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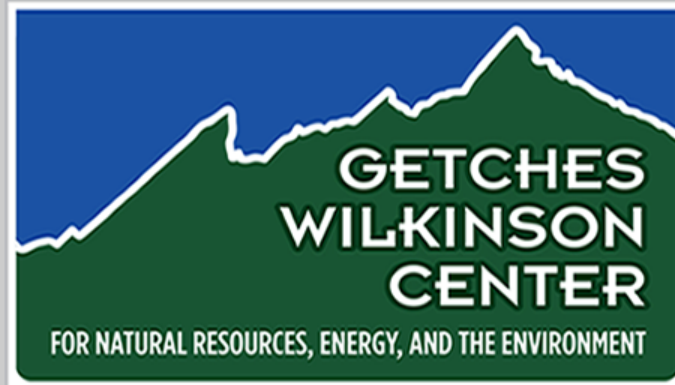
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# **WILDERNESS AND NATURAL AREA PRESERVATION IN THE UNITED STATES: A SURVEY OF NATIONAL LAWS**

**George W. Pring\* and Stephen Miller\*\***

There is an eagle in me and a mockingbird  
...and the eagle flies among the Rocky Mountains of my dreams  
and fights among the Sierra crags of what I want  
...and the mockingbird warbles in the early forenoon  
before the dew is gone....

And I got the eagle and the mockingbird from the wilderness.

- Carl Sandburg (1918).

## **INTRODUCTION**

### **A BRIEF HISTORY**

Wild, undeveloped lands have always held a unique fascination in the American mind - a strange mixture of fear, desire to dominate, and deep aesthetic appreciation. It would be centuries before wilderness would be venerated by poets like Carl Sandburg, for itself and for the strength and beauty it can bring to life. Instead, wilderness began as the "enemy" of the first European settlers in the 1600s, as the author John Steinbeck graphically describes:

Our land is of every kind geologically and climatically, and our people are of every kind also - of every race, of every ethnic category - and yet our land is one nation, and our people are Americans....

In the beginning we crept, scuttled, escaped, were driven out of the safe and settled corners of the earth to the fringes of a strange and hostile wilderness, a nameless and hostile continent....Far from welcoming us, this continent resisted us. The [Indians] fought...to hold on to a land they thought was theirs. The rocky soils fought back, and the bewildering forests and the deserts. Diseases...decimated the early comers, and...they fought one another. This land was no gift. The [first settlers] worked for it, fought for it, and died for it...and when they had taken a little piece...they had to gentle it and smooth it and make it habitable....

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They came at it as though it were an enemy, which of course it was. They burned the forests and changed the rainfall; they swept the buffalo from the plains, blasted the streams, set fire to the grass, and ran a reckless scythe through the virgin and noble timber. Perhaps they felt that it was limitless and could never be exhausted....<sup>1</sup>

Even before the U.S. Constitution was drafted in 1787, the national government began to acquire vast land holdings and thereby assume paramount control over American land policy and development.<sup>2</sup> In less than a century, from the 1780s to 1860s, the central government amassed the bulk of the 2.3 billion acres (9.31 million square kilometers)<sup>3</sup> that constitute today's United States.<sup>4</sup> Then, it was virtually all wilderness.

Americans in those centuries did not view U.S. government land acquisition as an end in itself; instead, it was accepted as the most efficient means to channel the land to states, individual citizens, and private corporations, both to spread U.S. hegemony over the continent and to bolster the growing private economy. Thus, in what is now known as the "Disposal Era" (1790s-1920s), over 1.1 billion of these U.S. acres (4.5 million km<sup>2</sup>) were virtually given away, for private agricultural home-steading, railroads, mining, timbering, water supply, and for state government development.

During the 1800s, these public land disposal policies fueled a period of unprecedented settlement and economic expansion. Then, in the last decades of that century - with the "end of the frontier" and a growing disillusionment over the widespread abuses of the disposal laws - a new ethic began to emerge. Leading American poets and writers (Ralph Waldo Emerson, Henry David Thoreau, George Perkins Marsh, Walt Whitman), gifted political activists (John Muir, Frederick Law Olmsted), and government leaders (Gifford Pinchot, Stephen Mather, Theodore Roosevelt) began to urge a reform in public land policy. They laid the foundation of the "conservation movement," which continues to this day, a philosophy calling for government retention of land, protective management, and an allocation of resources for "multiple uses" on a "sustained yield" basis.

America's first great step - which pioneered the international land preservation movement - was Congress' reservation<sup>5</sup> of Yellowstone Park in 1872. Even more significant in territory affected was the General Revision Act of 1891.<sup>6</sup> In addition to repealing several of the more abusive disposal laws, it authorized the President to "set apart and reserve" timber lands as "public reservations"; before it was repealed in 1910, U.S. Presidents (most notably Theodore Roosevelt) had set aside over 190,000,000 acres (773,279 km<sup>2</sup>), today's U.S. Forests.

More land protection laws followed. The Organic Act of 1897<sup>7</sup> established conservation management for the forest reserves, under the soon-to-be-created U.S. Forest Service. The Antiquities Act of 1906 authorized the President to withdraw lands of historic, scientific, or scenic significance as national monuments. The National Park Act of 1916 created the National Park Service and, for the first time, expressed in legislation "the quietly revolutionary" goal to

conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.<sup>8</sup>

The preservation movement was begun.

A growing environmental consciousness in the 1960s would provide the next great boon of preservationism. Congressional land-classification acts - such as the Wilderness Act of 1964 and the Wild and Scenic Rivers Act of 1968 - would put millions of acres into protected status. At the same time, regulatory laws which at first appeared to have little to do with land preservation - the National Environmental Policy Act of 1969, the Federal Water Pollution Control Act of 1972, and the Endangered Species Act of 1973 - would stop development in many pristine areas.

The U.S. government still owns over 732,000,000 acres (nearly 3,000,000 km<sup>2</sup>) - one-third of the nation's land.<sup>9</sup> Today, perhaps 20 percent of the U.S. remains wild or largely untouched by development - over 90 percent of Alaska and some 6 percent of the contiguous 48 states (approximately 450,000,000 acres (1,821,862 km<sup>2</sup>)). The bulk of these undeveloped areas are on U.S. government lands; so far, less than 130,000,000 acres (513,360 km<sup>2</sup>) of these natural areas have been substantially protected as wilderness and parks.

Both through its outright ownership of public lands and through its legislative power to regulate private lands, the national government has preeminence in land preservation in the United States.<sup>10</sup> Yet, countervailing political-economic view-points exist, preventing an "all-out" land preservation policy, despite the national government's powers.

States'-rights sentiments continue to press for the U.S. government to "privatize" its land holdings; antiregulatory and free-market economic philosophies argue against intrusive government regulation of private property; populist strains react against what some see as the "elitist" nature of preservation; and the American work-ethic (sometimes said to be rooted in the Judeo-Christian exhortation to "multiply and subdue the earth"<sup>11</sup>) rebels against "locking up" valuable resources in wilderness.<sup>12</sup>

These conflicting views of wilderness, of government management, and of human values may help to explain why, on the one hand, land protection laws are so numerous and diverse, but yet, on the other hand, their application and enforcement have proved so controversial.

### **THE FOUR DIFFERENT TECHNIQUES**

A first view of U.S. land preservation laws is apt to impress or confuse the viewer with their sheer numbers and seeming diversity. They are numerous, but, on close inspection, their diversity actually boils down to four different government techniques or methods for effecting preservation.

#### **Reclassification or Management of Government Property**

By far the predominant technique, the one that has put the most millions of acres into protected status, is simply closing existing government land to development. In these laws, Congress or a government agency changes the classification or management of public land under its control from a developable status to an undevelopable or limited-development status. The prime examples of this approach are the Wilderness Act of 1964, the Wild and Scenic Rivers Act of 1968, the Antiquities Act of 1906, and federal agency management statutes.

#### **Predevelopment Approval or Study Requirements**

A very common protective technique is to require, before a land-impacting development can proceed, that there be a careful government review of its positive and negative impacts and alternative approaches. The underlying theory (criticized as illogical by some authorities<sup>13</sup>) is that the environmental data thus acquired will influence the project decision or design. With some laws - such as the National Environmental Policy Act of 1969 - this is accomplished by an intensive environmental impact study, the results of which must merely be "considered" before the development proceeds. In other cases - such as the Clean Water Act Section 404 review or the Endangered Species Act - the development must actually be granted a government license, permit, or other approval, or else it is prohibited from proceeding.

