Methods of Forest Law-Making

by

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I. INTRODUCTION

Natural forestland is a precious and unique resource within the United States. Forestland provides timber for construction and paper, a habitat for wildlife, and recreation areas and aesthetic value for visitors. Each of these uses is in potential conflict with the other, as well as with other uses such as conversion of forestland to farmland. These potential conflicts are further complicated when one considers that a large portion of forestland in the United States is privately owned and not subject to uniform federal control.

In recognition of the value of private forestland, many states use various methods to control the use of this resource. This Article analyzes the various state legal instruments of environmental management that directly influence forested property in private ownership. These instruments, or "methods," are (1) the prescription or regulation of forest practices by statutory and common law constructs; (2) the furnishing of incentives to encourage desirable behavior and the assessment of charges to discourage undesirable behavior; and (3) the encouragement of voluntary measures that promote land-management practices preferred by the public.[1] Section II reviews the development, goals, and methods of private forestland management. Section III surveys the primary methods of state environmental management

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[1] *See generally* MICHAEL KLOEPFER, UMWELTRECHT 97–249 (1989); REINER SCHMIDT, EINFÜHRUNG IN DAS UMWELTRECHT 8–18 (3d ed. 1992); Gerd Ketteler, *Instrumente des Umweltrechts*, 34 JURISTISCHE SCHULUNG 909, 913 (1994). *Cf.* David A. Westbrook, *Liberal Environmental Jurisprudence*, 27 U.C. DAVIS L. REV. 619 (1994).

of private forestland. Examples from the various state legislative schemes that utilize the methods are provided for illustrative purposes.

II. A Brief Overview of Private Forestland Management

A significant portion of United States forestland is privately owned. Therefore, any attempt by state governments to protect forestland resources must include the regulation of private lands. The many conflicting uses for forestland, however, make uniform control unlikely. Hence, the goals for forestland preservation and use to which a state aspires often determine the type of control.

A. *Forestland in the United States*

Of the 3,787,425 square miles (937,261,000 hectares) of land that comprise the United States,[2] approximately twenty-eight percent (1,134,749 square miles, or 265,188,000 hectares) are classified as forest and woodland.[3] In other words, there is approximately one hectare of forested property for each of the 250 million inhabitants of the United States.

The United States possesses about 483 million acres (196 million hectares) of commercial timberland.[4] Commercial timberland constitutes sixty-six percent of the country's acreage classified as forest and woodland.[5] Seventy-two percent of the commercial timberland in the United States is in private ownership.[6] Privately owned timberland produces about seventy-nine percent of the timber produced in the United States.[7]

Ownership of private commercial timberland can be categorized into three general groups: agriculture, wood industry, and other private owners. These three ownership groups are quite disparate in their interests and practices. The burden of regulatory compliance often differs depending on the size and purpose for which the timberland is held.[8] Nevertheless, the regulatory legislation of the various

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[2] Rand McNally, The New International Atlas 299 (1994).

[3] Thomas W. Birch, Douglas G. Lewis & H. Fred Kaiser, The Private Forest-Land Owners of the United States 7 (Forest Service Resource Bulletin WO-1, 1982).

[4] Commercial timberland is usually defined as forestland that can produce, or is capable of producing, continuous crops of industrial wood, which is further defined as 20 cubic feet or more per acre per year. United States Bureau of the Census, Statistical Abstract of the United States 679 at table 1150 (1993).

[5] *Id.*

[6] *Id.*

[7] *Id.*

[8] For example, farmers whose forest primarily serves as shelter belt are unlikely to possess

states treats the ownership groups uniformly, with the exception of very small ownerships, which are sometimes exempt from legislation.[9] The disproportionate burden of compliance placed on agricultural and smaller owners is redressed in part by federal cost-sharing programs.[10]

B. *The Goals of Legislative Methods of Private Forestland Management*

The legislation that influences the management of private forestland is primarily the product of the state legislatures,[11] although one finds occasional legislation and regulation at the local,[12] regional,[13] and interstate levels.[14] Federal cost-sharing and tax legislation also provide powerful incentives in certain instances.[15]

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the expertise to ensure compliance with regulations, and the small size of the farmers' woodlots makes retention of a professional forester uneconomical.

[9] *See* MASS. ANN. LAWS ch. 132, § 44 (Law. Co-op 1994) (exempting uses of timberlands involving less than 25,000 board feet of lumber or 50 cords of wood, from state, commercial timber regulations).

[10] *See infra* Section I.B. and notes 15, 77, and 139.

[11] *E.g.*, Alaska Forest Resources and Practices Act, ALASKA STAT. §§ 41.17.010–.110 (1993); Idaho Forest Practices Act, IDAHO CODE §§ 38-1301 to -1314 (1994); California Z'Berg-Nejedly Forest Practice Act of 1973, CAL. PUB. RES. CODE §§ 4511–4628 (West 1984 & Supp. 1994); CONN. GEN. STAT. §§ 23-65f to -65o (1992); Maine Land Use Regulation Law, ME. REV. STAT. ANN. tit. 12, §§ 681–689 (West 1994); Massachusetts Forest Cutting Practices Act, MASS. GEN. LAWS ANN. ch. 132, §§ 40–46 (West 1991); Nevada Forest Practice Act of 1955, NEV. REV. STAT. ANN. §§ 528.010–.090 (Michie 1986 & Supp. 1993); Oregon Forest Practices Act, OR. REV. STAT. ANN. §§ 527.610–.770, .990(1), .992 (1988 & Supp. 1993); Washington Forest Practices Act, WASH. REV. CODE ANN. §§76.09–.950 (West 1994 & Supp. 1995). *See generally* Russell K. Henley & Paul V. Ellefson, State Forest Practice Regulation in the United States: Administration, Cost, and Accomplishment (U. of Minn. 1986 Station Bulletin AD-SB-3011).

[12] UNITED STATES DEP'T OF AGRICULTURE FOREST SERVICE, THE COOPERATIVE FOREST MANAGEMENT PROGRAM—PAST AND FUTURE, A SUMMARY REPORT 14 (1975); Sizemore, *Improving the Productivity of Nonindustrial Private Woodlands*, *in* REPORT OF THE PRESIDENT'S ADVISORY PANEL ON TIMBER AND THE ENVIRONMENT 234, 247 (1973). Twenty-nine municipalities in Connecticut and over 100 municipalities in New Jersey possess forest protection or tree protection ordinances. Henley & Ellefson, *supra* note 11, at 15.

[13] For example, the Connecticut River Gateway Committee prepares minimum standards for the control of activities on land that has legislatively been included in the conservation zone. CONN. GEN. STAT. ANN. §§ 25-102c, -102d (West 1990). These standards address development, development standards, the cutting of timber, and the removal of soil in order to prevent deterioration of the natural or traditional riverway scene. *Id.* § 25-102d(a). These standards are then adopted as ordinances and implemented by the towns with land-use jurisdiction within the conservation zone. *Id.* § 25-102g.

[14] *See infra* note 102.

[15] *See infra* Section III.B. and notes 77 and 138.

The federal government once attempted to regulate private timberland directly. Federal regulations were to be promulgated during President Franklin Delano Roosevelt's "New Deal" Era in the 1930s. HARRY FALK JR., TIMBER AND FOREST PRODUCTS LAW 248 (1958); Gordon Robinson, *The Public Forester and Our Public Interests*, 59 SIERRA CLUB BULL. 8 (1974). These regulations were only one facet of expansive legislation that delegated legislative power to the President. National Industrial Recovery Act of June 16, 1933, ch. 90, 48 STAT. 195 (1933). The

The two predominant legal methods of private forest management are regulation and incentives. Beyond the use of regulatory and incentive schemes, the remaining methods of private forest management, the imposition of charges and the use of voluntary cooperation,[16] find little application in current legislation devoted to the management of private forestland.

