influence of the operator.

In a general discussion of the process of administrative regulation, primarily as found in the transportation and public-utility fields, Sharfman (139) lists the following possible safeguards against unjustifiable action on the part of regulatory commissions: the fact that such bodies' existence is subject to legislative will; that their field of operation, power, policies, and standards are all prescribed; that their responsibility runs directly to the legislatures, with periodic public accounting to them; that they are generally required to give due public notice and

opportunity for hearings; and finally, that their deliberations are subject to judicial review. He considers it of "crucial importance," however, that the regulatory agencies be kept truly independent. He concludes: "There appears to be good promise that freedom and authority can be so harmonized as to promote economic well-being without sacrifice of essential values."

In the administration of sustained-yield forest units there are no independent regulatory commissions, but then neither is there any direct regulation. Recourse to judicial review is also avoided in so far as possible. The cooperative units are intended to be truly cooperative, and there seems to be no satisfactory way to handle complaint and appeal procedure except within the regular government department, even though this will be the same agency whose decision is appealed.⁵

An administrative problem of cooperative units would occur if there were more than one cooperator; the task of securing real cooperation among several landowners might be difficult in the extreme. Conceivably a number of private landowners could organize in some form of "sustained-yield district" similar to an irrigation district, but the fact that one or two large landowners would probably dominate such a district, giving scant recognition to small owners' interests, together with the necessity for long-term regulation of the cut, would probably make it unattractive to the small owner.

⁵The advisory boards proposed in the Kootenai and Woodleaf agreements would give further protection to the operator. See footnote on p. 7.

A final administrative difficulty, as Gulick (65) has noted, is that when government extends its actions into the economic sphere, as it has done in forestry, it generates new problems which require more than mere forestry proficiency to solve. He states:

Government action in the economic sphere tends to open up a wider and wider compass of problems, interrelations, and conflicting interests. These new questions are beyond settlement by science or engineering, and therefore by the professional. It would seem that the political problems of government are inescapably extended; that new pressure groups are generated both among the professionals and the bureaucrats, and among the affected economic and administrative units; and that the political task thrown on the political machinery of government is thereby rendered both more difficult and more important. A governmental solution of an economic problem, while it may improve the immediate situation greatly, thus throws on the political machinery a new and intensified burden with a host of ramifications.

This does not mean, however, that government should abstain from action, but it does indicate the increasing complexity of economic life, and the need for close attention to related problems whenever government action is contemplated.

Duration of Agreements

The long contract period is an undesirable feature of the cooperative agreements so far proposed. Many persons hesitate to see public resources committed for such a period of several generations. The scope and character of the changes in our economy in the last hundred years make one feel incompetent to plan anything for the next hundred years, or even to set a framework for such planning.

The difficulty lies in the contractual nature of

the agreements. Presumably either side can take action to compel the other side to observe the contract until its expiration date, while neither side can break it by unilateral action. A more satisfactory arrangement in this respect is that of the British Columbia forest management licenses, which may be cancelled by the government at any time the licensee violates the provisions of the license so as to frustrate its objectives.⁶

Or, alternatively, relatively short-term agreements, of say twenty years' duration, might suffice to get the program under way. To be sure, this would not assure attainment of long-run objectives, but it certainly could achieve sustained-yield management for twenty years, after which time if this were successful another twenty years of management could be undertaken, and so on. This way the contract terms could be made more specific and less open to evasion or miscarriage. In addition, any needed changes could be inserted at the renewal time. While the agreements could even now be modified at any time (by mutual consent), there is a serious possibility that either party will not wish to give up exploitation of any unusually favorable opportunity that might arise.

While twenty-year contracts might grant preference in renewals to the existing operator, this need not be required.

Andrews and Cowlin (5) remark that once normal

⁶Subject to the licensee's appeal to the Supreme Court, which may reverse the cancellation.

age-class distribution is attained on both the public and private lands, even the long-term type of contract might be terminated.

Loss of Public Revenue

Where sustained-yield units allow non-competitive sales at appraised prices, they have come under attack on the ground that public revenues will be less than under active competition. While this is a plausible argument, it is probably of but little consequence and may be entirely invalid. Under sustained-yield units the federal government, and state and local governments, should benefit in other ways than by a direct stumpage return, through receiving social or intangible economic benefits of permanent communities, and through allowing a much greater annual cut where a more balanced age-class distribution is attained.⁷ In addition, sustained-yield units can be expected to result in more intensive management of the forest, with a consequent greater production and harvest of the crop.

Special Problems of Federal Units

To the extent that federal units bring allocation of timber to individual mills without competition they are open to the same criticism given cooperative units. On the other hand, they make possible the same benefits of stability, and of incentive toward integration that makes for closer utilization and the channeling of raw material

⁷As indicated on p. 98, Andrews estimated a 40 percent greater allowable annual cut for the Shelton unit with the lands combined.

to its highest practicable use.

In cases where public timber is allocated to a number of mills, under a quota system, there is a serious administrative problem of readjustment of quotas to accommodate changes in plant ownership and in physical and financial capacity of the respective enterprises, which are inevitable with passage of time.

Another difficulty of federal units is that although other operators may legally be permitted to enter the manufacturing area of a given unit there may be no suitable site available for construction of a mill. Lack of available site may also prevent an existing operator from making the type of expansion in utilization it is expressly desired to encourage.

To be sure, boundaries of the manufacturing area could be extended to include additional industrial sites as the need should arise, but this would put the administering agency in a delicate position of being required to grant extension in some circumstances and to withhold it in others, with no adequate standard for such action.

The federal units have no stated period of duration, but are to remain in effect indefinitely, as long as they accomplish their objectives. Here again the administering agency may be subject to strong pressure either to continue an outmoded unit, or to put an end to one which is still useful.

The federal units are not to be abandoned because of these administrative difficulties. It is imperative,

however, that these difficulties be recognized and dealt with in a manner that keeps the community fully informed of and predominately behind the action of the controlling agency.

CHAPTER X

FOREIGN EXPERIENCE IN FOREST MANAGEMENT, ALLOCATION, AND SUSTAINED-YIELD

Forestry has been practiced in America for scarcely fifty years. Several nations have a much longer record of experience in this field, and others are coming to face many of the same problems America now faces. It will be helpful to examine this experience, particularly with respect to problems of private tenure and private allocation of public forests for industrial operation. No attempt will be made to present a comprehensive review of foreign experience, but selected examples will be presented, within the writer's knowledge and the limited availability of appropriate source material.

European Experience

Germany.--Forestry science and practice originated in Germany. Heske (68) reports a simple area-regulation for sustained yield in the city of Erfurt in 1359. Systematic forest management in most public and large private forests had been undertaken by early in the nineteenth century, with a definite objective of sustained yield. Later in the nineteenth century the industrialization of Germany, with rapid development of transportation facilities and the substitution of coal for many former uses of wood,

made local sustained yield less important. At about this same time the application of economic theory to forestry further weakened the validity of sustained-yield objectives, by giving attention to the principle of profit maximization, which directed that each tree or stand be cut when financially mature. However, the practical objective of sustained-yield management by working units persisted up to World War II. Forest management in Germany has been of a different character than that in America, first, because private forestry existed mainly on large entailed estates which were remnants of feudal holdings, and second, because management of the forest was never integrated to any extent with management of the woods-using industries, which were apparently able to secure adequate supplies either on the local market or from abroad. Therefore the need for allocation of public timber never developed.

Sweden and Finland.--The most advanced forestry now found in Europe is in Sweden, where 30 percent of the forest land is in industrial and large private holdings, and 45 percent is in small private holdings of 500 acres or less, with the remainder in public forests (103).

Dimock (38) reports government financial and directing interest in some of Sweden's lumber industries. For the most part, timber from public forests is sold competitively. So far as the writer knows, the problem of long-term allocation of public timber has not arisen. Some of the public timber is sold directly to a group of government-owned industries formed in 1941. This is causing some concern

on the part of the private forest industries (94). Perpetuation of the forest is assured by laws requiring forest land to be kept in forest, and by locally administered forest practice rules. Palmer (124) reports legislation in Sweden prohibiting acquisition of additional forests by private companies.

In Finland only 8 percent of the forest land is in industrial and large private holdings, while 38 percent is in public forests and 54 percent is in small private holdings of 500 acres or less (103). This means that a large part of industry's raw material must come from small private woodlands, whose owners are often well organized in cooperative marketing and management associations. Jenkins (78) reports that these small owners have a good appreciation of the value of their timber, and are successful in demanding a relatively high stumpage price.

Canadian Experience

British Columbia.--Ninety-three percent of the productive forest land in British Columbia is Crown-owned. Sale of Crown-owned "timber land" was prohibited in 1896. From 1912 to 1947 timber in commercial amounts from unalienated lands has been offered only under short-term timber sales, under competitive stumpage bid, starting at an appraised upset price.

Prior to 1912 the method of disposal had been under timber leases or timber licenses. Both of these types of tenure have been renewable, whether or not any timber was

cut, as long as the land carried merchantable timber in commercial quantities, and as long as the annual fees were paid. Leases are renewable for 21-year periods, and licenses are renewable annually. Both require payment of ground rent, license fees, forest-protection taxes, and royalty on timber cut, or the equivalent. A large number of both types are still in effect, with licenses predominating. Leases have no uniform size. Licenses are mostly for 640 acres, although they are transferable, and there are no restrictions on the number held by any person.