#### **Financial Assistance Tied to Standards**

A third technique is the more indirect approach of using federal government spending to encourage third parties to protect land. Detailed federal standards or rules are adopted, and acceptance of the government financial assistance obligates the recipients not only to protect land but to do so in accordance with the federal standards. The laws may provide direct

dollar grants to state and local governments - such as the Land and Water Conservation Fund Act, the Coastal Zone Management Act, and the Fish and Wildlife Conservation Act - or may provide income tax deductions to private individuals and corporations - as Internal Revenue Code Section 170 does for conservation easements.

### **Acquisition of Private Land**

While seemingly the most direct approach, laws authorizing government purchase of private land are a comparatively less-used technique for preservation. Several acts so provide - the Land and Water Conservation Fund Act, the Wild and Scenic Rivers Act, and the National Wildlife Refuge Acts - and the dollars and acres are not insignificant. However, fiscal realities and general discomfort with government interference with private property limit the acreage protected by this method.

A technique conspicuously absent at the national level is legislation authorizing direct zoning or classification of *privately* owned lands for nondevelopment.<sup>14</sup> This is explained by two separate strands of American legal thought. First is the prohibition in the U.S. Constitution's Fifth Amendment against government "taking" of private property without payment of just compensation; government "nationalization" of private property thus has a steep price. Second is the long-held perception that state and local governments, not the national, are the appropriate levels for regulating private property land use.

The following pages present the first attempt at an overview of all national land preservation laws, categorized by which of the four techniques the law employs. Two other variables - the degree of protection and the pristineness of the land - can be seen. The laws range from those which prohibit all development and intensive use of lands in their virgin state ("wilderness," "wild rivers," and "wild," "primitive," and "natural" areas) to those which allow some recreational development and use of less pristine land ("parks," "monuments," "scenic rivers") to those which allow "intensive development and use of more human-impacted land ("wildlife refuges," "national forests," "recreational rivers," "historic areas").

A cautionary statement is necessary. Space permits only a summary analysis of the acts themselves. Most, if not all, are amplified by lengthy agency regulations, guidelines, adjudication orders, and Attorney General and Solicitor opinions, as well as court decisions, which should of course be consulted for a more detailed analysis.

## **NATURAL AREA PRESERVATION LAWS**

### **RECLASSIFICATION OR MANAGEMENT OF GOVERNMENT PROPERTY**

#### **The Wilderness Act**

The Wilderness Act of 1964 (16 U.S.C. Sections 1131-1136) established the National Wilderness Preservation System, composed of federally owned lands designated and reserved by Congress as "wilderness." The Act's purpose is to prevent the consumption of all natural areas within the United States, leaving no lands preserved in their natural condition. Since 1919, wilderness areas had been administratively designated by various land managing agencies, but fear of easy agency reversals prompted demands for more permanent congressional reservations.

The Wilderness Act defines "wilderness" in surprisingly non-legal terms (which have led to many controversies over whether a particular area qualifies):

A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean...an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

The Act was specifically limited to lands of three major agencies: The U.S. Forest Service (USFS), National Park Service (NPS), and Fish & Wildlife Service (FWS). It conspicuously ignored over 60 percent of the public lands: the 470,000,000 acres (1,902,834 km<sup>2</sup>) then held by the nation's largest landholder, the Bureau of Land Management (BLM). It took 12 more years for Congress to require wilderness review and protection for these vast BLM holdings.

The Wilderness Act took two steps:

(1) It made "instant wildernesses" of all areas which the three agencies had already administratively designated as



"wilderness" or similar category (54 areas, 9,100,000 acres (36,842 km<sup>2</sup>)); and

(2) It ordered the three agencies to undertake 10-year studies of all large (generally 5,000 acres (20.2 km<sup>2</sup>) or more) primitive or roadless areas under their jurisdiction and report recommendations, through the President, to Congress. During the "study phase," the lands were to be preserved as wilderness. Studies by NPS and FWS proceeded fairly noncontroversially,<sup>15</sup> but the USFS studies were marred by agency delay and arbitrary exclusions and repeatedly successful environmental-group lawsuits.<sup>16</sup>

Today, only Congress can designate a "wilderness,"<sup>17</sup> yet it is dependent upon sometimes-reluctant government agencies to make the recommendations and provide the necessary data. Thus, environmental groups and other government agencies sometimes bypass the land agency and present their own proposals successfully to Congress.

By 1986, 462 areas totaling 88,587,332 acres (358,654 km<sup>2</sup>) had been designated as wilderness (4 percent of the U.S.):<sup>18</sup>

<u>Agency</u>	<u>Units</u>	<u>Acres</u>	<u>Km<sup>2</sup></u>
USFS	341	32,086,580	129,905
NPS	38	36,754,980	148,806
FWS	60	19,377,033	78,450
BLM	23	368,739	1,493
	<u>462</u>	<u>88,587,332</u>	<u>358,654</u>

Over 60 percent of these wilderness acres are in Alaska; most of the rest lie between the Pacific Ocean and Rocky Mountains. Over 44,000,000 acres (178,138 km<sup>2</sup>) are still under "study" (USFS, 20,000,000 acres (80,972 km<sup>2</sup>); BLM, over 24,000,000 acres (97,166 km<sup>2</sup>)), so the possibility of additional wilderness designations continues.

The Act protects wilderness by prohibiting many incompatible uses; however, concessions were made to protect some established practices and existing private rights. With some exceptions, roads, motor vehicles and equipment, commercial enterprises, buildings, and logging are prohibited. Mining was given a 20-year exemption, with the result that wildernesses contains numerous private claims (but little mining). Existing livestock grazing and sport hunting and fishing are allowed. Water resource developments may be permitted by the President. With a few spectacular exceptions, incompatible uses have caused little problem.

Human recreational uses cause the major management problems. Ecosystem carrying capacity is exceeded by visitor use in some wildernesses already, leading to permits and rationing. Additional management concerns include develop-

ments on surrounding land, fire and insect suppression, trail building and maintenance, hunting, sanitation, and livestock.

### **Section 603 of The Federal Land Policy and Management Act**

For 12 years after the Wilderness Act, the government's largest landholder, the U.S. Bureau of Land Management (BLM), was under no mandate to study or protect wilderness. This changed with the passage of the Federal Land Policy and Management Act of 1976 (FLPMA) (43 U.S.C. Sections 1701-1784), a law which significantly modernized the purposes, organization, and procedures of that "disposal"-oriented agency.

Section 603 of FLPMA (Section 1782) required BLM to begin a 15-year study of all of its large (generally 5,000 acres (20.2 km<sup>2</sup>) or more), roadless areas and make wilderness recommendations, through the President, to Congress. Again, generally, the areas under study must be managed so as not to impair their suitability for wilderness.

The BLM review has been at least as controversial as the USFS, criticized for using excessively "purist" criteria to eliminate worthy acreage from consideration (even in the eyes of its own Department). Incredibly, the BLM first determined that of its then-470,000,000 total acres (1,902,834 km<sup>2</sup>) only 174,000,000 (704,453 km<sup>2</sup>) were "roadless," and of those, only 24,000,000 (97,166 km<sup>2</sup>) were worthy of further study as possible wilderness recommendations. This gross elimination of 95 percent of BLM lands from consideration provoked great controversy and litigation.<sup>19</sup> To date, BLM has 23 wilderness units totaling 368,739 acres (1,493 km<sup>2</sup>), or less than 0.1 percent of its land. It is expected that Congress will be presented with millions of acres of wilderness proposals on BLM lands by environmental groups, bypassing this most reluctant of agencies.

### **Wild and Scenic Rivers Act**

Since 1900, the national government has been a prime mover in constructing, financing, and licensing billions of dollars in structural developments, dams, dredgings, channelizations, water supply diversions, hydropower and flood-control projects on America's rivers and streams. The resultant loss of free-flowing streams, riparian habitat, canyons and other landforms, and water quality, prompted a major national debate in the 1960s-70s.