Private forestland management seeks to accomplish several goals. One critical goal is the promotion of forest regeneration for sustained timber production. To ensure that regeneration will take place after timber harvesting, several states have enacted legislation that employs the methods of regulation and incentives.[17] This legislation, when considered together, reveals a disintegrated national strategy of furthering sustained timber production. The accomplishment of the goal of sustained timber production could be enhanced by offering additional progressive tax incentives to landowners who use longer rotation cycles.[18]

Another goal of private forestland management is to protect forestland resources, wildlife habitat, and soil and water quality.[19] This goal is primarily achieved through regulatory legislation,[20] although states also utilize incentives and voluntary measures.[21]

Finally, and most controversially, a recent trend is the recognition of recreation and aesthetics as legitimate goals of private forestland management legislation.[22] No state legislation specifically requires that private property be managed, with or without compensation, for purely aesthetic or recreational purposes. Nevertheless, five state laws—those of California, Connecticut, Maine, Massachusetts, and Washington—explicitly include protection of forest aesthetic or rec-

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United States Supreme Court declared the legislation unconstitutional. Schechter Poultry Corp. v. United States, 295 U.S. 495, 550 (1935); *see* Hamilton, *The Federal Forest Regulation Issue: A Recapitulation*, 9 FOREST HISTORY 2–11 (1965).

[16] *See generally* KLOEPFER, *supra* note 1, at 97–249; SCHMIDT, *supra* note 1, at 8–18; Ketteler, *supra* note 1, at 913. *Cf.* Westbrook, *supra* note 1.

[17] *See infra* notes 77–79 and 135–37 and accompanying text.

[18] *See* Gregory S. Amacher, Richard J. Brazee, & Thomas A. Thompson, *The Effect of Forest Productivity Taxes on Timber Stand Investment and Rotation Length*, 37 FOREST SCI. 1099.

[19] *E.g.*, CAL. PUB. RES. CODE § 4512(b) (West 1984 & Supp. 1995) ("giving consideration to values relating to recreation, watershed, wildlife, range and forage, fisheries . . . ."); OR. REV. STAT. § 527.630(1) (1988 & Supp. 1994) ("sound management of soil, air, water, fish and wildlife resources . . . ."); WASH. REV. CODE ANN. § 76.09.010(1) (West 1994) ("afford protection to forest soils, fisheries, wildlife, water quantity and quality . . . .").

[20] *See infra* notes 87–90 and accompanying text.

[21] *See infra* notes 132–34 and 146–50 and accompanying text.

[22] *E.g.*, CAL. PUB. RES. CODE § 4513(b) (West 1984 & Supp. 1995) ("The goal of maximum sustained production of high-quality timber products is [to be] achieved while giving consideration to values relating to . . . aesthetic enjoyment.").

reational value as a legislative goal.[23] A sixth law, that of Oregon, mentions aesthetics, but only in the context of protecting scenic views from highways.[24] In practice, however, aesthetics is not given much protection under such legislative schemes.

For example, the Z'Berg-Nejedly Forest Practice Act of California contains a legislative finding that "the timberlands of the state furnish high-quality timber, recreational opportunities, and aesthetic enjoyment while providing watershed protection and maintaining fisheries and wildlife."[25] In the statute's statement of intent, however, non-timber-producing purposes are relegated to a secondary role:

> It is the intent of the Legislature to create and maintain an effective and comprehensive system of regulation and use of all timberlands so as to assure that:
> (a) Where feasible, the productivity of timberlands is restored, enhanced, and maintained.
> (b) The goal of maximum sustained production of high-quality timber products is achieved while giving consideration to values relating to recreation, watershed, wildlife, range and forage, fisheries, regional economic vitality, employment, and aesthetic enjoyment.[26]

Similarly, the Washington Forest Practices Act treats aesthetics with ambivalence. The statute's legislative findings provide as follows:

> The legislature hereby finds and declares that the forest land resources are among the most valuable of all resources in the state; that a viable forest products industry is of prime importance to the state's economy; that it is in the public interest for public and private commercial forest lands to be managed consistent with sound policies of natural resource protection; that coincident with maintenance of a viable forest products industry, it is important to afford protection to forest soils, fisheries, wildlife, water quantity and quality, air quality, recreation, and *scenic beauty*.[27]

The statute continues in the same section to state the purposes and policies of the legislation.[28] The only provision that might be open to interpretation as embracing aesthetic values is the allusion to "public

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[23] *Id.* (recreation and aesthetics); CONN. GEN. STAT. § 23-65j(a)(4) (aesthetics); ME. REV. STAT. ANN. tit. 12, § 681 (West 1994) (recreation); MASS. GEN. LAWS ANN. ch. 132, § 40 (West 1991) (recreation); WASH. REV. CODE § 76.09 (West 1994 & Supp. 1995) (recreation and aesthetics).

[24] OR. REV. STAT. § 527.630(1) (1988 & Supp. 1994) ("scenic resources within visually sensitive corridors," defined in § 527.755 as areas adjacent to designated scenic highways).

[25] CAL. PUB. RES. CODE § 4512(b) (West 1984). *Cf.* CONN. GEN. STAT. § 23-65j(4) ("encourage the harvest of forest products in ways which . . . respect aesthetic values.").

[26] *Id.* § 4513.

[27] WASH. REV. CODE ANN. § 76.09.010(1) (West 1994) (emphasis added).

[28] *Id.* § 76.09.010(2).

resources," in which the slate is to "[a]fford protection to forest soils and public resources by utilizing all reasonable methods of technology in conducting forest practices[.]"[29]

The statutory definition of "public resources," however, negates an expansive reading of the term to include scenic beauty. "Public resources" is defined for purposes of the legislation as "water, fish and wildlife, and in addition . . . capital improvements of the state or its political subdivisions."[30] Furthermore, it is the Act's purposes and policies—which do not mention scenic beauty[31]—and not the findings and declarations—which contain the sole mention of scenic beauty[32]—that are to be achieved via promulgation and enforcement of regulations.[33] An examination of the regulations further demonstrates that aesthetics currently is not a practical goal of the Washington Forest Practices Act, as aesthetics is nowhere mentioned in the regulations.[34]

Lastly, the Oregon Forest Practices Act[35] provides as follows:

> Forests make a vital contribution to Oregon by providing jobs, products, tax base and other social and economic benefits, by helping to maintain forest tree species, soil, air and water resources and by providing a habitat for wildlife and aquatic life. Therefore, it is declared to be the public policy of the State of Oregon to encourage economically efficient forest practices that assure the continuous growing and harvesting of forest tree species and the maintenance of forestland for such purposes as the leading use on privately owned land, consistent with sound management of soil, air, water, fish and wildlife resources *and scenic resources within visually sensitive corridors as provided in ORS 527.755* that assures the continuous benefits of those resources for future generations of Oregonians.[36]

Under the Oregon statute, "visually sensitive corridor" is defined as forestland adjacent to designated scenic highways.[37] Many states have programs that protect freeways and highways from unsightly billboards.[38] Most of such legislation is motivated by grants of money from the federal government under the Highway Beautification Act

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[29] *Id.* § 76.09.010(2)(b).

[30] *Id.* § 76.09.020(13).

[31] *Id.* § 76.09.010(2).

[32] *Id.* § 76.09.010(1).

[33] *See Id.* § 76.09.040(1). *See generally* Brian L. Hansen, Comment, *Protection of Recreation and Scenic Beauty Under the Washington Forest Practices Act*, 53 WASH. L. REV. 443 (1978) (examining earlier version of the statute).