Under the arrangement of leases, licenses, and short-term timber sales there was no incentive for the operator to practice forestry, and much incentive to remove all the merchantable timber with no regard for regeneration of the forest. Until recently the British Columbia Forest Service has seldom been in a position to prescribe silvicultural practices or to regulate the cut for any given area.

The Mulholland Report of 1937 (115) and the Sloan Report of 1945 (26) recommended establishment of cooperative working circles, containing both unalienated Crown land and lands in other forms of tenure, to be managed for sustained yield. Out of these investigations grew legislation for forest management licenses¹ and farm woodlot licenses.²

The objective of forest management licenses is to

¹Chapt. 38, Sect. 12, Statutes of British Columbia, 1947.

²Chapt. 25, Sect. 4, Statutes of British Columbia, 1948.

give private forest operators the right to manage Crown lands for the purpose of "growing continuously and perpetually successive crops of forest products," and to achieve sustained yield, community stability, closer forest utilization, and perpetuation of the resource. It is not necessary that the licensee possess timberland of his own, but if he does, or holds Crown lands under lease or license tenures, such lands must where feasible be included in the management plan for the license. Privately owned lands so included retain their private status with respect to taxes, and when logged off may on election revert to the Crown. They may not be sold or transferred. Other tenures when logged off revert to the Crown. When such lands revert they automatically become part of the forest management license. Other private lands acquired by the licensee within the boundaries of the license or within any watershed on which the management license encroaches are subject to the management license.

The holder of a forest management license pays a rental of one cent per acre per year, forest-protection taxes, forest management expenses, and full appraised stumpage, as out, on timber described as merchantable at the time the license is issued, together with 16 percent of appraised stumpage on succeeding crops. Alternatively, he may elect to have costs of management, protection, and silvicultural treatment deducted in stumpage appraisals, and pay the full appraised stumpage on all crops. Appraisals are by the B.C. Forest Service, under the method currently

in use at the time the appraisal is made.³

Cutting under forest management licenses must be in accordance with periodic management and working plans prepared by the licensee and approved by the B.C. Forest Service.

Where a forest management license is granted for support of a given manufacturing plant it may not be sold or transferred separately.

The Minister of Lands and Forests may issue a stop-notice where a licensee is not complying with the terms of a forest management license, or may cancel it entirely if the licensee violates its provisions in a manner to frustrate its objects. Stop-notice or cancellation may be appealed to the Supreme Court, whose decision may in turn be appealed to the Court of Appeal, whose decision shall be final. Discretionary power exercised by the Minister may be appealed to the Lieutenant-Governor in Council.

The standard form of agreement for forest management licenses provides that withdrawals may be made for higher use on approval of the Minister. Deviation from the cutting budget may not be more than 50 percent either way in any one year, nor more than 10 percent in any five-year period. In the event of disagreement on rate, sequence, or methods of

³It is to be noted that in the U.S. sustained-yield units the operator pays no rent, and the public agency bears costs of protection and management, including planting and road construction, on its own lands.

cutting, the determinations of the Minister will be accepted and used.

The provincial government retains ultimate control under Section 3 of the standard agreement form, which requires the licensee to manage the area in accordance with provisions "of any regulations that may have been or may be made from time to time under the 'Forest Act' for the regulation of forest management licenses. . . ." [Italics supplied].

Eleven forest management licenses have been issued, and thirteen more areas are under reserve pending completion of management and working plans. These range in size from 5,600 acres to 668,000 acres. One company has applied for a forest management license covering 3 million acres in southeastern British Columbia (16). In 1948 about a hundred licenses were reported in various stages of completion (116).

These licenses have received some of the same opposition as have cooperative units in the United States, but to a much lesser degree. Reasons for this include (a) a recognition of the pioneering stage of the province's development, where the problem is more one of bringing virgin resources into use rather than allocation among competing firms; (b) an assumption that the B.C. Forest Service is unable to practice the intensity of management that the forest deserves; (c) a realization that the renewable leases and licenses, conceived in a period of exploitation, are an inadequate form of tenure for permanent management; (d) less active competition for public timber sales; and (e) a less well-organized opposition group.

At the 1951 Truck Loggers Convention (192)

E.T. Kenney, Minister of Lands and Forests, was asked whether he would prefer three large operators, each cutting 25 million board feet per year, to twenty-five small operators, each cutting 3 million feet per year. He replied that he would be in sympathy with the smaller operators, but he knew the larger operators would do a better job. C.D. Orchard, deputy minister, said that forest management licenses might force the small operator to move his operation, but would certainly not force him out of business for lack of timber. He added that the small logger, if he was a good logger, should certainly be able to survive and prosper. Previously (10), Orchard had stated that the government wanted operators to do their own reforestation, that it wanted to get away from government regulation, penalties, and policing of individual timber sales, and that big operators were necessary for industrial development.

The other new form of tenure, farm woodlot licenses, authorizes reservation of up to 640 acres of forest land for individual farmers, but in no case shall this be more than necessary to provide a productive capacity of 10,000 cubic feet per year when combined with the farmer's privately owned land. This would be managed under a management plan, together with the privately owned forest land, and would revert to the Crown on sale of the farm. No carrying charges will be paid on the Crown-land portion of the woodlot, but stumpage and royalty on trees removed from the license area will be paid as appraised and assessed by

the Forest Service. The woodlot must be kept stocked with forest growth of commercially-saleable species, and the land must be managed by the licensee for the perpetual yield of an annual or periodic harvest of wood. Only three applications for farm woodlot licenses have been received, none of which have been approved.

L.R. Andrews (?) questions the soundness of the farm woodlot license arrangement which he feels would burden the Forest Service with inspections and collection of stumpage and royalty payments from such small operations. He would prefer outright sale of land to farmers.

Recognizing that forest management licenses and farm woodlot licenses are not a complete answer to British Columbia's forest problem, the provincial government is establishing a series of "public working circles," where, as on the managed Provincial Forests, the Forest Service performs the management function and offers the timber for competitive sale. Public working circles will have access roads provided largely by the government. While these working circles are intended to provide timber for the small operator, there are no restrictions on location of manufacture, nor on competition by larger operators if they need the timber.

In addition, long-term timber sales may now be made to operators who cannot qualify for a forest management license, but who wish some assurance of timber supply, and who are willing to make large investments in road construction. These sales provide for the operator's option of

paying the initially bid stumpage rate throughout the life of the contract, or of paying on a sliding scale in accordance with fluctuations in the selling price of logs or lumber.

In conclusion, it may ultimately prove unwise for British Columbia to have gone so far in making forest management licenses perpetual. Yet it is evident that this form of tenure is bringing about a substantial increase in industrial expansion in the province, and has every promise of bringing good management practice on the land.

Ontario.--Continued exploitation of Ontario's forest resources led to a Royal investigation. The 1947 report of this investigation recommended mandatory pooling of the forest industries of the province to form twelve operating companies, each to be allocated the entire cut from a corresponding operating area. These areas would comprise all the Crown forest lands of commercial quality in the province, and in each area industrial expansion would be limited to the area's productive capacity. These recommendations failed to gain support, and were never put into effect.

Crown timber in Ontario is disposed of either competitively under a renewable annual license system, under non-competitive long-term agreements covering periods up to twenty-one years, or under short-term cutting permits for small quantities of timber valued at not over five hundred dollars.

The Ontario Minister of Lands and Forests may require operators to submit master plans for permanent management of their license areas. These are often a preliminary step

toward establishment of permanent Management Units, of which the first was established in 1947. It is the intention that these Management Units will provide permanent supplies of raw material to established industries. Presumably, allocation is to be achieved through renewable annual licenses or 21-year agreements (133).

H.R. Scott, Ontario's Minister of Lands and Forests, has been quoted as saying: "There is no use setting up new plants to use any possible forest surplus if by so doing we are going to cramp the growth of an already successful existing industry that has been built up along sound lines and has already developed its markets, its manufacturing know-how and, best of all, has created work and provided livelihood and happy communities in our north country" (17).

Other Canadian provinces.--Alberta grants cutting rights under licenses with limited renewal provisions. Forest management licenses have recently been authorized, patterned after those in British Columbia, but to the writer's knowledge none have so far been publicly proposed.

Quebec grants timber leases with terms and duration set according to the circumstances in each case. The 1948 annual report of the Minister of Lands and Forests (129) lists nineteen 30-year leases, one 35-year lease, and six 50-year leases in force. This report also indicates over 17,000 square miles leased to one company, the Canadian International Paper Company, and leases of more than 2,000 square miles to each of seven more companies. Quebec is engaged in an initial inventory of her forest resources,

and is beginning to require ten-year management plans from its lease holders.

Gilmour (50) states that Crown timber in Newfoundland is disposed of in large lots under 99-year renewable leases, or under short-term licenses for smaller areas.

Experience in Other Parts of the World

Forest operations in many parts of the world are still in an exploitative phase, with government foresters performing a crude extensive sort of management planning, and with private concessioners performing the cutting under leases or licenses for a stated period, usually under thirty years, but often renewable. A few government-owned sawmills are found in South Africa. The New Zealand government has advertised a 75-year sale of public timber, together with an offer of financial assistance in financing construction of an integrated plant for the production of lumber, pulp, and newsprint (45).

