

PRESERVATION OF NATURAL AREAS

History of Preservation in the United States

In 1847, U.S. Congressman George Perkins called attention to the devastating impact of deforestation, and by the late 19th century many other prominent government officials, including President Benjamin Harrison began to concern itself with environment (Library of Congress, n.d.a).

President Theodore Roosevelt signed the Antiquities Act of 1906; established the Nation's first National Monument in Wyoming known as Devil's Tower National Monument; founded another national monument in Arizona known as Petrified Forest National Monument. Since Roosevelt's administration, numerous presidents have also been committed to preserving natural areas (Library of Congress n.d.).

Congress established the Forest Service (under the U.S. Department of Agriculture) in 1905 to provide quality water and timber for the nation's benefit. Over the years, that mission has expanded to include managing national forests, ensuring land productivity, protecting environmental quality, and sustaining renewable resources such as water, forage, wildlife, wood, and recreation. There are currently 155 national forests and 20 grasslands encompassing 193 million acres, or approximately 8.5% of the continental United States land area (U.S. Department of Agriculture Forest Service, 2009).

The creation of a National Park Service was the culmination of a process that actually began many years before the founding of Yellowstone National Park by President Theodore Roosevelt in 1872. Incidents at Niagara Falls, where tolls were charged to visitors and generally tawdry concessions and souvenirs (as well as filth and squalor) abounded, led a concerned Congress to take action to protect Yosemite Valley when similar exploitation began in the 1850's. It was clear that some sort of government protection was needed. In 1864, Yosemite Valley and a nearby grove of Giant Sequoias were turned over to the State of California to be managed as a public park. Yosemite Valley was later merged with Yosemite National Park in 1906 (Dilsaver, 1994).

Natural Resources and Recreation Legislation

As stated in the National Park Service Organic Act (which became law on August 25, 1916), the purpose of the National Park Service is "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" (National Park Service (NPS), 2006).

Since the National Park Service Organic Act, much legislation has been directed at preserving the Nation's natural resources, including:

➤ **Outdoor Recreation Act, 1963**

- Named the Department of Interior coordinator of all federal agencies for programs affecting the conservation and development of recreation resources
- Charged to provide technical assistance to states, local governments, and private interests to promote conservation and utilization of recreation resources

➤ **Wilderness Act, 1964**

- Established the National Wilderness Preservation System which currently includes 756 wilderness areas (109,494,508 acres) in 44 states (National Wilderness Preservation System, 2010)
- Defined wilderness as a place where the landscape is affected primarily by the forces of nature and where humans are visitors who do not remain
- Wilderness Areas designated by Congress and are composed of existing federal lands that have retained a wilderness character

➤ **Wild and Scenic Rivers Act, 1968**

- Established system of areas distinct from the traditional park concept to protect river environment
- Preserves selected rivers and maintains their free-flowing condition

➤ **National Trails System Act, 1968**

- Established national system of recreational, scenic, and historic trails

- Prescribes methods and standards for adding components to the system

➤ **Endangered Species Act, 1973**

- Requires federal agencies to ensure actions do not jeopardize the continued existence of any endangered or threatened species
- Prohibits destruction or adverse modifications of critical habitat
(NPS, n.d.a)

The Department of the Interior is now the nation's principal conservation agency. It manages about one-fifth of the land in the United States, approximately 500 million acres. It is a large, decentralized agency that includes:

➤ **Bureau of Land Management**

- 31 million acres of managed land
- 16 National monuments (4,815,760 acres)
- 21 National Conservation Areas and other similar designations (4,548,627 acres)
- 222 Wilderness Areas (8,662,214 acres)
- 545 Wilderness Study Areas (12,790,291 acres)
- 67 Wild and Scenic River Segments (1,164,014 acres)
- 10 National Historic Trails (5,342 miles)
- 5 National Scenic Trails (664 miles)
(Bureau of Land Management, 2009)

➤ **Bureau of Reclamation**

- 8.7 million acres owned and administered
- 289 Recreation areas
- 348 reservoirs
(Bureau of Reclamation, n.d.; U.S. Department of the Interior (DOI), 2009)

