ORGANIZATIONAL PATTERNS AND ADMINISTRATIVE PROCEDURES FOR STATEWIDE FOREST RESOURCES PLANNING

by

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August 1982

STAFF PAPER SERIES NUMBER 316

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Published as Paper No. 1833 of the miscellaneous journal series of the Minnesota Agricultural Experiment Station.
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BACKGROUND

During the 50 or so years preceding passage of the Renewable Resources Planning Act (RPA) of 1974, a variety of state-federal cooperative forestry programs were created. The purpose of these programs was to assist states in protecting and managing the nearly 830 million acres of nonfederal forest and range lands in state and private ownership to coincide with the national interest.

By June of 1974, a list of 16 such cooperative programs were being administered by federal Forest Service officials (Table 1). These programs helped form the core of state agency operations by largely determining the amount (and timing) of state matching funds that would be spent on activities ranging from forest fire and pest control to cooperative forestry assistance. In addition, they provided a logical means of dividing up federal dollars among the states, and of securing continued federal involvement in the management of state forested lands.

The growing task of coordinating and administering these programs, however, each with its own unique formula for dividing up program funds and work responsibilities, and complicated procedures for accomplishment reporting, program review, etc., soon became burdensome for both state and federal authorities charged with overseeing the programs. Program planning was made still more difficult by requirements that states project proposed accomplishments and funding needs for up to three years in advance.
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In early 1977, then President Carter directed the Secretary of Agriculture to undertake what he termed a "comprehensive" study of cooperative forestry programs to examine the desirability of providing financial assistance to the states based on the existence of state forestry programs, rather than the presently fragmented approach used to distribute federal funds. He emphasized that need should be evaluated on the basis of "national environmental goals" and "multiple resource values" as well as individual state needs.

At roughly the same time, a task force representing the National Association of State Foresters was meeting in Orlando, Florida, where they proposed a suggested outline for a "state forest resources plan." Although this "Orlando Outline" as it was called, was never actually used by the states as written, it did serve to focus discussion and, ultimately, led to an agreement among task force members that each state would eventually need to develop some sort of a state forestry master plan (Appendices A, B).

In 1978, passage of the Cooperative Forestry Assistance Act (CFAA) repealed, updated and re-enacted several of the existing state-federal cooperative programs, as it "consolidated" funding to the states based on the existence of state forestry programs—to be developed with the assistance of federal Forest Service officials. Federal financial, technical and related planning assistance was then made available to the states upon request to help train state resource planning personnel, and assist states in formulating a new generation of comprehensive forest management plans (Appendix C).
In response to passage of the Cooperative Forestry Assistance Act (CFAA) of 1978 (PL 95-313), state forestry agencies all across the country are developing a new generation of long-range, comprehensive forest resource management plans. The purpose of these plans is to provide a renewed sense of long-term agency direction and improve the quality of state forest management by better organizing the decision making process. This, in an increasingly difficult and complex management environment where accelerating land-use pressures and conflicting resource demands threaten traditional notions of the "multiple-use" management philosophy. And, in a time when many states are experiencing serious financial distress.

The nature of the process is dynamic, with provisions to address a broad range of new and changing public needs, attitudes and concerns. Planning seeks to resolve pressing resource-related issues by providing a mechanism for dealing with these issues and a forum in which they may be discussed. Planning also secures a more reliable means of identifying and responding to emerging organizational problems and management opportunities that could ultimately impact the quality of forest management within the state.

Since 1978 and passage of CFAA, a good deal of progress has been made on the development of Statewide Forest Resource Plans (SFRP-plans) nationally. Currently, 48 states are active in developing forest management plans. As of mid-1982, some 17 states will have completed work on their first state forestry plan, with another ten states finishing up before year's end.
This progress has not, however, been without difficulty. There have been a variety of problems associated with statewide forest plan development around the nation. Problems with inadequate funding, staffing and training of planning personnel. Problems selecting a suitable planning design, and uncertainty over management requirements, program organization and basic planning needs. A number of states have also had difficulties in collecting and managing the necessary data base for conducting a comprehensive resource evaluation.

A good share of these problems, clearly, result from inexperience on the part of state agencies with comprehensive, multi-year program planning. It is equally clear, though, that some of the problems associated with plan development stem, at least in part, from an insufficient commitment to long-range planning on the part of sometimes skeptical state resource agency and government officials who view planning as unnecessary and incapable of producing immediate or tangible results.

There is a reason to believe, however, that state planning efforts could become more effective if some of the organizational and administrative uncertainties which currently surround the planning process were removed. Presently, many state forestry officials find themselves more adept at making technical planning judgements than the more fundamental and, ultimately, much more important choices regarding program organization, planning design, and coordination of forest planning activities with other state and local government planning processes. For example:
- **planning objectives and commitment**: Why undertake a planning effort? What benefits can be expected and what clientele are to be served? Who requires that planning activities be undertaken? What mechanisms are to be used to secure agency commitment to planning (e.g., legislative directive, agency administrative order, professional interest, non-governmental pressure)?

- **planning process**: What sequence of events are necessary to the development of a statewide plan? How is an appropriate planning structure to be developed and by whom? Is the planning process to be issue or goal driven? Or is it to simply lead to resource descriptions? What forest outputs are to be addressed by the planning process—all forest outputs or just timber? And which forest ownerships are to be addressed by the process?

- **resources required to plan**: What financial commitments are required to carry-out an effective planning effort (long and short-term commitments)? What is to be the source of financial support? What type of professional talent will be required and how much?

- **program administration**: What unit of state government should be responsible for statewide forest planning? What unit should actually undertake preparation of a plan? What state agencies need to be involved (e.g., natural resource department, pollution control agency, universities, environmental quality board) and at what level should such agencies be involved (e.g., governor’s staff, department level, division level)? How is coordination with other organizations to be achieved (e.g., federal, private) and how are conflicts to be resolved? What type of public programs are to be considered (e.g., regulatory, resource ownership, research, service and extension)?

- **program documentation and public involvement**: What reports or documents should result from the planning process? How are they to be developed? Is a commitment to public involvement required? If so, what techniques are to be implemented and what portion of planning resources should they consume?

- **information management**: What type of information is necessary for development of statewide plans? How is such information to be generated—who is to supply it? Will a major commitment to an information management system be required? Should the system be unique to the planning effort or available for other uses, including program budgeting?

- **implementation and monitoring**: What form of commitment will be required to implement planning documents (e.g., policy statements). Who should impose requirements that plans be implemented—legislative directive, administrative rules, interest group pressure?
How are plans to be related to and functionally integrated with budgeting processes, if at all? What flexibility must be built into plans in order to accommodate unforeseen events such as new technologies and new and more reliable information? In what manner are added budget constraints resulting from economic downturns to be addressed? And what of changing program emphasis due to changes in political leadership of state governments?

States would benefit from an in-depth accounting of planning experiences in other states, perhaps enabling them to avoid costly and unnecessary planning errors. There is a need to better define the role states must play in developing comprehensive resource programs and a need to foster an appreciation for the type of effort that will be required.

A variety of social changes which surround the role of state forestry highlight the importance of long-range planning in natural resources management. Because these changes have not been well recognized and anticipated in the past, state forestry planning has tended to assume a short-term perspective. Increasingly, there is a need for planning to address the needs voiced by various publics and still maintain a grasp of the practical and technical aspects of forest management.

In addition to dealing with these concerns, there is a need to establish two-way communication between various publics and the state forestry agency. By utilizing a long-range system of planning, relevant publics such as state legislators, loggers and landowners, can be constructively engaged in assessing the consequences of various program and policy alternatives. Sound and responsive planning can be developed in ways that will result in more effective on the ground state forestry programs.
The national statewide forest planning initiative offers states both challenge and opportunity. The states will need to re-examine their role and responsibility for managing the 829 million acres of nonfederal forest and range lands to best meet the needs of the nation's public. The states must assume a key leadership role in ensuring that the wealth of benefits provided by this vast resource will continue to flow to society.
STUDY OBJECTIVES AND PROCEDURES

Objectives

The study's overall objective was to assess alternative organizational patterns and administrative procedures that can be used by states to carry-out statewide forest planning activities. Implications for Minnesota were of special concern. Specific study objectives were:

- to identify and evaluate options for:
  - objectives of planning and securing commitment to planning
  - planning processes and resources required to implement such processes
  - administration of planning activities, including information management
  - implementing and monitoring of completed plans.

- to set forth organizational and administrative arrangements for facilitating efficient statewide forest planning in Minnesota.

Procedures

The study's objectives were accomplished by carrying-out the following procedures:

- identification of alternative planning objectives, methods, processes, and implementation procedures. This required:
  - systematic review of planning and organizational literature
  - nationwide survey of statewide forest planning activities
  - in-depth, case review of statewide forest planning activities in Michigan, Utah and Virginia.

- identification of criteria for judging alternative planning objectives, methods, processes and supplementary procedures. This required:
  - systematic review of planning and organizational literature
  - interviewing knowledgeable professionals acquainted with forest planning principles.
suggestion of an organizational and administrative document for improving the effectiveness of statewide forest planning in Minnesota. This required:

- detailed review of administrative organizations available for statewide forest planning in Minnesota
- setting forth options based on previously identified alternatives and criteria.
NATIONWIDE STATUS OF STATE FOREST RESOURCE PLANNING

Presently, some 48 states are actively engaged in the development of state forest resource plans (Table 2). These plans differ widely in scope, content and complexity, just as the states themselves differ in their unique management requirements, resource values and basic planning needs.

Although the vast majority of state forest planning is of the comprehensive type described earlier, it is important to note that a number of states are in the process of developing interim or "preliminary" management plans capable of providing only limited agency direction. By focusing on only certain forest outputs or specific agency activities, these non-comprehensive plans frequently lack the broad perspective necessary to deal effectively with complex management questions and resource-related issues.

The states differ also in both the approach taken to the planning task and in the progress each has made towards completion of work on their first state forest resources plan. Another ten states will follow before years end. The remaining states will continue work on an initial plan on into 1983 and beyond. About half of the states plan to conduct some type of forest resource assessment as a part of, or in addition to, the development of a state forestry management plan.

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1 The information contained in this section on the national status of SFRP was obtained primarily by the analysis of survey data collected over a four-month period in late 1981 from state resource planners throughout the country. In a seven-page written questionnaire, the planners were asked to respond to a variety of questions pertaining to the status of forestry planning efforts in their respective states. Subsequent personal interviews with selected state and federal officials knowledgeable about the SFRP process helped to substantiate and, in some cases, supplement survey information. For additional information about the questionnaire itself, see Appendix D. Additional survey information is contained in Appendix E.
<table>
<thead>
<tr>
<th>State</th>
<th>Forested Acres¹ (thousand)</th>
<th>Planning Step²</th>
<th>Anticipated Completion Date</th>
<th>Next Scheduled Update</th>
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<th>Planning Budget³ (FY 1982)</th>
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¹ Estimated acreages are based on approximate forest area. ² Planning steps are from the initial direction through the completion of the preliminary plan. The listing is in order of completion date. ³ Budgets are in hundreds of thousands of dollars. ⁴ Lead agencies are those responsible for direct implementation of the planning program; responsibilities may include coordinating, financing, and organizing. ⁵ Additional budget support provided. ⁶ Preliminary plans for these states are currently being developed.
<table>
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<th>State</th>
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Footnotes: Table 1


3 Annualized dollar amounts available for the express purpose of state forest resource planning. Source: McCann, 1982.

4 Agency bearing principle responsibility for state forest resources planning and related activities.

5 Program funding breakdown as follows (FY 1982 figures):

   Minnesota - $264,000 Total
      $60,000 Federal funding, including $30,000 in special Boundary Waters Canoe Area appropriations
      $25,000 Regular state legislative appropriation
      $179,000 Special State legislative planning grant

   California - $405,000 Total
      $85,000 Federal funding
      $320,000 state appropriation

   Oregon - $51,000 Total
      $27,000 Federal funding
      $24,000 State appropriation

6 A partial, noncomprehensive or otherwise incomplete state forest resource plan.

7 The Florida Division of Forestry, under the State Department of Agriculture and Consumer Services, has responsibility for developing a State & Private Forestry Program Plan to be completed on the date indicated. The Florida School of Forest Resources and Conservation, however, is charged with development of an overall, comprehensive state forest resource plan.

8 Wyoming resource assessment was carried out on only a limited basis.
It is worthwhile noting that most all of the states currently active in developing forest resource plans have indicated their desire to complete an initial planning cycle by no later than September 30, 1983. This is the tentative target date set by Federal Forest Service officials for timely state input into the 1985 update of RPA. 2

Organization and Resources

The widespread involvement of states in statewide forest planning efforts has been, to this point, largely a response to repeated federal efforts to encourage such planning. Federal financial and technical planning assistance have been instrumental in helping to promote and develop a basic planning capability among state forestry agencies.

Perhaps partially as a result of the major role assumed early on by federal authorities in assisting states with SFRP, state support for planning has so far been (with notable exception) relatively modest and slow to develop. State funds allocated to forestry planning were limited to the 80/20 FRP cost-share match required of states to participate in federal program funding. Recently the cost-share was changed to 50/50.

Nationally, survey results indicate that funds available for SFRP-related activities generally range from about $25,000 to just under $60,000 per annum (FY 1982 figures - Table 3) in most states. Or, roughly the amount required to employ one full-time planner and a small support staff.

2 There remains some question as to whether even this early date will allow sufficient time for the 1985 update to adequately reflect the information and projections contained in state forest resource plans.
Only five states reported planning funds in excess of $61,000 (annualized). A more detailed description of planning resources by state can be found in Table 2.

Table 3. State forest resources planning budget, fiscal year 1982.

<table>
<thead>
<tr>
<th>Planning Budget (dollars)</th>
<th>States¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 15,000</td>
<td>3</td>
</tr>
<tr>
<td>16,000 - 30,000</td>
<td>13</td>
</tr>
<tr>
<td>31,000 - 45,000</td>
<td>12</td>
</tr>
<tr>
<td>46,000 - 60,000</td>
<td>6</td>
</tr>
<tr>
<td>61,000 and above</td>
<td>5</td>
</tr>
</tbody>
</table>

¹ Based on usable survey results from 39 states.

Thirty-two states currently employ at least one full-time forest resource planner, with only eight states employing two or more persons on a regular, full-time basis. Eleven states, active in the planning process, still do not employ any full-time planning staff and instead rely on the part-time contributions of assorted agency personnel. In these states, SFRP program staffing levels would seem inadequate to meet even generally recognized planning objectives and moderate management expectations.

Table 4 provides a further look into how planning resources are allocated by planning activity. This table is based on the best estimates of state resource planning officials across the country, as to the
Table 4. State allocations of labor and financial resources to development of statewide forest resources plan, by planning activity. 1981.

<table>
<thead>
<tr>
<th>Planning Activity</th>
<th>Allocation of Resources¹</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Labor</td>
<td>Finances</td>
<td></td>
</tr>
<tr>
<td></td>
<td>percent</td>
<td>percent</td>
<td></td>
</tr>
<tr>
<td>Resource Inventory</td>
<td>8</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Information management</td>
<td>7</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Social Economic and Environmental Assessment</td>
<td>8</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Public Involvement</td>
<td>10</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Development of Goals, Strategies and Criteria</td>
<td>15</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Issue Identification, Consolidation and Prioritization</td>
<td>16</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Identification/Evaluation of Alternatives</td>
<td>12</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Program Selection and Public Policy Development</td>
<td>10</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Implementation/Monitoring</td>
<td>7</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>SFRP Administration and Coordination</td>
<td>7</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

¹ Averages do not include unusually large or otherwise unrepresentative figures.
approximate breakdown of planning resources (labor and funds) by SFRP activity category.

Although difficult to capsulize, the table does seem to suggest some rather interesting (albeit general) trends in the allocation of time and dollars, and concerning the relative importance of various stages in the SFRP planning process. According to the table, expenditures of planning resources vary widely among states (as indicated by the broad ranges), yet in most cases the activities requiring the greatest concentration of time and effort seem to involve issue resolution, evaluation of program alternatives, and the development of planning goals, strategies and criteria. These rankings likely reflect both the apparent difficulty of these particular planning steps, and the level of importance attached to each by state forestry officials and resource planning personnel.

Continued state involvement in state forest planning will, clearly, require greater recognition by some states of the underlying need for and value of a continuous system of long-range, multi-resource planning in the day-to-day management of their forest and related resources. Growing out of this recognition then, must come renewed commitment to and support for comprehensive forestry planning at the state level.

Administrative Organization of State Forestry Agencies

Quite often, the administrative complexion of state forestry agencies can also influence both the scope and character of the planning function. Consequently, the type of organization (e.g., land management vs. service agency), its location relative to other similar agencies, and the manner
in which its jurisdiction is described, can all markedly affect an agency's ability to conduct a successful planning effort.

Moreover, certain organizational characteristics like, for example, the existing network of vertical and horizontal power relationships within and between state resource agencies, can create formidable administrative barriers capable of impeding the flow of vital planning information and assistance across functional or jurisdictional boundaries. Thereby jeopardizing support for a plan by effectively restricting interagency coordination and participation in its development.

Table 5 shows the administrative location of state forestry agencies in states all across the country. Notice that in some 20 states the responsibility for forest management resides within a functionally organized Division of the State Department of Natural Resources or Conservation Department. Under this, the most common arrangement, the administrative responsibility for managing various state natural resources, e.g., parks, recreation, fish and wildlife, minerals, etc., is combined under a single executive-level department. In another 5 states, the forestry agency is located within an (organizationally similar) Environmental Protection Agency, with broad responsibilities for natural resource management and environmental protection. Under both arrangements, policy-level guidance usually originates with a state-appointed board or commission charged with overseeing each of the particular agencies within the larger department.3

3 Notable exceptions are Kentucky and Minnesota, where policymaking authority rests with Department officials.
<table>
<thead>
<tr>
<th>State</th>
<th>Within Natural Resource or Conservation Unit</th>
<th>Within Environmental Protection Unit</th>
<th>Independent Executive Board or Commission</th>
<th>Executive Level Forestry Unit</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>State Land Department</td>
</tr>
<tr>
<td>Alaska</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>State Forest Service—Colorado State University</td>
</tr>
<tr>
<td>Arizona</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dept. Natural Resources &amp; Environmental Control</td>
</tr>
<tr>
<td>Arkansas</td>
<td></td>
<td></td>
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<td></td>
<td>Dept. Agriculture</td>
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<tr>
<td>California</td>
<td></td>
<td></td>
<td>X</td>
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<tr>
<td>Colorado</td>
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<tr>
<td>Connecticut</td>
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<td>X</td>
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<tr>
<td>Delaware</td>
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<td>Florida</td>
<td></td>
<td></td>
<td>X</td>
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<td>Georgia</td>
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<tr>
<td>Hawaii</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>Forestry Dept.—Kansas State University</td>
</tr>
<tr>
<td>Idaho</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>Dept. Natural Resources &amp; Environmental Protection</td>
</tr>
<tr>
<td>Illinois</td>
<td>X</td>
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<td>Indiana</td>
<td>X</td>
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<td>Iowa</td>
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<td>X</td>
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<tr>
<td>Kansas</td>
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<td></td>
<td>Dept. of Lands</td>
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<tr>
<td>Kentucky</td>
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<td></td>
<td>State Forest Service—University of Nebraska</td>
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<tr>
<td>Louisiana</td>
<td>X</td>
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<tr>
<td>Maine</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>Dept. Resources &amp; Economic Development</td>
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<tr>
<td>Maryland</td>
<td>X</td>
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<tr>
<td>Massachusetts</td>
<td>X</td>
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<td>Michigan</td>
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<td>Minnesota</td>
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<tr>
<td>Mississippi</td>
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<tr>
<td>Missouri</td>
<td>X</td>
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<tr>
<td>Montana</td>
<td></td>
<td></td>
<td>X</td>
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<tr>
<td>Nebraska</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>Dept. Agriculture</td>
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<tr>
<td>Nevada</td>
<td>X</td>
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<tr>
<td>New Hampshire</td>
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<tr>
<td>New Jersey</td>
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<td>X</td>
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<tr>
<td>New Mexico</td>
<td>X</td>
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<td>X</td>
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<tr>
<td>New York</td>
<td>X</td>
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<tr>
<td>North Carolina</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>State Forest Service—University of North Dakota</td>
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<tr>
<td>North Dakota</td>
<td>X</td>
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<td></td>
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<tr>
<td>Ohio</td>
<td>X</td>
<td></td>
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<td></td>
<td>Dept. Agriculture</td>
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<tr>
<td>Oregon</td>
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<tr>
<td>Pennsylvania</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>Dept. Game, Fish, Parks</td>
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<tr>
<td>Rhode Island</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>State Forest Service—Texas A&amp;M University</td>
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<td>South Carolina</td>
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<td>Dept. Forests, Parks &amp; Recreation</td>
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<td>South Dakota</td>
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<td>Dept. Conservation &amp; Economic Development</td>
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<tr>
<td>Tennessee</td>
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<tr>
<td>Texas</td>
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<tr>
<td>Utah</td>
<td>X</td>
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<tr>
<td>Vermont</td>
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<td>Virginia</td>
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<tr>
<td>Washington</td>
<td>X</td>
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<tr>
<td>West Virginia</td>
<td>X</td>
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<tr>
<td>Wisconsin</td>
<td>X</td>
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<tr>
<td>Wyoming</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>Office of Public Lands</td>
</tr>
</tbody>
</table>
Five states, located mostly in the southern U.S., have independent forestry commissions with the state forester appointed by the governor, and consisting of representatives from various segments of the public and private sectors. Due to the tremendous social and economic importance of forestry in Oregon and California, these two states have elected to organize their forest management responsibilities into a single-purpose, executive-level forestry department. The remaining state forestry agencies are located in a variety of nonforestry administrative departments most closely allied with forestry interests within the state, e.g., agriculture, economic development, parks, game and fish, etc.

Planning Objectives and Commitment

Planning objectives vary widely among state forestry agencies involved in the development of comprehensive management plans. Among the most frequently mentioned are the need to provide clearer long-term agency direction and to improve the quality of management by better organizing the decision-making process. Chief of these is the expressed need to provide a clearer sense of direction in an increasingly difficult and complex management environment where accelerating land use pressures and conflicting resource demands threaten traditional notions of resource management philosophy. This, at a time when many states are experiencing serious financial problems, complete with across the board budget and personnel cuts in most agencies.

Other often cited reasons for planning include a desire on the part of state agencies to attach a greater sense of continuity to agency programs, and to the budgetary process in particular. The need to establish
a mechanism to deal effectively with pressing resource-related issues facing the agency. And the hope that long-range planning will somehow enable state agencies to better anticipate and respond to emerging problems, opportunities and other developments which impact the agency.

In terms of the source of state agency commitment to planning, over half of the states responding to the survey (67 percent) indicated that internal management-level dedication to the idea of comprehensive planning was responsible for their agency's decision to adopt and pursue the forest planning process. Most often, this decision was reached in response to the combined urgings of the State Forester, his executive staff, and the encouragement of Forest Service Area Planning personnel. Another ten states indicated some degree of planning commitment in addition to that of administrative agency officials, usually in the form of state legislative or executive support for planning. This additional support shown by state legislators and executive-level officials ranges from broad, informal resolutions of support in some states, to specific forestry planning legislation in others.

Only four states surveyed indicated that all three types of planning commitment were present at the time of the survey. All four states—California, Maryland, Minnesota and New Hampshire—now possess formal RPA-type legislation which, in effect, "institutionalizes" the SFRP process in those states (Appendix F).

Among other things, state forestry planning legislation offers a source of formal, official recognition of the value of and need for planning, as it underscores planning's important role in helping guide
the use and development of state forested lands. It further acts to secure lasting government commitment to planning by requiring a continuing system of long-range renewable resource planning and assessment to be carried out on a statewide level.

A broadening awareness of the many real, identifiable benefits and management opportunities which can ultimately derive from such a system has led a number of states to seek more formal recognition of the need for planning from state legislative and executive officials. Other states can reasonably be expected to follow in seeking greater state government support for and commitment to forest resources planning.

Planning Process

Planning typically involves creation of a system or "process" for effective planning and then establishing a set of relevant goals, objectives and priorities within that system. Hence, development of the appropriate planning structure (or "planning-to-plan") is an important first step in bringing together the diverse assortment of interacting and interrelated elements which collectively define the planning environment and help identify what planning is to accomplish. This structure provides a logical foundation from which planning can proceed.

Forestry planning is no exception. The planning design used to develop state forest resource plans will greatly effect not only the quality and character of these plans, but also the level of success and acceptance they are ultimately able to achieve. A frustrating lack of planning experience has led to difficulties in a number of states regarding
selection of a suitable planning design. Despite capable Forest Service assistance, forestry agencies in these states still do not appear to have developed a clear understanding of planning as a process. This fact has slowed progress and impeded plan development.

At present, nearly all of the states are utilizing some type of an issue-driven planning process, focusing on forest land issues and problems and examining alternative strategies for their resolution. These issues usually derive from problems with existing agency programs or policies rather than from a comprehensive examination of projected future needs and opportunities.

This has led some to charge that the forest planning process, by being issue-driven, concentrates on perceived problems at the expense of other alternatives and management opportunities available to the organization. Preferring instead a "goal-oriented" planning approach, critics claim the issue-driven process is myopic and leads to an incomplete examination of management alternatives, thereby impairing decision-making ability. It should be noted, however, that planning is merely a tool for decision-makers, providing a process by which important management-level decisions can be made. Ultimately, it's the quality of those decisions and not the process itself that counts when it comes to reviewing an agency's planning performance.
Information Management

Another major problem has been the ability of state agencies to collect and manage the data base necessary to conduct a comprehensive resource evaluation. Often information is required in addition to that supplied by Forest Service survey units so that the full array of management opportunities may be assessed. Consequently, statewide resource inventories often form the basis for local resource use projections and assumptions, and help to establish the direction of future decisions.

The use of natural resource data has expanded tremendously among state and local government agencies due, in part, to a growing awareness of the need to protect the natural environment and the resources it offers. As mentioned earlier, just over half of the states responding to the survey (26 states) plan to conduct a formal statewide resource assessment concurrent with the development of a state forestry plan. In 24 of these states, some type of analytical forecasting techniques (e.g., trend extrapolation, simulation methods, cross-impact analyses, scenario's, decision trees, etc.) will also be used to more accurately predict likely future conditions. However, despite the bulk and complexity of natural resource inventory information, only 14 states reported use of an automated information management system to assist in data handling and analysis. The remaining states rely on manual methods to assemble, sort and manipulate SFRP inventory information.
Program Administration

One of the concerns often expressed on the part of state forestry officials has been the desire to attach a greater sense of continuity and long-range direction to forestry programs and activities in order to counter the frustrating tendency many state agencies have to repeatedly react to short-term immediate demands. While an essential element of agency operations, a preoccupation with "crisis management" can often serve to distract forestry officials and impair their ability (and responsibility) to look ahead and plan effectively for an uncertain future.

Administration by perspective rather than panic is one of the chief goals of long-range planning. Planning serves as an early warning system of sorts by alerting management officials to emerging problems, issues and opportunities which may require subsequent action. The long-term nature of forest resources planning is, however, frequently incompatible with the short-term orientation of state governments. This differing perspective creates a number of problems in dealings with some state officials who view planning as unnecessary and incapable of producing immediate or tangible results.

Particularly troublesome has been the historical inability of state forestry agencies to somehow tie the program budgeting process to the lengthy rotation cycle of the resource. Twenty-five states indicated that a much closer program-budgeting link should result from statewide forest planning efforts in their states. Organizational goals, objectives, targets and priorities identified during the planning process will be used as
justification for long-range funding requests from state legislative authorities. Comprehensive management plans are also expected to provide an element of security in times of state government cutbacks and fiscal retrenchment by providing an important source of oversight authority and accountability.

**Program Documentation and Public Involvement**

Development of a state forestry plan usually implies concurrent production of certain planning documents designed to clarify and articulate how the planning process will work, what it involves, and what effect it is expected to have on the management of forested lands within the state. Program documentation also serves to communicate important information about the resource and how it might best be managed to coincide with the needs and wants of various user groups.