Summary

In summary, foreign experience indicates that relatively long-term arrangements are often considered necessary to encourage economic development of the forest resource and to induce investment in plant facilities. As the forest industries become larger and more complex they become more fixed in location, and as the forest areas of the world are more and more put under management, increasing attention is given to the relation between plant capacity and productive capacity of the forest.

CHAPTER XI

STRUCTURE OF THE FOREST INDUSTRIES

Sustained-yield units cannot help but affect the structure of the various forest industries. It will be helpful to review some of the structural aspects of these industries, especially as related to requirements for increased utilization and stability of operations.

Concept of an Economic Unit

There is no question that land use in forestry as well as in agriculture must be by individual operating units. Ultimately, however, there are no clear criteria for defining either "economic" or "natural" units. The working-circle concept described in Chapter III seems to be designed more as a social unit for stabilization of local employment and community life than as a unit of production in the economic sense. On economic grounds tractor and truck transportation have made it possible to secure wood supplies from a widely scattered area, and pulpwood and veneer mills have often secured regular supplies from a distance of over a hundred miles.

In 1912 Greeley (58) described the Whitman, Ochoco, Umatilla, and Malheur National Forests in eastern Oregon as a single economic unit, since their products could be

marketed only over a single railroad line to distant points. He also considered the Helena, Deerlodge, and Beaverhead National Forests in Montana a single economic unit, as they were all tributary to a single consuming center--the Montana copper mines.

On economic grounds there is no reason for not considering the forests tributary to Puget Sound, the lower Columbia River, Grays Harbor, coastal British Columbia, and southeastern Alaska as single economic units.

On economic grounds much can be said for considering the forest and the manufacturing plant together as a single unit of production. Yet when allocation of public timber is included in this concept there is a serious danger that once made such arrangements could not easily be undone. Private equities, often intangible, would be created, which would be extremely difficult to overlook or to extinguish. The only solution to a difficult situation of this sort might be public purchase and operation of the manufacturing plant, and as far as can now be seen that would hardly be desirable.

Small- vs. Large-Scale Mills

From a review of investigations on size and efficiency in the American economy, Osborn (121) is unable to reach any conclusions with respect to relative efficiency, in the sense of lower unit cost of production, between small- and large-scale enterprise. The difficulty, he states, is that published studies have been unable to eliminate variables other than size. He adds that much of the argument against

business stems from "an enthusiasm for small, locally-owned business or a fear of the social or political consequences of too great a concentration of economic power." Osborn is concerned, however, more with a comparison of large and moderate-sized firms, and it can hardly be disputed that the very small firm, so common in lumber manufacturing, is seriously handicapped by a lack of functional specialization of management tasks, poor marketing conditions, inadequate availability of capital, and an inability to utilize waste products.

In sawmilling, Duerr (39) has called attention to an important low-cost advantage of small mills due to the supplementary character of small-sawmill employment, and he illustrates this by the example of a forest operation in West Virginia in the 1930's, reportedly carried out by fifty-two sawmills, mostly small mills, rather than a few large ones. However, Duerr admits a physical inefficiency of small sawmills, and an opportunity-cost waste of equipment, capital, and labor.

Eldredge (41) estimates that perhaps one-half of the pine lumber cut in the lower South is produced by small mills and marketed through concentration yards that perform grading, seasoning, and dressing operations.

In the West, portable mills often have an advantage in being able to go into the forest to cut small material, and to skid and transport it in light equipment.

Large firms have a strategic advantage in buying and selling, in matters of finance, in being able to carry

on industrial research, and in having a variety of products on which to balance profits and losses. In addition, the large forest industries have an advantage in being able to sort the raw material for manufacturing into a variety of products, or to sort the finished product so as to realize a premium on the better grades.

Horizontal and Vertical Integration

The forest usually produces a wide variety of sizes and species, which no one manufacturing plant is fully able to utilize. While there are examples of clustered independent plants which use the forest raw material for a variety of products, or which use waste material from primary utilization plants, the writer believes that the greatest opportunity for full utilization of the forest lies in integrated plants under a single control, and that further development in this direction is inevitable.

Horizontal integration of forest industries, whether done within a single firm, or among a variety of firms in the same community, requires large and dependable concentrations of suitable raw material, financial ability to survive a certain period of research and development, and finally, an aggressive marketing organization.

The impetus toward vertical integration is primarily explained by a desire for self-preservation by assured access to raw material, and by stability of markets and prices in selling operations. A manufacturing plant that controls neither raw materials nor markets is likely to find itself denied any share of persistent or temporary advantage which

may arise in these sectors, and to find that it alone is required to bear the brunt of unfavorable shifts in their price or supply positions.

Hosmer (76) regards industrial forest management as a matter of business organization, where the essential task is "to integrate the problems of a complex raw material, technical productive processes, and a diverse market."

Forest Finance and the Problem of Allocation

Titus (148) has described cooperative units as a subsidy in that individual operators would be supplied with large volumes of mature timber in which they would have no investment, and on which they would be required to pay no taxes nor interest [nor stand the economic cost of implicit interest] during the long waiting period of several decades.

To the writer's knowledge the fallacy of this argument has never been pointed out. It lies in the fact that the timber is never given to the operator--he pays a full appraised stumpage as he cuts it, just as he would have to do if it had never been held for him, or as anyone would do purchasing similar timber at any time. Any capital investment, taxes, and interest costs borne by timberland owners is rewarded by the value of the timber when cut; a purchaser of stumpage gains reward only for processing, with capital values returned to the landowner as stumpage payment.

In so far as stumpage prices keep in step with the cost of growing and holding timber the cooperator gains no money advantage over other operators who purchase stumpage

or grow their own.

If future stumpage prices are expected to be less than the cost of growing and holding timber, then there is but little economic reason for any private person to own timberland, irrespective of whether or not there are sustained-yield units.

If future stumpage prices should turn out to be greater than the cost of growing and holding timber, then any purchaser of stumpage will be at a relative disadvantage, again irrespective of whether or not there are any sustained-yield units.

Any cooperator in a cooperative unit is spared the risk of loss in value or in destruction of standing timber, but then so is he denied the gain in value and in forest growth that accrues to the government through stumpage payments.

The cooperator does gain, however, in other respects. He is able to carry on his own milling operations on a large scale with assurance that an adequate raw-material supply will be available, and he is able to finance plant expansion based on the security of this assured supply. But in a region where vast public forests make future supplies available on a predominately competitive market any other operator has nearly the same assurance of supply, and nearly the same access to capital markets for plant expansion.

Effects of Cooperative and Federal Units

One effect of cooperative and federal units on the structure of the forest industries would be to accelerate increased utilization of the forest raw material and to

increase the degree of industrial development of the forest regions, not only directly in the individual manufacturing plants concerned but also in the industry generally as opportunities and experience of this leadership became known. Large-scale integrated forest industries would be encouraged, partly, to be sure, at the expense of opportunity for other operators, both large and small, but also partly in place of what would otherwise be a certain amount of inefficiency and waste, and in place of a lesser degree of resource utilization, employment, income, and wealth production.

Of course, any form of monopoly protection granted to private enterprise might be perverted so as to protect monopoly profits and retard progress rather than promote it, yet adequate public supervision should be able to prevent such a result.

However, any program of allocation of public timber must consider not only the benefits of allocation to some plants, but also the drawbacks of restricted availability to others. There is no fairness in allocation unless wide opportunity is available for allocation to all who qualify, and when there is a large amount of public timber so allocated it becomes increasingly unfair to those operators left out.

Thus, from the point of view of competitive industry, the greater the amount of allocation to some operators, the greater the need for allocation to others.

Conversely, the smaller the amount of allocation

among existing operators, the less becomes the need for allocation to any one.

All things considered, perhaps the greatest contribution of the public forests to the support of industry as a whole is therefore the assurance that maximum amounts of timber will always be available on a competitive market.

CHAPTER XII

PLANNING THE FOREST COMMUNITY

A major objective of sustained-yield units is to promote community stability through orderly, uninterrupted cutting operations under a sustained-yield management plan. This involves more than simply good forestry practice on the land.

Stabilizing the Economic Base

The objective of stability is sought, first, to keep the resource productive rather than to be liquidated and destroyed; second, to provide a continuing base for taxation and employment; and third, to prevent, in a general way, social losses from reduced activity and opportunities in a given region. This is a separate problem from that of stabilizing the individual community.

Stabilizing the Individual Community

The objective here is to protect capital values in homes, public buildings, utilities, secondary industries and commercial establishments, and social values in established institutions of government and economic life. Stability is, however, an inadequate objective, and something of a misnomer. While stability is sought to eliminate unwanted contractions in economic activity its advocates

certainly do not wish to eliminate economic expansion. A completely stabilized community would certainly not be attractive to all persons as a place in which to live and work.

In a study of abandoned lumber-mill towns in the Puget Sound Region, Cross (34) concludes that such abandonments are generally much less serious than popularly supposed. Many of these abandoned towns had been built as temporary, pioneer settlements around a single mill, and often could hardly be considered as real established communities. He held that pioneer sawmills had performed a service in bringing initial settlement and development to the region, and should not be condemned when they were subsequently forced to close. Many such mill closures were the result of the same economic pressures found in other industries, or of the timber being diverted to other mills, or of the gravitational pull of larger cities as transportation facilities reduced rural isolation.

