In the interest of forestry in the State of California, the State Board of Forestry has established certain goals to guide the formulation of policy for California forests. These goals are fully explained in the policy statement entitled "Renewable Resources Under Siege: A Policy for California Forestry" and include the following:

A. **Resource Protection** - The State must maintain and improve protection of forests and related resources from damage from wildfire and natural enemies, and to resist more effectively the pressures for unwise diversion of forests to nonforest use;

B. **Resource Enhancement** - The State must strengthen the incentives which encourage investment in needed enhancements of forest resource productivity;

C. **Research and Information** - The State must enlarge and sustain forestry research and information programs, focused on high priority needs, so that a factual basis for resource policy and management decision making can be provided for;

D. **Public Understanding** - The State must provide members of the several key audiences that ultimately influence forest use and management with sufficient information about the forest resource problems. This will ensure that they act in the light of accurate broadly based information.

The Board has found that:

A. The wealth of renewable natural resources in this country and in this state has made possible a high standard of living. How wisely these resources are used in the future will determine the living standards of generations to come. To use them wisely an enlightened, vigilant and informed citizenry is necessary.

B. Man is able to adjust himself to almost any environment and even to make new environments, but he cannot live without shelter, food or water. To continue to have these, he must manage well the natural resources from which they flow.

C. Natural resources do not belong to a single generation alone. As capital assets, they are also the property of those who follow. Each generation is only the steward during its lifetime and is obligated to keep these resources productive and in good condition.

D. Conservation is the wise use of natural resources to effect the greatest benefit for the greatest possible number of people over the longest period of
The practice of conservation includes the following renewable natural resources: forests, grasses and other vegetation; soil and water; mammals, birds, fish and other wildlife; recreational and scenic resources.

E. Conservation is a civic responsibility of every citizen. There must be leadership by a variety of private community and governmental groups. No one individual, agency, or group can assume full responsibility for an adequate conservation education program. An adequate program will necessitate active participation on the part of all groups, both public and private.

In light of these findings, it is the objective of the Board to encourage, through the available facilities and organization of the Department, a cooperative public education program in natural resource conservation coordinated with and through agencies of the State, local and Federal governments, educational institutions and civic groups.

FORESTRY RESEARCH

GENERAL POLICY

Pursuant to its responsibilities to determine, establish and maintain adequate forest policies, the Board has found that;

A. Forests provide numerous benefits to Californians. The creation and use of these benefits often involve complicated relationships between man and the wildland environment. Because of the complexities, man often does not have sufficient knowledge to manage effectively the forest ecosystems that are used by people. More also must be learned about the importance of natural forest systems to man's psychological and social needs.

B. This lack of knowledge is becoming increasingly critical. As more people use a limited forest base, economic and ecologic considerations clash more frequently. For recreational subdivisions conflict with concerns over soil disturbance or amenity values. If more were known about the forest ecosystem, these conflicts might be resolved on a more knowledgeable basis.

C. Historically, the forestry research program in California has been inadequate. There has been no central policy and no continuing organization to assess needs, develop the resources necessary to maintain an adequate ongoing research program and to coordinate the several elements required for such a program.

D. The Board is required by law to determine and report on the State's need for forest management research and to suggest needed projects. The Board is also required to conduct or provide for a program of research in specific areas set forth in law. These include forest management, soil characteristics and erosion rates, costs and feasible methods of reforestation, range improvement, and utilization of wood wastes for energy production. The Board's mandate to develop an "adequate forest policy for California" (PRC 740) requires an interest by the board in the interrelationship of all forest resources.
In light of these findings, the Board concludes that the public's interest is best served by developing and maintaining a vigorous program of forest research. The Board, as part of its general policy responsibilities, herein sets forth its policy on forest research.
DEFINITIONS  0333.2

"Forestry research" means the development of knowledge about forest resource systems and about man's interrelationship to these systems. It refers to programs to obtain and apply technical knowledge about forest resources systems and ways in which they may serve man's needs. It also includes the development of methods to apply technical knowledge to the framing and resolving questions about public policy relative to forest resources.

FORESTRY RESEARCH PROGRAM  0333.3

In order to promote a vigorous program of forestry research, the Board has found that in the public interest, it should, in conjunction with the Department, forest user groups, other State and Federal agencies, the University of California and other institutions of higher education, and the general public;

A. Inventory and assess needed forestry research at timely intervals;

B. Develop a master research plan that specifies and establishes priorities among needs and programs. The research plan will be updated every two years to reflect new needs and priorities;

C. Develop legislation needed to maintain a continuing and vigorous program of forestry research;

D. Foster and participate in mechanisms for ensuring cooperation and coordination in the development and implementation of research programs.