[34] *See* WASH. ADMIN. CODE §§ 173-202-010 to -020 (1994).

[35] OR. REV. STAT. §§ 527.610–.770 (1988 & Supp. 1994).

[36] *Id.* § 527.630(1) (emphasis added).

[37] *Id.* § 527.620(14).

[38] *See, e.g.*, CAL. STS. & HIGH. CODE §§ 260–263.8 (West 1990 & Supp. 1995); ILL. ANN. STAT.

of 1965.[39] In other words, Oregon's legislators have merely chosen to place these provisions in Oregon's Forest Practices Act; legislators could just as well have placed the provisions in separate scenic highway codifications, as did California, Virginia, and other states.[40]

In sum, state private forestland management legislation attempts to achieve a variety of goals, from the maintenance of the economic viability of forestland to the preservation of environmental resources. Although aesthetic and recreational values do find mention in private forestland management legislation, neither receives much actual protection. The recognition of such values, however, is a positive development and may influence private forestland management legislation in the future. In any case, which goal the state chooses strongly influences the type of control that it will use in managing private forestland within its borders.

C. *The Development of Private Forestland Management Legislation*

Before the recognition of the public value of forestland, private common law actions, such as nuisance, were the only methods used to control the use of private forestland. As awareness of forestland value increased, however, state legislatures enacted statutes to accomplish a variety of goals with respect to forestland. In addition, as statutory control became politically disfavored, other methods, such as incentives and voluntary management, emerged as mechanisms to control private forestland.

Historically, the enforcement of individual rights by adjoining property owners—who are those most immediately affected—was the legal technique most important to the protection of the environment.[41]

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ch. 20 (Smith-Hurd 1993); MASS. GEN. LAWS ANN. ch. 81, § 13A (West 1993); TEX. REV. CIV. STAT. ANN. art. 6674w-3 (West Supp. 1994); VA. CODE ANN. §§ 33.1-62 to -66 (Michie 1990).

The Oregon scenic highway program, which is part of the Oregon Forest Practices Act, OR. REV. STAT. §§ 527.610–.770 (1988 & Supp. 1994), is illustrative. Forestland within 150 feet of the outermost right-of-way boundary on either side of a scenic highway is designated a visually sensitive corridor. *Id.* § 527.620(14). Unless the area adjacent to the scenic corridor is adequately stocked, at least 50 healthy trees or at least 40 square feet in basal area of trees of at least 11 inches in diameter at 4½ feet above the ground—per acre—must be left after logging operations in the scenic corridor. *Id.* § 527.755(3). Moreover, the trees may only be cut after the understory has reached an average height of 10 feet and has at least 250 stems per acre. *Id.*

[39] 23 U.S.C. § 131 (1988 & Supp. V 1993).

[40] *See* CAL. STS. & HIGH. CODE §§ 260–263.8; ILL. ANN. STAT. ch. 20, para. 835/2(4); MASS. GEN. LAWS ANN. ch. 81, § 13A; TEX. REV. CIV. STAT. ANN. art. 6674w-3; VA. CODE ANN. §§ 33.1-63 to -66.

[41] *See generally* WILLIAM H. RODGERS, JR., HANDBOOK ON ENVIRONMENTAL LAW 100–12 (1977).

Owners and occupiers of property affected by unacceptable or unreasonable activities on other property could—and still can—sue for an injunction and damages, basing their claims for relief on such common law actions as trespass and nuisance.[42]

If a larger group of people was affected, an action could be brought by a public prosecutor as a "public" nuisance action.[43] This form of action served the same protective policies as direct regulation. Under direct regulation, however, the legislature, as opposed to an individual or a group, has assumed the role of defining what activities are unacceptable or unreasonable.

With the emergence of statutory law, legislative methods have relegated common law actions to a secondary role in the management of private forestland. For example, direct state regulation has gained preeminence over individual and group common law actions such that, currently, actions brought by public agencies at the local, state, and federal levels to enforce zoning and other regulatory measures are far more common than actions by aggrieved individuals.[44] Even existing common law actions often rely on statutes and regulations in order to determine current norms and standards.[45] Furthermore, legislation complements the common law of nuisance by declaring that certain regulatory and statutory violations constitute nuisances.[46]

Apart from early Colonial ordinances to protect and conserve lumber for the English ship-building industry and other legislation that had only a minor impact upon forest practices,[47] the first major development of forestry laws in the United States occurred between 1937 and 1955. Between these years, sixteen states adopted laws of the so-called "seed-tree" variety.[48] These laws, a form of direct regulation,

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[42] *See generally id.* at 100–12 and 154–58.

[43] *See generally* ZYGMUNT J.B. PLATER ET AL., ENVIRONMENTAL LAW & POLICY: A COURSEBOOK ON NATURE, LAW & SOCIETY 122–30 (1992); RODGERS, *supra* note 41, at 102–07.

[44] *See generally* PLATER ET AL., *supra* note 43, at 256–57 and 304–06 (discussing interplay between the common law and statutory law).

[45] *See generally id.* at 301.

[46] According to the United States Supreme Court in *Lawton v. Steele*, "a large discretion is necessarily vested in the legislature to determine, not only what the interests of the public require, but what measures are necessary for the protection of such interests." 152 U.S. 133, 136 (1894). Following this principle, a state legislature, long before Prohibition, was allowed to forbid the production of alcohol without having to compensate a brewery whose business was ruined by the legislature's regulation. *See* Mugler v. Kansas, 123 U.S. 623, 671 (1887).

[47] *See* FALK, *supra* note 15, at 43–68 and 302 (quoting GREELY, FOREST POLICY (1953)).

[48] These states were Idaho (1937), New Mexico (1937), Virginia (1940), Oregon (1941), Florida (1943), Maryland (1943), Massachusetts (1943), Minnesota (1943), Mississippi (1944), California (1945), Missouri (1945), Vermont (1945), Washington (1945), New York (1946), New Hampshire (1949), and Nevada (1955). Debra J. Salazar, Political Processes and Forest Practice Legislation (1986) (unpublished dissertation, University of Washington).

generally required that a specified number of seed-trees be left on a site after harvest to achieve a minimum level of reforestation.[49]

Early seed-tree laws constituted the first generation of private forestry legislation.[50] The enactment of this legislation was prompted by two widespread fears. The first fear was the public's fear of timber famine, which was forecast to threaten the United States and the world.[51] The second fear was the fear of the timber products industry of regulation by Congress.[52] The federal government was seen as politically less responsive to the interests of the industry than state and local governments.[53] As a result of these two fears, individual states began to create and develop their own methods of private forestland management through legislation.

The first modern legislation governing private forestland practices was enacted during the early 1970s. All of these recent laws, except three, are the product of legislative actions in the western United States—specifically, in Oregon (1971), Nevada (1971), California (1973), Idaho (1974), Washington (1974), and Alaska (1978).[54] The three exceptions are Massachusetts, which enacted its Forest Cutting Practices Act in 1983,[55] Connecticut, which enacted its law in 1992,[56] and Maine, which regulates forestry under its Land Use Regulation Law.[57]

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[49] *See* Henley & Ellefson, *supra* note 11, at 1.