Wright (203) considers economic growth as inevitably accompanied by a constant reorganization and reallocation of resources and people. While there is some justification in taking steps to cushion the shock of necessary readjustments, it is not wise to postpone their effect too long, nor to permanently insulate selected communities from competitive disadvantages of location.

It is difficult to plan the pattern of log movements to given processing communities, for a new road may easily make transportation in a different direction more

economic. Moreover, a successful location for manufacture of forest products, as with other products, may be determined more by the energy, resourcefulness, and aggressiveness of business management than by the transportation cost of raw materials, or other traditional factors (25).

The Company Town

A drawback to cooperative units is that they would tend to encourage development of company towns. While the expression "company town" often calls to mind a picture of ramshackle buildings and a poorly stocked company store, even respectable-looking communities may be owned and controlled by the single company which provides employment. However, where the company deliberately avoids extensive ownership of local real estate and domination of local government, public services, banks, and press, a satisfactory community relationship may still be attained.

It is difficult for resource-planning agencies either to avoid company towns or to regulate them so as to achieve any desired type. Perhaps the most to be expected is that a growing awareness of social responsibilities and of public-relations values accruing to the company will bring company action that tends to minimize the undesirable effects of the "company town" in its most extreme form. The writer wishes to emphasize his belief that such action can be brought about better by business initiative on the part

of the company concerned, rather than by any direct action of a public resource-management agency.

Alternative Methods of Assuring Continuity of Community Support

While establishment of cooperative and federal units is a direct means of allocating public timber to specified communities, the Forest Service, in its regular timber sales, not under P.L. 273, is able to encourage a certain degree of community stability. Under administrative departmental regulations award of timber to the highest bidder, under competitive sales, may be denied if "the award would result in removing or materially lessening opportunities for gainful employment to local labor; or would be against the interests of local users dependent on national forest timber; or would cause the abandonment or prevent the establishment of a local industry which should furnish a desirable permanent market for national forest products."¹ Also, "When necessary to promote better utilization of national forest timber or to facilitate protection and management of the national forests, a management plan may include provisions for requirements of purchasers for processing the timber to at least a stated degree within the working circle, or within a stated area, and, when appropriate, by machinery of a stated type; and agreements for cutting in accordance with the plan may so require."² These are both awkward procedures,

¹36 CFR 221.10 (a)(6).

²36 CFR 221.3 (b).

however, and to the writer's knowledge they have seldom, if ever, been applied.

In regular timber-management planning on the national forests, Gross (64) states that community stability may be encouraged by some silvicultural sacrifices in the cutting budget of any given working circle. I.J. Mason (107) adds that in old-growth stands provision for continuity of community support may be made by deliberately holding back the rate of cut from that which would realize the greatest potential growth and protection from epidemic insect and disease losses, and that any management plan and its cutting budget may be amended where a major block of timber is awarded to a mill in some community other than the one considered logical to the plan.

Dangers of Allocation

Mere existence of a community in a given location does not prove it should be there. Its location may have been uneconomic from the start, or changing conditions may have made it so today.

Whenever a public agency allocates timber to a given community it invites charges of economic dictatorship. In most cases federal units should not be established for reasons other than to forestall considerable immediate distress. The Forest Service has acted wisely in refraining from establishment of federal units requested where the motive was simply to insulate a given community from competition.

CHAPTER XIII

ROLE OF GOVERNMENT IN THE FOREST ECONOMY

Are cooperative and federal units to be avoided because they place too much economic power in the hands of the federal government? Should the government always seek active competition in sales of public timber? On the other hand, is it not wise for government to enlist the cooperation of private enterprise in the management of the public forests? Such questions cannot very well be discussed without first examining the role of government in some of its broader aspects.¹

Political and Social Role of Government

The classical functions of government are to coin money, maintain order and justice, and provide for the common defense. To these have been added the provision of roads, education, and other services for the general welfare. In a democracy, defined (31) as rule by popular will, government today seeks to assure certain fundamental human rights, among them freedom from involuntary servitude, equality of opportunity, equal protection before the law, and the absence of special privilege.

¹In the remarks that follow, attention is given primarily to the role of the federal government.

Beard (21) puts great significance on the method democracy offers for "making the political and economic adjustments required by changes in the production of wealth, the advance of knowledge, and the eternal urge of the human spirit." "Democracy," he states, "proclaims that these changes are to be effected by the processes of inquiry, discussion, deliberation, popular decision, and continuous appraisal of results."

Key (85) considers class interests and group interests as the principal driving forces in politics; he states that "it is a function of government to attempt to reconcile the interests of these groups, to devise policies that provide an accommodation among conflicting drives, [and] to maintain social unity despite the inevitable diversity of interest of social groups and classes."

Another duty of democratic government is suggested by Landauer (92), namely, to take measures to diminish the differences in opportunities and standards of living between the wealthy and the poor.

General Economic Role of Government

Edwards (40) takes maintenance of effective competition as a desirable objective of governmental policy, yet points out that substantial areas are deliberately made exceptions to the general rule, as for example where

technological conditions of production make competition inappropriate. As a general rule he does not sanction restrictive arrangements designed simply to protect a given enterprise from business loss or bankruptcy. He states:

The argument for this type of protection of the business interest is advanced, in the case of large business enterprises, on the theory that the collapse of a great concern injures so many people that it cannot be tolerated. To assert this is to argue, in effect, that the concern's activities are no longer private in character and therefore should no longer be determined privately. The logic of the argument implies a need for public regulation, of which prevention of bankruptcy would be only a small part.

Clark (31) and Lyon et al. (96) have traced the evolution of social control from its beginnings in the sanction and enforcement of private property rights and the establishment of a rule of law. Clark states:

Law arises out of the need of settling disputes; hence its very nature is the defeating of certain interests that others may prevail. Ultimately it becomes an instrument for furthering purposes and ideals prevailing in the community, but always it faces the necessity of defeating certain interests.

In the common evolution of business and control, implementation and the curb of specific abuses have led in many cases first to regulation, then to governmental guidance and active participation in the economic process.

Positive Role of Government

The American tradition holds that governmental powers should be held to a minimum, yet in practice the American people have increasingly turned toward government for assistance in meeting economic problems of the day. Clark (31), Pegrum (127), and MacIver (99) have described

this expansion of governmental functions, and Clark concludes that grounds can be found for an almost unlimited range of powers within which government may act to achieve social purposes, provided, of course, it can define its interests clearly and devise appropriate means to promote them. If emphasis on private enterprise is to be retained, he would suggest the following limitations on governmental powers: (a) Government should not limit individual liberty in a given sector except to increase it even more somewhere else; (b) a healthy balance should be preserved between public and private operations in terms of numbers, intelligence, and power of persons so engaged; (c) voluntary organization should in general be recognized as superior to compulsory organization; (d) the state should not be allowed to substitute its judgment for that of the individual in matters which primarily concern him, unless the state's judgment can give systematic and impartial balancing of the interests at stake; (e) the exercise of power must correspond to the particular interest involved; and (f) consumers' choice should not be unduly interfered with in determining the quantity and quality of production.

Davenport (35), however, fears that in some respects such limits may have already been overstepped. Taking the U.S. Department of Agriculture as an example, he warns of an increasing tendency toward transfer of initiative into governmental hands where it helps to perpetuate the "governmentalists" in office under the argument that "government can do it better."

A Lesson from Transportation Regulation

Sharfman (138) regards the long record of the Interstate Commerce Commission as outstanding in testing the soundness and effectiveness of public control measures. He emphasizes that in this sphere of control "the essence of private enterprise has been maintained"; the accompanying legislation has evolved through a "prolonged process of trial and error"; administrative policy has been "dominated by a sense of realism and restraint"; and the processes employed "have safeguarded all essential rights and interests." He concludes that this type of regulatory structure "has attempted to harmonize the maintenance of established institutions and the attainment of changing objectives; . . . has sought to safeguard the essence of the prevailing order, but to direct its concrete manifestations into channels of public welfare; . . . [and] has aimed to conserve the significant gains of past effort, to remove emerging maladjustments, and to establish arrangements so fashioned as to meet future needs."

As Stocking and Watkins (143) have pointed out, however, technological progress may be retarded in a regulated industry, with the attention of management "diverted from internal administration to external lobbying and litigation."

Social control in transportation fields (and in the public utilities) has been achieved only under a tremendous complexity. It has been justified by the indispensable nature of these services and by the vast

scope of their effect on our entire economic structure and activity. It is to be emphasized that this experience in regulation does not of itself justify a similar pattern of control, nor for that matter any control at all, in other sectors of the economy. Extreme caution should be observed in considering any proposal for public control, with the desirability and the form of any such control determined by the particular circumstances in each instance.

Particular Case of Forestry

The role of government in forestry has been discussed by Fernow (44), Schlich (135), Troup (150), Black (25), McArdle (98), and Martin (103). These writers all stress (a) the need for the state to conserve the forest as a basic resource essential in many ways to the well-being of its people; (b) the special influence of the long period of production in forestry, extending over several generations, which, with immediate pressure for cutting, often makes forestry unattractive to the individual; and (c) the private owner's common unconcern over watershed and other social values.

The early writers emphasized achieving forest conservation through government ownership of a significant portion of the resource. Recent experience in Canada, however, indicates that government ownership is not always a completely satisfactory answer.