DISSEMINATION OF NEW KNOWLEDGE  0333.4

To be useful, findings from research must reach resource managers, field personnel, and policy makers. The faster that new knowledge can be put into practice, the greater the potential gains in time or money saved.

The Board believes that California must have an aggressive program to put new knowledge into use in the shortest possible time. Considering the large number of users of forestry information and the high investment in forestry within California, current investment in activities to utilize available knowledge is inadequate.

To speed the flow of forestry knowledge, the Board has found that:

A. The Board, through its licensing programs and other mechanisms, will attempt to keep all Registered Professional Foresters, timber operators, nonindustrial, private forest landowners and the general public advised of new technology as it becomes available. A dialogue must be encouraged among professional foresters and timber operators to transfer technology gained as land managers to other professionals in the field.

B. The board will promote programs for dissemination of new knowledge from research activities.
C. The Director should encourage the California State Forestry Committee to assume the lead role in setting statewide policies and priorities for technology transfer. This committee is the California counterpart of the "State Forestry Committee", formed in 1978, in each state at the request of the U.S. Secretary of Agriculture.

D. The Director should utilize a variety of activities, including Research Notes and periodic meetings with foresters and timber operators, to promote dissemination of the latest findings from research as they become available.

COMMITTEE ON RESEARCH

The Board has established a Committee on Research to:

A. Review ongoing research programs;

B. Advise the Board on research needs, priorities, policy, and such other matters as the Board directs;

c. Take the lead role to improve coordination and cooperation of the various industrial, educational, State and Federal agencies involved in research; and

D. Recommend a system through which information can be collected, maintained and disseminated on all completed forestry research projects.

The Committee on Research includes members drawn from the Department, forest user groups, other State and Federal agencies, the University of California, and other educational institutions as may be appropriate. The Board appoints the members and designates the Chairman. The Committee meets as required on the call of the Chairman of the Board, or of the Chairman of the Committee, or of a majority of its members. The Committee reports to the Board its recommendations for action biennially, beginning on June 30, 1980, and may submit interim reports of recommendations if needed.

The Committee may enter into arrangements with other agencies or advisory committees of the Board to assist in obtaining information and in conducting such analyses as are required for it to fulfill its functions. The Director, to the extent feasible, provides necessary staff support and funds to assist the Committee in its work.

COOPERATION

Cooperation between the forest products industry, non-industrial private forest landowners, other forest user groups, public agencies, and the general public, is essential to the development and maintenance of a vigorous forestry research program. Only through cooperation will it be possible to realize the full range of research possibilities and to arrive at acceptable priorities. The forest research program will inevitably be subjected to severe financial constraints. Through cooperation, the Board believes that all parties will come to view forestry research as an investment in the future. The future promises uncertainty with more people, limited land, and greater environmental problems. The Board believes that cooperation in forestry research will be one of the most cost-effective ways to meet these increased pressures.
Pursuant to its responsibility to determine, establish, and maintain adequate forest policies, the Board has found that:

A. Timber growing, harvesting and processing are of basic importance to the people of California. Because most forests are renewable resources, they will be as important to future generations as they are to the present one. Thus, properly managed forests are now and can continue to be a major and increasing source of essential raw materials, and of employment and community income for large areas of the State;

B. In 2009, Californians consumed approximately 13,257,000 m$^3$ or 5.6 billion board feet of wood products in a variety of essential ways. That same year, the State’s forest products industry produced approximately 2,380,000 m$^3$ or slightly more than one billion board feet of wood products (McKeever, D and Howard, J (2011). Solid Wood Products Consumption in Major End Uses in the United States, 1950 – 2009. USDA, Forest Service: Forest Products Laboratory, FPL-GTR-199; California’s Forest and Rangeland: 2010 Assessment. California Department of Forestry and Fire Protection);

C. The forest industries of the State currently produce less than 20% of the State's annual consumption of wood products, the balance being supplied from national and world markets. Historically, prices of most wood products have risen as a result of demand expanding more than supply, indicating an increasing relative scarcity of wood. In the decades ahead, competition in national and world markets is expected to become increasingly severe from the standpoint of all consumers of wood products. Hence, the maintenance and promotion of an environmentally sustainable wood supply from within the state is of steadily increasing importance and concern to Californians;