[50] Most of the seed-tree laws have been superseded by modern legislation. Seed-tree laws are still in force in Florida, Louisiana, Maryland, Mississippi, Missouri, New Mexico, New York, Vermont, and Virginia. Florida Seed Tree Law, FLA. STAT. ANN. §§ 591.27–.34 (West 1987); Louisiana Turpentine Seed Tree Law, LA. REV. STAT. ANN. § 3:4293 (West 1987); Maryland Forest Conservancy Law, MD. CODE ANN. [NAT. RES.] §§ 5-301 to -307 (1989 & Supp. 1994); Maryland Pine Reforestation Law, MD. CODE ANN. [NAT. RES.] §§ 5-501 to -509; Mississippi Forest Harvesting Law, MISS. CODE ANN. §§ 49-19-51 to -77 (1990); Missouri State Forestry Law, MO. ANN. STAT. §§ 254.010–.300 (Vernon 1990); New Mexico Forest Conservation Act, N.M. STAT. ANN. §§ 68-2-1 to -2-25 (1990 & Supp. 1993); New York Forest Practice Act, N.Y. ENVTL. CONS. LAW §§ 9-0701 to -0717; Vermont Conservation and Management of Forest Land Law, VT. STAT. ANN. tit. 10 §§ 2621–2624 (1994); Virginia Seed Tree Law, VA. CODE ANN. §§ 10.1-1162 to -1169 (Michie 1993).

[51] *See* Henley & Ellefson, *supra* note 11, at 1.

[52] *See id.*

[53] *See id.*

[54] Alaska Forest Resources and Practices Act, ALASKA STAT. §§ 41.17.010–.110 (1994); California Z'Berg-Nejedly Forest Practice Act of 1973, CAL. PUB. RES. CODE §§ 4511–4621; Idaho Forest Practices Act, IDAHO CODE §§ 38-1301 to -1314 (1994); Nevada Forest Practice Act, NEV. REV. STAT. ANN. §§ 528.010–.090 (Michie 1986 & Supp. 1993); Oregon Forest Practices Act, OR. REV. STAT. §§ 527.610–.730, 527.990(1) (1988 & Supp .1994); Washington Forest Practices Act, WASH. REV. CODE ANN. §§ 76.09.010–.950 (West 1994 & Supp. 1995). For the author's analysis of the California legislation, see Comment, *Regulation of Private Logging in California*, 5 ECOLOGY L.Q. 139 (1975).

[55] Massachusetts Forest Cutting Practices Act, MASS. GEN. LAWS ANN. ch. 132, §§ 40–46 (West 1991).

[56] CONN. GEN. STAT. §§ 23-65j to 23-65o (1992).

[57] Maine Land Use Regulation Law, ME. REV. STAT. ANN. tit. 12, §§ 681–689 (West 1994).

From these first and second generation laws emerged much of the contemporary private forestland management legislation.

III. Private Forestland Management Methods

From the limited scope of common law nuisance actions and early seed-tree laws, three methods of private forestland control emerged: regulations, incentives, and voluntary management. A state legislature's choice of method is strongly dependent on its goals for private forestland and the urgency the legislature believes is necessary. Additionally, the political climate also influences a legislature's choice.

A. *Regulations*

State regulation is perhaps the most widely used method of private forestland control. These regulations attempt to specify the uses a private landowner may make of the forestland without violating constitutional restrictions against the taking of private property without just compensation. The regulations are in no way uniform among the states, however, because the conflicting and competing goals vary from state to state. As such, the regulations of an individual state must be examined to determine how and to what end they are used. Adding to the complication is the fact that the regulatory agency structure in each state is often different.

States that possess the largest amount of private forestland have enacted comprehensive regulatory schemes to protect and preserve forested property in private ownership. Most of these states provide for criminal penalties for noncompliance.[58] In practice, however, state inspectors often use nonconfrontational methods to secure compliance.[59] Usually, state inspectors will attempt to convince private landowners that proper forestland management is in the landowners' best interests.[60] Indeed, the regulations of one state, Washington, specifically provide that it is state policy to encourage informal, practical, and result-oriented resolution of alleged violations rather than to prosecute offenders.[61]

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[58] Alaska Stat. § 41.17.131; Cal. Pub. Res. Code § 4601; Idaho Code § 38-1310; Nev. Rev. Stat. Ann. § 528.090; Or. Rev. Stat. § 527.990; Wash. Rev. Code Ann. § 76.09.190. For a discussion on citizen enforcement, see Sharon E. Duggan, *Citizen Enforcement of California's Private Land Forest Practice Regulations*, 8 J. Envtl. L. & Litig. 291, 300–15 (1993).

[59] *See* Henley & Ellefson, *supra* note 11, at 3.

[60] *See id.*

[61] Wash. Admin. Code § 222-46-010 (1994).

Each state with modern forestland legislation has an agency responsible for promulgation of regulations. These regulations clarify and expand upon legislation. Sometimes the regulations are enforced by the same agency that has promulgated the regulations.

Agency organizational structures vary from state to state. Alaska, California, and Oregon each possess a Board of Forestry; and Washington possesses a Forest Practices Board.[62] Members of these boards, who are appointed by the governor,[63] are responsible for promulgation of regulations.[64] Board members also hear appeals from regulatory actions.[65] In each of these states, enforcement of regulations is delegated to a state forester.[66] The state forester in turn is the director of a department in the state government. In California, the relevant department is the Department of Forestry.[67] In Oregon, the relevant department is the State Forestry Department.[68] In Alaska, the relevant department is the Division of Forestry.[69] In Washington, the relevant department is the Division of Private Forestry and National Heritage, which is a division of the Department of Natural Resources.[70]

Similarly, in Idaho, regulations are promulgated by the Board of Land Commissioners, consisting of the governor and other elected officials, who need not have a background in forestry.[71] The Department of Lands is responsible for enforcement of the Board of Land Commissioners' regulations.[72]

In Massachusetts, Connecticut and Nevada, in contrast, forest practice regulations are promulgated and enforced by the same agency. In Massachusetts, forest practice regulations are promulgated and enforced by the Director of the Division of Forests and Parks, with the consent of the Director of the Department of Environmental Manage-

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[62] ALASKA STAT. § 41.17.041; CAL. PUB. RES. CODE § 730; OR. REV. STAT. § 526.009; WASH. REV. CODE ANN. § 76.09.030.

[63] ALASKA STAT. § 41.17.041; CAL. PUB. RES. CODE § 730; OR. REV. STAT. § 526.009; WASH. REV. CODE ANN. § 76.09.030.

[64] ALASKA STAT. § 41.17.047; CAL. PUB. RES. CODE § 4551; OR. REV. STAT. § 526.016; WASH. REV. CODE ANN. § 76.09.040.

[65] ALASKA STAT. § 41.17.047; CAL. PUB. RES. CODE § 4551; OR. REV. STAT. § 527.700; WASH. REV. CODE ANN. § 76.09.050.

[66] ALASKA STAT. § 41.17.041 (State Forester); CAL. PUB. RES. CODE § 701 (Director of Forestry); OR. REV. STAT. §§ 526.041, 527.670 (State Forester); WASH. REV. CODE ANN. § 76.09.030 (Commissioner of Public Lands).

[67] CAL. PUB. RES. CODE § 4003 (West 1984).

[68] OR. REV. STAT. § 526.008 (1988).

[69] ALASKA STAT. § 41.17.020 (1993).

[70] WASH. REV. CODE ANN. § 76.09.020 (West 1994).

[71] *See* IDAHO CODE ANN. §§ 38-1302 to -1303 (1994).

[72] *Id.* §§ 38-1303 to -1304.

ment.[73] In Connecticut, the commissioner of environmental protection is to adopt and enforce regulations.[74] In Nevada, the Forestry Fire Warden promulgates and enforces forest practice regulations.[75]

Many owners of agricultural and forested property have felt financial pressure to deforest their property and to devote the property to another use.[76] Several states possess legislative schemes that can deny these landowners the right to convert their property to a more profitable use.[77] Such laws are generally not considered to be expropriations of property that require compensation, as long as the existing forestry use is profitable.[78]

State regulation of private forestland takes various forms. One form of state regulation seeks to ensure regeneration after logging.[79]

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[73] MASS. GEN. LAWS ANN. ch. 132, § 1 (West 1991).