By the 1960s, a few rivers had been preserved in their natural state by congressional action,<sup>20</sup> but this piecemeal legislative approach was replaced by the Wild and Scenic Rivers Act of 1968 (WSRA) (16 U.S.C. Sections 1271-1287). The Act created the National Wild and Scenic Rivers System and established a

national policy of protecting, for public enjoyment, rivers possessing "outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values." As of 1986, the national system consisted of 66 rivers or segments, totaling 7,224 miles (11,558 km).<sup>21</sup>

The Act provides three ways for rivers to become part of the national system:

(1) Congress may directly designate a river through legislation (of the 66 in the system, 38 were included in this way);

(2) The Secretary of the Interior may place rivers already in a state system into the national system, upon a state governor's request (12 have been added this way);

(3) Congress may order a federal agency to study a river in its jurisdiction and then make recommendations, through the President, on whether Congress should designate it (91 rivers have been ordered studied and 81 of the studies have been completed, but only 16 rivers added to the system as a result).<sup>22</sup>

Three types of rivers are recognized as worthy of protection:

(1) "Wild" rivers - free-flowing (no dams or diversions), generally inaccessible except by foot trail, unpolluted, essentially primitive shorelines (little evidence of human activity or development);

(2) "Scenic" rivers - free-flowing, occasionally accessible by road, railroad, or bridge, largely undeveloped shorelines (small communities, scattered structures, some agriculture and timbering acceptable);

(3) "Recreational" rivers - generally natural (some dams and diversions), more substantial human activities and developments acceptable.

Subject to limited exceptions, U.S. government lands which constitute the bed and bank of a designated river, as well as public lands within one-quarter mile (0.4 km) of such river, are preserved. The WSRA prohibits federal government construction, financial assistance, or licensing on designated or study rivers. It does not directly prohibit private development; however, it allows federal agencies to acquire private lands and easements and work with state and local governments to apply land use controls.

The WSRA's implementation has been controversial. Environmentalists complain that the amount of rivers designated in nearly 20 years is grossly inadequate, while private and public landowners and development interests resist studies and designations for fear of interference with property rights and development plans. Similar to the Wilderness Act, the study process is criticized by environmentalists as too slow

and too restrictive, and by opposition interests because it largely prevents development during the study.

### **Alaska Lands Acts**

In 1970, the U.S. government owned 97 percent of the 365,000,000 acres comprising the State of Alaska. For decades, the state government, Alaskan Natives, and private mineral-petroleum companies had agitated for the U.S. to "dispose" of its holdings to them. In 1971, Congress began that process with the Alaska Native Claims Settlement Act (ANCSA) (43 U.S.C. Sections 1601-1628). ANCSA resumed state selections of 104,000,000 acres (421,053 km<sup>2</sup>), granted Alaskan Natives the right to select 44,000,000 acres (178,138 km<sup>2</sup>), and authorized the Secretary of the Interior to withdraw up to 80,000,000 acres (323,887 km<sup>2</sup>) of "national interest" lands (for parks, wilderness, etc.).

Conflicts about overlapping selections rose to a fever pitch, when, in 1978, the President and the Secretary of the Interior executed a massive withdrawal of over 100,000,000 acres (over 405,000 km<sup>2</sup>) to forestall state/Native/company selections on pristine lands.<sup>23</sup> Congress responded by passing the Alaska National Interest Lands Conservation Act of 1980 (ANILCA) (16 U.S.C. Sections 3101-3233), called by one senator "perhaps the greatest conservation achievement of the century."

ANILCA rescinded the 1978 withdrawals, but redesignated over 104,000,000 acres (421,053 km<sup>2</sup>) (chiefly BLM lands) for preservation. This included 56,400,000 acres (228,340 km<sup>2</sup>) added to the National Wilderness Preservation System, 13 new rivers for the National Wild and Scenic Rivers System, with the balance going to the NPS and FWS as parks, monuments, and refuges.

This one act more than doubled the size of the national parks, almost tripled national wildlife refuges, and quadrupled national wilderness areas. It also reduced dramatically the land held by the relatively nonpreservationist BLM from 480,500,000 acres (1,945,344 km<sup>2</sup>) in 1978 to 341,100,000 (1,380,972 km<sup>2</sup>) in 1983. ANILCA was not a complete victory for environmentalists. It allows many incompatible uses (including snowmobiles, motor boats, airplanes, timber, mining and exploration, and roads in some areas). Moreover, it failed to preserve the magnificent, 15,400,000-acre (62,348 km<sup>2</sup>) Tongass National Forest in southeast Alaska, a significant setback for preservationists.

### **The Antiquities Act**

The oldest and most-used preservation law is the Antiquities Act of 1906 (16 U.S.C. Sections 431-433). While creation of national parks, wildernesses, and other significant areas is a power jealously retained by Congress, through this Act it has delegated to the President the authority to reserve U.S. lands as "national monuments." National monuments can be any federally owned land which contains "historic landmarks, historic and prehistoric structures, and other object of historic or scientific interest."

The Antiquities Act has been used over 60 times by every American President since Theodore Roosevelt. Some major examples are Grand Canyon N.M. (271,145 acres (1,098 km<sup>2</sup>)), Death Valley N.M. (1,601,800 acres (6,485 km<sup>2</sup>)), Glacier Bay N.M. (1,164,800 acres (4,716 km<sup>2</sup>)), and the monumental Alaska withdrawals of 1978. The NPS administers national monuments, and a number have been upgraded to national parks.<sup>24</sup>

The Act has not been limited to "historic" monuments, but has been used repeatedly to preserve pristine land areas and scenery. The Act allows the government to acquire private lands if they complement monuments or contain objects worthy of protection.

### **Cultural Preservation Laws**

The Antiquities Act contains little enforcement power to protect lands once reserved. Other congressional laws have been passed to provide regulations and penalties for the protection of archaeological, paleontological, and historical resources on U.S. government lands. In preventing destructive excavation (often with bulldozers), roadbuilding, and other assaults, these acts indirectly protect the natural and wilderness values of the areas as well.

Examples include the Archaeological Resources Protection Act of 1979 (ARPA) (16 U.S.C. Sections 470aa-470ll), the Historic Sites, Buildings, and Antiquities Act of 1935 (16 U.S.C. Sections 461-469j), and the National Historic Preservation Act of 1966 (16 U.S.C. Sections 470-470w-6).<sup>25</sup>

### **The National Trails System Act**

The National Trails System Act of 1968 (NTSA) (16 U.S.C. Sections 1241-1251) envisioned an extensive network of recreational trails, with the initial components of the system being the Appalachian and the Pacific Crest trails and 14 additional routes identified for further study. Four types of trails make up the system: national recreation trails, national scenic trails, national historic trails, and connecting and side trails. While

national scenic and historic trails may only be authorized by acts of Congress, the Secretaries of Interior and Agriculture are authorized to establish and designate national recreation trails.

The trails may be built on U.S. government land, or private land may be acquired; buffer areas along the trails are encouraged. Thus, the Act provides an indirect means of preserving new lands. However, this is offset by its emphasis on urban areas, funding limitations, and encouragement of intensive use, structures, and mechanized travel. Further, the system has not expanded rapidly, and there are as yet only a handful of designated trails or areas under study.

### **General BLM Laws**

When Congress passed the Federal Land Policy and Management Act of 1976 (FLPMA) (43 U.S.C. Sections 1701-1784), it did much more for land preservation than merely order the BLM, in Section 603, to begin a wilderness review. It repealed over 100 conflicting "disposal" laws governing BLM land and instituted a new "organic act" for the agency, with new purposes, mandates, and procedures. A number of these FLPMA changes - particularly when coupled with the National Environmental Policy Act (NEPA)—should have significant positive effect on preservation of nonwilderness BLM lands.

FLPMA announces an official change in national policy from one of disposal of public lands to one of retention. Preservation is made a key goal, but along with development and extractive uses. The Act for the first time makes land use planning a mandatory advance step before any BLM land-related decisionmaking. Multiple use and sustained yield policies are now required.

Even more concretely, FLPMA directs that special attention be given to "areas of critical environmental concern" in order to "protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural systems." Preservation of scenic values and conservation of recreational and watershed resources is part of multiple-use management. Land use planning specifically requires "integrated consideration of physical, biological, economic, and other sciences," giving priority to protection of areas of critical environmental concern. Land exchanges must consider, among other values, recreation area needs. All rights-of-way must contain terms and conditions to "minimize damage to scenic and aesthetic values and fish and wildlife habitat and otherwise protect the environment."

In its most significant and sweeping language, Section 302(b) of FLPMA states:

In managing the public lands the Secretary shall, by regulation or otherwise, *take any action necessary to prevent unnecessary or undue degradation of the lands* (emphasis added).