Program publications describing facets of the state's planning effort also tend to "open up" the planning process to public view, and often help build support for and encourage involvement in plan development. Distribution and review of these documents, however, is sometimes limited to interested state agency and state government officials, but often extends to representatives of the broader public, private and institutional sectors.

Table 6 lists the most commonly used forms of forest plan documentation, in addition to the production of a basic state forestry management plan. It is interesting to note that aside from publication of a long-range agency plan, the two most common forms of documentation are the Program Assessment and Issues papers.
Table 6  Documents describing state forest resource planning processes and products, by type of document.  1981.

<table>
<thead>
<tr>
<th>Type of Document</th>
<th>Number of States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Historical, Developmental or Introductory Planning Document</td>
<td>8</td>
</tr>
<tr>
<td>Planning Concept Document</td>
<td>11</td>
</tr>
<tr>
<td>Social, Economic, Environmental Assessment</td>
<td>27</td>
</tr>
<tr>
<td>Public Involvement Plan</td>
<td>5</td>
</tr>
<tr>
<td>Issues Papers</td>
<td>23</td>
</tr>
<tr>
<td>Program Alternatives/Levels Document</td>
<td>13</td>
</tr>
<tr>
<td>Supplemental Work Plan, Management Guide, Implementation Package</td>
<td>16</td>
</tr>
<tr>
<td>State Forest Resources Plan</td>
<td>41</td>
</tr>
<tr>
<td>Regional Plans, Management Guidebooks</td>
<td>1</td>
</tr>
<tr>
<td>Informational Brochures, Pamphlets, Public Awareness Guides, A/V Presentations, etc.</td>
<td>7</td>
</tr>
<tr>
<td>Miscellaneous Published Reports, Executive Summaries, Maps, Conference Transcripts, Draft or Working Papers</td>
<td>24</td>
</tr>
</tbody>
</table>
As indicated earlier, public participation in state forest planning has not been extensive in most states. A variety of techniques are, however, currently being used by states to solicit and collect program input. These techniques range from limited inter-agency review to more extensive efforts designed to foster a broad exchange of ideas and encourage active participation throughout the planning process.

Table 7 lists several of the more common forms of public involvement used by the states and is based on survey information from 39 states. Inter-agency review is the most widely used method of involvement with all 39 states surveyed indicating use of this technique. In addition, most states (97 percent of respondents) conduct a selected contact and review process whereby knowledgeable persons from the local forestry community or persons expressing an interest in forestry planning, are periodically contacted and given the opportunity to review and comment on aspects of the planning process, including draft and proposed planning documents.

A number of states (54 percent of respondents) hold regular public meetings or workshops where forestry issues, concerns and alternative management strategies are discussed. The meetings are designed to keep the interested public informed of planning progress and involved in critical stages of plan development. They also allow state forestry officials to obtain some feeling for the issues and concerns most important in the minds of the public.

Often these meetings are conducted around the states by a state-appointed forestry planning committee or "core team" who's official charge is to serve as an advisory to the planning process, and to help coordinate
Table 7  Public involvement techniques used by states in developing statewide forest plans, by technique. 1981.

<table>
<thead>
<tr>
<th>Involvement Technique</th>
<th>Number of States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inter-Agency Review and Comment</td>
<td>39</td>
</tr>
<tr>
<td>Formal Public Hearings</td>
<td>5</td>
</tr>
<tr>
<td>Public Meetings, Workshops, Seminars, Regional Forms, etc.</td>
<td>21</td>
</tr>
<tr>
<td>Selected Contact and Review</td>
<td>38</td>
</tr>
<tr>
<td>Advisory Committee(s)</td>
<td>26</td>
</tr>
<tr>
<td>General Informational Mailings, Media Campaigns, Random Public Contact, Opinion Surveys, etc.</td>
<td>14</td>
</tr>
<tr>
<td>Other¹</td>
<td>2</td>
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</tbody>
</table>

¹ Specialized forms of public participation including: target group analysis, demonstration projects, delphi or trade-off evaluation profiles, nominal group technique, social assessment methodologies.
and direct planning efforts. Over half of the states responding to the survey (67 percent) reported formation of some type of planning advisory body. Although the composition of such a body can often determine the usefulness of its input, planning advisory boards have without question played an important role in facilitating forest resource planning and building the political support necessary for this process to continue.

Implementation and Monitoring

Once implemented, state forestry plans will be updated and revised variously (Table 2) to reflect new management information and possible changes in the resource, available technology, or in organizational goals and objectives. Program updates add an important element of flexibility to long-range management plans, and as such are essential to their lasting vitality and useful application.

Most states indicated a reliance upon internal agency commitment to insure implementation of completed plans, and to foster future adherence to some type of comprehensive planning process. In all but a few states, participation in forest planning remains optional, left to the discretion of state forestry officials who must, presumably, remain convinced of its merits for this process to continue. Only 15 states currently depend on formal means of commitment (i.e., administrative or executive order, legislative mandate, etc.) to supplement and solidify agency support for planning, and to help overcome pockets of internal resistance and apathy which frequently hinder agency planning efforts.
Although many states have yet to reach the implementation stages of planning, most seem to recognize that planning is a continuing, dynamic process requiring continual review and re-evaluation in order to monitor achievements and keep pace with changes in existing problems, opportunities and issues. Nearly all of the states surveyed indicated that an ongoing formal review process will accompany their planning efforts.

In addition, a number of states now have legislation requiring periodic evaluation of all major state agency programs. This type of legislation (e.g., Zero-Based Budgeting, Planning-Programming-Budgeting-Systems, MBO, etc.) is designed to foster increased accountability in government and stem the seemingly endless growth of government programs, departments and bureaucratic agencies. Forestry agencies in these states must incorporate an evaluation mechanism within their planning process to comply with state law, and also to demonstrate the efficiency and effectiveness of their various programs to state legislative and executive officials.

**State Reaction to Federal Program Assistance**

Federal efforts to assist states in developing comprehensive forestry plans have, in most cases, met with favorable and often enthusiastic response from state forestry officials around the country. Few would argue the importance of federal assistance in helping establish the necessary base of support and direction for planning, or challenge the wisdom of federal involvement in state efforts to secure an improved supply of domestic forest outputs.
Clearly, the federal leadership role, orchestrated through the U.S. Forest Service's office of Area Planning and Development, has benefited states by providing a welcome source of financial and technical aid during the often difficult period of adjustment to SFRP planning. Federal efforts have also helped to "legitimize" (or sell) the idea of long-range, programmatic forestry planning to skeptical state and local resource agency officials, awakening them to the urgent need to engage in such planning.

Still, a diversity of opinion exists as to just how effective federal program assistance has been in encouraging planning, and whether federal efforts are, in fact, achieving their intended purpose. A number of states, for example, have yet to acknowledge the need for statewide forest planning, preferring instead to rely on time-tested management planning techniques and to pursue existing organizational initiatives. Others participate based only on expectations of continued federal program assistance, apparently unconvinced of the merits of comprehensive forestry planning.

Moreover, questions of federal domination, manipulation of the planning process and heavy-handedness in dealing with the states have arisen in discussions with some state officials involved with SFRP. Similar charges of bureaucratic favoritism, technical incompetence and (especially) federal insensitivity to the needs of the states, while less frequent, can also be heard.

In an effort to sample existing opinion and gain a somewhat better understanding of just how state planning officials really do feel about federal program assistance, state resource planners throughout the country were invited to respond to the following question:
"In your opinion, have federal efforts to provide planning assistance to the states (notably those of the U.S. Forest Service, State and Private Forestry) been sufficient to encourage the development of meaningful and effective statewide forestry plans?"

Below are some selected responses.

"Yes and no, ... more assistance needed in the area of data gathering and analysis techniques."

"No, there have been numerous false starts (attributable to) conflicting direction provided by the Washington office and the regional offices of USFS, State and Private Forestry."

"Financially yes, technically no."

"The development of a planning process has been very helpful."

"There have been some logistical problems due to the (distant) location of FRP planning assistance staff."

"Yes, (especially) state and regional meetings, training sessions, and one-on-one planning assistance."

"Technical assistance has been invaluable."

"The amount of S&PF monetary assistance should vary ... based on the state's unique ability to contribute to (the attainment of) national forestry goals."

"No, totally unresponsive to states needs."

"Process guidance is good ... format and content requirements for RFA information are, however, not definitive."

"The U.S. Forest Service has really assisted the SFRP process in neighboring states ... we have not received that type of commitment."

"The U.S. Forest Service, S&PF assistance largely initiated long-range FRP planning (in our state) ... the 80/20 monies inspired state foresters ...."

"A stipulation on federal funding should be that at least one person be hired whose primary duties are planning."
"USFS assistance in information gathering and training have been helpful. However, their constant push to plan using the USFS process has, at times, been counter-productive to producing a state plan to meet state needs."

"Dollars are the bottom line, but (the feds) have also given needed advice at critical points in the process ... their strong suit has been flexibility."

"Yes, but greater effort will be needed to assure quality implementation and evaluation programs."

"Sufficient to start, ... too little to develop and implement comprehensive planning process. One man planning staff is just not enough!"

"Initial federal efforts were rigidly structured, insufficiently flexible to allow for unique and differing state situations ... much better presently."

"The future will determine the success of these plans."

"Many federal planners view SFRP as the same as national forest planning with a fixed land base and complete management control. This attitude causes problems and misunderstanding."

"Program dollars have been sufficient, although technical assistance has not always been ...."

"Without continued federal support and encouragement nothing would have been done in this state."

"Technical assistance has been very helpful ... especially in terms of public involvement techniques."

"Definitely yes, (federal planning staffers) have given us direction but not led us as if we were children. That's the way it should be."

"Yes, (our state) has been a leader partly because we followed the lead given by USFS forest resources planning staff. We were not conservative ... we stepped out with both federal dollars and technical assistance."

"Yes, in several ways--funding, training, and information and education."

"Yes and no ... one must remember that this process is still new ... through many trials and tribulations we are where we are. A lot of frustrations and anxieties are still to come ...."
ORGANIZING TO PLAN IN MICHIGAN, UTAH AND VIRGINIA

Organizational patterns and administrative procedures required for the development of statewide forest plans are far more complex than evidence from a national survey implies. Consequently, case studies of the forest planning efforts in three states were undertaken. The states were: Michigan, Utah and Virginia. Criteria used to select the cases included: relative state experience with and exposure to comprehensive resource planning; regional representation; advanced status of statewide forest planning program; willingness to participate in a review of planning process review; similarity of local political and economic conditions to those in Minnesota; and distinct or unique character of statewide forest planning initiative. What follows is a general review of planning principles identified in each state. A more detailed accounting can be found elsewhere. 4

Virginia Division of Forestry

The Virginia Division of Forestry, located within the state's Department of Conservation and Economic Development, is charged with providing for Virginia's forested lands. Divisional responsibilities encompass the full range of forest management activities including: applied research, service functions, pest and fire protection, and various support and consultative services. In addition to the management of directly controlled state forest lands, the Division also bears indirect management responsibility

4 Case study descriptions on file at the Department of Forest Resources, College of Forestry, University of Minnesota.
for Virginia's vast privately held forest reserves. Fully 88 percent of the state's forest lands are in private ownerships (77 percent nonindustrial private, 11 percent timber industry lands), while only about 12 percent are publically owned. This fact has important and far reaching implications for forest management within the state, and for VDF's role in assisting in the management of these resources.

The Virginia Division of Forestry bears major responsibility for developing management plans for Virginia's forest and related resources. The Division, working cooperatively with other state and federal agencies, forest industry, forestry consultants, Universities and various interest groups, is responding to this task by developing comprehensive statewide management plans to address future forest uses and issues of importance to forestry within the state. It has been active in this long-range resource planning process for approximately the past three years and expects to complete an initial agency plan by sometime in late 1982. Forest resource planning falls under the jurisdiction of the Forest Management Chief, with actual plans developed through the office of the Forestry Planning Coordinator.

At this writing, the Division of Forestry is fast approaching completion of a workable statewide management plan for the Division. Unusually strong, internal management-level dedication to planning, coupled with the expert guidance provided by Forest Service specialists, University of Virginia researchers, and that of an outside contractor, combined to produce what in every respect appears to have been a quality planning effort.
Key planning strengths include the formulation and structuring of agency goals and objectives early in the planning process, and communication of these goals to those involved in the process. Recent efforts have also involved a broader spectrum of stakeholders than ever before in the planning process, while at the same time formalizing a way in which concerns voiced can be identified, dealt with and, ultimately resolved.

The Division's use of advanced analytical and technical methods (notably, Interpretive Structural Modeling or Intent Structuring, Nominal Group Technique, and Social Resource Management) has helped further refine and systematize the Division's resource planning process, serving to elevate planning from a routine agency function to a collectively worthwhile experience.

Other factors contributing to the success of Division's program planning efforts have been:

- the early and continuing support and involvement of state agency and state government officials in the planning process;

- the generous cooperation of federal, state and local sources;

- extensive input from agency administrative, executive and field personnel;

- the devotion of an exceptionally hard-working and talented resource planning coordinator;

- unusually strong, internal agency commitment to the SFRP process;

and

- a willingness to experiment, to take chances with new techniques, new ideas, and the ready acceptance of planning suggestions from sources outside the Division.
Two of the basic problem areas affecting development of the Division planning effort have been: 1) decentralization of the authority base and, 2) a general lack of public education and involvement in planning. The decentralization of authority issue deals with difficulties encountered in attempting to influence the management of privately held forest lands. Recall that nearly 87 percent of Virginia's forested lands are privately held, 77 percent by nonindustrial private landowners. The state has no direct control over these lands, and it is a decidedly difficult task to steer such disjointed and varied interests towards a statewide plan for forest management. Although Virginia has been recognized nationally as a leader in the use of private landowner incentive programs (the Federal Incentives Program, or FIP, is largely modeled after Virginia's forestry assistance programs), these programs have not been completely effective. Consequently, any comprehensive statewide plan will ultimately be subject to the priorities of the individual landowner.

Another planning concern faced by the Division is the level of public awareness and education with regard to the issues which surround resource management within the state. Division planners and decisionmakers would like to see greater public involvement in their planning efforts. Unfortunately, the public is often not adequately informed or not generally knowledgeable enough in the area of forestry to offer responsible input to the resource planning process. Consequently, public input has thus far tended to be mostly peripheral and somewhat nonsystematic.
Moreover, people tend not to respond to future issues, but rather to issues affecting them now. Responsible forest resource management demands a much longer-term orientation in order to develop the sort of perspective needed to deal effectively with events occurring 10, 20, 30 or even 50 years hence. Long-range planning methodologies, such as the one adopted by the Division, also require this type of visionary perspective. Still, such efforts are subject to public impatience.

Despite these and other concerns, the Virginia Division of Forestry appears to be well on its way towards implementation of a competent and highly innovative divisional plan for the management of Virginia's forest resources. The Division, working cooperatively in this endeavor, will have taken the all-important first step in improving the level of management on state-owned forest lands, and in enhancing possibilities for increased production from privately-held forests throughout Virginia. In addition, Virginia's state forestry organization can expect to enjoy a new and improved sense of direction, as well as closer relations with other state and federal agencies, state lawmakers, forest industry and the resource-using public.
Utah Division of State Lands and Forestry

Utah's Division of State Lands and Forestry is one of nine agencies located within the Utah State Department of Natural Resources. Current Division operations involve administering activities on over six million acres of state agency, trust and sovereign lands. Of the 15 million acres of forest land in Utah, however, only 25 percent is in state and private ownership (7 percent state, 18 percent private). The Federal Bureau of Land Management and the Forest Service administer most of the remaining forest land (41 percent and 28 percent, respectively). State-owned productive forest land comprises about 3 percent of Utah's 3.4 million acre total of productive forest lands. State ownerships are mainly comprised of a few large blocks of land (5,000+ acres) and numerous scattered sections amidst various Federal ownerships. The Division is also responsible for managing approximately 8 percent of the state's suitable rangelands, and for administering surface and mineral activities on all of its 6 million acres.

In October of 1978, the Division, together with Region 4 representatives from the U.S. Forest Service, State & Private Forestry, embarked on a year long effort to produce a long-range State Forest and Range Resources Program for Utah. Inspired by passage of the Cooperative Forestry Assistance Act (PL 95-313) earlier that same year, a planning team was assembled consisting of personnel from the Division and from the Forest Service. The team was augmented by personnel from INTASA, Inc., a Menlo Park, California, consulting firm, to assist in developing the planning process and approach. The project ran through September 1979.
A most unique aspect of the endeavor (in addition to employing an outside contractor) was the provision that planners from 11 other Intermountain and Plains states were invited to observe and participate in the development of Utah's program, so that they too might share the experience of developing and applying a program planning approach to state resource management. Participant states included: Arizona, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, South Dakota, and Wyoming.

The Utah planning approach evolved with two over-riding objectives in mind: (1) Develop the very best program for the management and orderly development of state surface and mineral resources and private forest resources; and (2) Develop a planning structure and program that can be used as a management tool.

In response to these objectives, three basic planning concepts were used to develop Utah's Resource Program. First, evidence for supporting or changing the existing program should be based on an assessment of program, resource or related information. Second, issues facing the Division, and their tentative solution, should provide another basis for possibly changing the program. Third, the existing program should be structured and displayed in such a way that changes can be easily and demonstrably incorporated.

A substantial part of the Utah planning effort was directed at identification and resolution of issues, problems, concerns, and management opportunities. An exhaustive listing of issues was compiled. The issues
were then screened to determine their relevancy and to narrow the scope of the planning process to a set of issues that could be dealt with effectively in light of planning constraints such as time, funds, Division responsibilities, etc. The screening process indicated which issues are most important and which should be addressed in light of these constraints. Following is a list of screening criteria which were used:

1. **Irreversible consequences if no action is taken.** Attention must be paid to issues requiring immediate attention in order to prevent undesirable and/or irreversible consequences.

2. **Statewide concern.** Localized issues may best be dealt with at a lower level of administration.

3. **Seriousness or extent of problem.** Some issues may be relatively more serious in terms of their impacts or consequences than others.

4. **Public concern.** Degree of public concern may be used to determine the importance of addressing an issue.

5. **Not being addressed by another agency.** This criterion acknowledges distinct authority of different agencies, but determines whether, in fact, the issue is being addressed.

6. **Potential net benefit to Utah.** It may be that little or no benefits would result from addressing or even resolving a particular issue.

The above criteria are not listed by priority, nor were issues screened "out" simply because they failed to satisfy one or more of the criteria. For those issues screened "in", recommendations were made that the issue be resolved through one or more of the following actions.

1) **Actively pursued** by planning team through development of alternative strategies to resolve the issue. This process requires careful examination of what could be done, what should be done, and what currently is being done to resolve the issue.

2) **Referred** to another agency.

3) **Resolved** with a policy statement or administrative judgement.
The approach selected in developing Utah's Forest and Range Resource Planning Program would seem to provide decisionmakers in that state with a relatively complete and comprehensive examination of the current and projected future status of the state's forest and rangeland resources, as well as providing needed information concerning issues and options related to their development. The Division's use of Intent Structuring throughout the planning process has helped to illuminate important relationships between identified agency goals, objectives, targets, guidelines, and functional activities. This innovative technique very effectively ties these multiple, interdependent resource management objectives to specific enabling authorities and state legislative mandates which, collectively, provide the basis for agency operations and activities. What results is a clear, concise hierarchy of management-level goals and objectives supported by the specific activities and associated costs required for their attainment.

The form and format of the Division's program planning documents also help communicate an improved understanding of the character and complexity of contemporary resource management among Utah's resource using public and state agency officials alike. The documents expose the interested reader to many of the finer points of multi-year program planning (e.g., budget preparation, analytical and quantitative forecasting, program area planning) and provide a detailed description of the who's, what's and wherefore's of state resource management.

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Possible weaknesses in Utah's planning effort include its failure to seek broad and direct citizen input at each step in the program development process. This may be explained in part by the extensive federal ownership of land throughout Utah (66 percent) and the relatively lesser importance of state and private ownerships (7 and 18 percent, respectively) on the overall resource management picture.

Still, public involvement is an increasingly important component of most state agency decisions and can greatly influence the success and/or acceptance of both the agency and the programs it seeks to administer. Citizen input can also assist in identifying and defining areas of local and regional concern. Efforts aimed at encouraging greater public participation in the development of future Division programs and planning activities can be expected as the planning process is further refined and as planning experience is accumulated.

The Division's program does, however, appear to be firmly linked to the agency's appropriations and budgetary processes, to inter-agency MBO agreements, to Federal Forest Service planning needs, and to issues of local and regional significance. Such linkage is essential if the program is to survive the rigors of administrative life and to achieve the broad-based political support necessary for this process to continue.
Michigan Division of Forestry

The Forest Management Division of the Michigan Department of Natural Resources is the leadership agency for public forestry services, assistance, and coordination in the State of Michigan. In addition to managing Michigan's State Forest System, the agency provides technical forestry assistance to landowners, forest industries, local governmental units, local and regional development groups, special interests, and the general public. It assists too, in rural fire protection.

Just over half of Michigan is forested, some 19.4 million acres in total. Of this, 18.9 million acres (or 97 percent) are considered to be commercial forest lands. Thirty-four percent of this commercial forest land is publicly owned, including approximately six million acres of state and National Forests. Another 12 percent (or two million acres) is held by forest products companies located within the state. By far the bulk of the state's commercial forest lands, however, about 54 percent, are comprised of smaller, individual tracts held by an estimated 200,000 non-industrial private landowners.

Forest planning is performed under the authority of Act 17, P.A. 1921, which places the responsibility for protection and conservation of Michigan's forests with Department of Natural Resources. In addition, Executive Order 1973-2 directs the Department to "...assume complete responsibility for the development of a State Land Use Plan...." The Division's forest resource planning is largely in response to three important, internally-identified agency objectives: (1) prepare a statewide forest plan, (2) prepare and
maintain comprehensive management plans for state owned forests, and (3)
assist local units of government in forest planning.

Michigan's planning process involves: (1) assessing all forest re-
sources and resource uses within the state, and the programs affecting
their use and condition; (2) examining major issues relevant to the state's
forest resources; and (3) recommending program and policy direction for
forest management in the state based upon this assessment and examination
of the issues. The two major products in the process are an Assessment
of the state's forest resources, and a recommended resource Program for their
management. Together, these components comprise the state's total manage-
ment plan. The following basic principles, each of major importance, were
formulated early on in the process to assist in development of this plan:

- Plan, promote and achieve patterns of forest use that optimize
economic, environmental, recreational, and social values according
to the needs of Michigan citizens now and in the future.

- Encourage community and regional economic development and environ-
mental improvement through wise use of the forest.

- Protect, conserve and enhance the forest and improve the quality of
the human uses made of it.

- Provide recreational opportunity to serve human needs of physical,
mental and social well-being.

- Produce sufficient timber to meet future demands.

- Maintain and enhance wildlife and fisheries habitat and protect
endangered and threatened plant and animal species.

Becoming one of the first states to do so, Michigan has now nearly
completed work on a comprehensive statewide plan for the management of its
forest and related resources. In so doing, Michigan joins a growing list
of states who seem to have benefitted from earlier Federal forest planning
experiences, and who have subsequently responded by developing and implementing their own system of long-range forest management planning.

A genuine desire on the part of state agency officials to produce a workable forestry plan touched off planning efforts in Michigan. This internally perceived sense of urgency provided much of the necessary impetus to initiate and successfully complete a comprehensive planning effort. In addition, a higher-order motivation—namely the need to promote economic growth and diversification in Michigan, later emerged to further strengthen and expand this impetus, providing added support for planning.

Building on this foundation of support, Michigan's Forest Management Division, working cooperatively with Forest Service and Michigan State University assistance, proceeded to mount an aggressive and highly capable planning program. Key planning strengths include the early recognition of planning's role in helping Michigan more accurately define resource capabilities, resource targets, and forestry's role generally, in meeting heightened state and regional demands for forest goods and services. The integration of resource issues, management concerns and perceived opportunities for development, throughout the planning process also assisted the Division's efforts by legitimizing and rendering more useful process results.

Problems associated with the development of Michigan's plan appear to have resulted primarily from agency inexperience with comprehensive multi-year planning, rather than from any fundamental breakdown in planning ability. There were, of course, the inevitable difficulties in adapting the Forest Service's suggested planning methodology to suit needs specific
to the State of Michigan and its resources. Problems of this sort, however, were not considered major, nor were they necessarily unexpected.

Problems did surface, however, during the program development phase in attempting to demonstrate logical and explicit ties between existing resource issues and the goals developed during the planning process to address those issues. This difficulty sent resource planners scurrying "back to the drawing board" to work out a revised conceptual approach for more effectively communicating and presenting these linkages to the public.

Successful implementation of Michigan's recently completed management plan would appear virtually assured in view of the levels of support and involvement generated throughout its development. Future efforts by the Division will seek to promote expanded public interest and involvement in the resource planning and decisionmaking processes. Meanwhile, recognizing the need to key public input to the level of planning, and to each of the various process steps. A number of other changes both procedural and substantive, are also contemplated for future efforts in order to further streamline and improve upon this planning process. Ultimately, making forestry in Michigan more directly responsive to public needs.
ORGANIZATIONAL PRINCIPLES FOR PLANNING:
A SYNTHESIS OF IDEAS

A major study objective was to search out principles or guidelines that would enable state agencies to more effectively organize for the development of statewide forest plans. The following is a brief assessment of issues and principles which have emerged from the national survey of state forestry agencies, the examination of organizational patterns in three case studies and a review of a variety of published and unpublished planning literature. For the sake of clarity, three major subject areas have been identified, namely, organization and resources, process management, and program coordination and implementation.

Organization and Resources

Major Issues

Major issues of an organizational nature that are important to effective statewide forest planning efforts are numerous. Those deemed most critical are:

- the need to formally establish (or "institutionalize") planning within the state forestry organization as an integral and ongoing agency activity;

- the need to promote the active support and involvement of state policymakers, key agency officials, public and private organizations, industry representatives, special interests and the public, throughout the SFRP process;

- the need to demonstrate cost-effectiveness in planning;

- the need to reconcile the long-term nature of forest resource management with the predominantly short-term orientation of state governments and administrative agencies via the SFRP process;
- the need to make planning more responsive to social, economic and political considerations;

- the need to surmount internal resistance and apathy on the part of skeptical agency officials who view long-term planning as unnecessary and incapable of producing immediate or tangible results;

- the need to overcome problems resulting from agency inexperience, generally, with comprehensive, multi-year program planning;

- the need to secure added commitment to planning from state legislators, key administrators, and from the executive branch of state government;

- the need for a systematic program of developing the necessary public acceptance for successful program implementation.

Management and Planning

The primary functions of management have been described as planning, organizing, communicating and evaluating (Jackson 1978). The ability to carry out these management functions effectively and efficiently is dependent upon a clear statement of objectives, thorough understanding of the interrelations among objectives, establishing a good match between objectives and the resources available to implement them and, setting organizational priorities based upon the relative merits of these objectives and the existing set of constraints acting upon the organization.

Two basic assumptions can be made concerning the planning function: (1) it is intended to be successful; and (2) the resources available for planning-related activities comprise but a fraction of total resources. (Hence, the need for cost effectiveness in planning.) Whatever the purposes of planning, ultimately its results must somehow be connected to other parts of the management process. The increasing popularity of programs such as Management-By-Objectives (MBO) speaks to the critical nature of this relationship.
Uses of Planning

The activity of planning can be used by administrators to fulfill a wide variety of purposes. For example, planning might be used to pace organizational growth and development. Certainly, a variety of contemporary factors highlight the need to establish some sort of orderly and measured pace for growth. Alternatively, planning might be employed as a tactic to delay or avoid making difficult decisions or taking immediate action. Time may be needed to weigh and formulate alternative plans, policies or implementation strategies. A wise choice generally requires that alternatives and implications be examined thoroughly in advance. Even though the decision-maker might be quite capable of and comfortable in reaching a determination without the aid of planning, planning may be employed due to certain political advantages to be derived therefrom. Advantages which have little, if anything, to do with the substance of the decision.