[74] CONN. GEN. STAT. §§ 23-65j(a) (adoption of regulations) and 23-65m (enforcement by the attorney general at the commissioners request). A forest practices advisory board can recommend changes in the regulations. *Id.* § 23-65g(e)(2). No regulations had been adopted at the time of publication.

[75] NEV. REV. STAT. § 528.040 (Michie 1986).

[76] *See* William Unkel & Dean Cromwell, *California's Timber Yield Tax*, 6 ECOLOGY L.Q. 831, 832–33 (1978).

[77] Compare, however, New Mexico, which readily allows conversions of timber-producing property to other uses. The state statute provides that "[n]othing in the Forest Conservation Act shall prevent a landowner hereafter from converting forest vegetative types to nonforest vegetative types for such purposes as range, wildlife habitat, farming, surface mining or subdivision development . . . ." N.M. STAT. ANN. § 68-2-16 (Michie 1978).

[78] See Lucas v. South Carolina Coastal Council, 112 S. Ct. 2886, 2895 (1992).

[79] *See* ALASKA STAT. § 41.17.010 (1993); CAL. PUB. RES. CODE § 4512 (West 1994); IDAHO CODE § 38-1302 (1994); MASS. GEN. LAWS ch. 132, § 40 (West 1991); NEV. REV. STAT. ANN. § 528.030 (Michie 1986); OR. REV. STAT. § 527.630 (1988); WASH. REV. CODE ANN. § 76.09.010 (West 1994).

The impetus behind much of the modern state regeneration legislation began with the passage by Congress of the Clarke-McNary Act of June 7, 1924. *See* DAVID A. ADAMS, RENEWABLE RESOURCE POLICY 167–68 (1993). The Clarke-McNary Act authorized the Secretary of Agriculture to provide federal cost-sharing of 50% of the cost to the states to supply "forest-tree seeds and plants, for the purpose of establishing windbreaks, shelter belts, and farm wood lots upon denuded or nonforested lands." Clarke-McNary Act, ch. 348, 43 Stat. 653 (1924). Section 5 of the Clarke-McNary Act authorized similar federal assistance to farmers "in establishing, improving, and renewing wood lots, shelter belts, windbreaks, and other valuable forest growth, and in growing and renewing useful timber crops." *Id.*

Federal incentives were continued under the Agriculture and Consumer Protection Act of 1973, Pub. L. No. 93-86, 87 Stat. 221 (1973), and expanded by the Cooperative Forestry Assistance Act of 1978. Pub. L. No. 95-313, 92 Stat. 365 (1978). Under the 1978 Act, subsidies for reforestation and afforestation were extended to smaller landowners, generally to those owning no more than 1,000 acres. *Id.*; ADAMS, *supra*, at 168. The 1978 Act also authorized reimbursement of up to 75% of a landowner's costs for "afforestation of suitable open lands, reforestation of cutover or other unstocked or understocked forest lands, timber stand improvement practices, including thinning, prescribed burning, and other silvicultural treatments, and for resources management and protection" in accordance with an approved forest management plan. 92 Stat. 365; ADAMS, *supra*, at 168. In practice, administrative action has reduced federal

Under almost all of these regulations, the variety of tree to be regenerated is left to the discretion of the landowner. Exceptions are found in California and Maryland. The tree species to be regenerated is specified in the Southern Forest District of California.[80] Regeneration of the harvested tree species is encouraged, but not required, in Maryland.[81]

Clearcutting is also a target of state regulation. Public discussions of forest practices in the United States often focus on the practice of clearcutting.[82] Most of these discussions concern clearcutting on public—especially federal—property, where old-growth forests still exist.[83] Nevertheless, several state regulatory schemes curtail or forbid clearcutting on private lands. For example, regulations in California provide that, where practical, clearcuts be irregularly shaped and variable in size so as to blend with the natural patterns and features of the landscape.[84] Moreover, clearcutting is prohibited altogether in the counties around San Francisco.[85] In Massachusetts, clearcutting is generally limited to areas ten acres in size.[86] Clearcutting is also generally prohibited in Nevada,[87] which has very few forests.[88]

Several state regulatory schemes attempt to protect watercourses and soil.[89] One general regulatory measure that seeks to protect ri-

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reimbursement to about 50% of a landowner's afforestation costs. ADAMS, *supra*, at 168. The Food Security Act of 1985 has the potential to greatly expand federally subsidized reforestation. Pub. L. No. 99-198, 99 Stat. 1354 (1985). The Conservation Reserve Program established by that Act authorizes the Secretary of Agriculture to contract with farmers and ranchers to remove highly erodible land from cultivation and to stock such land with trees. § 1252, 99 Stat. at 1516; ADAMS, *supra*, at 168.

[80] CAL. CODE REGS. tit. 14, § 913.8 (1995).

[81] MD. CODE ANN., [NAT. RES.] § 5-504 (1989).

[82] *See* REPORT OF THE PRESIDENT'S ADVISORY PANEL ON TIMBER AND THE ENVIRONMENT 31–32 (1973). *See, e.g.*, Testimony, May 5, 1994, Honorable John Bryant, United States House of Representatives, 5th District, House Natural Resources/National Parks, Forests and Public Lands Bills, FED. DOCUMENT CLEARINGHOUSE, May 5, 1994, *available in* LEXIS, News Library, CURNWS File [hereinafter FED. DOCUMENT CLEARINGHOUSE].

[83] *See, e.g.*, FED. DOCUMENT CLEARINGHOUSE, *supra* note 80.

[84] CAL. CODE REGS. tit. 14, § 913 (1995).

[85] *Id.* § 927.9.

[86] *See* MASS. REGS. CODE tit. 304, § 11.03 (1993).

[87] *See* NEV. REV. STAT. § 528.050 (1986).

[88] Nevada has a total area of 110,567 square miles. RAND MCNALLY, *supra* note 2, at 298. Of this total land area, there are only 128,000 acres of commercial timberland. Henley & Ellefson, *supra* note 11, at 29. Only 68,000 acres are privately owned. *Id.*

[89] *See, e.g.*, CAL. CODE REGS. tit. 14, §§ 932, 957.4, 954.6 (1995); MASS. REGS. CODE tit. 304, § 11.04 (1993); ME. DEP'T OF CONSERVATION, LAND USE REGULATION COMM'N, LAND USE DISTRICTS & STANDARDS ch. X, § 10.17; NEV. REV. STAT. §§ 528.053–.057 (1986 & Supp. 1993); TAHOE REGIONAL PLANNING AGENCY REGULATORY ORDINANCES ch. 71 (1992). Logging restrictions may also result from state scenic river acts, such as the Massachusetts Scenic Rivers Act, MASS. GEN. LAWS ANN. ch. 21, § 17B (West 1994) (permitting prohibitions against shoreline

parian areas is a prohibition against leaving slash in streams.[90] Another general regulatory measure is a requirement that loggers leave a portion of vegetation intact along streams.[91] Concern for soil protection is reflected, for example, in enactments that regulate the number and placement of roads, and in provisions that require that roads passing over streams be fitted properly with culverts.[92]

Landscape values occasionally are accorded priority in legislation that regulates forestry near highly populated areas. One such example is found in the densely populated Marin County Recreation Corridor, which is located north of the San Francisco Bridge in California. In this area, according to a state regulation, special restrictions apply to any logging operation that is visible from any public road, public trail, or residence located within one-quarter mile of the operation.[93] According to the regulation, all trees to be cut must be individually selected to minimize adverse visual effects, and vegetation must be left uncut if necessary to screen exposed soil from view.[94]

Occasionally, one finds legislation, such as in New Hampshire, that requires that no more than fifty percent of trees within 150 feet of any public highway be cut or otherwise felled.[95] In Massachusetts, both the existing regulation and a proposed revision specifically state that buffer strips intended "to improve the visual quality of the landscape" be located along the edges of publicly maintained roads.[96] Such regulations serve public safety values as well as landscape values because trees can serve as a windbreak and can collect drifting snow.[97] Such restrictions on the use of private property exist only because of the location of a public road. Although no case awarding compensation

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alterations); Maryland's Chesapeake Bay Resource Protection Program, MD. CODE ANN., [NAT. RES.] § 8-1801(b)(2) (1990) (permitting for local agency restrictions on private property); and the Virginia Scenic Rivers Act, VA. CODE ANN. § 10.1-407 (Michie 1993) (permitting all riparian land and water uses that are otherwise permitted by law, except impeding the natural flow of the river).