However, there is serious doubt as to BLM's ability or aspiration to implement this congressional mandate in the field, given its historic indifference to the preservation of natural areas. Time and judicial interpretations of these sections will be necessary to see if they receive a "mandatory-action" interpretation or are lost in an "agency-discretion" abyss.

Additionally, significant changes in BLM's grazing program have been brought about by NEPA, FLPMA, and the Public Rangelands Improvement Act of 1978 (43 U.S.C. Sections 1901-1908). These changes are discussed more fully elsewhere,<sup>26</sup> but essentially require BLM and its licensed grazers to be more protective of land, ecosystems, wildlife, and natural areas on the 171,000,000 acres (692,308 km<sup>2</sup>) of BLM land currently used by private cattle and sheep ranchers.

### **General USFS Laws**

Like the BLM, the USFS had new management acts passed in the 1970s, which, coupled with NEPA, have positive potential for preservation of nonwilderness national forest lands. Today, the USFS is the second largest U.S. government landholder, with 191,000,000 acres (773,279 km<sup>2</sup>) divided into 155 national forests and 19 national grasslands in 44 states and two possessions.

Public debate over the USFS's utilitarian, timber-production emphasis under the Organic Act of 1897 (16 U.S.C. Sections 473-478, 479-482; Section 476 repealed in 1976) and the Multiple-Use Sustained-Yield Act of 1960 (16 U.S.C. Sections 528-531) came to a head in the 1970s. Courts and Congress began to take a more intensive look at agency decisionmaking, according it less discretion. The Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA) and the National Forest Management Act of 1976 (NFMA) (collectively, 16 U.S.C. Sections 1600-1614) now expressly require the agency to consider preservation and evaluate conflicting uses.<sup>27</sup> Still, USFS lands in general may be used for timber, mining, grazing, water, and recreational-development resources, with the predominant mission still timber production.

### **General NPS Laws**

Unlike many other federal agencies, the NPS began with a mission for preservation; yet, it has found the very popularity of its recreation opportunities slowly eroding that mandate. The National Park Service Organic Act of 1916 (16 U.S.C. Sections 1-60qq) framed the mandate in a contradictory way:

to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.

This tension between preservation ("conserve...unimpaired") and recreation ("enjoyment") is reflected in other provisions of the Act which require the NPS to both "regulate" and yet "promote" park use.

Still, compared to the multiple-use character of USFS, BLM, etc., the NPS has the most clear-cut preservation mandate of any U.S. government agency for its nonwilderness lands. It is the fourth largest U.S. government land owner, with 337 units totaling 74,900,000 acres (303,239 km<sup>2</sup>) in almost every state (nearly 75 percent in Alaska). Its holdings include the highly protected wilderness areas, somewhat less protected parks and monuments, as well as a growing number of other, even less protected categories, such as national seashores, lakeshores, recreation areas, scenic parkways, battlefields, preserves, landmarks, and historic sites.<sup>28</sup> At the extreme, its urban parks and historic sites are the antithesis of natural preservation.

The National Park Mining and Regulation Act of 1976 (16 U.S.C. Sections 1901-1912) permits regulated mining in some park lands. In addition, timber cutting, destruction of plant and animal life, grazing, airports, roads, and tourist hotels and facilities may be allowed. But the greatest threat to preservation of these spectacular natural areas today comes from without, not within. The NPS itself has identified over 4,000 external threats to the parks, including air pollution, water quality and quantity reductions, incompatible developments, pesticide/ biocide use, noise impacts, visual incursions, etc. According to government studies, it has not done a good job of defending itself against those external threats, to date.<sup>29</sup>

### **General FWS Laws**

Recognizing that habitat preservation is crucial in assuring healthy wildlife populations, the U.S. government has set aside vast amounts of public land specifically for animal and fish protection. Although landform preservation is not the primary goal, it is a direct beneficiary of wildlife management.

Since the first wildlife refuge was established by President Theodore Roosevelt in 1903 (Pelican Island, Florida), the FWS has grown to be the third largest U.S. government landholder, with 84,900,000 acres (343,725 km<sup>2</sup>) in the National Wildlife Refuge System (88 percent in Alaska), in addition to numerous wildlife easements acquired on private property. Until 1966, no single law governed the many national wildlife refuges, which were added piecemeal by congressional dedication,



presidential withdrawal, and agency purchase. The National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. Sections 668dd-668ee), together with the Refuge Recreation Act of 1962 and the Refuge Revenue Sharing Act of 1964 constitute the basic statutory authority for the FWS.<sup>30</sup>

Today, national wildlife refuges vary from pristine, wilderness areas (19,377,033 acres (78,450 km<sup>2</sup>), or less than 25 percent) to heavily used wildlife hunting areas, to producing oil and gas fields. While the 1966 Act somewhat restricts the Secretary of the Interior's ability to dispose of refuges, it permits the use of any area within the System for any purpose, including but not limited to hunting, fishing, public recreation and accommodations, and access whenever [the Secretary] determines that such uses are compatible with the major purposes for which such areas were established.

Thus, as a natural area preservation technique, nonwilderness refuges offer a dubious and changeable potential.

## **PREDEVELOPMENT APPROVAL OR STUDY REQUIREMENTS**

### **The National Environmental Policy Act**

The National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. Sections 4321-4370) is easily the most pervasive and controversial environmental legislation to emerge from the environmental era. Most importantly, it requires extensive study and consideration of the environmental impacts and alternatives of any major federal action that significantly affects the environment. Moreover, it allows federal court litigation to be initiated by private citizens to challenge U.S. government failure to comply with the Act.

While NEPA supporters sought radical reform in federal agency programs (land and resource allocation, construction, planning, financial assistance, permitting, etc.), because of their effects on the environment, it is doubtful that they envisioned what NEPA would become. During its first 10 years (1970-1980), NEPA forced federal agencies to prepare more than 12,400 such studies, called "environmental impact statements" (EISs), and precipitated more than 1,200 lawsuits.<sup>31</sup>

The purposes of the NEPA are:

[T]o declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality.

While Section 101 sets forth only ambitious and ambiguous goals for environmental protection, the courts have inter-

preted Section 102 as "action forcing" procedures, enforceable by the judiciary.<sup>32</sup> Section 102(2)C requires a "detailed statement" (EIS) prior to federal agencies' proceeding with major, environment-impacting projects. Section 102(2)(E) requires an alternatives study whenever a federal agency proposal involves "unresolved conflicts concerning alternative uses of available resources." Agency efforts to avoid doing these studies have been, and will continue to be, the source of NEPA litigation.

The theory of NEPA is simple (some have criticized it as simplistic<sup>33</sup>): if nonenvironmental agencies are forced to prepare an environmental analysis of their own projects, before they proceed, they will consider the negative data thus exposed and will change or cancel their projects. Cynicism about NEPA's theory may well be justified, particularly because the law requires only "consideration" of the study findings; once the study is produced, the agency in theory may proceed with its project despite its environmental negatives.

Supporters of NEPA argue that it is the "salvation" of the environment. Critics contend it is a producer of unnecessary paperwork, expense, and delays of worthy projects. While there is truth in both statements (the EIS process has exposed bad projects and good alike), NEPA's substantial benefits cannot be denied: (1) it has made the environment a major preoccupation of federal agencies; (2) the EIS process has brought about environmentally sound changes in programs and projects; (3) it has dramatically increased the funding for environmental research, thus greatly increasing our substantive knowledge; (4) it has dramatically increased the employment of environmental personnel, thus producing significant "insider" reforms; and (5) it has exposed agency planning and decisions to broadened public involvement and criticism.<sup>34</sup>

NEPA has assisted natural areas preservation in a number of ways, direct and indirect. Prior to this Act, federal land agency laws provided few grounds for a successful challenge in court of a federal agency's decision to perform or allow development or other inconsistent uses in natural areas. Because most such decisions are "major federal actions" under NEPA, courts today are willing to provide review, increasing the scope of protection. Among the large national programs halted and remanded for reconsideration by NEPA litigation are USFS wilderness studies, federal coal leasing programs, federal offshore oil and gas leasing, USFS timber planning, federal biocide spraying programs, dam construction, and industrial water marketing programs.

Also, prior to NEPA, successful challenges to private developments in privately owned natural areas were difficult.

Today, with the pervasiveness of federal government involvement in the private sector (financial assistance, permitting, public land access, joint ventures, etc.), many private developments come under NEPA requirements.