D. Wood is one of a limited number of basic raw materials. Foremost, it is renewable and, once its useful life is finished, it is biodegradable. Energy requirements for extraction, processing, and installing wood materials are often much lower than energy requirements for major competing materials. Wood’s low thermal conductivity often makes it superior to nonrenewable materials for building construction. Significant advantages from the standpoint of maintaining a quality environment would therefore result from minimizing scarcity-induced substitution of other materials for wood;

E. The area of commercial forest land in California has been declining and probably will continue to do so as a consequence of allocations of commercial forest land to residential and commercial construction, rights-of-way, parks and wilderness, reservoirs, and other uses which preclude timber growing and harvesting;

F. The public's need for the other values provided by forests (such as those derived from parks and wilderness, wildlife, watershed, minerals, aesthetics, forage for domestic livestock and scientific investigation) will compete with timber growing for the use of forest land. In some situations, provision of these values may limit the
extent to which commercial forest may be fully utilized for timber growing and harvesting;

G. The statewide estimate of timber volumes show constant increase over time after reported declines in the 1970s and 1980s. Private and State owned timberlands are currently the most productive in the State as measured in gross growth (Christensen, G; Campbell, Sally and Fried, J. (2008) California’s Forest Resources, 2001 – 2005, Five-Year Forest Inventory and Analysis Report, USDA, Forest Service: Pacific Northwest Research Station). Maintenance or enhancement of this growing stock on State and private timberland is an important factor in meeting the State’s continuing wood products needs.

H. The quality characteristics of timber harvested in the State, judged by current market quality standards, have been changing and will probably continue to do so as the annual production primarily comes from young-growth rather than original-growth trees. Considerations of market economics work strongly against timber growing rotations and management regimes which can produce large, fine-grained, knot-free trees comparable in such respects with original-growth trees;

I. The State, through the mechanism of timberland production zoning, has recognized the need to protect the State’s private timberland as an important productive resource, which comprises approximately 8.7 million acres (California’s Forest and Rangeland: 2010 Assessment. California Department of Forestry and Fire Protection). This resource is imperative for future wood growth, and for economically efficient timber growing;

J. There has been a significant increase in the utilization of wood residue in processing and manufacturing of forest products over the last several decades, with nearly 100% of mill residues being utilized for alternative industries (Morgan, T; Brandt, J; Songster, K; Keegan III, C and Christensen, G (2012). California’s Forest Products Industry and Timber Harvest, 2006, USDA, Forest Service: Pacific Northwest Research Station, PNW-GTR-866). Trends in unnecessary waste during consumption and disposal of forest products have also decreased over this time period. Continued efficient utilization that extends wood fiber resources is a crucial element in the maintenance of timber supply.

In the light of these findings, the Board has concluded that protection of the public's interest in economically supplying its needs for forest products in this and future generations requires vigorous and coordinated efforts by the Board to (1) maintain timberland as a source of current and future timber supply, (2) promote establishment, maintenance, and productive management of forest growing stocks needed to ensure the long-term optimum productivity of such lands, (3) encourage the balance among timber size classes needed to ensure continuity of the timber supply, (4) encourage maintenance of a supply which will have suitably diversified quality characteristics, and (5) encourage efficient utilization of wood both in the woods, in processing and in consumption as a means of extending timber supplies.

To accomplish these goals, the Board recognizes the need for detailed policies with respect to maintenance of timberland availability, development of optimum management and utilization practices, provision of adequate growing stock, and encouragement of adequately balanced timber size classes and adequate diversity of quality
characteristics. Such policies will clearly recognize the Board’s differing responsibilities with respect to State forests, the State’s interest in Federal land matters pertaining to forestry, and the State’s interest in forest resources on private lands, and shall reflect the State’s concern that major consideration be given to preventing environmental damage and mitigating the effects of global climate change. The Board recognizes that land-use decisions affecting timber production should be taken in the light both of this policy and of review of the public’s need for non-timber values derived from forests and forest land, particularly as those needs are recognized by responsible public bodies.

DEFINITIONS

The term “timberland” has historically been defined in a number of ways for the purposes of state policy, regulation, and education. For the purposes of this policy statement, the Board includes two definitions that originate in California’s forest practice regulation and land zoning statutes: the Z’Berg-Nejedly Forest Practice Act and the Timberland Productivity Act.

The Z’Berg-Nejedly Forest Practice Act, Public Resources Code Section 4526 defines ‘timberland’ as, “…land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis.” This definition is the foundation of the State’s forest practice regulation program and the Board’s adoption of Forest Practice Rules for timber management on private and state owned lands.