Planning can also be used in ascertaining the analytical and/or creative abilities of the organization. In laying out a scheme for future action, planning tests the capacity of agency personnel to imagine and think creatively. The constructive ability of each individual is tested. Planning involves the selection, use and manipulation of ideas, people, resources and time in meeting the needs of a particular situation. Properly done, it demands respect for the ability and courage of individuals within the organization to innovate and apply themselves creatively.
Often planning is undertaken simply to gauge public feeling and attitudes regarding the adequacy of management. A "trial balloon" of sorts is sent up to elicit response and encourage constructive criticisms. Should this indicator of public feeling indicate the existence of serious negative attitudes, retreat is still possible, since the organization has gone no further than to plan. A positive response, of course, signals welcome support for the organization and its proposed management programs.

Most often, planning is undertaken to demonstrate major changes in existing circumstances and to develop better ways of dealing with those changed conditions. Planning attempts to motivate individuals (both within and external to the organization) into accepting and supporting inevitable change. At the same time, planning seeks to offer innovative solutions and strategies for dealing with problems posed by this evolution.

Ultimately, planning must assume the offensive in order to protect the public interest inherent in new developments. The system of planning must identify the dangers of adhering to old policies and procedures, stressing instead the ever-changing nature of the decision-making environment. Finally, planning must propose and initiate the development of new methods and new ideas for dealing with this complex and dynamic environment, and for ensuring continued responsive management.

**Benefits of Planning**

Some of the possible benefits of planning to the organization include (Warfield 1976):
- Improved ability to evaluate programs, facilities, staff and expected performance.
- Better understanding of organizational strengths and weaknesses, and possible deficiencies in some portion of the system of administration.
- Logical basis for organizational development.
- Effective communication of job responsibilities to staff members.
- Better recognition of issues, opportunities, and concerns confronting the organization, and improved understanding of alternative courses of action and other options available.
- Improved ability to relate requests for additional funds to performance or expected performance.
- Identify inconsistencies between stated objectives and actual behavior of individuals within the organization.
- Basis for bringing about cooperation and participation of various different groups of people in the management process.
- Systematic, rational basis for evaluation.
- Means for introducing Planning - Programming - Budgeting into the system.

Planning Objectives

Some of the objectives which frequently help guide land and natural resource management planning activities are the need to (USDA Forest Service 1980):
- Provide a systematic and consistent process for renewable resource management decision-making.

- Provide direction for natural resource management, including the determination of criteria, standards, guidelines and procedures for resource use and management practices.

- Integrate individual resource planning activities through the use of an interdisciplinary approach.

- Provide for public participation.

- Respond to the laws and authorities affecting the management of state forested lands.

- Coordinate state land and resource management planning efforts with those of local governments, other state and federal agencies, forest industry, public and private organizations, regional development groups and private landowners.

- Assist in the development of the RPA Assessment and Program by providing a foundation for summarizing capabilities and opportunities, and a means for distribution of objectives and program direction.

- Provide direction to guide management practices that will achieve an appropriate mix of goods and services, within sound environmental principles and in a cost efficient manner.

- Determine optimum long-range land ownership patterns to meet land and resource management goals and objectives over time.

- Provide a direction and control mechanism for implementation of approved management programs.
- Develop a truly statewide perspective for the management of state forested lands.

- Improve the capabilities within each state to provide forest resources information to planning efforts conducted by various other state agencies, organizations and administrative departments.

- Provide the appropriate data and information, and the needed goals, criteria and direction to respond affirmatively to public issues and management concerns at the local level.

Information and Data Needs

Natural resource information needs have multiplied rapidly in recent years as new perspectives on the environment, energy, development and resource policy have begun to emerge. The use of natural resource data has, as a result, expended tremendously among state and local governments who sense the impending need to better protect and manage the natural environment and the resources it offers. A good deal of this awareness has been encouraged through federal legislation and initiative. The states too, have developed a variety of programs which, increasingly, require consideration of natural resource inventory information.

Data needs are highly diverse and dependent upon the scope and nature of the particular program under consideration. Wide variation in management goals, authorities, program objectives and policy orientations necessitate vastly different types of data, differing data formats and levels of detail. Data required for use in most state programs is also not well defined in the legislation or direction creating these programs (Council
of State Governments, 1976). Rather, program staff have typically had to define their own data needs and collection efforts based on the authorities and objectives of the program itself. Consequently, state programs frequently rely on available data sources collected, on an ad hoc basis, by other agencies (state and federal) within the state. Although the overall goals of the program can assist in defining the types of data needed, program authority is important in defining format requirements, and the manner in which data is presented.

**Basic Data Needs.** Some of the basic types of information helpful to the development of comprehensive state forest resource management plans includes, but is not limited to:

- supply/demand projections, basic assumptions and trend analysis;
- quantitative inventories detailing the extent, location, characteristics and condition of state forested lands;
- information on resource interactions and interdependencies;
- defining the technical capacity of the organization to efficiently manage forest-based production;
- information concerning forest land productivity and patterns of ownership;
- information on resource biological, environmental and economic potentials;
- identification of resource protection needs;
- description of programs, policies and activities needed to meet current and future demands placed upon state forested lands;
- documentation of organizational goals and objectives, and identification of issues, needs and opportunities for forest resource management;

- information on important policy considerations, laws, regulations, and other factors influencing the use, ownership or management of forested lands;

- provision of derived maps or data products to state data users upon request;

- information on landowner goals and public perceptions;

- identification of research needs, data gaps, public involvement needs, etc.;

- information necessary for State Forester participation in natural resource planning at the state, regional and national levels;

- information on the structure of inter- and intra-regional demand and markets for forest goods and services;

- description of the current management situation and basic assumptions concerning the role forestry is expected to play in the future.

Regulation, Management and Review. Data is, of course, just another tool to be combined with the tools of authority, staff and budget in order to achieve SFRP program objectives. Perhaps one of the most data-demanding aspects of planning is the need to review plans, to manage or regulate land uses, or to make basic decisions regarding state forestry policy. Data needs for program implementation can also be considerable.
Such data must support the formulation of management guidelines, criteria, land-use plans, and specific program activities to be carried out by the implementing agency. Data is also helpful in justifying agency budgets, program authority, and long-range funding requests from state legislative officials.

Forest-level Planning. Information needed for forest-level (or "unit") planning emphasizes tactical and operational kinds of information, with goals and objectives taken as given from prior planning at higher organizational levels. Some strategic planning is, however, also necessary at this level to address local demands, and to determine constraints on management arising from local considerations (Hartgraves, 1980).

This "top-down" planning approach relies on the disaggregation of national and regional data sources, to determine the contributions of individual forest and field units. It frequently becomes necessary, however, to combine or reconcile aggregate data sources with local information and judgements as to the reasonableness of assumptions and projections.

The general problem with assigning national production goals downward (as in RPA) is that, at the state level, inequalities often exist which constrain management activities to those that are operationally feasible, e.g., those activities which can be accomplished within budget, manpower and technical limitations. Differences exist too, in biophysical capabilities and in the general direction or "philosophy" of state resource management.
Information Management. The degree of sophistication with which natural resources data is assembled, sorted and manipulated can markedly affect the quality and utility of resulting policies, plans and decisions. Questions of what data to use, how to use it, and at what level of detail, become especially critical when data users are untrained or unqualified in data management. In many cases, critical data functions have not adequately been met by state forestry personnel who lack the necessary training in this important area.

The use of automated information management systems in state forest resource planning has also not generally been extensive. Few state forestry agencies currently possess this important capacity. However, because state forest planning is a relatively new endeavor in many states, considerable and continuing progress is expected with regard to further development of this capability.

Data coordination issues seem to focus on the apparent mismatch between the needs of data users and the products available from data producers. This mismatch exists for a number of reasons including: a lack of interagency coordination and communication, narrow professional interpretations, an inability to forecast future needs, incompatible data formats and requirements and, various problems involving duplication, overlap and inefficiencies in data collection and analysis.

Recommended improvements might include a systematic reorganization of data producers and users into a single, integrated State-Federal database and/or the establishment of some permanent mechanisms to enhance
communications between the two. Through the use of such a system, overlap and inefficiency might be reduced, and data capabilities, availability and limitations might become more apparent.

Public Involvement

Increasingly, state agencies with major problem-solving responsibilities are becoming involved in the planning, design, implementation and administration of various projects which, either because of their size or complexity, are likely to affect a great many interests. Statewide forest planning is just one example of this. There exists an important need to interact constructively and effectively with these potentially affected interests in an effort to facilitate project support and the successful implementation of major projects.

It seems that if the public feels a major or far-ranging project decision was reached without adequate consideration of public needs and concerns, even though they may be in fundamental agreement with that decision, they will not support or accept it. Solutions can no longer be imposed upon affected interests. Citizen's have learned that they need not necessarily accept such solutions. The penalties for failing to acknowledge this fundamental precept are possible delay, defeat, veto or outright failure to implement agency programs. The public must feel a part of, and important to an agency's planning and decision-making processes.

The role of citizen participation in decision-making takes on particular significance in decisions the public feels should be made democratically. Regardless of political philosophies, some issues simply require
broad discussion, negotiation and resolution. Contrary to what some may believe, an agency does not in any way abrogate its responsibilities to represent all interests, just because some interests are allowed to participate directly. Public involvement must, however, be such that, although it influences the way in which issues are resolved, it does not become a substitute for decision-making by the agencies that possess the legitimate responsibility for it.

Most citizens will not participate in an agency's planning process unless they feel there are tangible issues involved, they consider the issues important and, they consider themselves capable of making a constructive contribution to the process. Obviously, public's will also not participate unless formally invited to do so, and until there is a formal plan or proposal to react to. Hence, the need to plan, design and administer a program of encouraging citizen participation in planning.

Benefits of Public Involvement. One of the principle benefits to the organization of involving the public early and often in its planning/decision-making process is an effective broadening of the information base upon which planning is conducted and decisions made. Public involvement can also assist in early identification and resolution of important impact-related issues and concerns, thus contributing to the agency's problem-solving ability. In addition, public input can strengthen agency efforts to anticipate and respond to emerging resource issues—before such issues can evolve into disruptive demands.
An informed and involved public is more likely to understand and support resource planning activities and proposed program actions. The public can also provide valuable project design information, and assist in the task of monitoring and evaluating program success. In addition, public participation demonstrates that public issues and concerns were legitimately sought and considered in reaching planning decisions. Such active and open participation helps build agency credibility and greatly improves the likelihood of successful plan implementation.

Activities and Focus. The five interdependent phases of public participation have been described as (USFS, 1981): (1) Issues definition, (2) Collection, (3) Analysis, (4) Evaluation, and (5) Implementation.

The identification of "key" publics for input into each of these phases can proceed based on records of past involvement, current inquiries, the presence of vested public or private interests, or on records of similar involvement by certain groups or individuals elsewhere. Identification is an important first step in securing the participation of various interests in the planning process.

In order to accomplish a successful program of public participation in decision-making it is necessary to (USDA Forest Service 1981):

(1) Make public involvement an integral part of any planning, program, or project and not a separate procedure.

(2) Begin public participation at the earliest possible stages to assist in: (a) identifying and resolving problems, (b) assessing needs, (c) planning strategies and developing work plans,
(d) gathering data, (e) formulating alternatives and estimating their consequences, (f) analyzing, evaluating and comparing trade-offs among alternatives.

(3) Provide full and timely information regarding impending decisions and give ample opportunities for the public and cooperating agencies to be involved in the decision-making process.

(4) Identify the publics affected by the program or project and facilitate their participation in the planning process.

(5) Respond to public recommendations in a documented and visible manner.

(6) Document all public participation; describe how public input was actually used in the decision-making process.

Again, state management responsibility, including decision-making, cannot and should not be transferred or delegated to the public through the vehicle of public participation.

Techniques. A variety of techniques are available for effecting a system of public involvement that is both effective and capable of making a constructive contribution to the successful implementation of agency projects and programs. Some of the more commonly used techniques for securing such involvement are listed below.

- attending or holding public meetings, hearings, workshops, press conferences or other public forums.

- Conducting interagency review, coordination or request for comments.
- Appointment of a citizen's advisory committee, ad hoc committees or a citizen's review board.
- Producing and releasing materials for communication to the public, e.g., legal notices, paid advertisements, news releases, civic notices, feature articles, newsletters, etc.
- Mapping of socio-political and environmental data.
- Face-to-face contacts, personal meetings.
- Consultation with key groups and individuals.
- Collecting data, e.g., surveys, studies, dephi, Nominal Group techniques, etc.
- Monitoring and other "non-reactive" learning.
- Utilizing forums provided by existing organizations and institutions.
- Use of a demonstration project.
- Gaming and selected role playing.
- Operating through regional or field offices.

The selection of a particular involvement technique or strategy for securing public input will depend upon the relative impacts of project considerations, the degree of public interest in and awareness of the project, and on the existence of differing viewpoints or attitudes on the issues and concerns addressed by the project. Other factors to consider in selecting or applying the above techniques are:

- the audience or "publics" to be reached;
- the level of complexity and degree of polarization associated with the project;
- anticipated benefits of public involvement;
- staff time, funds and expertise required;
- level of complexity and amount of detail necessary;
- length of time available;
- ability of the organization to effectively institute this technique;
- level of staff interest and competence;
- type & intensity of interaction desired.

Analysis and Evaluation of Public Response. Resource managers must not only consider whether, when or which techniques will be used in soliciting public input, but how to fairly present this public response to agency decision-makers. Indeed, public response is but one of a number of factors to be considered in reaching a final determination on issues confronting the agency. Such response must be combined with legal, political, economic, technical and resource capability factors to arrive at a comprehensive and workable decision.

The public response analyst must serve as a "liaison," of sorts, between the agency and its publics, by accurately interpreting and communicating public attitudes and feelings to decision-makers to assist in their difficult task. Information on public attitudes is essential to properly assess the nature and extent of the social dimension of resource decision-making. This information must be captured and presented in a manner which facilitates decision-making. Subtle, but important, differences between response analysis (objective) and evaluation (subjective), and quantitative vs. qualitative interpretations must also be carefully recognized and observed.
Public response analysis is defined as "any technique that objectively and systematically identifies, summarizes and describes characteristics of communication," (USDA Forest Service 1981). Analysis is declared "objective" if each step of the process is carried out on the basis of explicitly formulated rules or procedures which serve to minimize bias. It is "systematic" if the addition or deletion of content is done according to consistently applied rules.

The purpose of response analysis is to summarize and display the number, content and nature of public responses, so that project staff can make recommendations and decisions. Analysis seeks to identify public opinions and values and their underlying reasons, as well as new ideas and information concerning issues, policies, and resource management alternatives.

Strategic, Operational and Long-term Planning

Strategic or long-term management planning is commonly defined as a process by which an organization: (1) sets its major management objectives, (2) assesses its capabilities and the opportunities and risks present in its environment, and (3) collects and allocates its resources to achieve those objectives (Figure 1). Objectives here are taken to mean an organizational "aspiration" to be worked towards, while goals are defined as being a specific achievement to be attained at some future date. The terms "strategic" and "operational" often coincide with these respective time projections. Thus, one may speak of "strategic planning of long-range objectives" and "operational planning of short-range goals." Statewide
TRADITIONAL PLANNING INVOLVES

Assessing and organizing the combination of resources, internal actions and external relationships required to achieve the institution’s goals for the planning period, based upon the projected status of factors that are currently seen as relevant to institutional functions and uncertain enough to warrant validation by the planning process.

This process tends to be internally-oriented, bounded, systematic, quantitative, and structured.

STRATEGIC PLANNING INVOLVES

Scanning the universe of external events to detect input signaling innovation or change which may directly or indirectly alter the future status of factors relevant to the organization’s functions; determining the most probable nature of such alterations, and assessing their implications for current and future institutional actions.

This process tends to be externally-oriented, open-ended, holistic, qualitative, and intuitive.

1. Basically, the adoption of strategic planning involves putting a new “front end” on the traditional planning process, with the principal purpose of providing program planning with more -- and more specific -- planning assumptions and imperatives.

2. The expanded horizon of the strategic planning process requires greater executive involvement than traditional planning. The “universe of external events” is large, and the organization’s research resources are limited. Senior officials must assess research priorities with great care, and with the understanding that in an increasingly dynamic operating environment, sound long-term policy commitments and resource investments must be based upon an improved knowledge of that environment and how we may most effectively and beneficially interact with it.

Forest Resources Planning is, by this definition, one form of strategic planning.

Strategy provides the organization with a major source of direction and serves as a basis for development. The "strategy" of an organization, although merely a conceptualization, is comprised of several identifiable elements including: the long-term objectives (or purposes) of the organization; the set of constraints which act upon the organization and effect its activities, and; the relevant set of organizational plans, goals, guidelines and criteria that have been developed to assist in attaining organizational objectives.

A long term plan is, however, not necessarily a strategic plan. More often, long term planning involves assessing the likely consequences of strategic decisions already made. While both strategic and long term planning typically address the deployment of organizational resources to achieve set goals and objectives, and include the establishment of policies and programs aimed at fostering this direction, only the strategic planning perspective would also consider the organization's basic character, its motivations, orientations, and key areas of competence for the future.

This distinction is especially important for forestry. Seldom is the term "strategic" used to describe the type of planning typically conducted by forestry organizations. This may be due, in part, to perceived difficulties in identifying and addressing the myriad of factors which make up the forest environment. The process at this level involves a "translation" of public attitudes and preferences into policy options and program goals.
Strategic planning examines the range of feasible policy options and management constraints as it shifts from "what ought to happen" to "what can happen."

Operational Planning. Operational planning, in contrast to strategic planning, seeks to address nearer term organizational concerns, and as such is perhaps the most visible component of broader strategic (or long-term) planning and decision-making. Its purpose is to preserve and maintain a relatively high level of operational efficiency, flexibility and administrative awareness.

Planning of the operational sort attempts to identify, in a timely fashion, internal needs and problem areas, responding to these concerns by offering interim adjustments or proposed alterations to existing policy or structure. Other operational objectives might include disaster avoidance, activity programming and evaluation, sustaining organizational flexibility and, the redefinition of organizational goals and objectives.

Operational planning implies the identification of specific program targets derived as a result of partnership with affected interests. Operational planning involves a translation from "what can happen" to "what will happen." In essence, it represents the final stage of the planning process. Operational planning provides a source of continuous monitoring and feedback, modifying subsequent planning actions in accordance with the desires of affected interests and minimizing discrepancies between probable and desired futures.
Project vs. Program Planning

The distinction between an agencies' project planning and broader program planning process is basically one involving scope (Figure 2). Project planning is the process by which specific projects to be carried out under a given program are identified and budgeted. Program planning, on the other hand, seeks to decide which among these composite programs (or project mixes) shall be further pursued, redefined or selected for adoption.

Project planning is distinguished from programmatic (or area) planning by the degree of interest focused on a single project within the context of a larger, overall management program. Conversely, program planning entails the examination and design of various kinds of activities and projects that an organization might wish to pursue at the more detailed levels of planning. Project plans serve as the essential basis for this analysis.

Planning Through Project Selection

Planning through project selection, or planning from the "bottom-up," is a method which permits decision-makers to select and evaluate program direction based upon a number of various projects chosen individually from among competing possibilities. The unit of management in such planning is the project. The project selection approach to management is often advocated when little data exists on which to base detailed state or regional direction.
Figure 2. Program vs. project planning - a systems approach.

<table>
<thead>
<tr>
<th>Steps</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phases</td>
<td>Problem Definition</td>
<td>Value System Design</td>
<td>System Synthesis</td>
<td>Systems Analysis</td>
<td>Optimization of each Alternative</td>
<td>Decision Making</td>
<td>Planning for Action</td>
</tr>
<tr>
<td>1 Program Planning</td>
<td>Problems to consider?</td>
<td>Objectives in solving each problem?</td>
<td>Approaches for attaining each objective?</td>
<td>Consequences of pursuing each alternative?</td>
<td>Requirements for optimizing each alternative?</td>
<td>Programs selected for further planning?</td>
<td>Reasonable projects under each program?</td>
</tr>
<tr>
<td></td>
<td>Means for posing them?</td>
<td>Definition of success for each objective?</td>
<td>Effective description for each approach?</td>
<td>Best way of presenting each to decision makers?</td>
<td>Resources allocated to each program?</td>
<td>Schedule for project planning?</td>
<td>Resources allocated among projects?</td>
</tr>
<tr>
<td></td>
<td>Suitable names?</td>
<td>Measure for success?</td>
<td>Constraints?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Project Planning</td>
<td>Relation of project to program objectives?</td>
<td>Applicable objectives for project?</td>
<td>Tasks to be performed?</td>
<td>Evaluation criteria for system concepts?</td>
<td>Optimal alternative for each system?</td>
<td>Programs to be continued?</td>
<td>Schedule for system development?</td>
</tr>
<tr>
<td></td>
<td>Problems to be solved by project?</td>
<td>Relation of project's objectives to programs?</td>
<td>Alternative systems required?</td>
<td>Variables?</td>
<td>Resources allocated to development for each?</td>
<td>Task managers?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Measures for success?</td>
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Objectives are taken into consideration in appraising the relative merits of individual projects, rather than through a more comprehensive sense of program guidance. In this sense, planning through project selection is perhaps a second best approach to planning, lacking the necessary strategy to enable attainment of broader State and National resource goals.

Project selection is more a matter of tactics, and is not an acceptable substitute for more comprehensive planning. The former appears, however, to have been the more common approach to State and Local forestry planning (if not National planning) in years past. Ultimately, of course, both approaches are needed to formulate clear, consistent plans for guiding state forestry direction.

Systems Approach to Planning

The complexity and character of contemporary resource planning and policymaking make appropriate the application of a "systems" perspective to problem-solving and management. Rather than employing a specific approach or technique, systematic decision-making involves utilization of a relatively new concept or way of looking at problems. It represents, in essence, a practical management philosophy which recognizes the complexity and inter-relatedness of the planning environment, and the resulting need to provide for a unified approach to analysis and discussion.

This comprehensive methodology, as applied to planning, requires, first, the identification and partitioning of the "elements" which make up the planning universe. This is followed by integration of these elements into logical "frameworks" that, ultimately, comprise the substantive aspects of that system.
Systems analysis typically proceeds through a series of steps (or activity categories) aimed at bringing about sufficient clarification to the issues under consideration to permit resolution. These steps are identified as: problem definition, value system design, systems synthesis, systems analysis, optimization of each alternative, decision-making, and planning to implement the next phase. Each of the steps outlined need not be completely carried out for the sequence to continue. In fact, it may frequently be desirable to return to a step already passed through. This system is also highly flexible and adaptive, with an opportunity for learning at each step.

As indicated earlier, these steps tend to be interactive and iterative by nature. Emphasis is on their mutual degree of inter-relatedness. Each is premised on certain basic assumptions regarding the organization, its objectives and resources, and its desire to attain broad-ranging management goals. The concept of optimization i.e., of resource allocation, in decision-making, goal setting, program selection, etc., emerges repeatedly in systems literature, and is a central motivation for this particular approach to planning.

Dimensions of Planning

The planning activity of an individual agency is often identified as being the "core" of its management process, with all remaining functions ultimately dependent upon it. Assuming that a plan is, in essence, simply a predetermined course of action, it would perhaps be helpful to understand more clearly some of the important dimensions (or parts) that went
into the make-up of this plan. The following is a selected listing of planning dimensions which can be used to further examine the underlying composition of such a plan and evaluate its essential characteristics (adapted from Lebreton and Henning, 1961):

- complexity
- significance
- comprehensiveness and completeness
- specificity
- flexibility
- frequency
- formality
- authority
- ease of implementation, control

**Complexity**, of course, refers to the apparent degree of simplicity and/or complicatedness found within and between plan components. In general, the more complicated the plan, the larger the number of variables to be considered, and the more difficult becomes the task of evaluation. Complexity is frequently measured by the number of individual parts or sub-parts found to exist within a plan, and the degree of detail associated with each. In a highly technical field such as forestry, management plans can be expected to be relatively complex.

The **significance** of a plan is much less easily defined. Basically, significance refers to either the sum total of expenditures and/or receipts associated with plan development, or it refers to the strategic importance
of the planning effort itself to the implementing institution. Although plans may be neither costly to prepare, nor be expected to directly result in increased revenues to the implementing agency, its broader strategic role may be of great significance to the future of the organization. The development of State Forest Resource Plans would most likely fit into this latter category of strategic importance.

Comprehensiveness refers to the extent to which organizational planning embraces the entire organization, its mission, role and responsibilities. Comprehensiveness may also refer to the scope of planning efforts, and the extent to which important agency issues, outputs, activities and concerns are forthrightly addressed.

A comprehensive forestry plan is one that speaks to the issues involved in managing forested lands and resources within the state environment—regardless of ownership, jurisdiction, or administrative limitations. Truly comprehensive plans seek to integrate the organization's unique value system and basic policy orientation with the broader needs and wants of varied constituency groups. Such plans, however, typically require more effective team efforts to prepare and coordinate, and present greater challenge in implementation, approval and control. Final approval of comprehensive plans also usually occurs higher up within the organization than do functional or operational plans.

Specificity is concerned with those important planning elements that are presented in varying degrees of detail. The greater the degree of specificity in plan components, the easier it may become to fully integrate,
coordinate, communicate and implement the plan. Specificity can, however, also be divisive.

In discussing the concept of specificity, it is important to note that state forestry plans, as currently envisioned, basically represent broad policy documents to be used in establishing management direction and guiding decision-making responsibilities. These agency plans are not intended to be used as a basis for actual land-use allocations, or for recommending the on-the-ground management activities of practicing field foresters.

**Flexibility** is a function of the rigidity (or lack of it) of the planning process. Plans possessing a high degree of flexibility may better withstand the inherent rigors of an uncertain future, and accommodate much more readily unforeseen future events. The degree of program flexibility is a key variable in determining a plan's unique ability to chart effective and responsive direction. To the extent that alternative management strategies and possible courses of action have been conscientiously sought, developed and considered, and likely future events have been accurately portrayed and projected, program flexibility will be enhanced.

**Frequency** refers to the intermittent character of the planning function itself. That is, how often plans are formulated, reappraised, updated and revised. Statewide forest resources planning is designed to be a continuous and cyclical management process, with state's maintaining "indefinitely" their basic planning capability. SFRP plans are to be continually monitored, reviewed, updated and revised. Generally, the more
frequently plans are formulated, the less important long-range projections become, the more routine the planning process and, the shorter the planning period.

The existence of a permanent staff with authority for planning or establishment of a planning bureau within the state organization is not, however, prima facie evidence of a "continuous" planning process. Although this may be the case, often planning responsibility is diffused over a number of plans, i.e., unit plans, regional or area plans, individual forest plans, etc., many of which are essentially unrelated. Despite the existence of constant planning activity, frequency is concerned only with the development of a given type of plan.

Formality addresses the manner in which planning is authorized, approved, conducted and controlled. Plan formality is a function of the complexity, comprehensiveness, significance and authorization of the planning effort. Generally, the greater the degree of formality at all stages of the planning process, the greater the acceptance of planning participants; the easier it is to effect control over the plan, and; the greater the chance that some planning flexibility will be lost.

Authorization refers to the degree of official support and approval for the preparation and implementation of plans. Statewide forestry planning represents a relatively formal and official means of addressing forestry issues within the state political environment.

Finally, the case of implementation looks at the content of the plan, the process by which it was developed, the level of support and participation, and how these factors might influence the successful implementation
of planning results. This criterion also examines the validity of underlying project assumptions, the accuracy of project forecasts and projections, and the overall adequacy of the planning process itself.

The preceding "dimensions" of planning can be used to analyze and evaluate the adequacy of individual planning efforts. They may be used singly, or in combination to assess planning strengths and identify possible weaknesses. Collectively, they provide a useful framework for analysis and discussion. Individually, however, their usefulness may be limited and open to question.