Further, prior to NEPA, much agency planning proceeded "out of sight" of the public, until it was complete. Now, NEPA and public involvement have become integral parts of agency planning processes, frequently resulting in more environmentally protective decisions, without the necessity for litigation.

### **The Clean Air Act**

The Clean Air Act of 1970 (CAA) (42 U.S.C. Sections 7401-7642) is primarily focused on human health protection through attainment and maintenance of national ambient air quality standards, enforced by emission standards for stationary and mobile sources of air pollution. Yet, it creates one program specifically designed to protect natural land areas.

1977 amendments to the Act (Sections 7470-7479) require "prevention of significant deterioration" (PSD) of air quality over certain important land areas. Using a zoning approach, the Act creates three land classifications subject to PSD, ranging from Class I (most pure) to Class III (least restrictive). Most large parks and wilderness areas are in Class I, while the balance of federal natural areas are in Class II.

Major new pollution sources planning to locate in PSD areas have the strictest preconstruction permit review, technology controls, and monitoring requirements, and may be denied a permit to construct if their pollutant load would exceed the allowable small increases.<sup>35</sup>

In addition, believing PSD might not be enough in many pristine areas, Congress added visibility protection for Class I areas in 1977 (Section 7491). Under this separate program, both existing and new large sources must undergo additional review and even more stringent technology controls. Securing Class I or II status for appropriate lands is an excellent means of protecting the overall ecosystem, since the designation dramatically reduces the amount of new development which can be permitted in the area.

### **The Clean Water Act**

The Clean Water Act of 1977 (originally the Federal Water Pollution Control Act Amendments of 1972) (33 U.S.C. Sections 1251-1376) is designed to prevent pollution of the nation's surface waters, through the use of permits enforcing effluent and ambient water quality standards. The Act's general permit features enhance aquatic natural areas, but one inde-

pendent section provides an even more direct means of protecting natural areas.

Section 404 of the Act (Section 1344) incorporates the Dredge and Fill Permit Program, which has existed since the 1899 Refuse Act. Section 404 requires a U.S. Army Corps of Engineers' permit before any "discharge of dredge or fill material into the navigable waters." Court and agency interpretations have so expanded the provision that it now applies to virtually any alteration of wetland areas, whether "navigable" or not.

Two different permit processes exist. One is a streamlined "general" or "nationwide" permit, which requires only notice (not an individual permit review) for select activities not believed to have significant adverse individual or cumulative impacts. Regretably, some of these activities are highly questionable (agricultural and timber activities, discharges above headwaters or into nontributary waters, small hydropower projects, some surface coal mines, etc.).

The second process is a true "public interest review" permit for all other dredge and fill operations (including mining, recreational dredging, dams, water projects, bridges, filling marshes, etc.). Detailed consideration of environmental factors, public notice and input, and compliance with NEPA are required by the Corps' regulations. EPA has a veto power, and FWS must be consulted.<sup>36</sup>

Section 404 provides not only a political process, like NEPA, but also firm substantive standards and an approval process which may assist preservation of natural wetland areas. However, the Corps' expansion of the automatic "general" permit categories, its general pro-construction attitudes, and weak enforcement make this a less than perfect tool for preservation.

### **The Endangered Species Act**

The Endangered Species Act of 1973 (ESA) (16 U.S.C. Sections 1531-1543), even as amended in 1978, has been termed a "formidable constraint" on a wide variety of land uses. While designed to preserve endangered or threatened plant and animal species, it wisely recognizes that habitat protection is one key to that goal, thus giving it substantial powers to protect natural areas.

Section 7 of the Act could scarcely be more prohibitive. It commands all federal agencies to

insure that any action authorized, funded, or carried out by such agency...is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species....

The section has been strictly interpreted by the U.S. Supreme Court, stopping, in a classic case, construction of the Tellico Dam in "an area of great natural beauty" in Tennessee, because of an endangered fish, the Snail Darter.<sup>37</sup> This prompted lengthy amendments in 1978, which surprisingly left Section 7 untouched, creating instead a cabinet-level committee which could override the Act and let a project go forward. Significantly, that committee has ruled only in favor of the endangered species thus far.

The Act requires the Secretary of the Interior to designate species as endangered and threatened and to specify the critical habitat necessary for the preservation of the species. This part of the process has been criticized as far too time-consuming and restrictive. The Act emphatically prohibits the "taking" of (virtually any interference with) an endangered species and imposes civil penalties for violations. It requires the Secretaries of Interior and Agriculture to establish programs to conserve fish, wildlife, and plants, including land acquisition with funds from the Land and Water Conservation Fund.<sup>38</sup>

### **The Fish and Wildlife Coordination Act**

The Fish and Wildlife Coordination Act of 1958 (FWCA) (16 U.S.C. Sections 661-666c) broadly requires that water-resource development programs give "equal consideration" to wildlife conservation. This is another wildlife protection law which can, in some cases, have a significant effect on preservation of natural areas.

The FWCA has three key provisions. First, its "consultation" requirement orders federal agencies preparing to construct or to permit a water project to consult with FWS and state wildlife agencies in advance, to prevent loss and damage to wildlife resources, and to provide for their development and improvement. Second, its "reporting" requirement orders preparation of reports on the expected wildlife resource damages and requires that they be considered. Third and most important, its "conservation" requirement requires that there must be "adequate provision...for the conservation" of the lost resources ("mitigation" and "enhancement").<sup>39</sup>

The FWCA has made protection or replacement of wildlife habitat an essential step in every water project in which the U.S. government is involved in any way. In some cases, the required mitigation/enhancement program makes a project dis-economic and it dies; in other cases, new natural areas are created or set aside elsewhere so the project can go forward. In theory, the FWCA could be the nation's strongest protection against the loss of natural areas to water projects; instead, FWS enforcement of mitigation/enhancement against its sib-

ling agencies has often been less than aggressive, resulting in insufficient replacement of the losses.

### **Other Wildlife Protection Laws**

Other wildlife protection laws, while not so focused on habitat as the Endangered Species Act and the Fish and Wildlife Coordination Act, can indirectly protect natural areas. Examples include the Bald and Golden Eagle Protection Act (16 U.S.C. Sections 668-668d) and the Migratory Bird Treaty Act of 1918 (16 U.S.C. Sections 703-708, 709a-712).

These Acts broadly prohibit killing, possessing, or in general interfering with any of the listed species. Substantial criminal and civil penalties are provided, and the Acts and their strict regulations have been upheld by the U.S. Supreme Court.<sup>40</sup> The presence of populations, even nests, of these species has been enough to prohibit or alter permits for public and private development in natural areas. Courts have also held that developments and activities which accidentally or incidentally kill such species (pesticide spraying programs, toxic substance releases, maintaining oil sludge pits) can violate the Acts.

### **Other Agency-Limiting Acts**

Federal agencies' own organic or operating laws can contain requirements which protect natural areas from the agencies' plans and programs. A classic example is Section 4(f) of the Department of Transportation Act of 1966 (49 U.S.C. Section 1653(f)).

Section 4(f) provides that the Secretary of Transportation shall not approve any government or private program or project (typically a new highway) which requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance... unless (1) there is no feasible and prudent alternative to the use of such land, and (2) such program includes all possible planning to minimize harm to such [land].

The same language is found in Section 18(a) of the Federal-Aid Highway Act of 1968 (23 U.S.C. Section 138).

In a classic environmental case, a proposed superhighway through a city park was stopped, because the Secretary had failed to do the required studies of alternatives and mitigation.<sup>41</sup> In this sense, such study or advance-findings requirements play a role very similar to the alternatives and mitigation-study requirements of NEPA, requiring public notice and input on planning at the predevelopment or pre-permit stage.

## **FINANCIAL ASSISTANCE TIED TO STANDARDS**

### **The Coastal Zone Management Act**

Congress passed the Coastal Zone Management Act of 1972 (CZMA) (16 U.S.C. Sections 1451-1464) to protect the diminishing natural resources of America's fast-developing coastal areas.<sup>42</sup> The CZMA does not regulate these ocean and inland watershore areas directly; instead, it pursues its goal of rational use of coastal resources by providing federal financial assistance to states, if the states will develop land use and management plans consistent with the federal act's standards.<sup>43</sup>

Federal standards require state programs to be specific as to area covered, describe permissible uses, and provide sufficient authority for implementation. Although states are not required to adopt coastal zone programs, the attractive federal incentives have caused 30 (all ocean and Great Lakes states) to adopt or begin to plan such programs. Two types of state programs are emerging: (1) permit or siting programs for certain development activities and (2) more comprehensive land use planning and management regulations.