In addition to ownership, government activities in forestry have in this country included (a) assistance

to individual states and private owners in protection and the provision of technical services and planting stock, (b) leadership in research, and (c) encouragement of state regulation of cutting practices and improvement of forest tax laws. The Forest Service has also urged establishment of federally sponsored credit and insurance systems, and federal regulation of cutting practices where state regulation is inadequate.

After reviewing forest conditions in the United States, Sweden, and Finland, Martin (103) concludes:

1. Government has the over-all duty of protecting any vital natural resource from misuse and destruction.

2. It can best exercise this responsibility by preserving the individual's incentive to progress and by placing much of the responsibility directly upon those citizens who have a real interest in maintaining the resource.

3. The government's task can be more easily and effectively carried out if there exists a rational and competitive balance of forest land ownership in the country.

4. The most effective enforcement of any law regulating the actions of individual citizens is that which is applied on the local level by officials chosen by the people.

Martin's position exemplifies the forest industries' growing desire to justify themselves in the public eye, and to demonstrate their competence to accept responsibility and leadership. At first glance his position may appear somewhat biased, yet it ably represents a growing social consciousness in industry, and an earnest effort based squarely on experience and accomplishment, to find a realistic program. As such it deserves a great deal of consideration and respect.

Concluding Remarks on
Role of Government in Forestry

Just as in any field of endeavor, the proper role of government in forestry, in a private enterprise economy, cannot be defined in any timeless fashion. Each nation and each generation has its own problems, its own traditions, and its own economic and political outlook. This requires a different governmental role, with a considerable range of appropriate action, in each situation.

The plan of sustained-yield forest units emerged during unstable times in an unstable industry, when people generally looked to government for assistance in meeting current economic problems. These conditions have now been significantly altered, yet the fundamental task of long-term forest management and conservation remains, with the organization for control still unsatisfactory. The only conclusion possible is that within the broad framework of a private-enterprise economy and a democratic society there is virtually no absolute standard and no sharp limit to the allowable scope of governmental action in forestry. The only requirement is that it serve a definite need and gain acceptance and approval by a majority of the persons to be affected.

CHAPTER XIV

ALTERNATIVES TO THE PROGRAM

Sustained-yield objectives of the 1937 and 1944 acts have been widely accepted; it is the means proposed for achieving sustained yield that have been opposed. If the program in its present form is unacceptable, then the available alternatives or modifications should be examined.

Alternatives to Simplify Management

Where a complex pattern of land ownership exists, especially in checkerboarded lands, a logical solution is land exchange so as to block up individual ownerships. Ample authority for such exchange of Forest Service lands exists under the Exchange Acts of 1922 (42 Stat. 465) and 1925 (43 Stat. 1215), and for O. and C. lands under an act of 1939 (53 Stat. 1144).

At the present time, however, neither the federal agencies nor other timberland owners seem anxious to effect exchanges, primarily because they recognize strategic values in a maintenance of the status quo.¹ Private owners, through control of rights-of-way, can often hold a preferential

¹The City of Seattle has, however, worked out a program for acquiring 24,500 acres of intermingled national forest land in its Cedar River Watershed, through exchange for other land outside the watershed (145).

position in bidding for public stumpage. Or even without right-of-way control the private owner has a competitive advantage in being able to spread road-construction costs over both the public timber and his own. In addition, interspersed lands reduce the loss to a single owner from any given fire.

The Bureau of Land Management has ruled that

. . . the strategic advantages to regional conservation of resources which are inherent in the checkerboard land pattern, in many cases, may outweigh the administrative advantages which could be gained by concentrating the O. and C. lands in solid blocks. This advantage lies in the fact that progressive conservation practices being applied on the grant lands tend to encourage the adoption of similar practices on the intermingled lands.²

The Forest Service, while it continues to encourage exchange of stumpage for private land, presumably does not wish to contract the exterior boundaries of the national forests, and recognizes similar public benefits to those indicated in the above Bureau of Land Management regulation.

As an alternative to land exchange, forest management would be simplified by an increased construction of public access roads.

Alternatives to Improve Practices on Private Forest Land

Suggested alternatives to improve private forestry have included federal benefit payments, technical assistance, low-cost credit and insurance facilities, local tax modification, and state or federal regulation. Or eligibility for

²43 CFR 115.95

public timber sales could be denied to any person or firm not practicing good forestry on its own land.

Most of these devices are unworkable or insufficient, and have been discussed elsewhere in this report. In the last analysis the greatest incentive for improved private practice is the economic incentive: that it pays to manage your lands well. This is becoming more and more appreciated by private forest landowners, especially the larger ones, and the need for public action is much less urgent now than it was in the 1930's.

Alternatives to Achieve Sustained Yield

If sustained yield is taken to include a regulation of the rate of cut, then such regulation could be taken by each type of landowner, public and private, independently, or conceivably, if necessary, by establishment of production quotas under some form of government or industry administration. It is the writer's opinion that sustained-yield management of the public forests, together with the treatment likely to be given private forests, will in a prosperous national economy adequately safeguard the continuity of national timber supply and local community stability, without the need for production quotas or public regulation of the rate of cut on private lands.³ Many private forests, especially those in the

³Reforestation laws, and public regulation of cutting practices may still be desirable.

smaller ownerships, need improved care, but the writer believes this should be encouraged primarily through economic incentives of the market, and through educational efforts and technical assistance by industry or by state or federal governments.

Alternatives for Community Stability

Alternatives open to the Forest Service to encourage community stability under administrative regulations have been discussed in Chapter XII, although it must be emphasized that the Forest Service has been reluctant to exercise this authority.

Federal units are, of course, an alternative to cooperative units as a means of achieving community stability, and have often been proposed as such. But unfortunately, to replace a proposed cooperative unit by a federal unit might have the effect of foregoing most of the cooperative unit's advantages and bringing about most of the federal unit's disadvantages.

Alternatives for Encouraging Investment

Investment for additional industrial development and raw-material utilization can be encouraged by long-term (10- to 30-year) timber sales, by allowance of accelerated amortization for income-tax purposes, or by the presence of a favorable long-run market outlook. The last-mentioned condition can be encouraged by keeping the national economy at high levels of production and employment.

This was undoubtedly the principal incentive for the large expansion that has occurred in recent years. In addition, local taxing authorities could grant tax concessions for new plant construction.

Other Alternatives

Foster (155) and others have proposed public access roads, frequent small competitive sales, and a free log market as an alternative to cooperative units. This would increase opportunity for many operators, especially the smaller ones, but would not achieve the objectives of large-scale industrial development, increased utilization of the resource, and community stability. To a large degree the case for cooperative units rests on acceptance of these latter objectives as socially desirable, over and above any possible undesirable effects on community and social structure.

Another alternative would be to form a public or semi-public corporation to take the place of the private cooperator and his milling facilities, but it hardly seems that this would be acceptable in America today.

Still another alternative would be to shift some of the better federal forest lands to private ownership, so as to encourage industrial forest management and greater utilization. Such action is of course always a possibility, and has been advocated to a greater or lesser degree by Woods (198), Greeley (63), the National Lumber Manufacturers Association (4), and others. While pressure for more

private forest ownership may increase in the next few years, other public values are involved, and the writer feels that the people as a whole wish to see no such changes made.

Other possible alternatives include renewable cutting licenses for up to twenty years, or public timber sales without competition on a first-come-first-served basis or through administrative selection. These would avoid competitive sales entirely, and allow cooperative units without discrimination in stumpage prices. But this would mean an even greater discrimination in availability of public stumpage.

A last alternative is to halt extension of the sustained-yield program and to continue the present system of timber sales, both small and large, short-term and long-term, with a gradual increase of public roads. This will bring about increased competition, and probably with it, in many cases, local and regional over-capacity. It may, however, turn out to be the best solution, and it is the course of action recommended by the writer.

Proposal for a Modified
Type of Cooperative Agreement

The writer believes that if additional cooperative units are to be established, their undesirable effects could be minimized by including in their cooperative agreements the following modifications:

1. A duration of not over twenty or thirty years.

2. A provision that the agreement may be cancelled by the public agency if the private cooperator repeatedly fails to comply with the agreement, with the operator's right to appeal such cancellation in the courts.
3. Public recreational use of company roads and lands where feasible.
4. Provision for management practices that give some recognition to watershed values on company lands as well as on the public lands.
5. Reservation of a larger portion of the allowable annual out than heretofore proposed, for competitive sales.
6. Less restriction on outside purchases of public stumpage by the private cooperator.
7. A three-man advisory board to advise the Secretary on matters appealed to him, as provided in the proposed Kootenai and Woodleaf agreements.
8. Stumpage appraisals either calculated by a method based on expected rather than past costs and prices, with annual or periodic readjustment on a sliding scale in accordance with fluctuations of the selling price of logs or lumber, above or below original appraised prices, or calculated as a percentage of conversion return more nearly representative of that found in actual competitive sales.

The reduced duration is proposed as a safeguard against unforeseen events in the future, especially important when the contract is presumably binding upon both parties for the entire period. Admittedly, a 20-year contract would not assure all the objectives of a longer contract, yet it would have the advantage of permitting its provisions to be stated in more specific terms. Obligations and procedures could then be spelled out more clearly, and new situations and new needs recognized if and when the agreement were renewed.

CHAPTER XV

CONCLUSIONS

Sustained-yield units must be judged on their ability to contribute toward efficient resource management, taking into account their social and political effects. Such units cannot be evaluated singly, but must be examined together on the basis of their impact on the structure of the forest industries, and on the life and outlook of the people who would be affected.