**Process Management**

**Major Issues**

The sequence of events involved in the development of statewide forest plans surface numerous issues regarding the management of planning processes. Included are:

- the need to clearly define management requirements, process responsibilities and basic planning needs early in the planning process;
- selection of an appropriate planning design, public involvement technique, and an effective approach to issue resolution;
- the need to recognize the integrated, systemic nature of resource issues and to develop positive management techniques and alternatives for resolution;
- formulation of workable agency goals, program and policy alternatives, program direction and recommended budgets;
- the need to fully develop the important link between planning, programming and the development of agency budgets;

- the need to ensure that management goals, alternatives and proposed activities are realistic and comprehensive, and capable of producing the desired results;

- the need to plan, design, administer, and execute a system of public involvement that is effective and capable of making a constructive contribution to program implementation;

- the assembly, analysis and display of natural resource inventory information in a useful fashion;

- the need to keep pace with technological innovation;

- the need to develop new skills and new capabilities including (but not limited to) the following:

  . organizational skills
  . policy analysis skills
  . public involvement skills
  . decisionmaking skills
  . strategy development skills
  . practical skills (i.e., administrative, managerial)

The Planning Process

The process currently used to conduct statewide forest planning is characterized by its comprehensive, systematic and interdisciplinary approach to problem-solving, and to meeting long-term management needs. Its essential issue-driven orientation is designed to assist resource managers in the identification of important public issues and management concerns, while at the same time alerting them to emerging (and unfulfilled) resource
use and development opportunities. Planning also helps set important budget, program and policy priorities.

The information generated throughout the planning process is used to formulate and modify program direction and proposed agency activities. Planning is extended to include the selection of what is to be achieved (goals and objectives), and determination of policy and control procedures for the implementation of this scheme. Finally, planning is tied to legislation, agency appropriations, program budgeting and to the priority-setting process.

Essentially, statewide forest planning is a seven-step process which involves: (1) analysis of the present situation; (2) identifying public issues, management concerns, and unfulfilled or emerging opportunities to be addressed; (3) developing relevant assumptions upon which planning will be based; (4) establishing goals and objectives; (5) developing and weighing alternatives; (6) making and implementing decisions; and (7) establishing review and control procedures. Additional planning activities may be required in particular situations.

Because all of the actions within the planning process are closely linked and highly interdependent, they must not be viewed as discrete or necessarily sequential. Some planning actions may occur simultaneously just as it may become necessary to repeat certain actions as more information becomes available. The process must, therefore, remain open and interactive to deal effectively with continuously changing needs and management conditions.
Generalized Sequence of Events

The following generalized sequence of statewide forest planning events and related activities (Figure 3) was adapted from the approach currently in use by most states. It represents merely a suggested planning outline and is based upon various State and Federal planning guidelines, published planning reports, instructional guidebooks, and an extensive search of the practical and theoretical planning literature.

As indicated by this sequence of events, the process typically progresses through a series of identifiable steps (or events), which are designed to contribute to the resolution of planning questions and aid in the selection of a recommended agency program. It should be noted, however, that these suggested steps are very much interrelated and do not represent isolated or necessarily successive planning actions. Rather, they flow continuously, often simultaneously, towards the development of a recommended agency-level program for managing state forest resources.

A schematic of this multi-year program planning process is presented in Figure 4.

Issue Set. The issue set is comprised of components of both public and managerial issue elements, as well as potential agency reactions to those elements. Figure 5 suggests that issues arise both internally and externally, deriving from agency concerns and the broader public interest, respectively.
Figure 3. Statewide forest resources planning: Generalized events.

I. PRE-PLANNING
   BACKGROUND
   AGENCY OVERVIEW, PLANNING HISTORY
   AUTHORITIES, JURISDICTIONS, MISSION STATEMENT
   DESCRIPTION OF AGENCY PROGRAMS, ACTIVITIES
   COORDINATION NEEDS, RELATIONSHIP TO OTHER PLANNING PROCESS
   INITIAL DIRECTION OR "CONCEPT"
   PLANNING PROCESS DESCRIPTION — INCLUDING PUBLIC INVOLVEMENT PLAN
   PLAN OF WORK

II. ISSUE DEVELOPMENT
   IDENTIFICATION, CONSOLIDATION, PRIORITIZATION OF ISSUES
   ASSESSMENT OF CURRENT MANAGEMENT SITUATION
   DEVELOP ISSUE NARRATIVE, DESCRIPTION, ANALYTICAL BACKGROUND
   INITIAL GOALS, STRATEGIES TO ADDRESS ISSUES
   SPECIFY PLANNING QUESTIONS, DECISION SPACE

III. INVENTORY — ANALYSIS
   DETERMINE SUPPLY/DEMAND RELATIONSHIPS (CSAP)
   SPECIFY BASIC ASSUMPTIONS, PROJECTIONS, LIMITATIONS
   DATA COLLECTION, ANALYSIS, SYNTHESIS AND DISPLAY
   SOCIAL, ECONOMIC, ENVIRONMENTAL ASSESSMENT

IV. PROGRAM DEVELOPMENT
   ESTABLISH MANAGEMENT DIRECTION — GOALS, OBJECTIVES, STANDARDS,
   GUIDELINES, CONSTRAINTS, TARGETS, COSTS, OUTPUTS
   DEVELOP SFAP PROGRAM OUTLINE
   DESCRIBE DECISION & PROCESS CRITERIA

V. PROGRAM ALTERNATIVES
   DESCRIBE EVALUATION CRITERIA, APPLICATION GUIDELINES
   ANALYSIS OF ALTERNATIVES
   IDENTIFY INTERRELATIONSHIPS, TRADE-OFFS, IMPACTS, AGENCY CAPABILITY
   TO MEET DEMANDS, CONTRIBUTION TO BROADER OBJECTIVES, ECONOMIC
   EFFICIENCY, ENVIRONMENTAL AND EQUITY CONSIDERATIONS

VI. FINAL DIRECTION
   REVISE INITIAL GOALS, OBJECTIVES, OUTPUT TARGETS, WORK PLAN
   & COURSE OF ACTION
   REASSESS STRATEGIES, DECISION CRITERIA, INFORMATION NEEDS,
   ANALYSIS PROCEDURES, PI ADEQUACY
   RECOMMENDED COURSE OF ACTION (SELECTION OF PREFERRED ALTERNATIVE)
   PROGRAM AND PUBLIC POLICY DEVELOPMENT
   ACTION PLANS

VII. IMPLEMENTATION/MONITORING
   ESTABLISH MEASUREMENT PROCEDURES, EVALUATION CRITERIA AND
   ACCOMPLISHMENT REPORTING TECHNIQUES
   DESCRIBE/SCHEDULE/ASSIGN EVALUATION TASKS, FREQUENCY, PERMISSIBLE
   DEVIATION & PROVISIONS FOR AMENDMENT AND REVISION
   DESCRIBE SELECTED PROGRAM EFFECTS (INTENTIONAL AND OTHERWISE)
   DESCRIBE/SCHEDULE/ASSIGN ADDITIONAL EVALUATION TASKS

VIII. PROGRAM UPDATE
Figure 5. Public and Managerial Issue Elements and Potential Agency Reactions.

Regardless of their origin, issues must be adapted to fit within the realm of available forest management opportunities and reconciled with basic assumptions and limitations regarding the ability of the organization to resolve the identified issues. This process results in a set of "constrained" management opportunities, which reflect reasonable expectations for accomplishment.

Planning Questions. Planning questions are questions or statements which address some aspect of the public interest. They seek to focus agency actions and describe management responsibilities. Selected questions may also be used to drive successive planning actions.

In developing the appropriate set of planning questions, the results of the first planning action, the issue set, is used to identify, or "scope," issue elements to enable synthesis into potential questions. Related elements may suggest logical groupings or methods of treating planning questions. The development of planning questions is illustrated in Figure 6.

Management Alternatives. After alternatives to current agency programs have been enumerated for the entire set of planning questions, potential alternative programs can be formulated out of compatible combinations of alternatives. Professional judgements concerning political feasibility, economic efficiency and administrative practicality must be combined with technical expertise in order to avoid proposing unrealistic or clearly unacceptable alternatives. Figure 7 illustrates the development of management alternatives.
Figure 7. Description of Current Situation and Preliminary Selection of Management Alternatives.

Evaluation of Alternatives. The fourth planning action in this scheme of events involves the evaluation of proposed program alternatives. Effects to be studied include inputs and outputs, program accomplishments, trade-offs, cost effectiveness, and other impacts associated with selected alternatives. Documentation is essential to make deliberations more visible and to promote broader public participation in this important planning step. Figure 8 displays the major elements of program evaluation.

Program Selection and Implementation. After evaluation is complete, the final planning action, or the actual selection of a recommended program, can proceed. First, however, an agreed upon set of decision criteria must be established and communicated to guide the selection process. Some prioritization and/or weighing of these criteria may also be necessary. Figure 9 shows a list of selection criteria that have been both prioritized and weighed.

Alternatives not meeting decision criteria have little chance of being selected or implemented. Those that are selected must be reviewed and re-examined periodically to ensure their continued effectiveness. New developments, arising from social or political change, must be recycled through the selection process to reflect their recent importance, and to help structure needed modifications in the existing plan.

Unforseen events can be accommodated via a shift in policy or program direction. Such deviations require a re-examination of the issue set in order to ascertain whether changes are needed in established priorities. The selection process is outlined in Figure 9.
Figure 8. Evaluation of Proposed Program Alternatives.

<table>
<thead>
<tr>
<th>SELECTED ALTERNATIVES</th>
<th>EFFECTS</th>
<th>OUTPUTS, ACCOMPLISHMENTS</th>
<th>F.T.E.'s: AGENCY, OTHER</th>
<th>CASH FLOWS, COST, SOURCES</th>
<th>OTHER: AUXILLARY EFFECTS</th>
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<td>1. HIGH FED. FUNDING</td>
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<td>2. MAXIMAL FEES FOR SERVICES</td>
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<td>3. MAXIMIZE NUMBER OF DISTRICTS</td>
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<td>4. EMPLOY FIREFIGHTING TEAMS (PERMANENT FTE)</td>
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<td>5. CURRENT SITUATION AS PROJECTED</td>
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Figure 9. Final Selection of Recommended Program.

ESTABLISH THE DECISION CRITERIA

PRIORITIZE, WEIGHT (x) THE CRITERIA

APPLY CRITERIA TO EFFECTS OF ALTERNATIVES

RESULTING IN A RECOMMENDED PROGRAM

PRIORITY WEIGHT

1. below flat cihua (10)
2. alluvial base (5)
3. flat cihua arid site (4)
4. cihua alluvial (3)
5. cynade alluvial (2)
6. yluo above flat (2)

X

Planning Process Requirements

Since the "process" used to develop statewide forest plans may well be of greater lasting significance than the plans themselves, it is important that those elements which go into making up these plans be designed so as to maximize the net benefits of this important process. If planning can be viewed, conceptually at least, as a system of decision-making involving the allocation of resources to the production of goods and services, then planning for the management of such a system will require, at a minimum (Hartgraves 1981):

1. assessing initial conditions of the resource system (e.g., resource inventory);
2. deriving a process for specifying the desired output objectives for the resources system and actually setting those objectives;
3. describing alternative courses of action (management strategies) for achieving output objectives;
4. predicting output levels expected for given initial resource conditions and each potential imposed course of action;
5. evaluating predicted outputs in terms of some valuation criterion related to the objectives set for the system; and
6. selecting that course of action which appears, according to the specified criteria, to best meet desired objectives.

To be completely effective, the planning process must also provide for implementing these plans, continuous monitoring of resource systems, and accommodating possible changes in objectives or existing conditions.
Planning would, therefore, be dynamic and systematic in its approach to selecting and implementing management alternatives.

Content of a Plan

A brief survey of planning literature originating from a variety of sources, indicates a significant difference in perceptions as to the necessary content of the basic state forest resources plan. Among the most frequently mentioned features, however, were the following:

- a description of agency authorities, role, jurisdictions and mission statement;

- specification of basic assumptions, projections and limitations upon which the plan is based;

- identification of the planning horizon;

- planning process description, including: decision and process criteria, standards, guidelines and information needs;

- value system design, including specification of agency goals, objectives, strategies, constraints and rationale for planning;

- public involvement plan;

- an assessment of the current management situation;

- identification of major issues, opportunities and concerns confronting the agency;

- implementation/monitoring features.

Issue-Driven Planning

At present, nearly all of the states active in developing SFRP plans are utilizing some type of an "issue-driven" approach to planning. That is, emphasis is on the identification and resolution of resource-related issues, and on problems with existing agency policies or programs.
Resolving such concerns is hoped to make planning more responsive to the needs and interests of state landowners and the general public.

Adoption of this particular planning approach is largely a result of federal efforts to encourage issue-oriented resource planning. This suggested methodology follows direction provided in two Area Handbooks prepared by the U.S. Forest Service (i.e., State Forest Resource Planning Handbook, prepared by Southeastern Area, S&PF, 1980; and A Guide to State-wide Forest Resource Planning, prepared by Northeastern Area, S&PF, 1980), and in a comprehensive guide to program planning developed by Forest Service Regions 2 and 4 entitled: State Forest Resource Program Planning: Understanding and Application, 1979. These publications advise identifying the direction that planning will take by concentrating on "problems and opportunities" which are of major concern.

National Forest System planning also utilizes elements of an issue-oriented approach in the development of resource management plans. In part, this is in response to legal requirements (RPA/NFMA) which govern the management of federal forest lands. These regulations provide both a conceptual foundation for USFS planning and a number of specific planning actions which must be carried out. The process mandated by NFMA represents a significant departure from earlier, more conventional "functional"

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6 The ten-step planning process mandated by the National Forest Management Act of 1976 is as follows: (1) identify issues, concerns and opportunities; (2) develop planning criteria; (3) data and information collection; (4) analysis of the current management situation; (5) formulate alternatives; (6) estimate effects of alternatives; (7) evaluate alternatives; (8) selection of preferred alternative; (9) implementation, and; (10) monitor and evaluate effectiveness.
planning exercises. It requires broad involvement and interdisciplinary coordination of management systems in developing a plan which better responds to the needs of the public.

Some of the potential limitations of using an issue-driven system of planning include its focus on areas of only marginal change, and its tendency to view existing problems rather than taking on the future orientation necessary for effective forest resource management (Barnett 1981). This focus on existing programs and policies can, in many cases, effectively limit comprehensive examination of future resource needs and opportunities resulting from forest resource developments, or changes in social, economic or technical variables. Moreover, critics contend this "mixed-scanning" approach can relegate management decision-making to a disjointed, incremental process with minimal inquiry into the need for, or effectiveness of, various agency actions.

Issue-driven planning is also thought to give insufficient consideration to important resource interactions (e.g., the complimentary and/or contradictory impacts of multiple resource uses) and to trade-offs associated with alternative courses of action. Preferring instead a "goal-oriented" planning approach, critics insist that the management of a multiple-use resource demands a decision-making process that will enable these trade-offs to be more clearly understood.
Goal-Oriented Planning

Goal-oriented planning, rather than focusing on management issues, seeks instead to identify state goals and objectives in an effort to establish direction for planning programs. Alternative strategies and policies are then evaluated as to their ability to satisfy identified goals. The use of such an approach is thought to provide for greater innovation in resource management, and for a clearer, more complete examination of available alternatives, opportunities and trade-offs involved in program selection.

Goal establishment is, however, frequently difficult and time consuming. Moreover, goals may be defined so broadly that they are of little, if any, value to decision-makers, e.g., forest resources will be managed so as to provide the greatest good to the greatest number. In addition, many management goals are already mandated to state forestry agencies through administrative, legislative or executive actions. Agencies may wish to simply incorporate forestry goals with other, broader statewide goals.

Skillful planning can, no doubt, help mitigate many of the possible short-comings of either planning approach, as applied to state forestry planning. A well-conceived, properly executed planning process, regardless of whether it is issue or goal-driven, will ensure that agency concerns receive adequate exposure, and that management goals, alternatives, and activities are realistic and comprehensive.
Process vs. Products

A point of contention among those who have either observed or been closely involved with statewide forest planning, is the relative degree of emphasis to be placed on the "process" of planning, as opposed to the production of usable planning "products," i.e., planning documents, work plans, budget papers. A preoccupation with process could, of course, become an obstacle to "getting the job done."

Critics charge that the development of well-defined planning products is necessary to justify this process, not the other way around. They feel it is essentially a waste of time to repeatedly discuss planning "concepts" at the expense of more tangible activities. Repeated revision of a process, critics claim, is probably of second or third order in importance when compared to the development of usable intermediate or final planning products. They caution against strictly adhering to the series of (conceptual) steps in a flow chart.

The process used to develop statewide forest plans, is, however, very much a part of the planning product. By the time such a complex project has gone through the long and involved process of being planned, designed and implemented, it will have acquired a history of its own. That history—the history of the process, becomes as much a feature of the project as are some of its more obvious features such as cost, physical form and applications. With a project's history becoming an integral and recognized aspect of a project, it is essential to select or design a process which is (at a minimum) perceived as being competent, valid and capable of producing quality results.
Development of Planning Criteria

The purpose of establishing planning criteria is to provide a set of rules, or "planning guidelines," within which the planning process can be conducted and important decisions made. Generally, criteria are based on:

1. laws, executive orders, regulations and agency policy;
2. planning goals, objectives, recommendations and assumptions;
3. issues, management concerns and resource use and development opportunities;
4. the plans and programs of other local, state and federal governments and implementing institutions;
5. social, economic and technical factors.

Planning criteria are essentially standards, tests, or rules that can be used to guide actions within the planning process. They can provide specific direction on planning requirements, the flow of information, interdisciplinary team operations, program development and other important planning actions.

Planning criteria can be divided into two categories, decision criteria and process criteria (USDA Forest Service 1980).

Decision criteria commonly serve two purposes. First, they enable selection of a preferred management alternative. In addition, they indicate the desired direction or results which land resource management planning will seek to attain. Process criteria, on the other hand, are specific requirements which are necessary for the planning process to continue. They provide direction for individual planning actions, and
are dependent upon the objectives or decision criteria associated with the planning process.

Evaluation criteria are also frequently employed in the evaluation and selection of proposed program alternatives. Typical evaluation criteria might include social (i.e., employment opportunities, responsiveness to public issues and concerns, community development), biological (i.e., environmental productivity, wildlife habitat improvements, maximization of timber growth rates), and physical or technical considerations (i.e., geographic limits, soil loss). These and other criteria stem from a variety of sources and are applied to ensure consistency and objectivity in the decision process.

Program Development Considerations

The selection of a "preferred" program for the management of state forest resources represents the final, important step in setting long-term direction for the state forestry organization. Selection must be based on consideration of various factors: social, economic, political, and technical. These and other factors commonly influence the success and/or acceptance of the selected program.

Ideally, such considerations have already been adequately identified by the planning process and examined in detail on an individual basis. Collective analysis and review is then necessary to determine possible unforeseen negative consequences, interactions or conflicts.

Some suggested criteria which may prove useful in this difficult process of evaluation are offered below.
1. Local and Regional Priorities - Often resource management priorities in a given locality or region of the state may conflict with, or even surpass in importance, those resulting from the broader SFRP (statewide) process.

2. Program Development Constraints - Agency resources and responsibilities must be adequate to carry out the selected management program within a reasonable period of time, and despite the financial, legal and human limitations of the organization.

3. Project Interdependencies - Project interdependencies are typically of four types: (1) horizontal interdependencies, i.e., relationships between individual projects or project components at the same level of production; (2) vertical interdependencies, i.e., relationships between project components at differing levels of production, where output from one is required to initiate or complete another; (3) interdependencies through time, i.e., addresses the difficulty of assessing relative costs and benefits of a project involving a one-time slice of an ongoing activity and; (4) indirect interdependencies i.e., inter-relationships between a project and other indirectly related activities or effects, which should be considered within the project's scope if meaningful analysis is to be carried out.

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4. **Statewide Priorities** - Acting in concert with other considerations, statewide resource development priorities provide essential guidance to the selection of a workable program alternative.

5. **Degree of Program Readiness** - Recognizing that many forestry projects take years to develop, certain projects may receive special consideration because they are essentially "ready to go."

6. **Level of Effort Required** - The selection of a preferred alternative must consider the relative levels of time and effort required of implementing officials to successfully execute the chosen program.

7. **Economic Efficiency, Effectiveness and Sensitivity** - Accurate measures of a program's anticipated net costs and benefits, (i.e., NPW, B/C, IRR) as well as its sensitivity to varying assumptions and conditions, are needed to assess economic desirability. Selection must also be based upon reasonable expectations of what can be accomplished with current and anticipated levels of funding.

8. **Administrative Efficiency** - The additional cost of administering the program must be warranted either in terms of increased revenue collections or improved performance resulting from implementation.

9. **Operational Practicality** - The selected program must be both realistic and implementable in terms of the additional burdens placed upon resource managers and support staff.
10. **Political Viability** - In order to be politically viable, agency programs must earn the broad support of implementing agencies and officials, state lawmakers, the executive, public and private interests, and the public at large.

Careful examination of these and other factors can enable decision-makers to reach better reasoned and more effective judgements as to the relative merits of competing program and policy alternatives. Properly employed, they can foster policy success, and help decision-makers avoid the serious and damaging effects of reversing direction after realizing the initially selected course of action was either inappropriate, unrealistic, or unacceptable in terms of the state's political environment.

**Management Decision Making**

A major focus of state forestry planning efforts, thus far, has been on the need to produce a more efficient and effective means of reaching important management-level decisions. The planning process, with its provision for systematically reorganizing the decision-making environment within state agencies charged with such responsibilities, is specifically designed to accomplish this. Statewide forest planning assists these agencies in formulating and implementing increasingly complex and integrated solutions to difficult resource management problems.

Decision-making, and the commitment it implies, are the very essence of administration. However, inherent in nearly any large or political organization are certain obstacles (or potential obstacles) to effective decision-making. Among these are: the fragmentation of decision-making
authority, contradictions in organizational objectives, inadequate communications, informational gaps and a general hesitancy among decision-makers to commit themselves to a certain (seemingly irreversible) course of action, and to face the series of subsequent choices and repercussions stemming from that decision.

The decision environment is composed of a complex grouping of interrelated elements, which confront the decision-maker with an obligation to choose from among a (frequently) bewildering array of proposed alternatives and policy choices. Decision-making under these difficult circumstances requires both exceptional judgement and imagination. The decision-maker must possess the ability to broadly generalize about the future, to deal effectively with uncertainty and, still reach a binding decision based on these and other factors. Finally, the decision-maker must remain committed to the chosen alternative.

Successful Decision Making. Although decision-making success is frequently difficult to measure, decisions which satisfy the following seven "ideal" procedural criteria (developed by Janis and Mann, 1977) are thought to stand a far better chance of successfully attaining the decision-maker's objectives, and of being adhered to over the long run.

The decision-maker, to the best of his ability and within his information processing capabilities:

(1) thoroughly canvasses a wide range of alternative courses of action;
(2) surveys the full range of objectives to be fulfilled and the values implied by each choice;

(3) carefully weighs whatever he knows about the costs and risks of negative consequences, as well as the positive consequences, that could flow from each alternative;

(4) intensively searches for new information relevant to further evaluation of the alternatives;

(5) correctly assimilates and takes into account any new information or expert judgement to which he is exposed, even when the information or judgement does not support the course of action he initially prefers;

(6) re-examines the positive and negative consequences of all known alternatives, including those originally regarded as unacceptable, before making a final choice; and

(7) makes detailed provisions for implementing or executing the chosen course of action, with special attention to contingency plans that might be required if various known risks were to materialize.

This scheme assumes that failure to meet any one of these criteria constitutes a fundamental "defect" in the rational decision-making process. The more defects, the more likely that setbacks will be experienced in implementing the flawed decision, and the less likely it will be able to withstand intense public scrutiny.
**Decision-making Criteria.** In addition, there are a number of generally applicable decision criteria which might be employed as a guide to affecting or evaluating management decisions. These include:

- political, administrative or practical feasibility;
- economic efficiency, effectiveness and equity;
- degree of expected public support and acceptance;
- relative contribution to attainment of specified goals and objectives;
- anticipated social, economic and environmental effects, i.e., positive and negative, intended and unintended;
- analytical and technical requirements;
- information requirements and availability;
- sensitivity to changing conditions;
- relative departure from existing policy or decisions;
- potential contribution to resolution of public issues and management concerns;
- the need to change existing policy or direction.

If policy decisions arrived at by the forest planning/decision-making process are to be fully implemented and supported, these decisions must also be both politically pragmatic and capable of attracting broad-based support. For, long-range resource management planning is, above all, a politically-motivated process involving resource allocation. Inter-governmental coordination and involvement in this process ensure that this essential character will continue.
Concern has been expressed regarding the general trend over the past several years (especially at the federal level) towards more centralized planning and management control over publicly-administered natural resources. RPA/NPMA planning is but one example of this. The question is raised as to whether planning might not be more effective as a "bottom-up" or "top-down" management exercise, with resulting decisions being made locally or at a higher planning level. The answer to this is unclear. It would appear, however, that some combination of the two approaches would likely yield the most desirable results.

Unfavorable Decision Conditions. Reaching a decision involves the resolution of conflicting alternative choices. Most decisions also require either taking some specified action, or predicting certain aspects of the future. Decisions, of course, are required at each step in the planning process and are, therefore, inextricably tied to planning. Conversely, plans must be consulted to reach effective decisions. The quality of decision-making is most affected by the existing set of circumstances and alternatives which confront the decision-maker. The following are five especially unfavorable conditions which frequently confront those charged with the responsibility for making important management-level decisions, making their important task more difficult (adapted from Janis and Mann, 1977).
1. One Predominant Alternative

When initial scanning of the alternatives turns up what appears to be only one acceptable alternative, seemingly without any attractive competition, the decision-maker is likely to ignore or minimize the risks attendant to choosing this alternative, giving little thought to possible negative consequences. The decision-maker, in effect, perceives himself as having essentially no choice. This "illusion" of no real choice (or limited choice) can lead to hasty, ill-conceived or unworkable solutions. Sometimes, of course, this is not an illusion, but a fact. More frequently, however, it simply stems from an incomplete examination of possible alternatives, or a lack of creativity.

2. No Immediate Negative Consequences

Even though a decision-maker may be aware of an impending loss associated with making a particular decision, he may tend to dismiss that loss as insignificant, if he believes that it will not materialize within the "foreseeable future." No attempt is made to determine the extent of the loss. By relegating the danger to a distance future, decision-makers effectively avoid the stress of here-and-now decisional conflict. In forestry, where planning periods are frequently measured in decades rather than years, this temptation is especially prevalent. Negative consequences are made still more remote when decisions rendered are not expected to be implemented for some time into the future.
3. Low Social Importance

A decision-maker may be more inclined to reach a quick decision when there are indications that the decision is of relatively low social importance, or if he feels that a poor decision might be easily reversed. When a decision-maker is led to believe that few will be affected by his decision, or that perhaps still fewer will ever be aware of it, he will likely become much less diligent about carrying out his responsibilities.

4. No Additional Information Available

If a decision-maker is led to believe that he will not find any new information bearing on the decision, often he will discontinue his search for answers and render a less than informed judgement. Knowing this, leaders of large and bureaucratic organizations may at times deliberately withhold critical information so as to influence a decision in one way or another. Such "conspiracies or silence" are perhaps not as common in forestry, but often decision quality may suffer due to either a shortage of information or an insufficient attempt by decision-makers to seek out and utilize important data sources.

5. Impatience of Significant Others

Another condition that frequently prods decision-makers into reaching an incomplete or otherwise unacceptable solution, is pressure from others within his social network, i.e., administrators, superiors, colleagues, etc., to arrive at a decision quickly. Not wanting to create the impression that he is somehow unresponsive to the needs of others who eagerly await his decision, the decision-maker is likely to forego extensive
analysis and render, what may turn out to be, a premature or poorly researched decision. Deadlines or constant pressures from associates can cause the decision-maker to abruptly terminate his search for an ideal solution.

Policymaking

The statewide forestry planning process is, importantly, concerned with the formulation and evaluation of state forestry policy. Forest planning facilitates this process by providing the necessary information, analyses and direction to effectively set and achieve state forestry policy. As such, planning is a "tool" to be used by agency administrators, much as any other tool, for making resource management more responsive to agency and public needs.