The foremost incentive is dollars. A federally approved state plan receives federal grants that pay up to 80 percent of the cost of the program. Second, a "federal consistency" provision means that, in a state with an approved program, federal agencies, permittees, and lessees may only act in accordance with state rules, giving the state some control over federal programs.

Critics of the CZMA approach point out that the federal standards are vague and permissive, that (after 15 years) relatively few states actually have operating programs, and that state programs frequently employ weak controls. Supporters of the CZMA praise its "federal-state partnership" approach and point out that the effort has saved many natural coastal areas from development.

### **The Coastal Barrier Resources Act**

The opposite approach - financial disincentives - is used to protect some of the same coastal resources in the Coastal Barrier Resources Act of 1982 (16 U.S.C. Sections 3501-3510). The Act seeks to protect "undeveloped coastal barriers" (areas that protect landward habitats from wave action, plus all associated and adjacent habitats) on the Atlantic and Gulf of Mexico coasts.

The Act sweepingly prohibits federal financial assistance (state revenue-sharing grants, bank and flood insurance, mortgage underwriting, public assistance programs, loans, grants, or other forms of direct or indirect aid) for any con-

struction, purchase, or land management project in a designated undeveloped coastal barrier area. However, some highly impactful developments are exempt (including energy resources facilities, channel improvements, roads, and military activities).

The Act is one of a new generation of environmental laws, relying on economic, market-based approaches, rather than traditional regulatory, acquisition, or subsidy approaches.<sup>44</sup> Time will tell if it is effective.

### **The Fish and Wildlife Conservation Act**

The Fish and Wildlife Conservation Act of 1980 (popularly called the "Nongame Act") (16 U.S.C. Sections 2901-2911) provides federal financial and technical assistance to encourage states to develop, revise, and implement conservation plans for nongame fish and wildlife. The Act provides detailed, ecologically based standards which state conservation programs must meet to obtain approval and funding.<sup>45</sup>

Millions of dollars have passed to states under this Act, encouraging conservation programs which protect natural areas because of the Act's emphasis on habitat. The Act is somewhat limited, since it focuses on nongame species only (and further because endangered species are excluded from that definition).

### **Laws Encouraging Habitat Management on Private Lands**

A number of national laws encourage (directly or indirectly) habitat preservation and management on private lands, through financial aid. While some of these laws support developments that destroy natural areas (dams, agriculture, etc.), each has some potential for protecting natural areas.

The purpose of the Water Bank Act of 1970 (16 U.S.C. Sections 1301-1311) is "to preserve, restore, and improve the [privately owned] wetlands of the Nation," and thereby conserve surface waters, improve wildlife habitat, reduce erosion and stream sedimentation, and improve flood control and water quality "to enhance the natural beauty of the landscape." For the first time an agriculture-promoting Congress recognized that a major means of natural areas protection would be to "reduce acres of new land coming into [agricultural] production and to retire lands now in agricultural production."

The Secretary of Agriculture is authorized to enter into 10-year, renewable leases or agreements with private landowners and pay them for protecting their wetlands for migratory wildfowl. The landowner must agree to comply with federal standards prohibiting most draining, development, and impactful uses.<sup>46</sup> Up to \$10,000,000 a year may be spent on



this program, making it a significant alternative to outright land-purchase programs.

The Soil and Water Resources Conservation Act of 1977 (16 U.S.C. Sections 2001-2009) similarly provides financial assistance to private land owners for conservation of soils, plants, woodlands, watershed, water resources, wildlife and habitat, and recreational resources. The Secretary of Agriculture administers a continuing appraisal of the quality of the conservation, under federal standards.

The chief purpose of the Watershed Protection and Flood Prevention Act of 1954 (the "Small Watersheds Act") (16 U.S.C. Sections 1001-1009) is to provide federal financial assistance to private land owners for the construction of small flood-water reservoirs. As destructive of natural areas as such dams and impoundments may be, the Act also authorizes funding for "measures needed to conserve and develop...wildlife...and recreation resources," thus providing some potential for natural areas protection under federal standards.

The primary purpose of the Soil Conservation and Domestic Allotment Act (the "Soil Conservation Service Act") (16 U.S.C. Sections 590a-590q) is to combat soil erosion from commercial farming, grazing, and timbering activities. While an indirect possibility, the federal financial assistance standards of this Act can, from time to time, cause natural areas to be preserved because of their beneficial effect in reducing erosion.

### **The Internal Revenue Code**

Since the ratification of the 16th Amendment to the U.S. Constitution in 1913, American individuals and private businesses have paid an annual tax on their income, with higher-income groups paying a progressively higher percentage of their income (Internal Revenue Code, 26 U.S.C. Sections 1-9602). The U.S. government derives most of its revenue from this tax. Over the years, an enormous number of provisions have been written into the IRC by special interest groups to provide deductions, exemptions, and credits for certain activities, in order to reduce the taxes paid.

Natural area preservation is enormously assisted by one of these provisions, which allows a tax deduction for gifts of land (IRC Section 170(a), (c)) and conservation easements (Section 170(f)(3)(B) (iii)) to governmental agencies or private charities (called "land trusts").

Thus, the federal government provides a direct financial subsidy (after-tax dollar savings) to individuals and private businesses to encourage them not to develop natural areas but, instead, to donate them for permanent preservation as open

space "for public benefit." Detailed provisions in the Code as well as in new 1987 Treasury Regulations (Section 1.170A-14) set strict standards for the qualifying lands and for their perpetual protection and management.

Donors have always been able to deduct the fair market value of a "charitable deduction" of the donor's full, fee-title interest in real or personal property, if given to a qualifying government agency or proper private charitable organization. On the other hand, many land owners wish to keep title to their natural land (perhaps even keep living or farming on it) and give up only the future development rights. This is done by granting a "conservation easement" which contractually deeds away all future development rights, reserving some limited uses to the donor. The donee land trust holds the easement in perpetuity (without being able to use the development rights). Moreover, the fee or easement need not be donated free; even a below-market sale provides a deduction for the difference between the cash received and fair-market-value.

As an example, a farmer owns 200 acres, consisting of a home-barn site, crop lands, and natural woodlands. The farmer is hard pressed by low income, debts, and taxes and would otherwise have no choice but to sell some or all of the acreage to a developer. Instead, he donates a conservation easement on the 200 acres to a land trust, reserving the right for himself and his heirs to live in the home and continue to farm the acres. The land is valued at \$300,000 if it were developed as a residential community (highest and best use). After the donation of the conservation easement, the undevelopable 200-acre farm is valued at \$125,000. The farmer thus gets an income tax deduction of \$175,000 (\$300,000 - \$125,000), reduced real estate taxes, and reduced estate taxes when, on his death, the property passes to his children.

Today, conservation easements protect more than 1,700,000 acres (6,883 km<sup>2</sup>) of natural areas in 46 states, managed by government agencies and over 500 private, non-profit charitable land trusts. The Tax Reform Act of 1986 has reduced somewhat the after-tax benefits of all charitable deductions, but the land/easement deduction is still available and should continue to be a major source of new acres protected in the future.

## **GOVERNMENT ACQUISITION OF PRIVATE LAND**

### **The Land and Water Conservation Fund Act**

The keystone for government acquisition of natural and recreational lands is the Land and Water Conservation Fund Act of 1965 (LWCFA) (16 U.S.C. Sections 4601-4 to 4601-11). One of the largest of the federal aid programs, the Act has provided

billions of dollars to federal agencies and to states (in 50 percent matching grants) for the purchase, planning, and development of natural and recreational acreage.<sup>47</sup>

The fund is created by a hodge-podge of (1) sales of federal properties, (2) motorboat fuel taxes, (3) congressional appropriations, (4) outer continental shelf oil and gas lease revenues, and (5) recreation fees. Federal purchases are for the national parks, forest, and wildlife refuge systems. State and local government purchases are for both natural parks and intensive recreation areas.