[90] *E.g.*, N.H. REV. STAT. ANN. § 224:44-b (Supp. 1994).

[91] *E.g.*, *id.* § 224:44-a (Supp. 1994).

[92] *E.g.*, CAL. CODE REGS. tit. 14, § 923 (1995); OREGON DEP'T OF FORESTRY, FOREST PRACTICE WATER PROTECTION RULES § 629-24-521 (1994); WASHINGTON FOREST PRACTICE BD., WASHINGTON FOREST PRACTICES § 222-24-020 (1994); Proposed MASS. REGS. CODE. tit. 3.04, § 11.04(2)(a) (Oct. 11, 1994). The location of roads can also serve landscape values. Laws occasionally require that roads follow natural contours. *E.g.*, OREGON DEP'T OF FORESTRY, *supra*, § 629-24-521.

[93] CAL. CODE REGS. tit. 14, § 927.13 (1995).

[94] *Id.*

[95] N.H. REV. STAT. ANN. § 224:44-a (Supp. 1994).

[96] MASS. REGS. CODE tit. 304, § 11.04(1)(e) (1993).

[97] *See, e.g.*, Daphne Field, *The Beauty of Trees*, TORONTO STAR, Mar. 12, 1995, at F3.

has been found, under such circumstances private landowners might be entitled to compensation for an expropriation of private property.[98]

Unlike other states that regulate private forestland through direct regulation, Maine primarily employs a system of classification of forestland as its primary regulatory method.[99] According to Maine's land use regulation law, all land outside of city boundaries is divided into one of three districts: development, protection, or management.[100] In all, there are approximately ten million acres in these classifications, ninety-five percent of which is forested.[101] Of this total area, two percent is classified for development, twenty percent is classified for protection, and seventy percent is classified for management.[102] In the management district, forestry may not be limited in any way.[103] In the other two districts, logging may be restricted, but may not be totally forbidden.[104]

Regulations, as a method of state management of private forestland, are widespread but certainly not uniform. Conflicting goals, differing agency structures, and changing political climates make the use of regulations difficult. Nevertheless, regulations remain a legitimate method of managing private forestland resources because public welfare is often the primary goal.

B. *Incentives and Disincentives*

One effective device to steer private activity is to provide financial incentives. Creating tax incentives for afforestation is a common method

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[98] *See* Thomas Lundmark, *Visual Impacts of Forestry*, 12 COLUM. J. ENVTL. L. 131, 150–53 (1987).

[99] *See* ME. REV. STAT. ANN. tit. 12 §§ 681–689 (West 1994).

[100] *See id.* § 685(A).

[101] Henley & Ellefson, *supra* note 11, at 147.

[102] *Id.*

[103] *See* ME. REV. STAT. ANN. tit. 12, § 685(A)(5).

[104] *See id.* § 685(A)(1), (5).

The Tahoe Regional Planning Agency formerly used a similar classification scheme. TAHOE REGIONAL PLANNING AGENCY TIMBER HARVESTING ORDINANCE (1973) (discussed in Lundmark, *supra* note 96, at 135).

The Tahoe Regional Planning Agency was founded in 1969 by an interstate compact between California and Nevada. Tahoe Regional Planning Compact, Pub. L. No. 91-148, 83 Stat. 360 (1969). Pursuant to the United States Constitution, Congress had to ratify the compact before the compact took effect. *See* U.S. CONST. art. I, § 10. According to the legislation implementing the compact, the Tahoe Regional Planning Agency was responsible for the planning and oversight of the use and preservation of the Lake Tahoe basin and its environs. CAL. GOV. CODE §§ 66,800–67,132 (West 1993); NEV. REV. STAT. ANN. §§ 277.190–.200 (Michie 1995). The Tahoe Regional Planning Agency's area was divided into various districts. TAHOE REGIONAL PLANNING AGENCY TIMBER HARVESTING ORDINANCE § 9.00(1) (1973). In the general forest district, for example, a permit had to be obtained for the removal of forest products of any kind for commercial purposes. *Id.* § 9.00(1).

of promoting the expansion and continuation of forestland areas in the United States. The traditional purposes for these subsidies are to promote production of timber and to protect against erosion, especially wind erosion,[105] as was experienced during the 1930s.[106] In more recent times, the preservation of forestland for recreational uses has become a stated purpose of tax incentive legislation.

In natural resources law, legislatures have tended to shy away from direct regulation.[107] Many state legislatures have turned, if at all, to the use of incentives. Incentives are politically more palatable than direct regulation because of people's natural tendency to respond more cooperatively to government inducement than to government force. Incentives are also often more readily enforceable, and therefore more efficient, than direct regulation.[108]

For two reasons, incentives have predominantly taken the form of tax breaks. First, tax incentives as a method of natural resource management employ a system—taxation—that is already in place. Second, tax incentives offer the government the advantage that those persons affected by the legislation come to the government with their petitions and requests, rather than the government having to seek out violators, which is the usual scenario under direct regulation. This second advantage can result in lower enforcement costs to regulatory agencies.

The Tahoe Regional Planning Agency has since abandoned its classification scheme in favor of general standards. *See* TAHOE REGIONAL PLANNING AGENCY REGULATORY ORDINANCES ch. 71. According to these newer provisions, no permit from the Tahoe Regional Planning Agency is generally required to remove up to 100 trees annually within a project area. *Id.* § 4.3.A(6). Clearcutting of up to five acres, termed "patch cutting" in the regulations, is allowed only when necessary for regeneration harvest or early successional stage management. *Id.* ch. 71.3.B. Cutting in stream environment zones is limited. *See id.* ch. 71.3.C.

[105] *See, e.g.*, Prepared Statement of Paul W. Johnson, Chief, Natural Resources Conservation Service, United States Department of Agriculture, Before the Committee on Agriculture, Nutrition and Forestry, United States Senate Conservation, Wetlands and Federal Farm Policy, FED. NEWS SERVICE, Mar. 14, 1995, *available in* LEXIS, News Library, Curnws File.

[106] *See, e.g.*, Eve Johnson, *The Till that Kills*, VANCOUVER SUN, Aug. 6, 1994, at B3.

[107] *See* ADAMS *supra* note 77, at 472 n.90 (noting that Congress's first attempt at modern environmental regulation was NEPA, which vaguely directed federal agencies to consider environmental impacts as opposed to attempting to regulate how the nation's resources should be managed).

[108] For a general discussion of the advantages of using tax incentives as an environmental regulatory tool, see Hilary Sigman, *An Empirical Assessment of State Hazardous Waste Taxes*, Joel D. Scheraga & Neil A. Leary, *Costs and Side Benefits of Using Energy Taxes To Mitigate Global Climate Change*, and Edith Brashares & Geraldine Gerardi, *Issues in the Design of a Tax on Toxic Pollutants*, *in* 1993 NATIONAL TAX ASSOCIATION, PROCEEDINGS OF THE EIGHTY-SIXTH ANNUAL CONFERENCE, NINTH CONCURRENT SESSION 129–45 (1993).