Policy change is typically the object of policymaking. Policymaking can be thought of as a behavioral process which seeks to initiate, enable, inhibit or regulate some activity or aspect of behavior that would otherwise be uncontrolled. Policy ultimately promotes a degree of certainty and/or routine among those it affects. This element of continuity can be potentially very valuable to the organization.

Policymaking is, however, an inherently complex undertaking. Power, knowledge, influence and authority must be combined in the right proportions to produce guidelines for effective management, and to enable a choice from among alternative futures. Because policymaking is usually based on "ingredients" rather than on a rigid process framework, it incorporates a number of social, political and behavioral elements, which must
be identified and addressed within the context of the policymaking process. Possible conflicts, interactions or multiple-objectives arising from this examination, must then be reconciled in the form of adjustments to existing policy or the formulation of new policy measures.

Policymaking is also a decidedly normative science. Individual values, beliefs, preferences and motivations almost invariably enter in, at some point, to the formulation of public policy. Learning how to utilize such value-laden information in a reasonably objective and politically astute manner is essential, and represents an individual challenge of the highest order. For many of those involved with forest planning, this will require developing a new and expanded awareness of and sensitivity to these important factors. Without this awareness, state forestry officials may be unable to fully realize the benefits of planning, or to avoid its pitfalls. Possibly even losing control over this important management responsibility to those better attuned to the realities of the political process.

**Measuring Policy Success.** Merely because policy is made, however, is no indication of its quality or effectiveness. Some of the factors affecting policy success are: (1) policy standards and available resources (basically funds) for implementation; (2) support for these policies within the state political environment; (3) social and economic factors; (4) characteristics of the implementing agencies; (5) communication of policy outputs and other decisions within and among implementing agencies; (6) incentives to promote compliance with policy decisions; and (7) the commitment, skill and policy pre-dispositions of implementing officials.
Collectively, these factors provide an overview of the many influences that can assure and/or impede successful implementation of forest planning program and policy outputs. In order to fully evaluate policy success, one must also take into account the multiple objectives of most policy decisions, balancing the negative values and consequences with the positive values and consequences which result. Since there is often no accepted method for obtaining quantitative scores for these values, subjective ratings must be used. Such ratings are, however, of doubtful validity and subject to a variety of errors deriving from numerous distortions and rationalizations.

State policies pertaining to forestry have in the past resulted from a variety of influences and often have not reflected a sufficiently comprehensive and/or systematic examination of existing alternatives. SFRP seeks to remedy this situation. To the extent that policy alternatives can be more clearly identified, analyzed and intelligently evaluated, policy performance will be enhanced. The forest planning process, by structuring and systematizing state resource policymaking, focuses attention on this important management process.

Policy Evaluation. Policy evaluation attempts to critically assess policy performance. It seeks to improve policymaking efforts and make them more responsive to public needs by identifying the true effects of various policies (existing and proposed), and by providing a detailed comparison of policy alternatives. Such evaluation should logically accompany management planning and policy formulation.
There is an increasing need for state forestry policy to be realistic, adaptive, observable and responsive to local public needs. Participation in policymaking (distinct from simply observing) must also be encouraged. Effective policymaking requires broad input, and that all relevant viewpoints be heard and considered. All too often, narrow participation has resulted in arbitrary, unreasonable or unsupported state forestry policies, imposed upon an unwilling clientele.

It is also important to remember that interests who participate in forest planning, or who are formally invited to do so, are much more likely to support policy decisions arrived at by this process. Many individuals feel strongly a need to become involved in decisions which might affect them. They must feel that their needs and concerns are recognized and have been adequately taken into account. Further, participating interests are much less likely to assume extremist or irresponsible positions than are those who have remained "outside" of the planning process. The agency's investment of time and effort needed to secure such input (an insurance policy of sorts) may well be insignificant when compared to the rewards of policy success.
Program Coordination and Implementation

Major Issues

Coordination and implementation issues weigh heavily in the development of statewide forest plans. Among the major issues concerned with such subjects are:

- the need to better integrate state forest resource plans within the state political process;
- the need to explicitly recognize and tie program direction to broader state, regional and national goals (e.g., employment, economic development, environmental quality);
- the need to demonstrate more clearly anticipated short-term (2-5 years) and long-term (5+ years) planning effects, as well as how planning might contribute to the attainment of worthwhile goals and to the resolution of resource issues.
- the need to foster improved program coordination with and input into other state, sub-state, regional and national planning systems (e.g., SCORP, HUD 701, CZM, RPA, RCA);
- the need to continually monitor, review and re-evaluate planning to discern its effects (intended or otherwise), to measure and report accomplishments and, ultimately, to foster increased accountability;
- the need to view planning as an integral, ongoing and dynamic "process", rather than as an isolated management exercise yielding discrete results;
- the need to develop programs that are both realistic and implementable given reasonable expectations of what can be accomplished with anticipated resources;
- the need to consider the full range of implementation opportunities available for the successful implementation of completed state forest resource plans.

Coordination Needs

Due to the highly complex and multi-resource nature of contemporary forestry, the successful implementation of nearly any long-term comprehensive forest management program is unlikely without close interagency and intergovernmental cooperation in its development. The diversity of forest land uses and outputs, conflicting social values, and differing landowner perspectives, necessitate the adoption of a broad-based approach to problem solving and management.

There is an increasing need for planning-related activities to demonstrate a systematic and integrated perspective towards resource management and, importantly, towards the planning process itself. Planning must exhibit an internal and external awareness of linkages to the activities of other governmental agencies, public and private organizations, and those of individual landowners as well.

The continuous flow of information and assistance between planning levels is vital for maintaining consistency in the methods used to address forest-related issues and concerns. Issues must be collectively, rather than functionally, identified, considered and resolved. Because the
planning process is dynamic, it is essential that mechanisms be found for continuous two-way communication between individual state planning efforts, which frequently occur simultaneously. Such coordination ensures that government policies, programs and goals for the management of natural resources will be compatible to the extent possible.

Among the process actions which most frequently require negotiation and agreement between responsible officials are the following (USDA Forest Service 1980):

1. Public issues and management concerns to be addressed.
2. The type, format and accuracy of data or other information needed for the planning process.
3. Specific management practices, standards, guidelines and criteria to be employed.
4. Proposed policy and program alternatives to be addressed by the planning process.
5. Agency goals, objectives, targets and anticipated levels of output.
6. Recommended program proposals for implementing approved management plans.

Despite the generally recognized need for coordination, effective interagency agreements have so far been difficult to attain. This has been due, in part, to reluctance on the part of certain state agencies/officials to work across functional or jurisdictional administrative boundaries. This reluctance has, in some cases, compromised program
support and opened the door to conflicts (and overlap) with other state and local government planning efforts.

Needed is a framework which ties together the disparate planning efforts of individual state agencies and clarifies the relationships that exist between the various levels of planning, i.e., state, sub-state, regional, multi-regional, federal. Planning, at present, proceeds forward at each of these levels with little formal recognition of the political or administrative distinctions which logically constitute the affected program area.

Program Implementation

Implementation involves the carrying out of programs and basic policy decisions which emanate from the forest planning/decision-making process. Implementation might be thought of as the final in a series of steps designed to foster renewed direction. Each of the steps involves the coordinated efforts of various actors and takes place within the face of considerable uncertainty. Alternatively, implementation might be viewed as an integral and essential component of each of the preceding planning steps, thus occurring much earlier in the planning process.

Regardless of interpretation, implementation can connote the success and/or failure of a particular program, based on the degree of acceptance or, alternatively, rejection experience at this critical juncture. Thus, the agency that has successfully recognized and embraced the problems it originally sought to remedy, and that has developed workable program and policy alternatives to address those concerns--but cannot implement these
solutions, has failed to fulfill its societal mission. Developing good programs and innovative solutions to important problems, but failing to implement these solutions, is clearly an unacceptable planning outcome.

A Conceptual Framework. Implementation involves carrying out basic program and policy choices made within the context of a structured planning process. Ideally, this process: (1) clearly identifies the problems, issues and opportunities to be addressed, (2) specifies the relevant set of goals and objectives to be pursued and, (3) "structures" the process of implementation.

Planning has the capacity to structure the implementation process through its selection of implementing institutions; by providing certain legal and financial resources to those institutions; by setting forth a proposed policy orientation for agency officials to follow; and by regulating participation opportunities for nonagency interests. To the extent that the planning process is able to produce a clear, consistent set of agency goals, incorporate a means of relating these goals to important management issues, and then effectively structure the implementation process so that these issues might be favorably resolved, the possibilities for attaining organizational goals are enhanced.

In order for an agency (any agency) to be successful at planning, designing and implementing a complex management program, it would seem the agency must first accomplish three fundamentally important things.

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(1) Establish and maintain the *legitimacy* of the agency, its planning process, and all major assumptions and decisions connected with that process.

(2) Ensure that the *content* of the program developed is such that it earns the support of various affected interests.

(3) Ensure that the *process* by which the plan was designed, developed and implemented is sound, visible to the public, and also worthy of support.

Establishing the legitimacy of the agency, its planning process, and the assumptions upon which the process is based, should weigh heavily in the minds of agency officials. For this constitutes a most basic planning responsibility. One capable of making an important contribution to successful implementation. A broad range of affected interests need to know and understand, firsthand, just what types of problems can be (and will be) addressed by implementing this program, how the program might be expected to impact them and their interests, and whether in fact this exercise of agency responsibility constitutes an appropriate response to the problems at hand.

The agency, itself, bears the burden of proof and must be prepared to explain (at length) exactly what the proposed plan will look like, what it involves, and how it will impact selected publics. At the outset, it must be shown that the agency had a clear mandate, a legitimate responsibility, and the authority to develop this plan.
Once this has been established, the agency must seek to "legitimize" the process by which plans are developed. Assumptions and decisions built into the plan over time (implicitly or otherwise) must be explained and tested. Although these may have been perfectly valid originally, at some point due to changes in social, technical or other conditions, they may no longer hold. As a consequence, certain planning assumptions may need to be revised, re-written or eliminated altogether in order to secure lasting program support.

**Defining Success.** Seemingly, the critical role of implementation analysis is to identify those factors which most influence the achievement of planning goals and objectives. This task is complicated, however, by a number of circumstances which can markedly effect the ability of the implementing agency to discern or to accurately measure these factors. There are, in effect, a number of variables which can affect the program and policy outputs of implementing agencies. Briefly, these are: **internal** variables (e.g., the commitment and leadership skill of agency officials), **external** variables (e.g., changes in socio-economic conditions), and **intervening** or mixed variables (e.g., the attitudes of constituency groups). These important variables can also influence compliance with newly established policy, the level of support attainable and, ultimately, the achievement of recognized program objectives.

Variation over time in social, economic, and technical conditions (external variables) can dramatically influence planning's outcome. It can also affect perceptions of the planning program itself. Planning
assumptions, projections and forecasts are repeatedly tested as the relative importance of problems addressed by the planning program begins to shift. To the extent that other social and economic problems may intensify, political support for the allocation of scarce resources to forestry projects may diminish.

Successful implementation may be jeopardized also by local variations in socio-economic conditions or by the relative duration or seriousness of these problems. This type of variation frequently produces demands for added flexibility in agency regulations and increased administrative discretion to field units. Such discretion introduces the likelihood of variability in the execution of agency policy and opens the door to conflicts with underlying management goals and objectives. The imposition of strict, uniform standards and guidelines can, however, produce serious internal dissent and opposition. In either case, stated objectives are unlikely to be achieved.

In short, social, economic and technical conditions are some of the principle external variables affecting the policy outputs of implementing agencies. External variables are most often experienced through changes in interest group or public support for program objectives, or through legislative or executive developments within the agencies' operating environment.

Perhaps the factor most directly affecting the policy outputs of implementing agencies is the level of support, commitment and leadership skill of implementing officials (internal variables). The importance of attitude and skill in making a new program work cannot be overemphasized. Certainly,
this has been the case with state forest resource planning. Since its inception in early 1978, state forestry personnel in states all across the country have been active in helping to promote statewide forest planning as a workable alternative to existing planning systems.

The commitment of state agency officials to planning will typically depend, at least in part, on the degree to which statewide planning has been "institutionalized" within the agency and has subsequently been able to create a resulting bias favoring this type of exercise. The level of commitment is also a function of personal values, professional norms and the extent to which key officials are able to understand, support and participate in this process. Naturally, the importance of both skill and attitude factors will vary considerably with the amount of discretion afforded agency administrators.

In general, the commitment of agency personnel to the successful implementation of a project will be highest within a newly established agency or specialized bureau created specifically for this purpose. However, the level of individual commitment may tend to decline after an initial period, as the most dedicated people become increasingly "burned out" and disillusioned with bureaucratic routine—only to be replaced by those seeking security and maintenance rather than risk-taking.

Commitment to program objectives can, however, contribute little to their attainment unless accompanied by sufficient skill in utilizing available resources towards that end. Skill, here is taken to mean the individual's ability to go beyond what might normally be expected given
limited resources. Commonly referred to as "leadership," this quality is comprised of political, managerial and inter-personal elements. On the whole, however, leadership skill is not something easily defined. Although most will readily acknowledge its importance, few can accurately list its attributes or recognize this quality in a given individual.

Previous discussion has focused on the effects of various internal and external influences which complicate the process of measuring implementation success. Important too, are other influences (labeled intervening here) also capable of making this task more difficult. Influences such as the subtle changes which can frequently occur in the attitudes of constituency groups or elected officials towards planning objectives or proposed policy direction. Public support for such positions almost invariably declines over time.

As heightened public awareness wanes, public attention is drawn increasingly to other issues and programs at the political expense of the implementing agency. With this now diffuse base of support, opposition to the plan can intensify, becoming ever more vocal and difficult to ignore. In this unbalanced political environment, implementing agencies must eventually recognize the necessity to accommodate competing interests, resulting in a relatively less dramatic departure from the status quo than originally envisioned.

Continued support for an agencies' planning program among the institutions which provide that agency with its legal and financial resources (i.e., primarily the state legislature—specifically policy and fiscal
committees, the state executive, the courts, and other special authorities) may also be subject to change. These institutions quite commonly choose to pursue differing policies and directions, leaving the subordinate agency to deal with conflicting directives.

The continuous interaction between an agency and, for example, its legislative sovereigns can work for, or to the detriment of, agency programs depending on whether legislators are supportive of or critical towards these programs. On a more formal level, legislators also have the authority to alter and/or effectively undermine the legal and financial resources of the implementing agency. More frequently, however, indirect controls may be applied. Significant changes in any number of policies or procedural requirements could well affect support for a given program, or the degree of institutional control over the implementation process.

Other factors influencing implementation success include: the degree of clarity and precision with which agency objectives are articulated and ranked; the legal and financial resources available to the implementing agency; the extent to which the agency's planning process has been coordinated and integrated with those of other implementing agencies; the degree to which the decision rules of implementing agencies are supportive of (and biased towards) agency objectives; and the assignment of agencies/officials committed to the attainment of program objectives.

Program objectives that have been clearly stated and carefully ranked can serve as an indispensable aid to program evaluation, as unambiguous guides to implementing officials, and as a valuable resource available to
program supporters. Clear objectives can also assist actors (both within and external to the planning process) who may sense basic discrepancies between agency outputs and stated objectives. Agency directives must clearly indicate the role that individual objectives play within the totality of agency programs in order to avoid costly delay, confusion or an unacceptably low priority ranking, while these newly established objectives await incorporation into the agency's existing operating structure.

The financial resources available to the implementing agency will affect its ability to hire competent staff, to conduct technical analyses, to administer new and existing agency programs and, monitor program achievement and policy compliance. In general, there is thought to be a threshold level of funding necessary for these to be any possibility of achieving program objectives (Sabatier and Mazmanian, 1980). Beyond this level of funding (up to some saturation point) achievement and funding seem to be proportionally related.

It is also generally agreed that one of the principle obstacles to successful program implementation is the difficulty of obtaining coordinated action within and between agencies involved in the implementation process. Consequently, one of the most important characteristics of a workable management program is its ability to successfully integrate the efforts of the various implementators. This problem becomes particularly acute whenever local, state and federal cooperation is required (as in SFRP) to ensure successful implementation within a complex and heterogeneous system of administration.
In addition to providing clear and consistent objectives, adequate financing, and effective program coordination, the chances for implementation success may also rest on the extent to which an agency's set of decision rules favor and are supporting of program objectives. To the extent that agency activities are ostensibly guided (or biased) by these rules, the policy and decision outputs of implementing agencies are more likely to reflect program objectives. Decision rules can also act to effectively channel authority within the agency to those officials who are perhaps most strongly supportive of program goals.

Regardless of other influences, successful implementation remains unlikely without the unqualified support and commitment of agencies and officials involved in the implementation process. Almost invariably, new programs require the persistent push of dedicated implementors to develop the necessary rules, regulations and operating standards for program adoption. Again, successful implementation is perhaps most likely if responsibility for implementing the program can be assigned to a specially created agency or bureau (or a prestigious existing agency with the appropriate policy orientation) who will accord the program high priority. Implementation becomes still more likely if accompanied by recently enacted statute requiring that this activity be carried out.

Implementation Pathways

In order for public agencies with major responsibilities to enact nearly any large or complex management program in today's contemporary political environment, it is essential that agency officials first
understand and consider the full range of implementation opportunities available to them for successful program implementation. After having gone through a long and involved planning process in an effort to arrive at the best possible solutions to problems facing the agency, it might seem to those involved in the effort that carrying out these solutions, i.e., implementing the plan, is the only sensible course of action remaining. However, some of the affected interests may not fully agree. Unanimous support is unlikely and, consequently, should not be expected.

For this reason, state agencies must attempt to determine rather closely just how much support, and what type of support is needed to make a project implementable. Certainly, unanimous support is not always necessary for implementation. A determination must be made as to just which interests are supportive of the plan and what form their support must take. The agency must then develop substantial agreement among these supportive interests on the specifics of program implementation.

A variety of opportunities exist for the successful implementation of program and policy recommendations contained within the management program itself. Aside from the administration and outright management responsibility for state-owned forest lands, there are additional opportunities for influencing the management of privately held forest lands through various state and federal assistance programs (e.g., CFM, FIP, SEA). State forestry plans can also provide useful input into the various federal, state and local land-use planning and development processes (e.g., RPA, HUD 701, CZM, SCORP's 208). Such "systematic" input helps to focus
attention on individual program needs and enhances the effectiveness of state planning programs.

Program outputs might also be used in conjunction with the states' legal and political processes, providing needed information and assistance to state policymakers in the areas of forest land taxation, economic growth, and a myriad of environmental and natural resource issues. The plan can be used as a basis for addressing key resource issues and decision-making events occurring within the state, and evaluating their selective impacts on the states' vital forestry interests.

Program Monitoring, Review and Re-evaluation

Because state forestry planning is an ongoing process that occurs within the context of a dynamic management environment, there exists an important need to periodically review and assess planning performance. State agencies involved in such planning must formally recognize and respond to changes which may have occurred in problems, issues or opportunities confronting the agency.

There is a need to identify key problem areas and address emerging concerns; to review past accomplishments; to revise and update program elements; and to measure progress made in attaining program goals. Careful evaluation can also assist in ensuring the optimal use of available resources and the continued effectiveness of various management programs and techniques. Recognizing the need for program evaluation, several states have adopted measures designed to promote periodic review and re-evaluation of all major state agency programs (e.g., Planning-Programming-Budgeting Systems, Management by Objectives, Zero-Based Budgeting, etc.).
Ideally, a monitoring program should identify (USDA Forest Service 1980):

1. the effects, activities, practices and resources to be measured;
2. the expected frequency, precision and reliability of the monitoring process;
3. the schedule of monitoring assignments and evaluation responsibilities;
4. specific techniques which will be used in monitoring;
5. any special or unusual implementation features or arrangements such as contracting review responsibilities to other state agencies, organizations or outside consultants.

Variables to be measured and information assembled might include the following:

- information regarding the program's net social, economic and environmental effects (estimated and actual);
- a brief scoping of existing and emerging management issues, concerns and their current disposition;
- documentation of selected program and policy effects, both intended and otherwise;
- a quantitative comparison of actual and projected unit costs, output levels, goal and target attainment, activities undertaken and services rendered;
- quantitative measures of the program's economic efficiency and effectiveness;
. current, accurate and complete records of all expenditures by program and by function;
. a multi-year update of program assumptions, projections and forecasts, as necessary to correct earlier predictions and to reflect new management information;
. an identification of major research needs, data gaps, deficiencies in public involvement efforts or in general state policy direction;
. a listing of needs and recommendations for improving the ongoing evaluation of management systems and programs.

A major problem in program evaluation has been the inability of some state forestry agencies to collect and manage the necessary data base for conducting a comprehensive review. Difficulties in disaggregating National RPA data and a lack of communication, generally, between the users and producers of natural resource inventory information have seriously hampered evaluation efforts in these and other states.
MINNESOTA STATEWIDE FOREST PLANNING EFFORT

Minnesota Division of Forestry

The Division of Forestry is one of six divisions within the Minnesota Department of Natural Resources (DNR). The Division's major responsibilities include: forest fire protection on 23 million acres of wild lands, insect and disease protection on 16 million acres of forest land, management of 4.6 million acres of state forests and other state-owned forest land, and providing direct management assistance to counties, municipalities, and small private landowners. The Division also provides wood utilization and marketing assistance to loggers and timber processors.

State forest lands currently provide in excess of 450,000 cords of wood products annually, or about 20–25 percent of the total harvest required by the logging and forest products industries in Minnesota. Some 44,000 loggers and millworkers are employed by the timber industry, the state's third largest manufacturing industry with $2.3 million in annual sales. Recent, rapid expansion of the timber industry in Minnesota has created additional demands on state lands to supply needed raw materials. State forest lands, recreation areas, roads and trails are also used by a large and growing number of recreationists. An estimated 600,000 to 800,000 people use the state forests each year for hunting, fishing and a wide variety of dispersed recreational activities. Additional recreation opportunities will need to be provided to accommodate this growing demand.
The Division's forest management program has expanded well beyond its historical emphasis on fire fighting and lumbering. In 1981, Minnesota's forest tree nurseries shipped over 20 million seedlings to federal, state and local agencies throughout the state for wildlife plantings, soil and water conservation projects and for reforestation of cut and burned-over areas. Technical advice and management assistance is provided to some 5,600 small private landowners annually. County land departments also receive extensive assistance for forest development and harvesting, land sales, forest inventory and other special projects. Utilization and marketing specialists provide technical assistance to loggers, sawmillers, other wood processors to increase the efficiency of their operations and extend the available wood supply.

Division activities are supported by biennial legislative appropriations, federal grants for specific programs, and special funding consisting of receipts from the state forest campgrounds. In addition, up to $3 million per year (from 1980-1990) in federal BWCAW forestry intensification dollars are available to offset the decline in sustainable timber yield brought about by the allocation of forest land to the Boundary Waters Canoe Area in the Superior National Forest.

Organization

In 1956, a modified line-staff organization replaced the functional staff organization which had structured the Division of Forestry since its inception in 1911. The new structure permitted greater decentralization and coordination at the regional, rather than the state level. Since 1956,
three major reorganizations of the Department of Natural Resources have shifted line responsibilities and staff functions, but the general organizational pattern has remained intact. The present Division consists of four functional staffs and a field organization, all reporting to the Division Director (Figure 10). The Division's field organization is composed of 90 forest districts grouped into 20 areas, which constitute six administrative regions (Figure 11). Six regional forest supervisors have line authority for field operations.

Planning History

Planning is not new to the Division of Forestry. District management plans, fire action plans, and county wildlife habitat plans have been used for years to guide Department forest management programs. Plans dating back to the 1890's focused primarily on fire control and reforestation, and on the need to provide forest policy for Minnesota. Unfortunately, many of these early plans were not coordinated with one another. Further, most described past conditions or current management activities; little strategic or long-range planning was involved. In 1975, the Commissioner of Natural Resources instructed the Division of Forestry to prepare a long-range plan. This led to publication of *The Long-Range Plan for the Minnesota Department of Natural Resources Forest Management Program* in June of 1977. This plan was a first step towards comprehensive planning in that it identified issues and recommended further planning for individual management units. The long-range plan was not, however, developed with public or other agency involvement, and it lacked sufficient policy direction to permit development of individual unit plans.
Figure 10. Administrative organization, Division of Forestry, Minnesota Department of Natural Resources. 1980.

*Each region has like structure as exemplified.

Source: Division of Forestry, Minnesota Department of Natural Resources. 1982.
Figure 11. Administrative boundaries and office locations, Division of Forestry, Minnesota Department of Natural Resources. 1981.

Source: Division of Forestry, Minnesota Department of Natural Resources. 1982
Since 1977 and publication of the Division's pilot plan, long-range planning and program development have taken on new meaning and emphasis, both statewide and nationally. Passage of the Cooperative Forestry Assistance Act (PL 95-313), which provides states with financial, technical and related assistance, has been especially important in encouraging states to engage in planning. In June of 1979, the Chief of the U.S. Forest Service invited Minnesota and other states to participate in this federal planning assistance program. Minnesota's Governor responded with a strong endorsement of the concept.

Purpose and Scope of Planning

The goal of the Division of Forestry's forest planning program is to develop and maintain a long-range, comprehensive Minnesota Forest Resource Plan (MFRP), and individual forest unit plans, which will provide for the sound management, protection and utilization of Minnesota's forest resources. Among the major objectives of the planning program are the following:

- Assess past, present and prospective resource conditions.
- Organize forest resource inventory data into a system usable in forest management decisionmaking.
- Identify and address important issues relating to forest management in the state.
- Set goals and objectives and develop management strategies for improving management effectiveness.
- Develop a long-range program to guide the Division of Forestry's management activities in a manner that will balance social, economic, and environmental benefits.
- Coordinate forest planning efforts with those of federal, state and local agencies and with industrial and non-industrial private forest landowners.

The current planning effort is aimed at improving on past efforts by:
1) combining all district, forest, area, and regional plans into a cohesive statewide plan; 2) combining all single-purpose or functional plans, e.g., fire plans, timber management plans, into a single comprehensive plan, and; 3) coordinating plans for the management of state-owned lands with plans for county and federal ownerships, and to the extent possible, with private forest plans. The MFRP is perceived as one of several building blocks for a comprehensive Minnesota Natural Resources Plan. The Natural Resources Plan will, in turn, be used to prepare an overall environmental plan for the state (Figure 12).

Planning Process

The forest resource planning process is characterized by the development of seven individual planning volumes which explain various aspects of the plan and long-range program. The documents include: planning concept, issues, assessment, goals and objectives, program, action plan, and executive summary. Each of the documents is issued twice; first as a review draft for public comment and later after revision and incorporation of these comments, in final form. The entire process, shown graphically in Figure 13, is to be completed by July 1983. The following is a brief description of the seven volumes to be contained in the Minnesota Forest Resource Plan.
Figure 12. Planning levels and relationships, Division of Forestry, Minnesota Department of Natural Resources. 1981.

Minnesota State
"Master Plan"

State Environmental
Planning

Dept. Natural Resources
Comprehensive Planning

Minnesota Forest
Resources Plan

Div. of Forestry
Regional Plans

National R.P.A.

U.S.F.S. Regional Plans

State & Private
Forestry

National
Forest System

Forest &
Range
Research

National Forest Plans

Chippewa
Nat'l For.

Superior
Nat'l For.

Individual
State Forest
Unit Plans

Forest
Industry
Plans

N.I.P.
Forest
Plans

Other Public
Agency Forest
Plans

Direct Relationships ---

Major Interrelationships ---

Source: Division of Forestry, Minnesota Department of Natural Resources, 1982
Figure 13. Planning process for development of Minnesota Forest Resources Plan.
Concept Document (Vol. I). The Concept Document contains a description of the planning work to be done and the process to be followed in its completion. It also suggests generalized methods for public involvement and states a tentative schedule of planning activities.