General Observations

Sustained yield an elusive concept.--It is to be emphasized that sustained yield in the sense of regulation of the cut so as not to exceed growth is of little practical significance as an objective of forest management, except in that it signifies some permanence and continuity of operation. The rate of cut should be influenced not only by the rate of actual or potential growth, but also by general market conditions, financial requirements of the individual firm, and for the public forests the desire to stabilize communities and provide for the national defense. While an objective of the forest manager is to hold the cut within limits which do not destroy or diminish the productive capacity of the resource, he is often more actively concerned

with increasing growth and utilization through improving stocking and quality of the growing stock, rapid harvesting of overmature or other timber that might otherwise die, securing prompt regeneration, and developing markets for present unmerchantable material.

Original soundness of the sustained-yield unit legislation.--The pattern of this legislation developed through careful study by respected professional foresters in leading public, private, and educational positions. There is no question in the writer's mind but that from a technical forestry standpoint it was soundly conceived to simplify forest management on areas of mixed ownership, and that in the 1930's it could have helped solve pressing economic problems of the day: forest liquidation, ruinous competition, community distress, and widespread tax-reversion or delinquency of forest lands. However, for the most part these problems no longer cause immediate concern, and changes in the structure of the forest industries have made application of this legislation much less acceptable today.

Forest situation today.--A growing number of private forest owners are now thinking in terms of permanence based on the productive capacity of the land. Cooperative and federal units are no longer necessary to encourage industry to practice forestry; market forces are helping bring this about.

Industry is becoming more and more dependent on public forests, and a growing number of small and medium-sized mills must rely on public stumpage for the majority

of their requirements. Logging and milling are becoming more flexible, yet the larger integrated manufacturing plants are becoming more fixed in location. Better transportation facilities and markets for smaller logs make portable mills able to relog immediately many of the same areas cut for larger mills.

Industry's need for some assurance of log supply is recognized, but preservation of economic opportunities for small operators is equally desirable. Both large and small deserve an equal position of dignity and respect in the social structure, and the small operator should not artificially be denied opportunity for continued growth according to his capabilities.

The writer believes that additional land exchanges and public access roads are desirable, to facilitate management and to increase competition.

Growing hostility toward government control.--The last fifteen years have seen a growing unpopularity of government economic planning and active government participation in economic affairs in anything but a neutral manner. In addition, cooperation between business and government has always been suspect, especially where action is taken to exclude competition.

The cooperative arrangement is in some respects inherently unwieldy, in that it requires a true unity of purpose and a spirit of cooperation, and in that it may easily become a struggle for power among the public and private cooperators, with a great deal of friction and even

litigation. Outright allocation, or even sale of some of the public lands might be an easier way to increase incentive and avoid friction, but private enterprise must show a much greater and much longer record of accomplishment, and a greater provision for watershed, wildlife, and recreational values, before our long-established and accepted policy and tradition of federal ownership is set aside (33).

Case for Cooperative Units

Admittedly, the case for cooperative units is a strong one. Primarily they will encourage large-scale industrial development, efficient management of the forest resource for integrated use and interrelated values, and distribution of benefits to the community and to the nation that come from such use.

Accomplishments at Shelton.--Since establishment of the Shelton unit, the Simpson Logging Company has undertaken a program of intensified forest management, including an intensive type-survey, improved silvicultural practices, experimental thinning and regeneration studies, the planting of over a thousand acres every year, and increased protection. Additional accomplishments include recognition of recreational values through leaving undisturbed areas along streams and in opening company roads to hunters; integrated utilization to produce not only lumber, plywood, and doors, but also insulation board and acoustical tile from former waste material; and construction

of a \$150,000 research laboratory and a comfortable, attractive woods camp. In addition, the community has undertaken a continuing program, independent of the company, for construction of homes, public and business buildings, and utilities (62). Although social relationships and distribution of income have not been measured objectively, the writer's conclusion is that these conditions are satisfactory.

There are well-constructed schools, churches, business establishments, streets, and homes. There is a large proportion of home ownership. Shelton has the appearance of an attractive community, that cannot help but reflect a high degree of civic pride and initiative.

The same trend of improvements is apparent in the town of McCleary.

Cooperative units and intensified forest management.--Gulick (65) sees no magic in public ownership, and adds that some private companies are ahead of the Forest Service in management practices, and employ more men in the woods than he believes the government can possibly assign. Recognizing the importance of public timber supplies to their own future operations, many of these companies would like to practice the same degree of management on the public lands, and are willing to do this at their own expense if they can be assured that they will be able ultimately to reap the reward of such intensive management. To be sure, improved cutting practices could be required by regulation, but this alone does not bring the

type of direct capital investment in the forest and its growing stock that is required. Advocates of cooperative units assert that if industry can give the land better management, a way should certainly be found to give it the chance, with, of course, adequate safeguard of public values. However, a much greater superiority of private over public management should probably be required before any action is taken on this ground.

Cooperative units and social land values.--Cooperative units can recognize and develop social values of private forest land, as a necessary condition to allowing the private cooperator to manage public lands, or to have exclusive cutting rights. With the steady increase of population and regional economic development, these social values attain increased importance, and without coordinated management of his land with public lands, as in a cooperative unit, there is no way short of direct regulation to require the private landowner to be concerned about other than timber values.

Cooperative units and the American spirit of enterprise.--Cooperative units would provide a great opportunity to tap the energies and loyalty of American business. Cooperative units would give a psychic incentive for industry to gain respect and demonstrate to the public that it occupies an honorable and a necessary place in society. It is the writer's opinion that a large segment of industry fairly craves a chance to show its capacity

for responsibility and respectability in handling the forest. Cooperative units would provide this opportunity.

Case Against Cooperative Units

Opposition to cooperative units has been on more serious grounds than simply inertia and resistance to change. While traditional attitudes and beliefs have colored popular feeling toward cooperative units, other more tangible reasons exist for their rejection.

No satisfactory way to choose among potential cooperators.--The greatest objection to cooperative units is the difficulty of setting standards as to who could qualify. If the only criterion is land ownership to make up a significant proportion of the cut, this immediately has the effect of singling out the largest landowners, who in any competitive situation already enjoy the economic power and advantage that come with size and ample financial resources.

If additional qualifications are required, such as good management of private lands, or a record of desirable community relationships, then the public agency is immediately placed in the position of having to make value judgments in choosing among competitors.

No matter what the standards, the public agencies must be prepared to grant requests for cooperative units impartially wherever the applicant can qualify.

When a portion of the allowable cut is reserved for competitive sales, it is difficult to determine how

much. The smaller this portion becomes, the smaller is the opportunity for competitive enterprise. The larger it becomes, under an attempt to preserve the essential competitive structure of local industry, the more incongruous is the protection granted in the cooperative unit, and, on a regional basis, the more difficult and discriminatory the task of selection of the cooperator.

Inability to avoid discrimination against competitive sector.--As the forest industries become more and more dependent on public stumpage it becomes increasingly difficult to avoid discrimination in matters of strategic advantage and survival power between that segment fortified by cooperative units, and the rest of the industry.

Postwar stumpage-appraisal levels have in themselves been enough to discredit cooperative units, with competitive bidding often setting a price far above such appraisals. This may be explained partly by the appraisal methods used,¹ partly by a willingness of operators to bid away their profits, and partly by the steady rise in lumber prices. Yet the fact remains that a cooperator's ability to obtain stumpage at appraised prices serves as a tremendous competitive advantage over other operators.

¹It is difficult, however, to criticize the public agencies on this point, for on the whole they have been careful and conscientious in this work, and stumpage appraisal is no easy job. It generally requires a considerable amount of judgment and experience. Serious troubles occur when appraisals are too high. Moreover, it must be remembered that the nation has been going through an unprecedented building boom, and low stumpage appraisals have encouraged greater production.

Long duration of agreements.--The long duration of proposed cooperative agreements, and of the one now in effect, has brought serious doubts as to the ability to effect future changes, and the wisdom of so restricting future generations. The feeling is that if cooperative units are to be undertaken at all, they should be on a trial basis, and that for this purpose a period of anywhere near a hundred years is entirely too long.

Undesirable social and political aspects.--Any widespread establishment of cooperative units would materially restrict economic opportunities for independent operators. The writer considers such opportunity a fundamental and highly desirable social objective, even though he concedes that cooperative units, through greater utilization of the resource, would increase employment and probably wages, and that not all persons wish to be independent operators.

On social grounds the writer sees nothing against large industry per se,² but he does see a danger of local political domination by strong protected firms.

Other ways to encourage private forestry, community stability, and plant investment.--Private forests are increasingly receiving better care and management, and cooperative units are not necessary to protect the private resource from destruction, nor to assure the nation's wood supply. Better private management is partly the result of

²Neither are the technical and economic efficiency of large industry questioned.

tax laws more favorable to forestry, of the Tree Farm movement, and of state regulatory laws. But most of all it is the result of good markets, brought about by high levels of economic activity and effective demand in the economy as a whole.

Generally speaking, adequate community stability can likewise be assured by maintenance of a healthy and prosperous national economy, and by attention to community objectives in the management of the public forests themselves. Except in unusual circumstances, any communities not supported under such conditions may be no longer efficient in their present location and should probably be allowed to decline as part of an historical process of inevitable change.