Approximately forty states possess laws that reduce property taxes for forested property.[109] These tax breaks, called forest cropland laws, were enacted when public support for direct regulation was low.[110] The legislative purposes behind forest cropland laws include soil protection and the stimulation of wood production.[111] Forest cropland laws are intended to counteract, to a certain extent, the economic pressure on private landowners to harvest their forest too early, or not to invest in forestry at all.[112]

Wisconsin's use of tax incentives is illustrative of legislative incentives as a means of private forestland management. In 1927, the Wisconsin legislature enacted the Forest Crop Law, which provided tax incentives to private landowners.[113] The legislative goal of the law was to sustain and preserve forests.[114]

In 1971, the Wisconsin legislature amended the Forest Crop Law.[115] As a result of the amendments, land entitled to protection under the Forest Crop Law had to be made accessible to the public for hunting and fishing.[116] By 1985, when this program ended, 1.51 million acres had been enrolled.[117] This constitutes approximately seven percent of the approximately nine million acres of forests in private ownership in Wisconsin.[118]

In 1985, the Wisconsin legislature again amended the Forest Crop Law and renamed the legislation the Managed Forest Land Law.[119] Under the Managed Forest Land Law, private landowners may deny public access to up to eighty acres of their forest.[120] The rest of the forest, however, must be open to hunting and fishing, which is restricted to particular seasons during the year, and to other public recreation, which is seasonal only in intensity.[121] Currently, 113,868

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[109] William C. Siegel & Ed Kerr, *Update on Property Tax Laws*, 88 AMERICAN FORESTS 36, 37–38 (1982).

[110] *Id.*

[111] *Id.*

[112] *Id.*

[113] WISC. STAT. § 77.03 (1961) (originally enacted in 1927).

[114] WISC. STAT. ANN. § 77.01 (West 1989).

[115] Taxation of Forest Croplands, 1971 WIS. LAWS 583 (codified as amended at WIS. STAT. ANN. §§ 77.01–.16 (West 1989)).

[116] *Id.* at 583 (codified as amended at WIS. STAT. ANN. § 77.03 (West 1989)).

[117] Jeffery C. Stier, *Wisconsin's Experience with the Optional Yield Tax*, *in* FOREST TAXATION: ADAPTING IN AN ERA OF CHANGE 47, 49 (1988).

[118] *Id.*

[119] WIS. STAT. ANN. §§ 77.80–.91 (West 1989).

[120] *Id.* § 77.83(1).

[121] *Id.* § 77.83(2).

acres of private forestland are enrolled under this law.[122] Of this acreage, fifty-seven percent—or 64,656 acres—is open to the public.[123]

Wisconsin is not the only state that uses tax incentives as a means of private forestland management. To provide a favorable climate for long-term investment in forest resources, the California Timberland Productivity Act[124] allows for the classification of timberland as "timberland production zone."[125] Once classified, the land is restricted for ten years to the growing and harvesting of timber and compatible uses[126] including hunting and fishing.[127] In return for surrendering the speculative value of converting the property to another use, the private landowner enjoys reduced property taxation.[128] If during the ten-year period the landowner applies to reclassify the land to a use other than timber growing, the landowner must pay back taxes at a higher rate[129] and must obtain a permit.[130] The permit may only be granted if a conversion is in the public interest; the permit may be made subject to conditions.[131] The final decision to accept or deny the reclassification application lies with the California Department of Forestry.[132]

Ohio allows areas to be classified as nature preserves in order to promote business in the areas or to protect the areas' natural and aesthetic characteristics from destruction.[133] Private landowners who wish to include their land in this legislative scheme must agree not to develop the land and must also agree to manage the land according to restrictions sufficient to protect the land from destruction or im-

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[122] Glenn M. Stoddard, *Integrated Resource Management and Private Forestry: One State's Approach*, J. FORESTRY, Feb. 1988, at 38, 40.

[123] *Id.*

[124] CAL. GOV'T. CODE § 51,101 (Deering 1995).

[125] California possesses 16.5 million acres of commercial timberland, of which 7.6 million acres are in private ownership. Dennis E. Teeguarden & Paul E. Crebbin, *Experience with the Timber Yield Tax in California*, *in* FOREST TAXATION, *supra* note 116, at 35. Of that ownership, 75%—or 5.67 million acres—is classified as timberland production zone. *Id.*

[126] CAL. GOV'T. CODE § 51,114 (Deering 1995).

[127] *Id.* § 51,115.

[128] *Id.* § 51,142.

[129] *Id.*

[130] *Id.* § 51,131.

[131] *Id.* § 51,134

[132] CAL. PUB. RES. CODE § 4621.2(a) (Deering 1995); CAL. CODE REGS. tit. 14, § 1109.5 (1995). See generally the limiting restrictions placed on landowners by the New York Adirondack Park Agency Act, which nevertheless recognizes a right to continue existing uses. McCormick v. Lawrence, 372 N.Y.2d 156, 158–60 (1975), *aff'd mem.*, 387 N.Y.S.2d 919 (1976).

[133] OHIO REV. CODE ANN. § 1517.05 (Baldwin 1994).

pairment.[134] In return, the legislation provides that the land is not subject to taxation.[135]

Iowa's Fruit Tree and Forest Reservation Law and North Dakota's Forest Stewardship Law provide tax exemptions to private landowners who maintain their forests "properly stocked."[136] This requirement is met if the property is afforested according to law and no more than one-fifth of the existing stand of trees is removed in any one year.[137] In Delaware, private landowners can receive tax exemptions for their land for up to thirty years if the landowners ensure that the property will remain properly forested.[138] Rhode Island possesses a similar fifteen-year exception for landowners.[139] Finally, private landowners in Missouri are granted tax reductions if the landowners use a parcel of property of at least forty acres exclusively for wood production.[140]

In legislation addressing private forestry management, much use is made of incentives.[141] In contrast, little use is made of environmental charges. Environmental charges are measures that make the undesirable activity more difficult or more costly. An example of a charge

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[134] *Id.*

[135] *See id.* (stating creation of nature preserve is equivalent to transferring the land to the state).

[136] IOWA CODE ANN. § 427c.1 (West Supp. 1994); N.D. CENT. CODE §§ 57-57-01 to -11 (1993).

[137] IOWA CODE ANN. § 427c.4; N.D. CENT. CODE §§ 57-57-02 to -08.

[138] DEL. CODE ANN. tit. 7, § 3502 (1974).

[139] R.I. GEN. LAWS § 44-3-8 (1988).

The Federal Internal Revenue Code also encourages investment in timber-growing by offering incentives for planting trees and by providing individuals with favorable tax treatment of the proceeds of timber sales. I.R.C. §§ 1–9602 (1986). This encouragement of reforestation and afforestation takes two general forms: accelerated amortization of the costs of reforestation and a timber tax credit. *Id.*

Under accelerated amortization, taxpayers may deduct up to $10,000 in reforestation and afforestation expenses by spreading the expenses over a seven-year period. *Id.* § 49(b)(3). Alternatively, the taxpayer can elect to take a 10% investment tax credit of up to $10,000 for expenses in any one year, reducing the taxpayer's taxes by the amount of the credit. *Id.* Expenses incurred in planting trees and maintaining the forest that are not deductible are capitalized, meaning that the owner must wait to sell the timber to realize the benefit. *Id.* The rationale behind this benefit is to encourage small owners to plant trees. Sanford E. Westin & Richard A. Gaines, *Environmental Taxes in the United States*, *in* TAXATION FOR ENVIRONMENTAL PROTECTION: A MULTINATIONAL LEGAL STUDY 207 (Richard A. Gaines & Sanford E. Westin eds., 1991).