Issues Document (Vol. II). Contained in the Issues Document is descriptions of a two-step process for issue development. First a comprehensive listing of forest resource issues will be compiled from existing documents (e.g., agency documents, technical reports), and from comments made by Department personnel, other state agencies, and various publics. Second, issues and public concerns will be screened and aggregated into logical issue areas. Concise one-or-two sentence statements characterizing major issues will be prepared, followed by brief background material needed to understand the issues and the range of responses that could be made to them. Finally, opportunities for resolving issues will be suggested.

Assessment (Vol. III). The Assessment will describe and evaluate the past, present and prospective forest resource conditions in Minnesota and will serve as a basic reference to understanding forest resource issues and management activities. The Assessment will provide information and analysis needed to link issues and alternative management goals and strategies. Its content will include: an overview of Minnesota's natural resources, forest land use and ownership, timber resources, forest recreation and, wildlife and fish resources; a section on state forest roads; forest resource information management; and an overview of agencies, organizations and programs of importance to forestry in Minnesota. The Assessment will be updated every 10 years.
Goals and Alternative Strategies (Vol. IV). This document will set forth management directions which will be selected from the many options described in the Issues and Assessment Documents. It will be developed in part by workshops designed to generate and structure goals. When complete, the Document will include: a statement of long-range goals, a preferred strategy for attaining each of these goals and for resolving important resource-related issues, and a "package" of specific activities (or objectives) which contribute to carrying out management strategies. An analysis of some of the impacts and trade-offs associated with this preferred direction will also be provided.

Allocation of Targets (Vol. V). In this Document, targets will be set and responsibilities for their accomplishment will be divided among the various agencies and organizations who play a key role in Minnesota forestry based on resource capabilities, existing authorities and legal constraints. The selected program and strategy will, however, be binding only on the Department's Division of Forestry. Targets for other agencies and groups will be stated as recommendations.

Division of Forestry Program (Vol. VI). This Document will integrate the preferred response to the issues with the Division of Forestry's ongoing programs and responsibilities. It will cover all Division activities, not just those relating to the major issues. Goals for each of the Division's programs and areas of responsibility will be summarized and explained along with an explanation of targets and projected man-hour and budget needs for the 1984-85, 86-87, 88-89 legislative biennia. Much
of this information will be presented in table form. The program will cover a six year period (three biennia), but will be updated every four years as required by law.

Action Plan (Vol. VII). The Action Plan Document will present Division of Forestry proposals to the legislature and the public. It will contain program and budget summaries, proposed policies and legislation, and other information, and will, in essence, be an "action plan" for the Division based on the outcome of public review and legislative action. Specific targets and responsibilities will be spelled out as well as needed administrative policy changes. In addition, the Document will be used as an implementation document, outlining specific actions to be taken and assigning dates and names to activities needed to successfully implement the Division's preferred management program.
Public Involvement

Public involvement in the broadest sense, is both a goal in itself and an important element of the planning process. Its success is dependent on the composition of the "public", the methods used to obtain their input, and on the manner in which public inputs are aggregated, evaluated and used by the Division of Forestry. Recognizing this, the Division's goal of public involvement is to achieve "informed consent" among agencies, organizations and individuals who are concerned about forest management in Minnesota. At a minimum, the Division hopes to inform the various publics of the rationale behind forest management decisions, even if complete agreement is not reached. Some of the major objectives of the Division's public involvement program are to increase the level of public understanding and support for the Plan, to obtain information and determine major issues, and to gain increased exposure for the Department's forest management programs. In order to achieve these objectives, the Division relies on technical and professional advisors from within and outside the Department to review and comment on all draft planning documents. In addition, planning documents are distributed to legislators, forest industry representatives, government agencies, public and private organizations, and to interested publics for review (Figure 14). Periodic informational mailings, public meetings and personal contacts are also conducted to keep the public informed of planning progress and involved in key stages of plan development.
Figure 14. Public involvement contacts for development of the Minnesota Forest Resources Plan, 1981.

Source: Division of Forestry, Minnesota Department of Natural Resources, 1982.
Information Management

The Minnesota Forest Resource Plan will include a resource assessment which examines what forest lands in the state are producing and what they are, in fact, capable of producing. The Department refers to its basic forest resource inventories as Phase I and Phase II. Phase I, carried out in cooperation with the Forest Service's North Central Forest Experiment Station, provides statistical estimates of the extent, volume, and present condition of growing stock on all ownerships in Minnesota. Phase I data was collected to help delineate land capabilities in terms of multi-resource production and use, and to assess stand conditions with respect to timber production and use. This data furnishes a basis for long-term planning and evaluation of alternate management and investment strategies. The Division of Forestry has developed a computer-based data collection and processing system to deal with this information. Phase II inventory data is based on individual compartment examinations of state and county administered forest lands. This data can be retrieved in map or tabular form for individual forest stands. It can also be summarized for each State Forest, county, administrative district or geographical area. The Phase II inventory effort is currently underway.

Originally the main purpose of the statewide forest inventory was to obtain better information on timber resources. The Department has long been using inventory data to prepare timber management plans. It has become clear in recent years, however, that planners need better data on forest resources other than timber. These additional data needs have been incorporated into the design of the Phase II inventory effort.
In 1981, the Division proposed, and the Legislative Commission on Minnesota Resources (LCMR) funded, a project to begin development of an integrated forest management information system to support the Division's programs. The legislature has also encouraged further development of the Division's information management capabilities by specifically requiring that information management be addressed in the statewide forest resources plan.

**Program Coordination**

To fulfill its role as the lead forestry agency in Minnesota, the Division of Forestry has an obligation to meet its internal objectives and improve the coordination of its activities with those of other agencies and organizations. The success of many of the Division's programs depends on the quality of day-to-day contact with other major forest landowners in the state, and the extent to which these contacts result in improved cooperation.

Within the Department of Natural Resources, the Office of Planning will integrate the Minnesota Forest Resources Plan with the Department's comprehensive plans and will assist in the development of policies to implement the statewide forest plan. Department specialists in forestry, wildlife, minerals and other fields will provide the interdisciplinary expertise needed in the planning effort. The department's Planning and Environmental Review Team (PERT) will provide the formal mechanism for administrative review and approval (Figure 15).
Figure 15. Forest planning team relationships, Division of Forestry, Minnesota Department of Natural Resources. 1981

Source: Division of Forestry, Minnesota Department of Natural Resources. 1982.
Various legislative committees and the Legislative Commission on Minnesota Resources play an important role in setting policy and providing funds for natural resource programs. Legislative input and review are a major part of the planning process. The House-Senate Joint Select Committee on Forestry is also involved in the development of a statewide forestry plan and program. The Committee hopes to gain an improved understanding of existing and alternative goals and policies for statewide forest resource development and to explore possible means of implementing these measures. The Committee's work will complement and contribute to development of the statewide forest plan.

The Minnesota Energy, Planning and Economic Development Agency will facilitate coordination of the MFRP with other state and local units of government. Planning Assistance Specialists from the U.S. Forest Service State & Private Forestry will advise the Division of Forestry in developing the Plan and will coordinate state input into the federal Resources Planning Act process.

Discussion

Work on the Minnesota Forestry Resources Plan is scheduled for completion in June of 1983. When completed, the Plan and Program will be formally endorsed by the Division of Forestry and transmitted through the Commissioner of Natural Resources to the Governor and legislature for their review and approval. At that point, the Plan will become the document that guides the Division of Forestry's policies and programs. Currently, the legislature provides broad direction to the Division through the appropriations process.
However, because the Department's budget requests are not normally broken down by specific programs the legislature can only indicate what overall level of effort it prefers. By tying budget requests to program levels contained in the Plan, the legislature will be better able to determine both the mix of forestry programs and the overall level of effort expended. Legislative interest has helped to define and authorize the forestry planning process in Minnesota and has effectively placed the Division of Forestry in a leadership position. The legislature has expressed its commitment to improved forest management by providing funding and, importantly, by enacting legislation which requires continuing, comprehensive forest resource planning and assessment as a means of developing long-term forest policy for the state. Forest planning legislation presents a clear signal to future legislatures that continuous forest planning is a routine function of the Division, with the implication that it should be funded.

Legislative involvement, while helpful in securing needed support and direction, carries with it the possibility of indirect control over the implementation process. The continuous interaction between the Division and its legislature sovereigns could work for or to the detriment of the Division's programs, depending on whether legislators are supportive or critical towards these programs. Political support can frequently be unpredictable and subject to change. Experience at the federal level with the Resources Planning Act has shown that interest and political support shown initially for planning can rapidly decline unless accompanied by the dollars needed to initiate and successfully complete planning efforts.
Minnesota's key planning strengths include the Division of Forestry's ability to relate issues to opportunities and goals through the analysis of alternate strategies for resolving these issues. The seven-step approach to planning enables interested persons to follow along as issues are identified, developed and addressed. Opportunity is provided at each step for public review and comment on proposed direction. This acts to continually readjust and focus planning attention on issues and strategies which perhaps best represent a consensus of public opinion. By examining alternate goals and the means of attaining them, the Plan provides valuable information to decisionmakers who must, on the basis of such information, select a preferred course for the Division. Having considered these alternatives, decisions reached are more likely to reflect the long-term interests of the Division and the people it serves.

Alliances with the Minnesota Legislature, forest industry, state agencies, citizen's groups, and with other states in the region (Michigan and Wisconsin) have helped to make the planning effort more successful. This network of support has been instrumental in building credibility and could, to a large extent, determine the ultimate success of the Minnesota Forest Resource Plan.

Possible shortcomings include somewhat limited involvement by citizen and technical advisors, and failure to establish a formal advisory to the planning process early on. As a result, public involvement in the planning process has proceeded on a largely informal and unstructured basis, relying on the periodic contributions of designated planning advisors. The benefits
of somehow coordinating this input might be less time spent on public involvement activities and more effective interaction with targeted interests.

So far, the planning process in Minnesota has been one of the most extensively staffed and funded state forest resource planning operations anywhere in the country. Commitment to this process from the State Forester, the Governor, State Legislators, forest industry, and others has been impressive. Minnesota has been both innovative and adaptive in its approach to forest resource planning and program development. Moreover, a sincere attempt has been made to resolve issues and to address public concerns. The completed Plan will undoubtedly prove invaluable as a management tool and reflect the considerable time and effort that have gone into its development.
SUMMARY AND CONCLUSIONS

To briefly summarize, a good deal of progress has been made since 1978, and passage of the Cooperative Forestry Assistance Act, on the development of comprehensive state forest resource plans nationwide. As indicated earlier, 27 states expect completion of their first planning cycle by the end of 1982, with many others soon to follow. By one count, all but two states are actively engaged in preparing long-range management plans.

A variety of influences have emerged to shape this important process and shift repeatedly the apparent focus of planning efforts. Statewide forest planning began amid a backdrop of major social, economic, and political change. By and large, these changes have been supportive of, and have highlighted the need for, long-range planning of renewable natural resources. Increasingly forestry programs are being called upon to be accountable, cost-effective and justifiable in terms of their contribution to meeting various public and private sector needs. Forest planning has assisted in this critical task.

Along with the progress in state forestry planning, there have also been problems. Problems with inadequate funding, staffing and training of planning personnel have emerged in some states. Frequent turnover of forestry planning staff has resulted in setbacks and a loss of planning continuity in others. A number of states have experienced fundamental difficulties in selecting a suitable planning design, public involvement technique, or an effective approach to the task of issue resolution. Failure to view planning as an integral, ongoing "process" rather than as a discrete management exercise, has made these problems more troublesome.
General uncertainty over management requirements, process responsibilities and basic planning needs has hampered progress in a number of states. In many cases, such confusion has resulted in a significant delay. Additionally there have been difficulties in collecting and analyzing the necessary data base for conducting a thorough resource evaluation.

To this point, however, most of the difficulties experienced by states with statewide planning have been relatively minor, resulting from general inexperience with comprehensive, multi-year planning, rather than from any fundamental breakdown of the planning process itself. Nearly all of the states remain firmly committed to this important management process, vowing to continue despite these difficulties.

Statewide planning has, in fact, begun to gather momentum as planning results become available and as benefits begin to materialize. In many states, plans have already begun to provide essential direction and justification for forestry programs. This, in the face of serious across-the-board fiscal and manpower cutbacks.

As long-range funding requests from state government have become more difficult and less routine, state agencies have begun turning to long-term planning as a means of survival. Planning can help minimize the effects of adversity and offers a logical basis for continued development. Some of the other benefits of planning are briefly outlined below.
Benefits of Planning

The development of a sound planning process to guide the management of state forest resources can be expected to yield a number of important and positive results. Results which benefit not only the managing agency, but other groups who share a legitimate interest in quality resource management. Incorporation of such a process helps clarify and communicate management direction, thus enhancing public understanding of agency programs, policies and decisions.

Some of the "key" groups who might benefit most from SFRP planning include the following (Barnett, 1981):

Forestry Agency

- Establish long-term program direction to provide increased continuity and consistency of management, especially within the budgetary and appropriations process.

- Provide a tool to facilitate improved management by systematic reorganization of the decision-making process; by broadening the information base upon which management decisions are made, and; by enhancing communication among forest user groups.

- Provide a mechanism for dealing more effectively with resource-related issues, concerns, and conflicts confronting the agency.

- Establish a means of periodically evaluating the need for and benefits of various combinations of state and federal resource programs.

- Provide increased public awareness of and input into the forest planning and decision-making process.

State Governor and Legislature

- Identify and develop opportunities provided through the development of forest resources.

- Assist in establishing policy framework and machinery to coordinate the state bureaucracy, which is often organized functionally, i.e., forestry, soils, water, economic development.
- Articulate state goals that consider the future consequences of present courses of action or inaction.

- Identify needed legislation and establish policy agenda for issues relating to forestry.

- Complement and contribute to other state planning processes, i.e., environmental management and protection, economic development, land use planning, etc.

- Provide a means of oversight and accountability.

- Communicate state goals and concerns to the Federal government to be incorporated into National Forest planning process.

  Federal Government

- Provide state and regional programs directed at meeting sub-elements of national goals and needs identified in RPA.

- Evaluate Federal assistance programs to develop the best possible management strategy.

  Industry

- Facilitates long-range strategic planning to aid in capital expansion and development.

- Better defines industry's role in helping meet state resource output goals, and in improving the productivity of non-industrial private forest ownerships.

  General Public

- Establishes a formal mechanism for public input into the program development process of state forest resource agencies.

- Ensures consideration of public issues, needs and concerns in developing a statewide plan for managing renewable natural resources.

- Provides assurances to private forestland owners of continuing commitment on the part of state government to policies which affect important forestry issues.

- Establishes coordinated assistance efforts to private landowners.
Planning Outlook

In the final analysis, statewide forest resource planning must, on its own merits, prove worthy of the levels of time and effort that have gone into its development. Real and identifiable gains will need to be experienced for this process to continue. State involvement in forest plans is, clearly, premised on this important expectation. Although long-range plans can seldom hope to be 100 percent accurate or useful, their net contribution to the organization must (at least) outweigh costs incurred in plan development.

Planning success will undoubtedly take time and be difficult to measure. Ultimately, however, only time will enable meaningful evaluation of the relative successes of statewide forest plans, and the contributions that this important planning initiative has made to improving the quality of forest management at the state level. Such an evaluation is, at this point, not possible. However, as this process matures and evolves, a determination should become possible—if not self-evident.

This reviewer's predictions for the future of comprehensive state forest resource planning are as follows:

1. Statewide forest planning (or some derivative thereof) will prove effective and, eventually, necessary for the management of state forest resources.

2. Statewide forest planning will prove most useful in dealings with the socio-economic and political aspects of forest resource management (e.g., legislation, program budgeting, policy and
decision-making), as opposed to the on-the-ground planning and scheduling of specific resource management and production events.

3. Statewide forest planning will ultimately seek to focus greater attention on:

- projecting forest resource "futures;"
- formulating and considering alternative management strategies;
- alternative goal development;
- expanding public involvement;
- agency legal and administrative requirements;
- program budgeting and contingency planning;
- policy analysis;
- program coordination needs;
- multiple-use trade offs.

And focus relatively less attention on:

- raw data needs;
- development of precise, quantitative output parameters;
- justification of current agency programs, policies, practices and management activities;
- land-use allocation decision-making.

4. The statewide forest resources planning process (statewide forest planning, or some derivative thereof) will continue.
Opportunities for Minnesota

Continuation of the comprehensive forest resources planning process in Minnesota (MFRP) appears likely. Unprecedented statewide support and involvement in this effort point to its recognized importance as a necessary and ongoing management activity. Anticipated results should enable forest managers throughout the state to assess, for the first time, their role and responsibilities as related to the future of Minnesota forestry.

A number of opportunities exist for making Minnesota's planning effort more effective and more responsive to public needs. Past planning experiences in other states and at the federal level, have shown the need to periodically adjust and refine this process to reflect the latest in planning techniques, and to address changes brought on by legal, political or administrative evolution. Minnesota is in an excellent position to benefit from these and other experiences. Specific recommendations for improving MFRP are outlined below.

Interdisciplinary Input. Planning in Minnesota could benefit from the experiences and expertise of various professionals outside of the forestry community. Persons skilled in land-use planning, systems design, social resource management, public involvement, investment analysis, public affairs, and so on, could be of considerable assistance in guiding the MFRP effort.

All too often in the past, forestry professionals (in Minnesota and elsewhere) have remained virtually isolated from other disciplines, ignoring the contributions that these specializations are capable of making to effective forestry. The "new" planning perspective represented by MFRP, however,
requires that a genuinely comprehensive and interdisciplinary approach be taken to the planning process.

Information and Data Needs. Opportunities for improving the quality and utility of resource data used in the preparation of MFRP exist in an examination of existing institutional arrangements for gathering, analyzing and transferring such data. Informed professional judgements require that accurate and unbiased information be made readily available to decisionmakers in a form that can be easily understood.

Every effort should be made to combine, standardize and coordinate data sources wherever possible. Delivery systems must also be examined. The selective application of current, reliable research information, specific to Minnesota, presents an additional opportunity for making MFRP respond more directly to emerging public needs.

Public Involvement. The statewide forest planning process, as outlined in this report, assumes broad public involvement to achieve its goals. Yet, participation has in many cases fallen short of expectations. State agencies have as a result come under increasing criticism for allegedly not responding to broad social needs and values.

Minnesota forest resource planning must make a serious attempt to match technical expertise with public needs and preferences. The distinction between policy and technical questions must also be made clear. Effective input mechanisms and communication techniques need to be developed to enhance communications between politicians, professionals and the public. Opening up the planning process to include broad public participation could assist in accomplishing these worthwhile goals.
Program Coordination. Improved coordination among state resource agencies and those involved in the implementation process presents a significant opportunity for advancing MFRP. In the past, coordination among state agencies, public and private sector interests, and units of local government has been limited. Closer coordination could facilitate expanded production, improved resource management, and better integrated management programs and practices. Coordination issues present a major challenge for MFRP.

Issue Resolution. The issues, trends and events identified in MFRP are presented to alert resource managers to their importance and to offer a forum for discussion and resolution. Minnesota forest planners must embrace the full range of issues confronting Minnesota forestry, and develop responsible alternatives for resolving these issues. In large measure, successful resolution of major forestry issues will determine the direction and evolution of Minnesota forestry, as well as the extent to which MFRP itself is viewed as successful and deserving of continued support.

Social Resource Assessment. By identifying and measuring the social impacts associated with proposed program and policy alternatives, MFRP can more effectively engage interested parties in a meaningful dialog on emerging social issues, that should help shape Minnesota forestry programs. Social assessment provides essential information to make resource management responsive to public needs. It can be used by state officials to identify, monitor and evaluate public concerns which surround forest management, and to help attain broad social goals while still achieving organizational objectives.
Administrative Organization. Comprehensive planning presents added demands for efficiency within the state forestry organization. It also tests an agency's ability to respond constructively and creatively to the challenge of planning for an uncertain future. MFRP planning will no doubt require flexibility and adaptation within the state organization to enable the development and implementation of planning results. Lines of communication and authority within the Department of Natural Resources must remain open to facilitate the agency's basic mission. The challenge to the organization will be to provide for the orderly and democratic resolution of organizational issues, and to accommodate administrative changes where this is indicated.

Policy Development. A number of policies, some originating from within and some outside of Minnesota forest management agencies, impact the state's forest resources. Examples include federal restrictions on pesticides and herbicides, air and water quality standards, etc. Forest management will also be affected by policy decisions emanating from the MFRP process, and by public participation in the policy formulation process.

Minnesota Forest Resource Planning must seek to recognize the essential character of modern day resource management and redefine, accordingly, the role that resource professionals will play in public policy development. The challenge of MFRP is to clarify and strengthen these roles, meanwhile concentrating on presenting accurate information to resource policy makers. Ultimately, professional judgements and public policy must be combined, such that they highlight the policy implications of long-range management planning.
BIBLIOGRAPHY


GLOSSARY
GLOSSARY OF TERMS

ACTIVITIES
Specific types of work within a program area which will result in specific outputs of effects.

AGENCY MISSION
The programs and activities for which authority is granted that characterize the agency and its role in solving problems.

ALTERNATIVES (SEE MANAGEMENT ALTERNATIVES)

ANALYSIS
The identification of relevant measures of program effects, enumeration of these effects and their valuation for each alternative.

ANNUAL PROGRAM
A complete list of objectives to be accomplished by an agency or agencies during a one-year planning period.

ASSESSMENT, ISSUE
An appraisal or evaluation of resource-related issues, concerns, conflicts, and opportunities confronting the organization.

ASSESSMENT, RESOURCE
An appraisal or evaluation of resource use, management, and protection information, and of program efforts as they pertain to the agency's role.

BOTTOM-UP PLANNING
A method of selecting and evaluating program direction based on an examination of local or regional management considerations.

CFAA

CITIZEN PARTICIPATION (SEE PUBLIC INVOLVEMENT)

COOPERATIVE FOREST SERVICE PROGRAMS
Operating programs, administered by the Forest Service in cooperation with state forestry agencies, which are designed to accomplish goals for non-federal public and private forest and range lands.
CRITERIA
A set of rules or guidelines within which the planning process can be conducted and important decisions made. Decision Criteria - standards, tests, or indicators used to select a preferred strategy from among competing management alternatives. Process Criteria - specific requirements which must be met for the planning process to continue, providing direction for individual planning actions. Evaluation Criteria - criteria used to select and evaluate proposed program and policy alternatives.

DECISION GROUP
Aggregations of primary activities done together to produce an output, sharing common or interdependent features, which contribute to meeting or reaching a goal or objective.

ELEMENT (SEE PROGRAM ELEMENT)

FOREST RESOURCES PLANNING (FRP)
Any activity associated with the assembly, analysis, display or reporting of State forest resource information. FRP includes activities necessary to produce a State Forest Resources Plan and to provide forest resources information to other agencies' planning efforts.

FUNCTIONAL PLANNING
Planning individually for each of the multiple forest values, e.g. timber, water, wildlife, recreation, often without regard to resource interactions, multiple outputs and objectives, or possible conflicts which may arise as a result.

GOAL
A concise statement of an organization's central strategy in addressing a problem or opportunity, expressed in terms of a desired end-state or condition that operating programs are designed to achieve. A goal is normally expressed as a broad, general statement, which is timeless and non-quantifiable, representing an enduring statement of purpose not readily obtainable in the short term.

GUIDELINE
An indication or outline of policy or conduct.

INTERPRETIVE STRUCTURAL MODELING (ISM)
A facilitated process of collective inquiry using a computer to track a series of group decisions. Individual decisions are mapped and structured so as to clarify and display the logical interrelatedness of agency goals, objectives, authorities and mission.
IMPLEMENTATION
Activities necessary to carry out the completed and approved forestry program plan.

ISSUES
Subjects or questions of widespread public interest relating to the management of forest lands identified through the public participation process. Emerging Issue - a topic of discussion or activity that may evolve into a demand on natural resource use and management. Existing Issue - a direct public demand currently influencing natural resource use and management. Disruptive Issue - A public demand on natural resources or management that is beyond the control of a manager at a given administrative level.

ISSUE ASSESSMENT (SEE ASSESSMENT)

ISSUE OBJECTIVE
An objective statement of what should be accomplished within a specified period towards meeting an established long-range goal for resolving an issue.

LAND MANAGEMENT PLANNING
The process of organizing the development and use of lands and their resources in order to best meet the needs of people, while still maintaining flexibility for a dynamic combination of resource outputs for the future.

LONG-RANGE PLANNING
The process of establishing long-term management direction (5 years or longer) by exploring past and future possibilities, based upon historic trends, past and present conditions, and expectations and projections for the future.

MANAGEMENT-BY-OBJECTIVES (MBO)
A management process whereby managers at various levels in an organization jointly define the organization's goals, define individual responsibilities for attaining these goals, and use these measures as guides for operating the organization and assessing unit or individual contributions to meeting identified goals.

MANAGEMENT CONCERN
A matter of importance to the manager in administering the use of natural resources, which may or may not be of concern to the public.

MANAGEMENT OPPORTUNITY
A statement of possible actions, measures or treatments that management could take to address a public issue or management concern in a favorable way.
NFMA


NOMINAL GROUP TECHNIQUE (NGT)
A facilitated process of collective inquiry into the relatedness of goals, ideas, structure and objectives.

OBJECTIVE (or TARGET)
A specific statement of measurable results to be achieved within a stated time period. Objectives reflect alternative mixes of all outputs or achievements, which can be attained at a given budget level. An objective must include four essential elements: (1) It must state the desired outcome, i.e., what is to be accomplished; (2) It must indicate the time period within which the expected accomplishment will take place; (3) It must include measurement factors, i.e., quantity, quality or cost, so accomplishments can be verified, and; (4) It must indicate who in the organization is responsible for achieving the desired results.

OPERATIONAL PLANNING
Short-term organizational planning conducted to assess administration and operations, inventory and analysis, maintenance, and support functions. Planning of the operational sort seeks to identify specific program targets, to provide a source of continuous monitoring and feedback, and to modify subsequent actions in accordance with the desires of management and the public.

PLANNING
The act of determining, in advance, the goals and objectives of an organization and the selection, through a systematic consideration of alternatives, the policies, programs and procedures for attaining them.

PLANNING APPROACH (or METHODOLOGY)
The method selected to conceptually plan, design, administer and execute a continuous and comprehensive system of planning for an agencies' role in managing renewable natural resources.

PLANNING ASSUMPTIONS
A judgemental decision by planners which supplies missing values, relationships or societal preferences for some informational component necessary for making a decision.

PLANNING-PROGRAMMING-BUDGETING-SYSTEM (PPBS)
A planning and decisionmaking tool that attempts to organize information and analysis so that the consequences of alternative policies are clearly revealed and fully comparable.
POLICY
A guiding principle upon which a specific decision or set of decisions, together with the related actions designed to implement them, is based. Policy denotes a course of action and guides present and future decisions.

POLICY OPTIONS
Discrete guides or limits to an action or decision, each of which would produce different results.

POLICY PLAN
A formal planning document detailing a set of policies which collectively define the chosen course of action.

PROGRAM
An activity or coordinated combination of activities all designed to achieve specified final outputs, objectives, or end results.

PROGRAM ALTERNATIVES
The particular mix of programs available to help achieve specified objectives and contribute to the attainment of mission goals.

PROGRAM BUDGET
The document containing explanations, justifications, and quantitative input and output projections and personnel requirements for all program proposals.

PROGRAM DIRECTION
The alternative course of action selected for adoption as a result of comparison and evaluation of alternative programs and program mixes.

PROGRAM ELEMENT
A collection of program activities from the various operating programs required to accomplish a mission.

PROGRAM MIX (or ARRAY)
The particular mix of programs which comprise the operations of a given agency.

PROJECT PLANNING
Types of planning concerned with specific physical undertakings, such as timber harvesting, roadbuilding, recreational development, etc. Project planning entails a greater range of elements than Functional Planning, thus incorporates more numerous and diverse considerations. SEE OPERATIONAL PLANNING.
PUBLIC INTEREST
The ongoing desires of people as defined by their daily discussions, current activities, and future expectations.

PUBLIC INVOLVEMENT
An effort to inform the public of factors that relate to land and resource management and to elicit their comments and points of view before and during decisionmaking. Meetings, conferences, seminars, workshops, tours, written comments, responses to surveys and other activities may be used to secure public input into the planning/decisionmaking process.