➤ **Fish and Wildlife Service**

- 96.2 million acres managed land
- 1,932 species listed as threatened or endangered under Endangered Species Act
- 548 National Wildlife Refuges (198 are recreation sites)
(DOI, 2009)

➤ **National Park Service**

- 84.6 million acres managed land
- 58 National Parks
- 54 Wilderness Areas (43.6 million acres)
- 18 National Recreation Areas
- 10 National Seashores
- 15 National Rivers and Wild and Scenic Rivers
- 4 National Lakeshores
- 3 National Scenic Trails (3,565 miles)
- 776 Campgrounds (including 26,830 campsites)
(NPS, n.d.c)

The designation of a specific area depends on several factors. Oftentimes the only difference in the designation of a federally protected area is the

managing agency. For instance, National Forests fall under the Department of Agriculture and National Parks fall under the Department of the Interior. Permissible usage also factors into the equation. If hunting, trapping, and mineral extraction are permitted in a protected area, the area will be designated a National Preserve versus a National Park.

Preservation of Natural Areas in Texas

Texas' land area exceeds 268,000 square miles or approximately 170 million acres. It occupies approximately 7% of the total land and water area of the United States (Texas Almanac, 2010). The State contains 254 counties, which includes eleven ecoregions (Texas Parks & Wildlife Department (TPWD), 1997). Despite its large expanse, the state has relatively few federally protected natural areas:

➤ **National Wilderness Preservation System**

- Five wilderness areas managed by the National Forest Service
- One wilderness area managed by the National Park Service
- Found in 44 states
(National Atlas of the United States, 2009)

➤ **U.S. Fish and Wildlife Service**

- 18 Wildlife Refuges
- Over 450,000 acres
- Majority located along the Gulf of Mexico
(U.S. Fish and Wildlife Service, n.d.)

➤ **National Park Service**

- Big Bend National Park – 801,163 acres
- Guadalupe Mountains National Park
- Rio Grande Wild & Scenic River – 196-miles of the Rio Grande was designated by Congress as a Wild and Scenic River (NPS, 2008)
- Padre Island National Seashore – 130,434 acres
- El Camino Real de Los Tejas Historic Trail
 - Recent (2004) congressional designation
 - Runs through San Antonio
- El Camino Real de Tierra Adentro Historic Trail – extends 404 miles from El Paso, Texas, to San Juan Pueblo, New Mexico
- Amistad National Recreation Area
 - Consists of 57,292 acres including American portion of the reservoir
 - At a water elevation of 1,117 feet, it has 17,820 land acres
- Lake Meredith National Recreation Area – 10,000 acre reservoir and surroundings
- Big Thicket National Preserve – 97,000 acres
- Chamizal National Memorial

- Alibates Flint Quarries National Monument
- Fort Davis National Historic Site
- Palo Alto Battlefield National Historic Site
- Lyndon B. Johnson National Historical Park
- San Antonio Missions National Historical Park (NPS, n.d.d)

Texas Parks and Wildlife

The Texas Parks and Wildlife Department (TPWD) was established in 1963 as a consolidation of several conservation/preservation agencies (parks, fish, and game). In 1983, the Texas legislature passed the Wildlife Conservation Act giving TPWD authority for managing fish and wildlife resources in all Texas counties. TPWD currently consists of 10 departments including state parks, coastal and inland fisheries, resource protection, and wildlife (Bengston, Blankenship, & Bonds, n.d.).

State Parks

TPWD is responsible for the management of the state park system, currently consisting of 114 units, which “conserve natural and cultural resources, provide recreational and educational opportunities, and foster an understanding of the diversity of Texas’ lands and heritage for all generations” (State Park Advisory Committee (SPAC), 2006, p.4). Despite the fact that the state park system is the single largest element in attracting tourism, which supports the state’s economy, Texas ranks 49th in the nation in state spending per capita for state park operations. In its August 2006 report to the Texas Parks & Wildlife Commission, the State Park Advisory Committee noted that Texas state parks:

- Attract over 10 million visitors annually
- Generate \$793 million in sales impact
- Contribute \$456 million in Texans’ personal income
- Sustain 11,928 jobs

Much of this value is created in rural Texas (SPAC, 2006).