While it is granted that cooperative units would encourage additional plant investment, they are not a necessary condition of such investment. Again, the demand generated by a prosperous national economy acts as the primary incentive for industrial production and investment. If specific incentives are desirable, they may be provided by long-term timber sales, accelerated amortization for income-tax purposes, local tax exemptions, and by industrial research by state or federal governments, to develop new products and uses.

Master Units and Federal Units

Experience with the O. and C. master units, and their appurtenant marketing areas, has, on the whole, been

favorable. They have been large enough to allow a considerable flexibility, yet have been small enough to provide a reasonable assurance of community stability, even though in these relatively prosperous times such stability has generally not been seriously threatened. These master units affect only the O. and C. lands, which comprise only a portion of the lands within their boundaries. This allows timber from the other lands to move without restriction, and altogether the arrangement seems a healthy one. It probably would not be so, however, if all public timber within the boundaries of each master unit were to be affected.

Experience with federal units has been too brief to permit appraisal of results. The Forest Service has recognized the dangers of any widespread establishment of federal units, and has wisely restricted their application to communities in actual or potential distress.

Present Outlook

While the Shelton unit appears to be achieving its objectives, the writer believes that this unit may be unique, in that both sides may be leaning over backwards to make it work. Even the Shelton unit cannot be considered an unqualified success until thinnings in immature stands can be made and utilized profitably.

Cooperative units do provide an opportunity for achieving a more intensive management on the public lands, more regard for social values on private lands, and greater utilization of the forest raw material. Yet where more intensive management is desired on public lands there is

no inherent reason why it cannot be accomplished through public action, and such action would only be a logical corollary to the nation's long-established policy of public forest ownership. Social values on private land can be realized through public pressures, direct payments (as for protection), or through purchase or exchange for other lands. Greater utilization of the raw material will come with better markets and demand for finished products, even though it is recognized that cooperative units could accelerate such utilization.

While there can be no one best way of bringing public timber into productive use, and a diversity of arrangements is to be encouraged, and while the American people have seldom failed to act merely on account of irreconcilable beliefs, still, the great shortcoming of the program is that it cannot avoid serious discrimination in an increasingly competitive industry. Moreover, it lacks the support of implicit public approval behind it. The people who live in and near the forest have failed to accept the program as morally right, and it is even doubtful whether industry itself, taken as a whole, now favors it.

Yet whatever the problems of a program of this sort, the writer feels they could always be overcome somehow provided the objective is a sound one, and one which is generally desired by the people. If public sentiment should favor development of public forests under private

rather than public management and leadership, and if increased pressure develops for public use of private forest lands, then cooperative units may still be a desirable compromise between public management on the one hand and possible transfer of public forests to private ownership on the other.

Even without more cooperative or federal units, however, the program has already accomplished much in the educational value of the hearings, in encouraging operators to think in terms of permanence, and in serving as an example of the democratic administrative process of seeking new solutions to pressing problems, giving fair trial and public hearings, and of self-imposed government restraint when genuinely questioned by the people.

APPENDIX

I. Act of August 28, 1937 (50 Stat. 874)

An Act relating to the Revested Oregon and California Railroad and Reconveyed Coos Bay Wagon Road Grant Lands situated in the State of Oregon.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That notwithstanding any provisions in the Acts of June 9, 1916 (39 Stat. 218), and February 26, 1919 (40 Stat. 1179), as amended, such portions of the revested Oregon and California Railroad and reconveyed Coos Bay Wagon Road grant lands as are or may hereafter come under the jurisdiction of the Department of the Interior, which have heretofore or may hereafter be classified as timberlands, and power-site lands valuable for timber, shall be managed, except as provided in Section 3 hereof, for permanent forest production, and the timber thereon shall be sold, cut, and removed in conformity with the principal of sustained yield for the purpose of providing a permanent source of timber supply, protecting watersheds, regulating stream flow, and contributing to the economic stability of local communities and industries, and providing recreational facilities: Provided, That nothing herein shall be construed to interfere with the use and development of power sites as may be authorized by law.

The annual productive capacity for such lands shall be determined and declared as promptly as possible after the passage of this Act, but until such determination and declaration are made the average annual cut therefrom shall not exceed one-half billion feet board measure: Provided, That timber from said lands in an amount not less than one-half billion feet board measure, or not less than the annual sustained yield capacity when the same has been determined and declared, shall be sold annually or so much thereof as can be sold at reasonable prices on a normal market.

If the Secretary of the Interior determines that such action will facilitate sustained-yield management, he may subdivide such revested lands into sustained-yield forest units, the boundary lines of which shall be so established that a forest unit will provide, insofar as practicable, a permanent source of raw materials for the support of dependent communities and local industries of the region; but until such subdivision is made the land shall be treated as a single unit in applying the principle of sustained yield; Provided, That before the boundary

lines of such forest units are established, the Department, after published notice thereof, shall hold a hearing thereon in the vicinity of such lands open to attendance of State and local officers, representatives of dependent industries, residents, and other persons interested in the use of such lands. Due consideration shall be given to established lumbering operations in subdividing such lands when necessary to protect the economic stability of dependent communities. Timber sales from a forest unit shall be limited to the productive capacity of such unit and the Secretary is authorized, in his discretion, to reject any bids which may interfere with the sustained-yield management plan of any unit.

Sec. 2. The Secretary of the Interior is authorized, in his discretion, to make cooperative agreements with other Federal or State forest administrative agencies or with private forest owners or operators for the coordinated administration, with respect to time, rate, method of cutting, and sustained yield, of forest units comprising parts of revested or reconveyed lands, together with lands in private ownership or under the administration of other public agencies, when by such agreements he may be aided in accomplishing the purposes hereinbefore mentioned.

Sec. 3. The Secretary of the Interior is authorized to classify, either on application or otherwise, and restore to homestead entry, or purchase under the provisions of section 14 of the Act of June 28, 1934, (48 Stat. 1269), any of such revested or reconveyed land which, in his judgment, is more suitable for agricultural use than for afforestation, reforestation, stream-flow protection, recreation, or other public purposes.

Any of said lands heretofore classified as agricultural may be reclassified as timber lands, if found, upon examination, to be more suitable for the production of trees than agricultural use, such reclassified timber lands to be managed for permanent forest production as herein provided.

Sec. 4. The Secretary of the Interior is authorized, in his discretion, to lease for grazing any of said revested or reconveyed lands which may be so used without interfering with the production of timber or other purposes of this Act as stated in section 1: Provided, That all the moneys received on account of grazing leases shall be covered either into the "Oregon and California land-grant fund" or the "Coos Bay Wagon Road grant fund" in the Treasury as the location of the leased lands shall determine, and be subject to distribution as other moneys in such funds: Provided further, That the Secretary is also authorized to formulate rules and regulations for the use, protection, improvement, and rehabilitation of such grazing lands.

Sec. 5. The Secretary of the Interior is hereby authorized to perform any and all acts and to make such

rules and regulations as may be necessary and proper for the purpose of carrying the provisions of this Act into full force and effect. The Secretary of the Interior is further authorized, in formulating forest rules and regulations, to consult with the Oregon State Board of Forestry, representatives of timber owners and operators on or contiguous to said revested and reconveyed lands, and other persons or agencies interested in the use of such lands.

In formulating regulations for the protection of such timberlands against fire, the Secretary is authorized, in his discretion, to consult and advise with Federal, State, and county agencies engaged in forest-fire-protection work, and to make agreements with such agencies for the cooperative administration of fire regulations therein: Provided, That rules and regulations for the protection of the revested lands from fire shall conform with the requirements and practices of the State of Oregon insofar as the same are consistent with the interests of the United States.

Title II

That on and after March 1, 1938, all moneys deposited in the Treasury of the United States in the special fund designated the "Oregon and California land-grant fund" shall be distributed annually as follows:

(a) Fifty per centum to the counties in which the lands revested under the Act of June 9, 1916 (39 Stat. 218), are situated, to be payable on or after June 30, 1938, and each year thereafter to each of said counties in the proportion that the total assessed value of the Oregon and California grant lands in each of said counties for the year 1915 bears to the total assessed value of all of said lands in the State of Oregon for said year, such moneys to be used as other county funds.

(b) Twenty-five per centum to said counties as money in lieu of taxes accrued or which shall accrue to them prior to March 1, 1938, under the provisions of the Act of July 13, 1926 (44 Stat. 915), and which taxes are unpaid on said date, such moneys to be paid to said counties severally by the Secretary of the Treasury of the United States, upon certification by the Secretary of the Interior, until such tax indebtedness as shall have accrued prior to March 1, 1938, is extinguished.

From and after payment of the above accrued taxes said 25 per centum shall be accredited annually to the general fund in the treasury of the United States until all reimbursable charges against the Oregon and California land-grant fund owing to the general fund in the Treasury have been

paid: Provided, That if for any year after the extinguishment of the tax indebtedness accruing to the counties prior to March 1, 1938, under the provisions of Forty-fourth Statutes, page 915, the total amount payable under subsection (a) of this title is less than 78 per centum of the aggregate amount of tax claims which accrued to said counties under said Act for the year 1934, there shall be additionally payable for such year such portion of said 25 per centum (but not in excess of three-fifths of said 25 per centum), as may be necessary to make up the deficiency. When the general fund in the Treasury has been fully reimbursed for the expenditures which were made charges against the Oregon and California land-grant fund said 25 per centum shall be paid annually, on or after June 30, to the several counties in the manner provided in subsection (a) hereof.