The Timberland Productivity Act, Government Code Section 51100, et seq established a new zoning designation intended to encourage the growing and harvesting of timber, and compatible uses on California’s private and state owned lands. Section 51104 of the Act defines “timberland” as, “…privately owned land, or land acquired for state forest purposes, which is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, and which is capable of growing an average annual volume of wood fiber of at least 15 cubic feet [180 board feet] per acre.” The term “compatible use” is defined in Section 51104(h) of the Act as, “…any use which does not significantly detract from the use of the property for, or inhibit, growing and harvesting timber.” The definition goes on to specify compatible uses including, but not limited to management for watershed; management for fish and wildlife habitat or hunting and fishing; a use integrally related to the growing, harvesting and processing of forest products, including but not limited to roads, log landings, and log storage areas; erection, construction, alteration, or maintenance of gas, electric, water, or communication transmission facilities; grazing; and construction of a residence or other structure necessary for the management of land zoned as timberland production.

LAND AVAILABILITY

In order to maintain timber growing land in California as a permanent source of current and future timber supply, the Board has found that it is in the public interest:
A. To oppose conversion to uses which preclude timber growing and harvesting on such privately owned timberland and other lands which have been classified as Timberland Production zone (TPZ) under provisions of the Z'berg-Warren-Keene-Collier Forest Taxation Reform Act of 1976, except where the public values to be achieved by such conversion exceed the public values derivable from timber growing. This policy applies both to conversion proposed by the owner of the land and to proposals for public acquisition of such land that do not include a managed timberland component;

B. To manage all timberland on State forests to investigate and demonstrate management for optimum long-run timber production. Where such forest lands contain or adjoin areas of high recreation value in State or other ownership, timber growing and harvesting practices may be modified in order to minimize conflicts between other land uses and to demonstrate the costs and effectiveness of such practices;

C. To support land management plans on federal public lands that are environmentally responsible and support economically sustainable rural communities and infrastructure;

D. To recognize that conservation easements pursuant to Civil Code 815.1 can be useful planning instruments compatible with the public values associated with timberland and Timberland Production zoning (TPZ) designations. Such public values include, but are not limited to preservation of watershed integrity, and floral and faunal habitat.

FOREST RESOURCE MANAGEMENT

To encourage the prudent and responsible forest resource management which is the intent of the Legislature, continuing efforts will be required (1) to fully use, maintain and enhance the productive capacity of forest soils; (2) to stock and to manage young stands of timber so as to increase their rate of growth in volume and/or quality, subject to maintaining soil fertility; (3) to fully utilize, consistent with other goals, both the mature timber and what would otherwise be normal mortality in young stands; and (4) to encourage efficient harvesting, processing, and manufacturing of wood and wood products. Pursuant to these objectives, the Board will:

A. Include in recommended research programs (1) studies designed to monitor and assess the long-term effects of various regimes of forest management on timber site fertility; (2) studies to develop optimum treatment regimes for representative timber stands; (3) studies to determine optimal stocking; and (4) surveys of size class distributions of public and private lands;

B. Encourage public agencies and private concerns engaged in forest products research to study timber quality characteristics, to assess trends in timber demand as they may affect needs for wood of varying qualities, and to develop new harvesting and processing technologies suited to utilizing available wood supplies effectively in the light of market needs;
C. Develop and encourage adoption by private timberland owners of forest management standards designed to maintain or improve site productivity, timber growth, and utilization;

D. Encourage adoption, by both public and private owners, of forest management standards designed to optimize the growth in volume or quality of timber on those forest lands designated for timber growing;

E. Promote reforestation of unstocked and understocked lands;

F. Encourage, by service forestry and other methods, recognition by small timberland owners of their importance to continuity of timber supply in California and of the benefits to be derived from actively managing their timbered property.

TIMBER SUPPLY INFORMATION, RESEARCH AND ANALYSIS

Although past research and analysis have provided a significant body of information about forests and forestland in California, maintenance of an adequate timber supply policy requires continuing research and analysis. Environmental, economic, and social data must be updated continually if policies are to be kept current. As human pressures on resources increase and as more is learned about the nature of resources, new areas of investigation must be studied. Information and research related to timber supply policy are continually being developed by numerous organizations. Such data needs to be brought together and analyzed in ways that are significant for public policy formation. It is the policy of the Board, in the discharge of its responsibilities for research and information programs, to encourage cooperative and coordinated efforts by the several research, information, and operating agencies within the State to develop a strong and continuing system of forest resource research and analysis as an integral part of the State's policy for maintenance of the timber supply.
The Board has adopted the following policy:

The wildlands of California are important as a source of water, timber, minerals, wildlife, recreation, and forage. The Director, in the development, management, and conservation of the natural resources, and in the interest of range improvement, shall encourage the improvement of rangeland, forestland, and habitat by incorporating the following, when possible:

A. The use of livestock grazing to minimize fuel loads and maintain fuel reduction treatments:
B. The development and improvement of brush-covered lands as an overall project
involving site selection, modification of undesirable vegetation, revegetation, application of effective follow-up measures and use of appropriate range management practices;

C. The practical application of methods in range improvement determined through experimentation, including the use of fire and its application in combination with other methods, and in revegetation of denuded wildland areas for soil erosion control;

D. The use of plans in range improvement projects which are designed to enhance their value for fire hazard reduction and fire control, stabilization of soil, control of noxious weeds, water conservation and production, and the overall betterment of forestland, rangeland and wildlife habitat.

RANGE IMPROVEMENT STUDIES 0335.1

Sections 4771-4788 of the Public Resources Code provide for certain range improvement projects for experimental controlled land clearance and revegetation, and research by the Department to determine the value of methods used. The Board has adopted the following policy for the guidance of the Director:

A. Studies should be conducted on a cooperative basis with the University of California and other research agencies and coordinated with other related research to avoid unnecessary duplication;

B. The location of experimental studies should be selected to represent conditions occurring over relatively large areas so that findings may be widely applicable;

C. All such activities will be in accordance with a plan previously adopted;

D. The Director will report to the Board periodically upon the progress of range improvement research and experimental projects, and make such information available to interested persons and to the public in the form of reports, bulletins, pamphlets and new releases, or such other media as may be appropriate.

FOREST TAXATION 0336

GENERAL 0336.1

Consistent with its policy on maintenance of timber supply and pursuant to its responsibility to determine, establish, and maintain adequate forest policies, the Board has found that:
A. Encouragement of timber growing and maintenance of forest land in production of forest products are of basic importance to the people of California. Such encouragement and maintenance can be fostered by enlightened taxing policies;

B. As trees take many years to mature, growing and harvesting of timber requires investment for long periods of time before income can be derived. During this time, trees are subject to fire, insects, disease and other unpredictable or uninsurable factors. Compounding high risk are annual holding costs, including taxes, which over time make it expensive to keep timber to its best growing age;

C. Productive forest lands are often located near areas subject to development and recreational uses. These uses carry high land values which, if assessed for tax purposes to adjacent timberland, can lead to property tax values far above those which can be sustained by growing timber on these lands. Consequently, without corrective policy action, tax pressure can force or support withdrawal of productive timberland to non-timber uses.

TAX TREATMENT FOR TIMBERLAND 0336.2

In order to protect the forest land component of timber growing, and consistent with Section 3(j), Article XIII of the California Constitution, which declares that systems of forest taxation should provide for the continued use of timberlands for the production of trees for forest products and should provide for land-use restrictions based on this use, the Board has found that:

A. Systems of forest taxation should adequately provide for restriction of timberland to growing trees and compatible uses, with particular emphasis on protecting highly productive land;

B. Land restricted to timber growing should be valued for taxation purposes according to its worth derived from adjacent land used for non-timber purposes.

TIMBER TAXATION 0336.3

In order to protect the timber component of the forest production base, the Board has found that it is in the public interest:

A. To support development of systems of Federal and State income taxation which provide appropriately for the long-term nature of timber growing enterprises;

B. To support development of methods of property taxation which relate the timing of taxation to periodic income to be derived from forestry uses and which do no deter long-term forest management.

ADMINISTRATION, DEPARTMENT OF FORESTRY 0337

AUDIT AND INSPECTION OF CONTRACTS 0337.1
In order to ensure that contracts are satisfactorily performed and the funds properly expended in accordance with law, it is the Board's policy that the Director will cause periodic audits and inspections to be made of those operations and projects contracted to other agencies with funds appropriated to the Department. The findings will be reported to the Board.

ACQUISITION OF SITES FOR DEPARTMENT FACILITIES 0337.2

In view of the long-term use envisaged for such permanent installations as lookouts, fire stations, forestry and conservation work camps, and other facilities, it is evident that the Department needs permanent control of the sites on which such improvements are erected.

The Board therefore has adopted the following policy for the guidance of the Director and for the information others: Whenever the most practical location for new facilities of these kinds is found to be on land not controlled by the Department, it is the policy of the Board to acquire fee title to such land before improvements are erected. However, this policy will not preclude development of such sites prior to acquiring fee title, provided that such development is deemed necessary for efficient conduct of the Department's work and further provided that appropriate interim lease arrangements can be made.