PUBLIC ISSUE (SEE ISSUES)

RESOURCE USE AND DEVELOPMENT OPPORTUNITIES
A possible action, measure, or treatment and corresponding goods and services identified during the resource scoping process.

RPA

STATE FOREST RESOURCE PLANNING (SFRP)
The planning steps or activities needed to produce, implement, maintain, and update a State forestry program direction document. Monitoring, accomplishment reporting, and the preparation of an agency budget are also frequently a part of the SFRP process.

STATE FOREST RESOURCES PROGRAM
A description of those activities that the State forestry agency is involved in to fulfill its legislative mandate. A State forest resources program may be used to qualify for Federal consolidated payments if it meets certain minimum information requirements.

SOCIAL ANALYSIS
An ongoing process of monitoring current and probable future social conditions influencing the management of natural resources. Social analysis can be used to design and implement management actions that respond to people's changing resource uses, and to evaluate the effectiveness of these actions.

SOCIAL RESOURCE MANAGEMENT (SRM)
A practical management system for responding to people's interests in resource decisionmaking.
STANDARD (or GUIDELINE)
A principle requiring a specific level of attainment, a rule to measure against.

STRATEGY
A consideration of alternative means for reaching a goal or objective.

STRATEGIC PLANNING
The study of objectives and analysis of alternative ways to achieve objectives in terms of their relative costs and benefits to the organization.

SUB-ELEMENTS
The major sub-elements of planning include: the establishment of goals and objectives, setting of targets, outlining assumptions, data collection and analysis, alternative considerations, plan selection and documentation.

TARGET (or OBJECTIVE)
Planned results which measure the achievement of goals and objectives. Results may be measured in terms of specific indicators, but must be related to some criteria establishing how well results were achieved.

TOP DOWN PLANNING
The flow of management authority and direction from the highest levels of organization (National) to lower levels (State) via disaggregation of cumulative goals, objectives and output targets.

TRADE-OFFS
The total estimated value of resource program outputs (market and non-market) foregone by: (1) modifying an existing program or substituting one resource program for another, or (2) switching among alternative courses of action. This "opportunity cost" includes only costs and benefits common to all courses of action under consideration.

ZERO-BASED BUDGETING
A management process that provides for systematic consideration of all programs and activities in conjunction with the formulation of budget requests and program planning.
APPENDICIES
APPENDIX - A

Outline for State Forest Resources Plan-
National Association of State Foresters
STATE FOREST (AND RANGE) RESOURCE PLAN*
(Suggested Format)
Also Known as the "Orlando Outline"

I. PROSPECTUS (EXECUTIVE SUMMARY)

A. State View

1. Overview of forest (and range) resource.
2. Contributions to state (e.g., recreation and wilderness, fish and wildlife, range, timber, water).
3. Environmental considerations (e.g., air, water, aesthetics, etc.).

B. Need for a State Forest (and Range) Plan

1. National activities (RPA, President's Environmental Message, etc.).
2. Interaction with other resource planning activities (other state agency plans and federal planning interaction with states under CZM, HUD 201, Rural Development, etc.).
3. State agency planning/budgeting (zero base budgeting).
4. Benefits to state for forest (and range) planning.
5. Identify broad goals for the state forest (and range) resources.

C. Level of Planning

1. Describe intent of plan, (e.g., provide basis for each program, or budget item, or activity; interface with RPA; maximize state resource outputs; provide forest (and range) resource data base to other state resource agencies).
2. Describe how plan was prepared, (e.g., state headquarters; forestry districts; state planning units; etc.)
3. Recognize other agency participation and contributions.

II. ASSESSMENT

This section of the plan need cover only the renewable resources of major interest in each state. These can be covered in a brief summary fashion or whatever greater detail is considered desirable to justify programs. Supporting data and analyses for this section are available in the RPA Assessment being prepared by the Forest Service. The same data will assist in the development of the State Forest (and Range) Resource Plan.

*Throughout the plan, all those elements deemed appropriate by the state agency from the Forest Service list plus any others of state interest should be developed. The Forest Service list includes eight resource elements: timber, range, wilderness, outdoor recreation, minerals, water, wildlife and fish, and human and community development; and includes support elements lands, soils, protection and facilities.
A. Basic assumptions - population, economic activity, disposable personal income, forest and range area, management levels, etc.

B. Analysis of trends in use of forest (and range) products and services with projections of demand.

C. Analysis of present forest-range resource situation with projections of supply of products and services.

D. Comparison of demand-supply projections of the economic, social and environmental implications.

E. Opportunities to increase and extend supplies of forest (and range) products and services.

F. Impact of nonrenewable resources (mineral) development and use on the forest (and range) base.

III. AUTHORITIES, LAWS, POLICIES, AND AGREEMENTS

A. Identify state forestry agency responsibilities, laws, agreements, and policies governing major forest (and range) programs.

B. Delineate state forestry agency relationships with federal laws and programs (P.L. 92-500, endangered species, CZM).

C. Identify other state resource agency responsibilities and authorities that relate to (A) and (B).

IV. FACTORS AFFECTING THE USE OF FOREST (AND RANGE) RESOURCES (Environmental, social, and economic)

A. Complementary uses and considerations.

B. Conflicting uses and constraints.

C. Resolutions of conflicts.

D. Opportunities for program development with State Forest (and Range) Plan.
   1. Needed improvement.
   2. Problem solutions.

E. State level process for resolution of conflicts and appeal process.

V. GOALS AND OBJECTIVES

A. Develop alternative goals for state forest (and range) resources.
   1. Identify problems and issues. (Problems are impediments to reaching the goals and objectives of a plan. Since problems are more readily perceived than goals, their identification may assist in defining goals. Issues are any concerns which could cause serious area-wide effects and which agency activity could resolve or help in resolving.
2. Collect additional data as necessary. This may include public input or meetings with other state agencies.
3. Evaluate problems and issues. This may be done through agency interaction.

B. Select goals.

C. Set program objectives (include all state forest (and range) programs - do not limit to federal co-op programs.)

VI. DEVELOP LONG RANGE (FIVE-YEAR PLUS) ALTERNATIVE AND RECOMMENDED PROGRAM DIRECTION

A. Analyze resource demand over time.

B. Indicate alternative general forestry measures or directions for meeting the objectives.

C. Display economic, environmental, and social effects associated with alternatives.

VII. ACTION PROGRAM

A. Provide a justification for activity projections (Table I), or cite existing functional plans. (See Appendix for suggested format.)

B. Display historic, current and projected accomplishment and budget (Table II); short view - 1981-85, and a long view - 1995-2030.

C. Identify other federal cooperative funding or state sources that might supplement S&PF cooperative funds for state forest (and range) programs not covered by S&PF cooperative program funds, (e.g., "208" planning and assessment, state legislature, Board of Regents research grants funds, etc.).

D. Formulate and recommend any needed laws, policies, or agreements to implement action program.
APPENDIX - B

Consolidated Payment Requests-
Forest Service Guidance to States
TO: STATE FORESTERS

Gentlemen:

The Committee of State Foresters met earlier this month to consider implementation of P.L. 95-313. One key topic was the procedure to use to guide States choosing to request consolidated payments (Section 9). Some States are contemplating making such requests to consolidate FY 1980 payments. The purpose of this letter is to give interim guidance pending development of appropriate Forest Service Manual direction and regulations.

The State Forest Resources Program referred to in Sec. 9(b) should serve several purposes in addition to providing a basis for consolidated payments. Obviously, such a program should be designed primarily to meet State Forester needs and objectives. It should also be a key source of input to the RPA planning process.

However, for the purpose of requesting consolidated payments the State program should include as a minimum:

A. Narrative:

1. A statement of the State Forestry organization's mission, role and authorities relating to those activities encompassed by P.L. 95-313. Significant inter-agency coordination or interfaces at the State level should be included.

2. A brief assessment of the forestry situation in the State. Ideally this should be based in part on (or at least not be in conflict with) the data developed for and presented in the RPA Assessment. The State assessment may be much more detailed in content and wider in scope than the RPA Assessment. As a minimum, the State assessment should relate to and provide a rationale for the cooperative programs and activities for which the State plans to seek funding through P.L. 95-313. Basic assumptions and trend projections may be particularly useful.
3. An outline of primary goals and objectives. This should give a long-range (10 years or more) direction to the State's participation in the programs encompassed by P.L. 95-313. This may take the form of problem identification, analysis of issues, broad priorities, etc. Some discussion of alternatives considered, public involvement, data gaps, research needs, and State policy direction may be useful.

4. A general description of each of the programs and activities that the State plans to include within the scope of P.L. 95-313. This should include any special or unusual implementation features or arrangements--such as contracting the work to other State agencies, consultants, etc.

Supporting Data:

A multi-year implementation schedule is a key element of the program. We have screened the data needs to a minimum of 21 activities and outputs. In accord with Section 9(a) of P.L. 95-313, the Forestry Incentives Program (FIP) shall not be included under consolidated payments. The attached table and definitions are needed to provide a standard format. A similar table will be used, we expect, for the next RPA effort and will focus on 1986-90 in particular. If you can suggest ways to improve the format or content of the draft table, please do so. To repeat, those are the minimum data needs of the Forest Service. Each State may choose to add activities or data to this basic framework. We expect to be able to improve the definitions, etc., to be used for FY 1981 and beyond.

Supporting data for consolidated payment requests are required for a minimum of three fiscal years—for example, 1980, 81, and 82. These estimates will not be binding on the State, nor on the Forest Service. They can be updated annually as needed.

We recognize that States electing to request consolidated payments starting in FY 1980 may not have enough time to complete a detailed, in-depth, State Forest Resources Program. We request that those States notify the Forest Service (Regional Forester or Area Director) of their intent as soon as possible. For this initial effort we will need, by July 1, 1979, the narrative, described in A. above, that is as complete as possible and supporting data shown on the attached table.

States requesting and receiving consolidated payments in FY 1980 on the basis of minimal narratives and supporting data will be expected to elaborate and improve on their program presentation in subsequent years. More detailed guidance for such planning will be developed in the next few months. However, the intent of the Committee of State Foresters and the Forest Service is to keep requirements to a minimum.
There will be opportunities to discuss State Forest Resource planning, consolidated payments and other aspects of implementation of P.L. 95-313 at your regional meetings in the next few months. In the meantime, your Area Director or Regional Forster and their staffs are available, at your request, to assist in preparation of the narrative and the tabular data needed if you choose to request consolidated payments in FY 1980.

There is an obvious need to coordinate the long range, multi-year RPA data and the short range or annual data needed for consolidated payments. Our Areas and Regions will soon have some work sheets to help you achieve that coordination during development of your State Forest Resources Program. We urge you to work with them in that regard whether or not you plan to request consolidated payments for FY 1980.

Sincerely,

PHILIP L. THORNTON
Deputy Chief, S&PF

Enclosures
## Supporting Data for Consolidated Payment Request Under P.L. 95-313

**FY 1980**

**State:**

**Date Prepared:**

**Prepared By:**

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</tr>
<tr>
<td>Z92</td>
<td>Five Occurrence Man Caused (Protected Area Only)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Z93</td>
<td>Acres Protected</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Z94</td>
<td>Cooperative Fire Loss (Protected Area Only)</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Total Rural Fire Prevention and Control (Sec. 7)</td>
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</table>

For each entry, except for *include under P29:* Include contributions of local agencies.
APPENDIX - C

Federal Assistance Program for Forest Planning
THE FEDERAL PLANNING ASSISTANCE PROGRAM

The Federal Planning Assistance Program has been developed by the Forest Service in cooperation with the National Association of State Foresters to assist states in developing the capability to more effectively plan for their forest and related resources. The Program was primarily designed to carry out the intent of Section 8(b) of the Cooperative Forestry Assistance Act of 1978 (PL 95-313) which requires:

"...that data regarding forest lands are available for and effectively presented in State and Federal natural resources planning."

The Act further recognizes the key role of the State Forester in achieving this purpose by listing his activities which directly relate to the above purpose. These include:

--"the assembly, analysis, display and reporting of State forest resources data;
--the training of State forest resources planners; and
--participation in natural resources planning at the State and Federal levels."

The Program's emphasis has been on assisting states in the development and use, on a continuing basis, of a "process" by which they may systematically plan their forestry future. States are also encouraged to develop what is

---

term a "basic planning capability" consisting of (Forest Service, 1981):

--the equivalent of at least one permanent, full-time professional
employee assigned to planning;

--an organizational structure incorporating long-range planning as an
integral part of agency operating procedures;

--the ability to conduct basic social, economic and environmental
analyses and to use basic planning systems within the planning process;

and

--the ability to develop, maintain and use a forest resources data base.

The Federal role orchestrated through the Area Planning and Development
(AP&D) office of the Forest Service's State & Private Forestry, consists of
providing states with financial, technical and related planning assistance
at the request of state agency officials involved in planning. Forest Service
Area Planning staff seek to familiarize state planners with the general nature
and purpose of State Forest Resource Plans and their relationship to Forest
Service planning efforts. An attempt is also made to achieve a uniform
understanding regarding state involvement in RPA, and to inform states of
specific information needs for development of the RPA program and assessment.

**PLANNING PROCESS GOALS**

Some of the stated purposes for establishment of a formalized planning
process are to (Forest Service, 1981):

--provide a working environment for the training of State forest resource
planners;

--provide the institutional capability for the assembly, analyses, display
and reporting of State forest resources data;

--provide the information needed for State Forester participation in
natural resources planning at the State and Federal levels;
provide a procedure for improving planning coordination among State and Federal agencies and for improving coordination between forestry activities of consulting foresters, private industry, conservation organizations, and those at the State and local level;

provide a decisionmaking and program development process which will improve management of forest resources;

provide a procedure for the consideration of current political, social, economic, and environmental information in a systematic decisionmaking process; and

provide a procedure for generating information needed to prepare and gain support for agency program budgets.

PLANNING PRODUCTS

State Forest Resource Plans are to provide a tangible end-product for the planning process. In addition to articulating and recording management goals, objectives, current (and future) resource needs, issues and opportunities, the plans are to identify program and policy alternatives available to address these demands. Some of the suggested purposes for a State forestry plan are to (Forest Service, 1981):

describe the social, economic and environmental effects of proposed program activities;

describe the resource contribution opportunities on all land ownerships to meet anticipated demands;

describe cooperative programs and relationships between Federal, State and local agencies regarding the protection, use and management of forest and rangelands; and

describe a record of long-range decisions affecting the protection, use and management of forest and rangelands.
Although a State Resources Plan is not required for State participation in any aspect of Forest Service planning, nor is one required to receive Federal cooperative program funds, such a Plan can serve as the basis for consolidated payment applications if it includes all the required information. (See Appendix for text of S & PF Deputy Chief's letter dated March 28, 1979.)

**FOREST SERVICE FINANCIAL ASSISTANCE**

The Forest Service will make available to the states upon request financial assistance to develop and use a systematic planning process, and to produce, implement and evaluate a State Forest Resources Plan. Other program activities eligible for Federal assistance include such things as (Forest Service, 1981):

- providing forest resources data to or participation in other planning affecting the protection, use and management of forest and rangelands;
- identification and mapping of prime timberlands;
- training of State forestry personnel in basic planning techniques and how to provide information and interact with other planning processes; and
- special efforts to collect, interpret and disseminate forest resources data for planning purposes.

Up to 80 percent of the costs of these activities can be provided by the Forest Service. Determination of need is currently based on planning goals set by the State Forester and the activities required to achieve them. Funds are allocated on the basis of State input to Forest Service planning and the National RPA Program development and budgeting process.

Beginning in fiscal year 1984, however, the national priority for financial assistance will be for fund the equivalent of one full-time
professional employee assigned to planning in each state. To qualify for this increment of funding States must agree to do the following (Forest Service, 1981):

--Develop and use a systematic State forest resources planning process.
--Produce, implement and maintain a State Forest Resources Plan.
--Secure the equivalent of at least one full-time professional employee assigned to planning.
--Develop an initial direction document which spells out the organization's commitment to preparing a State Forest Resources Plan.
--Develop a plan-of-work which builds upon the initial direction document.
--Develop a process for program implementation to ensure program direction is carried out according to plan.
--Develop and implement a process for program evaluation to monitor the effects of implementing the State Forest Resources Plan.
--Develop and maintain a basic data base to support the planning effort.
--Provide forest resources data to other State and Federal resources planning to the extent time permits.

States failing to agree to all of the above requirements will still be considered for financial assistance, but not as a part of the national priority. Funds remaining after the national priority is funded will be available to provide for additional increments of planning assistance work as proposed by the states. These increments should be discrete, well-defined units of work with clearly visible results or end-products and should (ideally) be aimed at improving the quality, content or reliability of the State Forest Resources Plan.

Other factors influencing funding decisions include: project size, cost, complexity, duration, usefulness and degree of urgency. Important too is the willingness of State officials to commit funds to the project and the contribution the project makes towards achieving State and Federal planning goals.
RELATED ASSISTANCE PROGRAMS

Section 8(a) of the Cooperative Forestry Assistance Act of 1978 authorizes the Secretary of Agriculture to provide financial, technical and related assistance to the State Foresters for:

"...the development of stronger and more efficient State organizations that will enable them to better fulfill their responsibilities for the protection and management of non-Federal forest lands."

This Organization and Management Assistance as it is called is available for matters relating to:

--organization management;
--program planning and management;
--budget and fiscal accounting services;
--personnel training and management;
--job and workload analysis; and
--information services and record keeping.

Section 8(c) of CFRA also makes available funds to State Foresters and others to:

"...ensure that new technology is introduced, new information is integrated into existing technology, and forestry research findings are promptly made available to state forestry personnel..."

These "technology transfer" funds help to promote technological innovation and application of new methods to the development of State forest resource plans and planning processes. They also assist states in avoiding old problems and inefficiencies by applying the appropriate technology.

In addition to planning assistance funds, Renewable Resources Evaluation (RRE) funds are also available to develop, organize, store, retrieve, and
analyze forest resources data for the RPA planning process. These funds may be used to support the State planning effort even though specific RPA involvement is not requested.

FOREST SERVICE TECHNICAL ASSISTANCE

Upon request, the Forest Service will provide technical assistance to the states concerning all aspects of forest resources planning. The type and amount of such assistance will vary depending on state needs. Technical assistance is provided via: long or short-term professional services, the training of state employees, and recommending or coordinating the services of consultants, universities or other agencies.

Forest Service technical support for the Planning Assistance Program is provided by a small group of planning specialists at the Washington Office level and by a staff group in each of the seven western Regional Offices and the Northeastern and Southeastern Area S & PF locations. Forest Service Region and Area staff groups provide direct assistance to the states. To the extent that funds and manpower ceilings permit, they maintain the knowledge and "state-of-the-art" skills necessary to fulfill state needs.

KINDS OF ASSISTANCE AVAILABLE

There are basically three kinds of federal technical assistance available to the states: 1) Planning process assistance; 2) Social, economic and environmental analysis; and 3) Information management assistance. The three types are described below in greater detail (Forest Service, 1981).

1. **Planning Process** - This assistance includes:

   a. Development of an understanding about systematic planning processes and their value to agency managers;

   b. Organizing a planning process considering staffing, information, and analytical needs;
c. Development of basic planning skills using proven planning principles;
d. Use of planning process to improve agency decisionmaking and overall management efficiency;
e. Use of automated systems to guide a planning process;
f. Methods and procedures for displaying and providing forest resources information to other planning processes;
g. Use of information concerning forestry-related legislation in a planning process; and
h. Use of policy analysis in the development of current and proposed programs.

2. Social, Economic, and Environmental Analysis - This assistance includes:
   a. Describing and evaluating the social setting of a State and its relationship to forest and range resources;
b. Use of public involvement techniques to build internal and external support for agency programs;
c. Evaluation of program alternatives in terms of social, economic, and environmental impacts;
d. Analysis of political support or political opportunities concerning proposed changes in forestry programs;
e. Use of supply and demand analysis in developing and evaluating alternatives; and
f. Development of procedures and use of systems in social, economic, environmental analysis.

3. Information Management - This assistance includes:
   a. Obtaining, interpreting, storing, and displaying information as a part of forest resources planning;
b. Use of statistical procedures to describe information, test its accuracy and evaluate relationships; and
c. Use of systems in information management.

Some of the other activities mentioned in Section 8(c) of the Cooperative Forestry Assistance Act and eligible for federal technical assistance are:

--- applying research result and conducting pilot studies;
--- developing and maintaining technical information systems; and
--- training State forestry personnel to carry out these activities.

Technical assistance in collecting and analyzing forest resources information can also be obtained from the Resources Evaluation Work Units of the Forest Service. Formerly the Forest Survey, these Work Units periodically conduct a comprehensive survey (inventory) and analysis of forest resources of each state. The inventories provide information about: the extent, character and condition of forested lands; forest land productivity and ownership; and kinds of forest outputs these forested lands are capable of producing (e.g., timber volume, wildlife habitat, forage). Work Units can also assist in gathering and analyzing data that might be helpful in monitoring the long-term effects of program direction found in State Forest Resource Plans.

PROGRAM ADMINISTRATION

Accomplishment Reporting

Accomplishment reporting measures the progress of the Planning Assistance Program in meeting the goals established in the RPA Program and provides information needed to administer the ongoing program. Accomplishment is based on the percentage of planning process work completed annually and is reported in terms of total acres planned for. This figure is obtained by multiplying the total forest area within the state by the percent of work completed (Table ____). Reports include only those acres planned for or evaluated under supervision of State Foresters or their equivalent.
Program Evaluation

During each fiscal year, a minimum of two operational visits are carried out by Forest Service officials to monitor the progress of each state involved in the Program. In addition to these formal reviews, Region and Area personnel also conduct a number of service trips annually to each state to ensure that Program objectives are being met.

These reviews and service trips are to focus on the following areas in order to improve national program guidance and continuity:

-- Review accomplishments and evaluate progress and performance based on a States' plan-of-work.

-- Review State records, files, correspondence and other planning documents produced by states.

-- Identify problem areas and prepare recommendations for problem solution.

-- Evaluate formal planning guidance provided and delivery of planning assistance to the states.

-- Evaluate the quantity and quality of technical support services provided.

-- Schedule requested technical assistance.
PLAN FOR STATE PARTICIPATION
IN THE PREPARATION OF THE 1985 RPA PROGRAM

Introduction
A. Purpose of Plan

The purpose of this Plan is to achieve a uniform understanding within the Forest Service and among the States about the role of the States in the 1985 RPA process. The Plan establishes a time schedule for specific tasks and events where State Forester involvement is important to the development of the 1985 RPA Program. States are requested to participate on the basis of their willingness and capability. Contributions are basic to the development of a program which will adequately reflect needs on non-Federal lands.

This Plan does not provide specific instructions on data needs. These will be provided by Regional Foresters in the West and Area Directors in the East, when actual requests for State input are made.

B. RPA in Brief

The Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974, as amended, provides a framework for comprehensive, long-range, and continuous planning of our Nation's natural resources. RPA requires that companion documents, a Renewable Resources Assessment and a Forest Service Program, be prepared every 10 and 5 years, respectively. These documents look 50 years ahead to plan and prepare for our natural resource future based on today's knowledge. The first Assessment and Program documents were completed in 1975; the second in 1980.

The 1985 RPA Process - Some Major Improvements

The Forest Service is now beginning work on a 1984 Supplement to the 1979 Assessment and a 1985 Program. The Assessment Supplement will consider new and improved information available since the 1979 Assessment was published and will help to set the goals for the 1985 Program. The 1985 Program will spell out our natural resource goals and their implications for each of the resources that are obtained through management of National Forest System lands, research conducted by the Forest Service, and assistance provided for State and private forest landowners. It will also detail the management objectives and strategies designed to achieve these goals. By doing so, the Program will provide Congress with a practical basis to relate annual budgets to long-term resource needs.

Based on the critique of the 1980 RPA, a determined effort has been made to improve the process for 1985 as it pertains to information and analysis. Briefly, the Program will evolve from strengthened ties to the findings in the 1979 Assessment, and the opportunities presented in the 1984 Assessment Supplement.
Equally important will be the use of improved data developed at the grassroots level during State forest resource planning, preparation of new National Forest Land and Resource Management Plans, and research plans of the Forest Service and forestry schools. At least two of the five program alternatives to be developed for State and private forestry programs—a "State (preferred) Plan" and a "Resource Maximum"—will be based primarily on information developed in State Forest Resource Plans. While some State plans will not be completed at the time we develop the 1985 RPA Program it is expected that States will be far enough along in their planning process to satisfy RPA data requirements.

One significant difference in the 1985 Program will be orientation to broad national goals rather than policy issues as in the 1980 Program. The public will initially participate in 1985 Program development by helping to formulate a single National goal for each of the following 10 opportunity areas: Timber Supply; Range Productivity; Recreation Use; Wilderness Use; Wildlife and Fish Habitat; Minerals and Energy Development; Water Yield and Quality; Rural Communities and Human Resources; International Forestry; and Protection and Support.

Public participation will again be invited when the draft Program and the draft Environmental Impact Statement are released in late fall 1983. These separate documents will describe detailed alternatives for moving toward our national goals, and a preferred program will be identified at this point. Public comments will help the Forest Service and the Secretary of Agriculture select a final recommended program to meet the 1985 requirement of the Resources Planning Act. Public comments received during State, Regional, and National Forest planning processes will also be used in the 1985 RPA process.

**State Participation**

State Foresters are requested to participate throughout the 1985 RPA process. Part 2 of this plan lists specific tasks and events where State Forester involvement is important to the development of the Program. It is essential that these tasks be completed as scheduled in order to meet the overall RPA timetable.

More specific instructions on these tasks will be provided by Regional Foresters in the West and Area Directors in the East, when the actual requests for State input are made. By March 15, 1982, Regions and Areas will brief State Foresters on the 1985 RPA process, and provide specific training on the structure and kind of information needed (costs, output targets, and supporting data) for cooperative program activities.

In addition to providing the Regions and Areas with program data, and their participation in in-Service and public review processes, State Foresters will also be invited to participate in the RPA Decision Process. Regional Foresters and Area Directors will make contact with State Foresters to gain their input prior to meetings with the Chief and Staff to make four key decisions:

1. Selection of a national goal for each opportunity area (June 1982),
2. Formation of national alternatives (June 1982),
3. Selection of the preferred alternative for the draft Program (September 1983), and

Also, a representative of the National Association of State Foresters will be invited to interact with the Forest Service at each of these four decision-making meetings.
APPENDIX - D

Survey Questionnaire
STATEWIDE FOREST RESOURCES PROGRAM PLANNING (SFRP)
A National Information Survey

State of ______________________

Please be as complete as possible. Lengthy answers may be continued on back of page.

I. Background

In what year were formal efforts begun to comprehensively plan for your state's forest and related resources?

Initiation Date __________

What is the currently anticipated completion date for work on this initial SFRP planning program (if already completed, give the date of completion)?

Date of Completion __________

How often will this program be updated; when will it be revised?

Next program update in ________, then every _____ years.

New program required by ________, then every _____ years.

What is the source of state agency commitment to comprehensive resource planning (e.g., legislative direction, administrative or executive order, professional interest, interest group pressure, RPA-type initiative, etc.)?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
II. Organization and Resources

Which state agency bears primary responsibility for comprehensive forestry planning (e.g., Department of Natural Resources, Environmental Planning Board, State Planning Agency, etc.)?

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________

What other state agencies also have involvement in SFRP planning? How are they involved? Please list.

<table>
<thead>
<tr>
<th>Agency</th>
<th>Nature of Involvement</th>
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</table>

How many full and part-time professional staff are currently employed in conjunction with state forestry planning efforts within administering agencies?

Number of full-time positions ___________

Number of part-time positions ___________

On an annualized basis, approximately what dollar amounts have been budgeted for the express purpose of SFRP planning?

FY 1980 _______ FY 1981 _______ FY 1982 _______
Based on your state's (limited) experience with comprehensive resource planning, please rank the following SFRP activities in terms of their "relative importance" by indicating: (1) The estimated proportion of total available man-hours of labor spent on each activity, and (2) The approximate percentage of total planning budget allocated to each program area.