(c) Twenty-five per centum to be available for the administration of this Act, in such annual amounts as the Congress shall from time to time determine. Any part of such per centum not used for administrative purposes shall be covered into the general fund of the Treasury of the United States: Provided, That moneys covered into the Treasury in such manner shall be used to satisfy the reimbursable charges against the Oregon and California land-grant fund mentioned in subsection (b) so long as any such charges shall exist.

All Acts or parts of Acts in conflict with this Act are hereby repealed to the extent necessary to give full force and effect to this Act.

Approved, August 28, 1937.

II. Sustained Yield Forest Management Act
of March 29, 1944 (58 Stat. 132)

An Act to promote sustained-yield forest management in order thereby (a) to stabilize communities, forest industries, employment, and taxable forest wealth; (b) to assure a continuous and ample supply of forest products; and (c) to secure the benefits of forests in regulation of water supply and stream flow, prevention of soil erosion, amelioration of climate, and preservation of wildlife.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in order to promote the stability of forest industries, of employment, of communities, and of taxable forest wealth, through continuous supplies of timber; in order to provide for a continuous and ample supply of forest products; and in order to secure the benefits of forests in maintenance of water supply, regulation of stream flow, prevention of soil erosion, amelioration of climate, and preservation of wildlife, the Secretary of Agriculture and the Secretary of the Interior are severally authorized to establish by formal declaration, when in their respective judgments such action would be in the public interest, cooperative sustained-yield units which shall consist of federally owned or administered forest land under the jurisdiction of the Secretary establishing the unit and, in addition thereto, land which reasonably may be expected to be made the subject of one or more of the cooperative agreements with private landowners authorized by section 2 of this Act.

Sec. 2. The Secretary of Agriculture, with respect to forest land under his jurisdiction, and the Secretary of the Interior, with respect to forest land under his jurisdiction, are severally authorized, for the purposes specified in section 1 of this Act, to enter into cooperative agreements with private owners of forest land within a cooperative sustained-yield unit, established pursuant to section 1 of this Act, providing for the coordinated management of such private forest land and of federally owned or administered forest lands within the sustained-yield unit involved.

Each cooperative agreement may give the cooperating private landowner the privilege of purchasing without competitive bidding at prices not less than their appraised value, subject to periodic readjustments of stumpage rates and to such other conditions and requirements as the Secretary may prescribe, timber and other forest products from federally owned or administered forest land within the unit, in accordance with the provisions of sustained-yield

management plans formulated or approved by the Secretary for the unit; shall limit the time, rate, and method of cutting or otherwise harvesting timber and other forest products from the land of the cooperating private landowner, due consideration being given to the character and condition of the timber, to the relation of the proposed cutting to the sustained-yield plan for the unit, and to the productive capacity of the land; shall prescribe the terms and conditions, but not the price, upon which the cooperating private landowner may sell to any person timber and other forest products from his land, compliance by the purchaser with such conditions to be required by the contract of sale; shall contain such provisions as the Secretary deems necessary to protect the reasonable interest of other owners of forest land within the unit; and shall contain such other provisions as the Secretary believes necessary to carry out the purposes of this Act.

Each cooperative agreement shall be placed on record in the county or counties in which the lands of the cooperating private landowner covered thereby are located, and the costs incident to such recordation may be paid out of any funds available for the protection or management of federally owned or administered forest land within the unit. When thus recorded, the agreement shall be binding upon the heirs, successors, and assigns of the owner of such land, and upon purchasers of timber or other forest products from such land, throughout the life of such cooperative agreement.

Sec. 3. The Secretary of Agriculture and the Secretary of the Interior are further severally authorized, whenever in their respective judgments the maintenance of a stable community or communities is primarily dependent upon the sale of timber or other forest products from federally owned or administered forest land and such maintenance cannot effectively be secured by following the usual procedure in selling such timber or other forest products, to establish by formal declaration for the purpose of maintaining the stability of such community or communities a sustained-yield unit consisting of forest land under the jurisdiction of the Secretary establishing such unit, to determine and define the boundaries of the community or communities for whose benefit such unit is created, and to sell, subject to such conditions and requirements as the Secretary believes necessary, federally owned or administered timber and other forest products from such unit without competitive bidding at prices not less than their appraised values, to responsible purchasers within such community or communities.

Sec. 4. Each of the said Secretaries is further authorized in his discretion to enter into cooperative agreements with the other Secretary, or with any Federal

agency having jurisdiction over federally owned or administered forest land, or with any State or local agency having jurisdiction over publicly owned or administered forest land, providing for the inclusion of such land in any coordinated plan of management otherwise authorized by the provisions of this Act when by such a cooperative agreement he may be aided in accomplishing the purposes of this Act; but no federally or publicly owned or administered forest land not under the jurisdiction of the Secretary establishing the sustained-yield unit concerned shall be included in any such plan except in pursuance of a cooperative agreement made under this section.

Sec. 5. Before any sustained-yield unit authorized by section 1 or section 3 of this Act shall be established, and before any cooperative agreement authorized by section 2 or section 4 of this Act shall be entered into, advance notice thereof shall be given by registered mail to each landowner whose land is proposed to be included and by publication in one or more newspapers of general circulation in the vicinity of the place where the timber is located, and the costs incident to such publication may be paid out of any funds available for the protection or management of the federally owned or administered forest land involved. This notice shall state: (1) the location of the proposed unit; (2) the name of each proposed cooperator; (3) the duration of the proposed cooperative agreement or agreements; (4) the location and estimated quantity of timber on the land of each proposed cooperator and on the Federal land involved; (5) the expected rate of cutting of such timber; and (6) the time and place of a public hearing to be held not less than thirty days after the first publication of said notice for the presentation of the advantages and disadvantages of the proposed action to the community or communities affected.

Before any sale agreement made without competition and involving more than \$500 in stumpage value of federally owned or administered timber shall be entered into under this Act, advance notice thereof shall be given by publication once weekly for four consecutive weeks in one or more newspapers of general circulation in the vicinity of the place where the timber is located, and the costs incident to such publication may be paid out of any funds available for the protection or management of federally owned or administered forest land within the unit concerned. This notice shall state: (1) the quantity and appraised value of the timber; (2) the time and place of a public hearing to be held not less than thirty days after the first publication of said notice if requested by the State or county where the timber is located or by any other person deemed to have a reasonable interest in the proposed sale or in its terms; and (3) the place where any request for a public hearing shall be made. Such requests need be

considered only if received at the place designated in the notice not later than fifteen days after the first publication of such notice. If a request for a hearing is received within the time designated, notice of the holding of the hearing shall be given not less than ten days before the time set for such hearing, in the same manner as provided for the original notice.

The determination made by the Secretary having jurisdiction upon the proposals considered at any such hearing, which determination may include the modification of the terms of such proposals, together with the minutes or other record of the hearing, shall be available for public inspection during the life of any coordinated plan of management or agreement entered into in consequence of such determination.

Sec. 6. In addition to any other remedy available under existing law, upon failure of any private owner of forest land which is subject to a cooperative agreement entered into pursuant to this Act to comply with the terms of such agreement, or upon failure of any purchaser of timber or other forest products from such land to comply with the terms and conditions required by such agreement to be included in the contract of sale, the Attorney General, at the request of the Secretary concerned, is authorized to institute against such owner or such purchaser a proceeding in equity in the proper district court of the United States, to require compliance with the terms and conditions of said cooperative agreement; and jurisdiction is hereby conferred upon said district courts to hear and determine such proceedings, to order compliance with the terms and conditions of cooperative agreements entered into pursuant to this Act, and to make such temporary and final orders as shall be deemed just in the premises. As used in this section the term "owner" shall include the heirs, successors, and assigns of the landowner entering into the cooperative agreements.

Sec. 7. Whenever used in this Act, the term "federally owned or administered forest land" shall be construed to mean forest land in which, or in the natural resources of which, the United States has a legal or equitable interest of any character sufficient to entitle the United States to control the management or disposition of the timber or other forest products thereon, except land heretofore or hereafter reserved or withdrawn for purposes which are inconsistent with the exercise of the authority conferred by this Act; and shall include trust or restricted Indian land, whether tribal or allotted, except that such land shall not be included without the consent of the Indians concerned.

Sec. 8. The Secretary of Agriculture and the Secretary of the Interior may severally prescribe such

rules and regulations as may be appropriate to carry out the purposes of this Act. Each Secretary may delegate any of his powers and duties under this Act to other officers or employees of his Department.

Sec. 9. Nothing contained in this Act shall be construed to abrogate or curtail any authority conferred upon the Secretary of Agriculture or the Secretary of the Interior by any Act relating to management of federally owned or administered forest lands, and nothing contained in any such Acts shall be construed to limit or restrict any authority conferred upon the Secretary of Agriculture or the Secretary of the Interior by this Act.

Sec. 10. Funds available for the protection or management of federally owned or administered forest land within the unit concerned may also be expended in carrying out the purposes of this Act, and there are hereby authorized to be appropriated such additional sums for the purposes of this Act as the Congress may from time to time deem necessary, but such additional sums shall not exceed \$150,000 for the Department of Agriculture and \$50,000 for the Department of the Interior, for any fiscal year.

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