The federal tax code also provides favorable tax treatment for the proceeds of the sale of timber. Profits realized from the sale of trees are subject to capital-gains treatment. I.R.C. § 631. Because corporations pay the same rates on capital-gains as on ordinary income, corporations are not benefitted by this provision. *See id.*

[140] MO. REV. STAT. §§ 254.010–.300 (1990).

[141] *See supra* Section III.B.

is the deposit paid on glass bottles in many jurisdictions.[142] The undesirable activity is discarding these bottles into nonrecycling facilities such as landfills. Under bottle-bill legislation, disposal of returnable bottles is not prohibited or otherwise directly regulated. Rather, disposal of returnable bottles is made more expensive. Opportunities exist for state legislatures to employ environmental charges as a method of private forestland management. Use of environmental charges could profitably be used, for example, to discourage conversion of forestland for timber-producing purposes. Currently, only occasional use is made of charges for this end. An example is the Nevada Forest Practice Law.[143] Under this law, the state can impose conditions upon private landowners who want to use their land for non-timber-producing purposes.[144] In the conversion process, conditions are routinely imposed, and permits are sometimes denied, for aesthetic reasons as well as for conservation reasons.[145] A typical condition that the state imposes on private landowners is a requirement that a thicket of trees be left standing to screen a project from public view or to fit a project as naturally as possible into the landscape.[146]

Although some legislative schemes use environmental charges to discourage certain private activities, such charges are not often used by states. Rather, states are more apt to use incentive schemes based on tax-breaks. The use of incentives is seen as a more favorable method of private forestland management because of the greater compliance, administrative ease, and efficiency associated with incentives.

C. *Voluntary Measures*

States also employ voluntary measures to manage private forestland. For example, legislation in Connecticut, South Carolina, Maryland, New York, and New Jersey encourages private landowners to consider amenity values in managing their forests.[147] In Oregon, where

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[142] *See, e.g.*, MASS. GEN. LAWS ANN. ch. 94, § 65T (West 1991).

[143] NEV. REV. STAT. ANN. §§ 528.010–.120 (1986).

[144] *Id.* §§ 528.040–.090.

[145] *See* Paul V. Ellefson & Frederick W. Cubbage, State Forest Practice Laws and Regulations: A Review and Case Study for Minnesota 15 (U. of Minn. Station Bulletin 536–1980).

[146] *See, e.g.*, KY. REV. STAT. ANN. § 177.915 (Baldwin 1993). Another environmental charge occasionally used by states is a requirement that loggers screen clearcut areas from public view. *E.g.*, CAL. CODE REGS. tit. 14, § 927.13 (1995). This requirement helps to raise the cost of the unpopular activity of clearcutting, thus discouraging the practice.

[147] CONN. DIRECTIVE 2310; Lundmark, *supra* note 96, at 132 n.6.

forestry is the largest employer,[148] regulations often exhort foresters to give "special consideration" to nontimber values such as recreation, wildlife, and aesthetics. A regulation in the Eastern Oregon Region directs that "[w]here major scenic attractions, highways, recreation areas or other high use areas are located within or traverse forest land, [the operator shall] conduct prompt cleanup and regeneration."[149]

Idaho possesses regulations comparable to those of Oregon.[150] Furthermore, in portions of Alaska, reforestation is merely encouraged—not required—after salvage harvest of wind-thrown timber or of timber destroyed by insects, disease, or fire.[151]

Tennessee is illustrative of the states that maintain a registry of natural areas containing land in private ownership which landowners may voluntarily join. The Tennessee Natural Areas Preservation Act of 1971[152] contemplates public recognition of natural areas as a means of encouraging the protection of natural areas.[153] Under this law, the Department of Conservation maintains a registry of land belonging to landowners who have agreed to retain the land in its natural condition according to department regulations.[154]

The Tennessee law expressly allows landowners to publicize the fact of regulation to enhance the recreational value of the land in the eyes of the public.[155] Landowners are not given any incentive other than the registry of their land in the system. If landowners fail to maintain their land according to the requirements of the law, the only penalty is removal of the land from the registry.[156]

Other examples of the voluntary private forestland management method include programs to protect natural areas,[157] to recycle material,[158] and to encourage more environmentally sensitive logging prac-

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[148] *See* David Bond, *Oregon Restructuring Example Good One To Follow in Canada*, VANCOUVER SUN, Nov. 16, 1994, at D5 (noting high tech will soon overtake forestry as Oregon's largest employer).

[149] OR. ADMIN. R. 629-24-448(1) (1994).

[150] IDAHO CODE § 38-1302 (1994).

[151] Henley & Ellefson, *supra* note 11, at 35.

[152] TENN. CODE ANN. §§ 11-14-101 to -116 (1992).

[153] *Id.* § 11-14-112.

[154] *Id.*

[155] *Id.*

[156] *Id.*

[157] See, for example, TENN. CODE ANN. § 11-14-112 (1992), which contemplates public recognition of natural areas as a means of encouraging the protection of such areas.

[158] Often, voluntary recycling programs have beneficial impacts on forestland management programs, because such programs reduce the pressure on commercial timberlands to supply the entire demand for wood and wood products. *See* Lane Robertson, *A Builder Uses Recycled and Non-Toxic Materials: Green House*, EUGENE REGISTER GUARD (Eugene, Oregon), May 15,

tices.[159] Voluntary programs can be extremely effective, as has been demonstrated by the results of avid, voluntary recycling in Germany and Denmark.[160] Effective voluntary programs share certain common elements: people are convinced that programs are worthwhile; compliance is widespread among similarly situated people; and the programs are comparatively easy to comply with. Although not a primary method of private forestland management, voluntary compliance schemes may become more important in the future, as the public's desire to protect and to preserve the environment increases.

IV. Conclusion

Methods of environmental management directed at private forestland exist in nearly every state. Such methods are far from uniform. Nevertheless, certain common principles can be discerned.

Several states possess legislation that directly affects private forested property through regulation. Older forms of direct regulation seek to ensure that property is reforested after logging. In recent years, states have enacted legislation that expands the legislative purposes to include wildlife protection, stream protection, soil protection, promotion of recreation, and, occasionally, promotion of aesthetics.

In addition to direct regulation, the legislation of numerous states provides for financial incentives. The usual financial incentive is reduced property taxation, generally providing that forested property be taxed for its value as a forest, rather than for another speculative value. Occasionally, tax incentives are offered for other purposes, such as entry of property into a registry of natural areas. In addition to incentives, the use of disincentives, although relatively undeveloped, may be useful in the future.

Finally, legislative schemes sometimes emphasize voluntary measures. These measures range from voluntary timber harvesting guidelines to voluntary entry of property into a registry of natural areas. In the latter case, private landowners may receive business or tax advantages by having the property included in the registry.

In the future, given the increased public desire to preserve forestland for recreational and aesthetic purposes, it can be expected that

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1994, at D1 (describing recycling practices used by Willamette Industries to turn old lumber and wastewood into particleboard).

[159] See, for example, Md. Code Ann., [Nat. Res.] §§ 5-501 to -508 (1989), which encourages use of the harvested tree species for regeneration.

[160] Anne Hazard, *Strict German Recycling System Has Mixed Record*, Chicago Tribune, Apr. 18, 1994, at 5.

legislators and regulators will focus greater attention upon these values in private forestland management schemes. Because of the costs involved in protecting these values, and because of constitutional restraints, it is likely that tax breaks and other forms of incentives rather than direct regulation will be used more often. Although currently not utilized as often as regulations and incentives, disincentives and voluntary measures also provide states with useful methods of private forestland management.