Wildlife Management Areas

Operated by the Wildlife Division of TPWD, wildlife management areas (WMAs) were established as sites to perform research on wildlife populations and habitat, conduct education on resource management, and provide a variety of outdoor recreation activities. There are currently 51 WMAs encompassing 756,464 acres of Texas. These areas are established to represent habitats and wildlife populations typical of each ecological region of Texas. With the exception of driving tours and special education events, WMAs require special permits for visitors (TPWD, 2007b).

State Natural Areas (SNAs)

The designation “Natural Area” is very similar to a state park. In general, SNAs are smaller than parks and require additional land use restrictions. There are currently seven SNAs in Texas encompassing approximately 42,026 acres (TPWD, 2007b).

Wetlands

Texas has the 4th largest wetland acreage in the lower 48 states and is one of the most important wintering areas for waterfowl in North America. Wetlands comprise approximately 5% of the total land area of the state. It is estimated that 35% of all rare and endangered animals depend upon wetland habitat. The Texas Wetlands Conservation Plan, published in 1997, focuses on non-regulatory, voluntary approaches to conserving wetlands (TPWD, 1997).

Preservation in Bandera, Bexar, Comal, and Kendall Counties

These four counties occupy a unique place in the state. Of the eleven distinct ecoregions in Texas, three converge in Bexar County:

- Blackland Prairie
 - Ranked as high priority for TPWD conservation efforts, this is the most severely altered of Texas’ ecoregions
 - Only an estimated 5,000 acres remain in their historic condition in terms of plant species
 - Edwards Plateau
 - Unique flora associated with karst (limestone, cave, spring, stream systems) – has the highest number of plant endemism of any ecoregion in the state and ranks third in number of rare plants
 - Of the 29 plant communities found here, three occur nowhere else in Texas and two are found nowhere else in the world
 - South Texas Plains
 - Consists mostly of level to rolling terrain characterized by dense brush.
 - High priority for TPWD because there is insufficient habitat to sustain many of the region’s threatened plants, animals, and communities.
- (TPWD, 2005)

Bandera, Bexar, Comal, and Kendall counties lie primarily within the Edwards Plateau region but Comal also abuts the Blackland Prairie. Together these four counties are home to 37 designated Endangered and/or Threatened species:

- ♦2 Amphibians ♦10 Birds
- ♦6 Arachnids ♦1 Crustacean
- ♦3 Fish ♦5 Insects
- ♦4 Mammals ♦1 Plant
- ♦5 Reptiles

(TPWD, 2009)

Within these counties are several state designated areas:

- **Bexar County**
 - Government Canyon State Natural Area
 - Consists of 8,624 acres just outside San Antonio
- **Bandera County**
 - Hill Country State Natural Area
 - 5,369.8 acres
 - Located in Bandera and Medina Counties, 45 miles northwest of San Antonio
 - Lost Maples State Natural Area
 - 2,174.2 acres
 - Located in Bandera and Real Counties
- **Comal County**
 - Honey Creek State Natural Area
 - 2,293.7 acres
 - Located in western Comal County
 - Guadalupe River State Park
 - 1,938.7 acres
 - Located along the boundary of Comal and Kendall Counties
 - Has 4 miles of river frontage and is located in the middle of a 9-mile stretch of the Guadalupe River
- **Kendall County**
 - Guadalupe River State Park (TPWD, 2007a)

Preservation without State/Federal Designation

More than 97 percent of Texas land is privately owned. Numerous avenues are available to individuals wishing to conserve and protect open spaces. The National Parks Service’s Rivers, Trails, and Conservation Program, in its publication *Open Space: Protecting Open Space: Tools and Techniques* (n.d.b), describes ten techniques available to Texans who want to preserve their land for the future. Included are:

- **Bargain Sale.** A landowner can conserve land and make a profit from the sale by agreeing to sell the property to a public or nonprofit agency for less than the fair market value. The seller benefits from charitable donation and reduced capital gains tax benefits and the municipality or nonprofit gets the land at a reduced price.
- **Parkland/Trail Dedication.** Also called exactions, a local government enacts ordinances requiring subdivision developers to dedication park or trail land, or to pay a fee that the government entity then uses to purchase and develop park/trail facilities.
- **Zoning for Conservation.** Municipal governments enact zoning ordinances that isolate specific resources not protected by existing zoning. Commonly protected by zoning are floodplains,

wetlands, watersheds, historic districts and archeological areas.