Since 1965, the Act has funded an impressive 2,800,000 acres (11,336 km<sup>2</sup>) of federal purchases and 2,000,000 acres (8,097 km<sup>2</sup>) by states. During the early years of the Reagan Administration, Interior Secretary James Watt declared an end to further LWCF purchases; his successor resumed the program, but actual spending since has not approached the old levels or the levels Congress annually sets aside. The law expires in 1989, and one respected private conservation-policy group has recommended that it be revised and expanded to generate \$200,000,000 a year for the next 10 years in new land purchases.<sup>48</sup>

### **The Refuge Recreation Act and the Refuge Revenue Sharing Act**

The Refuge Recreation Act of 1962 (16 U.S.C. Sections 460k to 460k-4) and the Refuge Revenue Sharing Act of 1964 (16 U.S.C. Section 715s) provide the financing for the National Wildlife Refuge System (NWRS). Together with the National Wildlife Refuge System Administration Act of 1966, they constitute the basic statutory authority for the FWS's NWRS.<sup>49</sup>

The Refuge Recreation Act allows acquisition of lands for the NWRS; these funds come solely from specific congressional appropriations or charitable donations from private individuals and organizations. Lands so purchased may be administered for public recreation, if compatible with the primary purpose of the refuge. Additional revenue sources for purchasing refuges include the Land and Water Conservation Fund Act, the Migratory Bird Conservation Act, and the Migratory Bird Hunting Stamp Act, discussed below.

The Refuge Revenue Sharing Act places revenues earned by national refuges (from sales of animals, timber, grass, minerals, oil and gas, and other permits) into a separate fund. Monies from that fund (1) are given to county governments in whose jurisdiction the refuges lie (to compensate for the federal government's exemption from county property taxes); (2) with the excess transferred to the Migratory Bird Conservation Act fund for federal acquisition of migratory bird refuges.

### **The Migratory Bird Conservation Act and The Migratory Bird Hunting Stamp Act**

The Migratory Bird Conservation Act of 1929 (MBCA) (16 U.S.C. Sections 715-715s) provides authorization and funds for federal acquisition of new additions to the National Wildlife Refuge System of special value to migratory birds. As originally enacted, the law required that such refuges be "inviolable sanctuaries," but 1949 and 1958 amendments now authorize hunting on portions of these lands.

The Secretary of the Interior may use the funds to purchase or condemn fee title, acquire easements, or enter into leases. Unlike most federal acquisition statutes, the MBCA requires the U.S. government to obtain the consent of the host state before acquisition.

The Migratory Bird Hunting Stamp Act of 1934 (the "Stamp Act") (16 U.S.C. Sections 718-718j) was passed to assure steady funding for the MBCA. The Stamp Act requires waterfowl hunters to purchase federal "duck stamps" along with their state hunting license, and this federal "tax" provides millions of dollars a year for MBCA acquisitions. The disadvantage of this approach is that the refuges so acquired are chiefly oriented toward production of migratory wildfowl for sport hunting.<sup>50</sup>

### **The Federal Aid in Wildlife Restoration Act**

The Federal Aid in Wildlife Restoration Act (the "Pittman-Robertson Program") (16 U.S.C. Sections 669-669j) provides federal financial assistance to states for acquisition, rehabilitation, restoration, and improvement of private land and waters for wildlife and habitat restoration. (Ironically, the federal funds come from taxes on the sale of hunting licenses, hand guns, and archery equipment used to kill the very species this Act seeks to "restore.") The Act apportions funds among the states based on the state's geographic size and the number of hunting/fishing licenses sold.<sup>51</sup>

### **The Federal Aid in Sport Fish Restoration Act**

The Federal Aid in Sport Fish Restoration Act (the "Dingell-Johnson Program") (16 U.S.C. Sections 777-777k) is identical to the Federal Aid in Wildlife Restoration Act, except that its federal aid is for state purchase and improvement of lands for sport fish restoration. The federal revenues come from taxes on fishing equipment, and the apportioning of funds among states is also based on size and licenses.<sup>52</sup>

## CONCLUSION

Each of the 40 national laws just described - directly or indirectly, successfully or weakly - operates to preserve and protect wilderness or natural areas in the United States. The sheer numbers of the laws at first suggest great diversity in methods, but we have seen this is not so; they really employ, singly or in combination, four basic control techniques. Their sheer numbers also at first suggest great protection, and yet, on closer examination, this may not be the case as well; collectively, they fail to add up to a single, coordinated, programmatic approach to the preservation of public and private natural areas.

As more square miles of America are lost each year to new growth and development, we should perhaps be thankful for the number, strength, and coverage of the laws we have. Still, preservation *victories* - in a pluralistic, changeable, political society - are always *temporary*, while the *losses* of a Glen Canyon of the Colorado River, a Tongass Forest, the caribou grounds of an Arctic Wildlife Refuge, a Tallgrass Prairie, an Everglades, or an urban park are *permanent*...stilling forever something of the eagle and the mockingbird in each of us.

## NOTES

1. J. STEINBECK, *AMERICA AND AMERICANS* 12-13, 144 (Bantam Books, New York, N.Y., 1966).
2. There are a number of excellent sources on the history and development of U.S. public land policy and law, as discussed in this section of the paper. See G. COGGINS & C. WILKINSON, *FEDERAL PUBLIC LAND AND RESOURCE LAW* (Foundation Press, Mineola, NY, 2d ed., 1987); J. LAITOS, *NATURAL RESOURCES LAW* (West Pub. Co., St. Paul, MN, 1985); T. SCHOENBAUM, *ENVIRONMENTAL POLICY LAW* (Foundation Press, Mineola, NY, 1985 ed.); PUBLIC LAND LAW REVIEW COMMISSION, *ONE THIRD OF THE NATION'S LAND* (U.S. Govt. Printing Off., Washington, DC, 1970); M. CLAWSON, *THE FEDERAL LANDS REVISITED* (Resources for the Future, Washington, DC, 1983); D. ZASLOWSKY & THE WILDERNESS SOCIETY, *THESE AMERICAN LANDS: PARKS, WILDERNESS, AND THE PUBLIC LANDS* (H. Holt & Co., New York, NY, 1986); P. Gates, *An Overview of American Land Policy*, in *AMERICAN LAW AND CONSTITUTIONAL ORDER: HISTORICAL PERSPECTIVES* 121-131 (L. Friedman & H. Scheiber, eds.; Harvard Univ. Press, Cambridge, MA, 1978).  
The Coggins & Wilkinson, Laitos, and Schoenbaum texts contain a wealth of detail and additional sources on the laws and their implementation. Citations for further reading are noted throughout the next section of the paper.
3. 247 acres = 100 hectares = 1 square kilometer. The U.S.'s 9.31 million km<sup>2</sup> makes it slightly smaller than the People's Republic of China (9.6 million km<sup>2</sup>).
4. By cession, the central government acquired from seven of the original 13 states 237,000,000 acres (959,514 km<sup>2</sup>), comprising what is now the Great Lakes and Mid-South states (1781-1802). By the Louisiana Purchase from France, it added 523,000,000 acres (2,117,409 km<sup>2</sup>), doubling the size of the U.S. (1803). Other significant acquisitions included the purchase of Florida from Spain (1819), the annexation of Texas (1845), the acquisition of the Pacific Northwest states from Great Britain (1846), the cession of California and the Southwest states following war with Mexico (1848), the purchase of Alaska from Russia (1867), and finally the annexation of Hawaii (1898).
5. When the U.S. government preserves its land by classifying it as park, wilderness, or other protected category, the action is generally termed a "reservation" or "withdrawal." This is due to the legal concept, mentioned earlier, that the public domain lands are generally avail-

able for private acquisition, unless otherwise classified, and to protect them from such disposal it is necessary to "reserve" or "withdraw" them from general availability.