*Please note the following exercise is designed to provide only a rough indication of program emphasis, and that neither measurement index necessarily bears any direct relationship to program content, quality or direction.

<table>
<thead>
<tr>
<th>Activity</th>
<th>% Labor</th>
<th>% Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource inventory</td>
<td></td>
<td></td>
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<tr>
<td>Information management</td>
<td></td>
<td></td>
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<tr>
<td>Social, economic and environmental assessment</td>
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<td></td>
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<tr>
<td>Public involvement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development of planning goals, strategies and criteria</td>
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<td></td>
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<tr>
<td>Issue identification, consolidation and prioritization</td>
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<td></td>
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<tr>
<td>Identification and evaluation of alternatives</td>
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<td></td>
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<tr>
<td>Program selection and public policy development.</td>
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<td></td>
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<tr>
<td>Implementation/monitoring.</td>
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<tr>
<td>SFRP administration and coordination</td>
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</tr>
<tr>
<td>Other</td>
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</tbody>
</table>

100% 100%
III. The Planning Process

What types of documents will ultimately be produced as a result of SFRP planning efforts in your state, and how will each be used? Please list.

<table>
<thead>
<tr>
<th>Documents Produced</th>
<th>Intended Purpose</th>
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What technique is employed to assemble, sort, and manipulate natural resource inventory data used in the assessment of your state's forest resource (e.g., Automated Information Management Systems)?

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</table>

Will long-term analytical forecasting techniques (e.g., trend extrapolation, simulation methods, cross-impact analyses, scenarios, decision trees, etc.) be used at any point in the development of your state's planning program to assist in determining likely future conditions?

☐ Yes

☐ No
Is the SFRP program in your state linked in any way with the budgeting and/or appropriations processes within state government? If so, how? (Briefly)

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

Regarding public involvement, where does this occur under your present system of planning? What mechanism is used to obtain public input? (Briefly)

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

Will a formal resource assessment be conducted as a part of or in addition to the development of a program for managing your state's forest resources?

☐ Yes

☐ No
IV. Implementation and Monitoring

What form of commitment is relied upon to assure implementation of completed SRFP plans (e.g., legislative direction, administrative or executive order, professional interest, interest group pressure)?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Which state authorities are responsible for overseeing SRFP and for providing the process with continued support and direction?

<table>
<thead>
<tr>
<th>Authority</th>
<th>Role</th>
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</tbody>
</table>

Does your state's SRFP process provide for on-going formal review and evaluation of program results, once implemented?

☐ Yes

☐ No
V. **Summary**

Will your state's forestry program coordinate with and provide useful input to the broader federal RPA planning process (e.g., local and regional goals, targets, supply and demand projects, etc.)?

☐ Yes

☐ No

In your opinion, have federal efforts to provide planning assistance to the states (notably, USFS, State and Private Forestry) been sufficient to encourage the development of meaningful and effective statewide forestry plans? Explain.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Thank you for completing the survey. Your response is most helpful!

Survey Completed By ________________________________ (name)

______________________________ (date)

Job Title ________________________________ (department)

When completed please return to:

Brian D. McCann
Research Assistant
Department of Forest Resources
College of Forestry
University of Minnesota
St. Paul, Minnesota 55108
APPENDIX - E

Detailed Survey-data Analysis
<table>
<thead>
<tr>
<th>States</th>
<th>Source of Planning Commitment</th>
<th>Planning - Budgeting Link</th>
<th>Information Management System</th>
<th>Analytical Forecasting</th>
<th>Mode of Public Involvement</th>
<th>Program Documentation</th>
<th>Program Monitoring Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeastern U.S.</td>
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<td></td>
</tr>
<tr>
<td>Delaware</td>
<td>Administrative, Legislative</td>
<td>Yes</td>
<td>Manual/Automated</td>
<td>Yes</td>
<td>A-D,E,F</td>
<td>B,C,E,G,H</td>
<td>State Forester - Planning Committee</td>
</tr>
<tr>
<td>Indiana</td>
<td>Administrative</td>
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<td>Manual</td>
<td>Yes</td>
<td>A,C,D,E,F</td>
<td>A,G,H,K</td>
<td>State Forester - Planning Advisory Committee</td>
</tr>
<tr>
<td>Iowa</td>
<td>Administrative, Legislative</td>
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<td>Manual</td>
<td>Yes</td>
<td>A,C,D,E</td>
<td>C,F</td>
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</tr>
<tr>
<td>Maine</td>
<td>Administrative</td>
<td>Yes</td>
<td>Automated</td>
<td>Yes</td>
<td>A,C,D,E</td>
<td>B,C,E,G,H</td>
<td>State Forester - Planning Committee</td>
</tr>
<tr>
<td>Maryland</td>
<td>Administrative, Executive</td>
<td>Yes</td>
<td>Automated</td>
<td>Yes</td>
<td>A,C,D,E,F</td>
<td>A,B,C,D,E,H,J,K</td>
<td>State Forestry - Director, State Forest Service</td>
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<td>Manual</td>
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<td>State Forester - Director, Dept. Natural Resources</td>
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<td>--</td>
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<tr>
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<td>Manual</td>
<td>No</td>
<td>A,C,D,E,F</td>
<td>A,B,C,H,K</td>
<td>State Forester - Forest Resources Committee</td>
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<td>Manual</td>
<td>No</td>
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<td>State Forester - Forestry Committee</td>
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<td>Manual</td>
<td>No</td>
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<td>B,C,E,H,K</td>
<td>State Forester - Program Advisory Committee</td>
</tr>
<tr>
<td>Ohio</td>
<td>Administrative</td>
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3. Planning - Budgeting Link
4. Information Management System
5. Analytical Forecasting
6. Mode of Public Involvement
7. Program Documentation
8. Program Monitoring Authority
9. Source of Planning Commitment
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Footnotes:


2 State agency commitment to planning usually originates with one (or more) of three sources: 1) Administrative - refers to internal planning initiative shown by state forestry officials. This is the most common form of commitment, 2) Executive - an expression of support for forestry planning from within the executive branch of state government (e.g., executive order, Governor's resolution), 3) Legislative - a formal or informal declaration of support for planning from state legislative officials.

3 Refers to use of analytical forecast techniques (e.g., trend extrapolation, simulation methods, cross-impact analyses, scenarios, decision trees) in development of a state FRP plan to assist in making long-term projections.

4 Modes of public involvement (key):
   A. Inter-agency review and comment
   B. Formal public hearings
   C. Public meetings, workshops, seminars, regional forums, etc.
   D. Selected contact and review
   E. Advisory committee(s)
   F. General informational mailings, media campaigns, random public contact, opinion surveys, etc.
   G. Other

5 SFRP program documentation (key):
   A. Historical, developmental or introductory planning document.
   B. Planning concept document
   C. Social, economic or environmental assessment
   D. Public involvement plan
   E. Issues papers
   F. Program alternatives/levels document
   G. Supplemental work plan, management guide or implementation package
   H. State forest resources plan
   I. Regional plans or management guidebooks
   J. Informational brochures, pamphlets, public awareness guides, A/V presentations, etc.
   K. Miscellaneous published reports, executive summaries, maps, conference transcripts, draft or working papers.

6 Person(s) or agency most directly responsible for monitoring and evaluating the progress of SFRP program efforts, both prior to and after plan implementation.
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Footnotes:


2  Miscellaneous expenditures of planning funds and labor, in the amounts shown, were as follows:

<table>
<thead>
<tr>
<th>State</th>
<th>Activity</th>
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<tbody>
<tr>
<td>Colorado</td>
<td>Research and development</td>
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<tr>
<td>Florida</td>
<td>Formal planning training</td>
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<tr>
<td>Indiana</td>
<td>Planning orientation</td>
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<td>Maryland</td>
<td>Local FRP assistance</td>
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<tr>
<td>Nebraska</td>
<td>Miscellaneous activities</td>
</tr>
<tr>
<td>Ohio</td>
<td>Analysis of issues</td>
</tr>
</tbody>
</table>

3  Louisiana responded to the survey by numerically ranking the listed planning activities in order of the total time and dollars spent (or to be spent) on each. Rankings were as follows: 1) Public involvement, 2) Issue identification ..., 3) Identification of alternatives, 4) Program selection, 5) Implementation/Monitoring, 6) Information management, 7) Inventory, 8) Development of goals ..., 9) SFIP administration, 10) Social, economic and environmental assessment.

4  Funds not allocated on the basis of individual planning activities.

5  The remaining labor (50%) is divided among activities 5-8. Remaining planning funds (40%) are divided variously among planning activities 2-10.
APPENDIX - F

State Forest Resource Planning Legislation
SENATE OF MARYLAND

91r3636 No. 995 3203-NR000

By: Senator Crawford
Introduced and read first time: February 23, 1979
Assigned to: Economic Affairs

Committee report: Favorable with amendments APPROVED
Senate action: Adopted BY THE GOVERNOR
Read second time: March 14, 1979

CHAPTER 504 MAY 29 '79

AN ACT concerning

Forestry

FOR the purpose of requiring the Department of Natural Resources to develop a long-term forest resource plan to provide for the sustained yield of forest resource benefits; authorizing the Department with a certain federal department and to accept certain federal funds; and generally relating to forest resources.

BY adding to

Article - Natural Resources
Section 5-214.

Annotated Code of Maryland

SECTION 1. BE IT ENACTED BY THE GENERAL ASSEMBLY OF MARYLAND, That section(s) of the Annotated Code of Maryland be repealed, amended, or enacted to read as follows:

Article - Natural Resources

5-214.

(A) THE DEPARTMENT SHALL DEVELOP A SYSTEM FOR LONG-RANGE RENEWABLE FOREST RESOURCES PLANNING. THE PUBLIC AND PRIVATE FOREST LAND RESOURCES OF MARYLAND, INCLUDING, BUT NOT LIMITED TO, WOOD FIBER, FOREST RECREATION, WILDLIFE,

EXPLANATION: CAPITALS INDICATE MATTER ADDED TO EXISTING LAW. [Brackets] indicate matter deleted from existing law. Underlining indicates amendments to bill. Strike-out indicates matter stricken by amendment.
SENATE BILL No. 995

FISH, FOREST WATERSHED, AND WILDERNESS POTENTIAL, SHALL BE EXAMINED AND INVENTORIED PERIODICALLY. AS PART OF THE FOREST RESOURCE PLANNING PROCESS, THE DEPARTMENT SHALL PERIODICALLY DEVELOP, REVIEW AND REVISE A RESOURCE PLAN THAT SHOULD HELP TO PROVIDE FOR THE SUSTAINED YIELD OF FOREST RESOURCE BENEFITS FOR THE CITIZENS OF MARYLAND. THE FOREST RESOURCE PLAN SHALL BE MADE AVAILABLE FOR PUBLIC AND LEGISLATIVE REVIEW AND COMMENT.


(C) THE DEPARTMENT MAY ACCEPT FEDERAL FUNDS AND MAY PROVIDE COST SHARE FUNDS TO COOPERATING GOVERNMENTS.

SECTION 2. AND BE IT FURTHER ENACTED, That this Act shall take effect July 1, 1979.
CHAPTER 1163

An act to add Chapter 12 (commencing with Section 4800) to Part 2 of Division 4 of, and to repeal Sections 741 and 744 of, the Public Resources Code, relating to forest resources, and making an appropriation therefor.

[Approved by Governor September 30, 1977. Filed with Secretary of State September 30, 1977.]

I am reducing the appropriation contained in Section 4 of Assembly Bill No. 452 from $450,000 to $400,500 by reducing subsection (a) from $150,000 to $133,500 and subsection (b) from $300,000 to $257,500. These funds would be used for hiring a liaison officer. I do not believe this position is necessary at this time.

With this reduction, I approve Assembly bill No. 452.

EDMUND G. BROWNJR., Governor

LEGISLATIVE COUNSEL'S DIGEST

AB 452, Keene. Forest resources.

The Z'berg-Nejedly Forest Practice Act of 1973 governs the conduct of forest practices on timberland. Under existing law there is no requirement for preparation of a formal assessment of the overall forest resources of the state or for preparation of a forest resource program.

This bill would require the Director of Forestry, under policy guidance from the State Board of Forestry, to prepare and submit to the board a forest resource assessment and analysis, which would include specified elements, by July 1, 1979, and to present an updated assessment by January 1, 1987, and January 1 of each fifth year thereafter. The bill would also require the board to prepare, based on a review of the assessment, a forest resource policy statement containing specified elements.

The bill would make legislative findings and declarations in such connection, would require the board to biennially determine state needs for forest management research and submit specified reports in such connection to the Governor and the Legislature, would authorize the director to prepare and implement a forest management information storage and retrieval program regarding forest land conditions in the state, would repeal certain related existing powers and duties of the board, and would enact other related provisions.

It would appropriate $450,000 to the Department of Forestry for expenditure, as specified, for purposes of the provisions of the bill.

Appropriation: yes.

The people of the State of California do enact as follows:

Ch. 1163 — 2 —

SECTION 1. Section 741 of the Public Resources Code is repealed.

SEC. 2. Section 744 of the Public Resources Code is repealed.

SEC. 3. Chapter 12 (commencing with Section 4800) is added to Part 2 of Division 4 of the Public Resources Code, to read:

CHAPTER 12. FOREST RESOURCES ASSESSMENT AND POLICY ACT OF 1977

4800. This chapter shall be known and may be cited as the Forest Resources Assessment and Policy Act of 1977.

4801. The Legislature finds and declares as follows:

(a) The forest resources of California provide vitally important economic and environmental benefits to the people of California.

(b) Demands on forest resources in California are expected to increase significantly in the next decades.

(c) Forest resources in California are limited.

(d) Better use of forest resources can result where there is good information as to anticipated needs and constraints and the potentials for meeting such needs consistent with Section 4513 of the Public Resources Code.

(e) The necessary information is not now available and should be developed.

(f) It is the intent of the Legislature to provide for the assessment of California's forest resources.

4802. As used in this chapter:

(a) "Board" means State Board of Forestry.


(c) "Assessment" means the forest resource assessment and analysis developed pursuant to Section 4803.

(d) "Director" means the Director of Forestry.

(e) "Forest resources" means those uses and values associated with, attainable from, or closely tied to, forest land, including fish, range, recreation, timber, watersheds, wilderness, and wildlife.

(f) "Forest land" means timberland defined pursuant to subdivision (h), and other lands which have been withdrawn from timber production, such as state parks, national parks, and wilderness areas.

(g) "Timberland" means land on which is growing a significant stand of trees of commercial species, or potential commercial species, either in public or private ownership or which is generally capable of maintaining a stand of trees in perpetuity and not withdrawn or otherwise devoted to uses other than timber production.

(h) "Timber" means wood fiber of commercial or potential commercial species growing on timberland as defined in subdivision (g).
4803. (a) Under policy guidance from the board and in consultation with the Secretary for Resources, the director shall prepare and submit to the board and the Secretary for Resources, a forest resource assessment and analysis not later than July 1, 1979, and shall present an updated assessment by January 1, 1987, and by January 1 of each fifth year thereafter. The assessment and analysis shall recognize distinct differences in ownership and management of forest resources in California between the various public and the various private owners and shall include, but not be limited to, the following:

(1) An assessment and analysis of the supply and availability of the various present and potential forest resources of the state, including limits to such supplies imposed by natural site conditions, such as slope stability and erosion hazard, or by governmental restriction, such as special zoning. Among resource potentials to be evaluated are opportunities to:

(i) Improve and rehabilitate the understocked timberland in California and to more fully utilize the productive potential for growing and harvesting timber.

(ii) Improve wood fiber utilization and wood product recycling.

(iii) Salvage trees infested with insects and diseases on timberland.

(iv) Improve the management of forest wildlife and wildlife habitat within the state.

(v) Increase the quantity and quality of recreation available in the state.

(vi) Improve and rehabilitate forest range areas within the state.

(vii) Increase the potential to use wood fiber from timberland as an economically viable source of fuel for energy production.

(2) An analysis of present and anticipated demand for various forest resources in the state.

(3) A description and evaluation of current state programs and responsibilities in cooperative state-federal forestry programs, and management of state and local public forest and related lands.

(4) A discussion of important policy considerations, laws, regulations, management responsibilities, and other factors expected to influence and significantly affect the use, ownership, and management of forest and range resources.

(b) In preparing the assessment, the director, under policy guidance of the board, shall solicit the cooperation of, and information collected by, public and private organizations, federal forest resource agencies, state agencies concerned with forest resources, county planning and taxation agencies, and state-supported forest resource research agencies.

(c) For the purpose of assisting the director and the board in preparing the assessment and its revisions, the board may appoint such advisory committees as it deems necessary. Such committees shall consist of individuals with expertise in forest resource fields with particular emphasis on survey and program analysis, and shall include representatives of state agencies concerned with the use of forest resources.

(d) In preparation of the assessment the director shall analyze the need to:

(1) Develop and maintain an effective system for the collection, analysis, and display of such data in forms that contribute to the achievement of the purposes of this chapter.

(2) Identify high priority needs for completing the data base and analytical framework essential to improving the quality of future assessments.

(3) Evaluate the accuracy and completeness of existing data and of steps needed to improve the accuracy and completeness of data for future assessments.

4804. (a) Based on a review of the assessment prepared pursuant to Section 4803, and consistent with Sections 740 and 4513, the board shall prepare a forest resource policy statement.

(b) Such policy statement shall recognize distinct differences between the various public and various private owners of forest resources in the state and should include, insofar as is possible, the following:

(1) A delineation of specific needs and opportunities for promoting both public and private forest resource management programs in California.

(2) A discussion of priorities for accomplishment of program opportunities, with specified costs, results, and possible constraints on implementation.

(3) An analysis of the relation of the alternative forest resource policies to employment opportunities in California.

4805. The board shall hold public hearings on the assessment and the proposed policy statement prepared pursuant to Sections 4803 and 4804.

4806. (a) The board, assisted by the director, shall biennially determine state needs for forest management research and recommend the conduct of needed projects to the Governor and the Legislature.

(b) To facilitate reporting and updating the assessment pursuant to Section 4803, the director, under guidance by the board, may prepare and implement a forest resource management information storage and retrieval program regarding forest land conditions in the state. Such program shall be coordinated and integrated to the maximum extent practicable with data storage and retrieval programs of other state and federal agencies and institutions. The director shall review existing forest resource management storage, retrieval, and analysis systems in the institutions of higher learning in this state, and insofar as the board deems desirable, may utilize such systems as a model for the state program established pursuant to this section.
4807. (a) The director shall convey the assessment and its updates to federal agencies charged with managing public land within the state.

(b) To assure the availability and compatibility of data and scientific information needed for development and implementation of the assessment, the board and the director shall cooperate with the United States Department of Agriculture in conducting surveys and analyses as provided for in the Resources Planning Act and with other federal agencies as provided by federal law.

SEC. 4. The sum of four hundred fifty thousand dollars ($450,000) is hereby appropriated from the General Fund to the Department of Forestry for expenditure for the purposes of Chapter 12 (commencing with Section 4800) of Part 2 of Division 4 of the Public Resources Code, in accordance with the following schedule:

(a) One hundred fifty thousand dollars ($150,000) for expenditure during the 1977-78 fiscal year.

(b) The three hundred thousand dollars ($300,000) for expenditure during the 1978-79 fiscal year.

It is the intent of the Legislature that the Department of Forestry and other departments affected by this act extend a high priority to their budget requests in subsequent fiscal years for the purpose of the Forest Resources Assessment and Policy Act of 1977.
HB 475

STATE OF NEW HAMPSHIRE

In the year of Our Lord one thousand nine hundred and eighty-one

AN ACT

establishing a forest resources planning act and making appropriations therefor.

Be it Enacted by the Senate and House of Representatives in General Court convened:

1 Forest Resources. Amend RSA 220 by striking out said chapter and inserting in place thereof the following:

CHAPTER 220

FOREST RESOURCES PLANNING ACT

220:1 Declaration of Policy. It is hereby recognized and declared that the public welfare of this state requires the maintenance, protection, and rehabilitation of forest lands, soils and cover, for the purpose of promoting healthful surroundings, recreational opportunities, and scenic values, of improving conditions for water and wildlife, and of providing all other benefits - social, economic, and environmental, that accrue to the public as a result of perpetuating a proper forest cover on the land. It is further recognized and declared that accurate and detailed information concerning the state's timber resources and uses is essential
to planning for the wise use and perpetuation of those resources and that the welfare of the state is served by making such information as complete, current, and available as possible.

220:2 Definitions. In this chapter:

I. "Director" means the director of the division of forests and lands, department of resources and economic development.

II. "Forest land" means all lands in this state, except those owned by the United States of America, which by reason of their location and character of soil have their principal use as wood or timber producing areas and other lands the continuance of which under forest cover is of substantial importance to the public interest.

220:3 Forest Advisory Boards. The director shall appoint forest advisory boards in each county or other geographic unit composed of at least 7 residents of said counties or units who are interested in forest conservation. The duties of said advisory boards shall be to advise and assist the director in carrying out the provisions of this chapter and further to act as representatives of local concerns and issues. Each board shall meet at least semi-annually and shall organize by choosing annually one of its members as chairman. A county forestry extension or state forestry employee appointed by the director shall not be a member of the advisory board but shall act as secretary and keep true records of their proceedings. In appointing such boards, the director shall fix the term of office of each member of the forest advisory board so that the term of office of one or more members shall expire annually. Appointments shall be made for terms of 3 years. Vacancies in said boards shall be filled by the
director. The members shall receive such travel expenses as may be made available by state appropriations or other sources and as authorized by the director.

220:4 State Forest Advisory Board. The chairman of each forest advisory board shall serve on a state forest advisory board whose chairman shall be elected annually by the members of said board. The duties of said advisory board shall be to represent the interests of the respective advisory boards and to advise and assist the director in carrying out the provisions of this chapter. The members shall meet at least semi-annually and shall receive such travel expenses as may be made available by state appropriations or other sources and as authorized by the director.

220:5 Forest Resources Inventory and Assessment.

I. The director under the guidance of the state forest advisory board shall undertake and inventory, assessment, and analysis of the forest resources of the state every 10 years. Such inventory and assessment, whenever practicable, shall be undertaken in conjunction with the United States department of agriculture forest service's resources evaluation of the state.

II. In preparing the inventory and assessment, the director shall:

(a) Solicit the cooperation of and information collected by public and private organizations, federal resource agencies, and regional and local planning organizations. For the purpose of assisting the director in preparing the inventory and assessment or its revisions, the director, in consultation with the forest advisory boards, may appoint such special advisory committees as he deems necessary. Such committees shall
consist of individuals with practical expertise in forest resource fields and shall include representatives of public and private agencies and organizations and of the forest industry and others concerned with the use of forest resources; and

(b) Evaluate the accuracy of existing data required to complete said inventory and assessment and shall identify high priority needs for completing such data base.

III. The director shall prepare an interim report every 5 years following an inventory and assessment.

220:6 Elements of the Inventory and Assessment. The inventory shall include, but shall not be limited to, the following:

I. Forest land ownership and management objectives;
II. Quantity and quality of timberland in the state;
III. Efficiency of utilization of forest products;
IV. Contribution to energy needs being made by wood;
V. Status of forest protection;
VI. Status of multiple-use values, including but not limited to, water, wildlife, recreation, soils, and employment;
VII. A description and evaluation of current public and private forestry programs;
VIII. Evaluation of management status on public and private lands;
IX. An analysis of present and anticipated supply and demand for the various forest resources in the state.

220:7 Forest Resources Plan. Based on the inventory and assessment prepared pursuant to sections 220:5 and 220:6, the director, with the
advice and assistance of the forest advisory boards, shall prepare and submit to the governor and the legislature every 10 years a comprehensive statewide forest resources plan and every 5 years an interim status report and 5 year program that addresses problems and opportunities on all ownerships. Such plan and program shall include but not be limited to the following:

I. A discussion of management responsibilities, policy considerations, laws, regulations, and other factors expected to influence and significantly affect the use, ownership, and management of forest resources.

II. A statement of policies regarding management of the forest resources of the state.

III. A description of specific fiscal needs and legislative priorities for promoting both public and private resource management programs in New Hampshire.

IV. A 5 year program for the management of all forested lands in the state.

220:5 Forest Planning Resources. The Director of the Division of Forests and Lands in the Department of Resources and Economic Development is directed to prepare within the limits of available departmental resources and in cooperation with the advisory boards and other special committees which he may appoint, in accordance with the provisions of this chapter, a biennial report on the forest resources planning situation to appropriate committees of the legislature on January 1 of each legislative year. Such report will include, but not be specifically limited to, the status of the State's forest resources, the currency of statewide aerial photography and forest resources data, and recommendations for financial
and other resources necessary to carry out the provisions of this chapter.

The Director of the Division of Forests and Lands shall also cooperate, to the extent possible, with other agencies of the state government, agencies of the federal government, other public and private individuals and organizations, and any others as may be appropriate in seeking and obtaining financial and other resources for maintaining up-to-date aerial photography, conducting forest resources surveys, analyzing data, preparing reports, and otherwise carrying out the intent of this chapter.

This act shall take effect July 1, 1981.
Sec. 5. (89.012) (FOREST RESOURCE MANAGEMENT PLAN.)

Subdivision 1. (PREPARATION.) By July 1, 1983, the commissioner shall prepare a comprehensive forest resource management plan designed to implement the policies stated in section 3. The plan shall include an assessment and program elements as provided in subdivisions 2 and 3 and any other issues which the commissioner determines should be included in the plan.

Subd. 2. (FOREST ASSESSMENT.) The assessment shall be updated at least once every ten years and shall include but not be limited to the following:

(a) The present and projected use and supply of and demand for forest resources in the state;

(b) The development of a forest resources data base, compatible with the data base of the Minnesota land management information center, capable of continuous updating and usable as a tool in effectively managing forest resources, utilizing existing data bases as much as practicable;

(c) The current and anticipated reforestation needs for forest land, including the amount of backlog areas, current and anticipated allowable harvests, identifying poorly stocked forest land, and delineating those areas needing reforestation which are prime forest lands or otherwise likely to produce optimum public benefits from reforestation; and

(d) An inventory and map of all existing state forest roads and classification by use, standard and condition.

Subd. 3. (PROGRAM ELEMENTS.) The program shall be updated every four years and shall describe specific actions to address the assessment and to implement the forest resources management policy of section 3, including but not limited to:

(a) Improvement of silvicultural practices and improved methods for harvesting and utilizing timber and timber residues;

(b) Measures to improve reforestation practices;

(c) Measures to enhance recreational opportunities and fish and wildlife habitat;

1Selected portion of the Minnesota Forest Resources Management Act of L982.
(d) The identification of "prime forest land" according to criteria developed by the commissioner;

(e) Priorities for construction and improvement of forest roads to achieve the state forest road policy, including the development of alternative methods for financing forest road construction, improvement and maintenance, and for imposing a reasonable share of the costs of the forest road system on those who directly benefit from the availability and use of the system;

(f) A description of how the multiple use and sustained yield management policy will apply to decisions about other public and private uses of forest lands and resources, including:

1. extractive uses;
2. utility corridors;
3. industrial, commercial, agricultural and institutional uses;
4. residential and seasonal use; and

(g) An estimate of the expenditures necessary to implement the elements of the program, along with the sources and amounts of revenue available or necessary to finance the estimated expenditures.

Subd. 4. (FEDERAL COORDINATION.) The department of natural resources shall coordinate all forest resources planning efforts with the appropriate federal agencies in order to achieve optimum public benefit, to obtain federal assistance, to participate in the federal forestry planning process, and to enhance the productivity and multiple use management of forest resources.

Subd. 5. (PUBLIC AND PRIVATE COORDINATION.) The department of natural resources shall coordinate all forest resources planning efforts with counties and other public agencies and private organizations engaged in forest resource management and research.

Subd. 6. (STAFF ASSISTANCE.) In preparing the forest resources management plan the commissioner is authorized to utilize existing professional staffs of state agencies when the expertise of the staff of a state agency is necessary to fully prepare the plan.