6. 16 U.S.C. Section 471 (repealed in part by the Pickett Act of 1910 and fully by FLPMA in 1976).
7. Detailed citations to the modern acts will be found in their respective discussions in this paper.
8. 16 U.S.C. Section 1 (1974).
9. Four key agencies control 95 percent of these U.S. lands: three in the Department of the Interior - Bureau of Land Management (341,000,000 acres or 1,380,567 km<sup>2</sup>), Fish and Wildlife Service (84,900,000 acres or 343,725 km<sup>2</sup>), and National Park Service (74,900,000 acres or 303,239 km<sup>2</sup>) and one in the Department of Agriculture - U.S. Forest Service (191,000,000 acres or 773,279 km<sup>2</sup>). The private sector - individuals and corporations - own approximately 60 percent of the U.S.; state and local governments, 5 percent; and Indian tribes 2 percent.
10. Local governments (state, county, and municipal) - while outside the scope of this paper - can and do play a significant role in preserving undeveloped lands, both through ownership of public lands and regulating private lands.  
*Ownership:* A few examples will give a sense of their role. Each of the fifty states has its own park system (often extensive, as in the case of New York State's Adirondack Park) and frequently owns other categories of preserved or semi-protected lands (a total of 9,936,000 acres or 40,227 km<sup>2</sup>). Counties and cities have also acquired significant areas, ranging from urban parks (such as New York City's Central Park) to suburban near-wilderness areas (such as Denver's Mountain Park System and Jefferson County, Colorado's nationally famous Open Space Program).  
*Regulation:* State and local governments also have the power to legislate land use on private land (through state land use, development siting, special-areas preservation, and environmental protection laws, and through local government zoning, building code, growth control, critical areas, and agricultural protection laws). See LAITOS, *supra* note 2, at 900-31; SCHOENBAUM, *supra* note 2, at 201-237, 421-522. These powers have been used in some cases to preserve valuable open-space lands from development.
11. And God blessed them, and God said unto them, Be fruitful, and multiply, and replenish the earth, and subdue it: and have dominion over the fish of the sea, and over the fowl of the air,

and over every living thing that moveth upon the earth.

Genesis 1:28, THE BIBLE (King James version).

12. For excellent materials, pro and con, on the preservation debate, see SCHOENBAUM, *supra* note 2, at 45-74; J. SAX, MOUNTAINS WITHOUT HANDRAILS: REFLECTIONS ON THE NATIONAL PARKS (Univ. of Michigan Press, Ann Arbor, MI, 1980).
13. Sax, *The (Unhappy) Truth About NEPA*, 26 OKLA. L. REV. 239 (1973).
14. While the Clean Air act and the Coastal Zone Management Act use a "zoning" technique, the decisions on zoning private land are left to the state governments.
15. On the NPS and FWS studies, see COGGINS & WILKINSON, *supra* note 2, at 1019-1022.
16. On the several ill-fated USFS studies, see *id.* at 995-1019.
17. In one spectacular year, 1984, Congress passed 19 wilderness bills, designating 8,600,000 new acres (34,818 km<sup>2</sup>).
18. COGGINS & WILKINSON, *supra* note 2, at 994.
19. See, for one example, a case tried by Professor Pring, where the Department reversed BLM over 800,000 acres (3,239 km<sup>2</sup>) of exclusions. *In re Utah Wilderness Association*, 75 IBLA 125 (1983); COGGINS & WILKINSON, *supra* note 2, at 1022-1056; LAITOS, *supra* note 2, at 359-362; SCHOENBAUM, *supra* note 2, at 367-390.
20. Ozark National Scenic Riverways Act, 16 U.S.C. §§460m to 460m-7 (designating the Current and the Jacks Fork River in Missouri as national rivers); Buffalo National River Act, 16 U.S.C. §§460m-8 to 460m-14 (designating Arkansas' Buffalo River as a national river).
21. 1 mile = 1.6 kilometers. In addition to the national system, many states have river protection programs; between 1965-1986, 32 states have protected 321 rivers totaling 11,571 miles (18,514 km).
22. For an excellent overview and critique of the Act's implementation, see U.S. GENERAL ACCOUNTING OFFICE, WILD AND SCENIC RIVERS: CERTAIN RIVERS NOT IN NATIONAL SYSTEM GENERALLY RETAIN ORIGINAL VALUES (GAO/RCED-87-39, Dec. 1986); COGGINS & WILKINSON, *supra* note 2, at 969-979; LAITOS, *supra* note 2, at 362-363; SCHOENBAUM, *supra* note 2, at 273-290.
23. COGGINS & WILKINSON, *supra* note 2, at 165-169, 249-257.
24. COGGINS & WILKINSON, *supra* note 2, at 164, 953-954; SCHOENBAUM, *supra* note 2, at 390-391.



25. COGGINS & WILKINSON, *supra* note 2, at 954-956; LAITOS, *supra* note 2, at 345-346; SCHOENBAUM, *supra* note 2, at 390-391.
26. COGGINS & WILKINSON, *supra* note 2, at 703-778; LAITOS, *supra* note 2, at 326-338.
27. COGGINS & WILKINSON, *supra* note 2, at 629-674; LAITOS, *supra* note 2, 450-471.
28. COGGINS & WILKINSON, *supra* note 2, at 953-969; LAITOS, *supra* note 2, at 339-345; SCHOENBAUM, *supra* note 2, at 384-390.
29. Pring, *Resource Protection and the National Parks: Meeting the Challenge of the Future*, in TOWARD THE YEAR 2000: A FUTURE FOR NATIONAL PARK SERVICE RESEARCH (George Wright Society, Washington, DC 1987); U.S. GENERAL ACCOUNTING OFFICE, LIMITED PROGRESS MADE IN DOCUMENTING AND MITIGATING THREATS TO THE PARKS (GAO/RCED-87-36, Feb. 1987); U.S. GENERAL ACCOUNTING OFFICE, NEW RULES FOR PROTECTING LAND IN THE NATIONAL PARK SYSTEM - CONSISTENT COMPLIANCE NEEDED (GAO/RCED-86-16, Oct. 1985).
30. COGGINS & WILKINSON, *supra* note 2, at 815-852.
31. COUNCIL ON ENVIRONMENTAL QUALITY, ENVIRONMENTAL QUALITY: 10TH ANNUAL REPORT AT 577-605 (1979); COUNCIL ON ENVIRONMENTAL QUALITY, ENVIRONMENTAL QUALITY: 11TH ANNUAL REPORT AT 370-386 (1980).
32. *Vermont Yankee Nuclear Power Corp. v. Natural Resource Defense Council, Inc.*, 435 U.S. 519 (1978); *Strycker's Bay Neighborhood Council, Inc. v. Karlen*, 444 U.S. 223 (1980).
33. Sax, *supra* note 13.
34. LAITOS, *supra* note 2, at 80-113; SCHOENBAUM, *supra* note 2, at 75-190; COGGINS & WILKINSON, *supra* note 2, at 321-356.
35. SCHOENBAUM, *supra* note 2, at 898-928.
36. LAITOS, *supra* note 2, at 185-186.
37. *Tennessee Valley Authority v. Hill*, 437 U.S. 153 (1978). The dam was later exempted by special Congressional legislation and the reservoir completed; since then, numerous populations of Snail Darters have been found, and the species has been taken off the endangered list.
38. COGGINS & WILKINSON, *supra* note 2, at 784-815; LAITOS, *supra* note 2, at 317-319; SCHOENBAUM, *supra* note 2, at 393-412.
39. SCHOENBAUM, *supra* note 2, at 416-417; LAITOS, *supra* note 2, at 316.

40. *Andrus v. Allard*, 444 U.S. 51 (1979); SCHOENBAUM, *supra* note 2, at 412-413.
41. *Citizens to Preserve Overton Park v. Volpe*, 401 U.S. 402 (1971).
42. According to one estimate, by 1990, over 75 percent of the nation's population will be living in the coastal zones. H.R. Rep. No. 1012, 96th Cong., 2d Sess. 32 (1980), *reprinted in* 1980 U.S. CODE CONG. & AD. NEWS 4362, 4380.
43. LAITOS, *supra* note 2, at 928-931; SCHOENBAUM, *supra* note 2, at 482-501.
44. Kuehn, *The Coastal Barrier Resources Act and the Expenditures Limitation Approach to Natural Resources Conservation: Wave of the Future or Island Unto Itself?*, 11 *ECOL. L. Q.* 583 (1984); SCHOENBAUM, *supra* note 2, at 471-474.
45. SCHOENBAUM, *supra* note 2, at 418.
46. COGGINS & WILKINSON, *supra* note 2, at 816.
47. COGGINS & WILKINSON, *supra* note 2, at 888-894.
48. THE CONSERVATION FOUNDATION, NATIONAL PARKS FOR A NEW GENERATION: VISIONS, REALITIES, PROSPECTS (The Conserv. Found., Washington, DC, 1985).
49. COGGINS & WILKINSON, *supra* note 2, at 817; LAITOS, *supra* note 2, at 316-317.
50. LAITOS, *supra* note 2, at 316-317; SCHOENBAUM, *supra* note 2, at 418.
51. LAITOS, *supra* note 2, at 316-317.
52. *Id.*