- **Trail Easements.** Landowner grants the use of a corridor across private property for public access purposes. The easement constitutes a partial interest in the property – the right of the easement holder (government or trail management organization) to enter the property, develop a trail facility within a designated corridor, and allow use of the trail. Easements are recorded in deed records and are binding to future owners of the property. Trail easements are not usually in perpetuity as is the case with other types of easements.
- **Conservation Easements (CEs).** Permanently protects land from development while allowing ownership to remain private. Initiated by property owner in partnership with a nonprofit organization with a conservation mission (usually a land trust) or a public agency, CEs legally restrict what use can be made of the land. Restrictions may be voluntarily placed by landowner and landowner retains all rights not specifically restricted by the easement. Significant savings for landowners in property, income, and estate or inheritance taxes. Conservation easements are usually irrevocable.
- **Purchase of Development Rights (PDR).** Governmental or nonprofit agency essentially purchases a conservation easement. Landowner retains rights as in CE but benefits from the value of its development potential. Less expensive than outright land purchase and the landowner, not the purchase agency, is responsible for land management.
- **Transfer of Development Rights (TDR).** Two areas are designated by ordinance: a sending area in which development is restricted and a receiving area where development is permitted. Development potential from the sending area is transferred to the receiving area, increasing the allowable development in the latter and permanently protecting the former.
- **Limited Development Option.** Landowner can subdivide the land and conserve a portion while developing another. Deed restriction and easements can be placed on both parcels.
- **Conservation Subdivisions.** In general, the number of houses allowed in a space are usually designated per acre. Here, the same number of houses are placed in denser concentration to provide a commonly held open space.
- **Deed Restrictions.** Requires homebuyers to agree to certain terms that place restrictions and limits on the use of the property. (NPS, n.d.b.)

Over 1,500 land trusts operate in the United States, some protecting small acreages, others protecting whole ecosystems. A land trust is a local, state or regional nonprofit organization directly involved in protecting land for its natural, recreational, scenic, historical or productive value. Fifty-four land trusts operate in Texas today, protecting some 1,306,735 acres in Texas as of 2008 (Texas Land Trust Council, 2008).

Numerous other conservation organizations work to conserve land and resources.

- The Green Spaces Alliance of South Texas, formerly known as the *Bexar Land Trust*, founded in 1998, serves Bexar, Kendall, Guadalupe, Comal, Bandera, Atascosa, Wilson and Medina Counties. Its purpose is to preserve green spaces that include unique physical and cultural landmarks of the local region (Green Spaces Alliance, 2008).
- The *Nature Conservancy of Texas* owns more than 30 nature preserves and conservation projects and helps monitor more than 100 voluntary land-preservation agreements that allow private landowners to conserve their land. In its history, the Nature Conservancy of Texas, along with its partners, has conserved 750,000 acres for wildlife habitat throughout the state (The Nature Conservancy, 2010).
- The *Cibolo Nature Center* studies and promotes various land stewardship techniques through a combination of research, volunteer, education, and arts activities. The Center protects four distinct ecosystems on one hundred acres of land in the Texas Hill Country (Cibolo Nature Center, 2006).
- *Audubon Texas*, a chapter of the National Audubon Society, promotes species/habitat conservation and improvement in community environmental education. Audubon Texas is responsible for habitat enhancements at the Mitchell Lake Wildlife Refuge and the Audubon Center in San Antonio. This organization has worked with the Texas Cave Management Association for acquisition of Deep Cave and Punkin Cave, and the Nature Conservancy of Texas for acquisition of key terrain near the Bracken Cave bat colony (Bexar Audubon Society, n.d.).

Preservation efforts address the serious consequences associated with declines in biodiversity. Ultimately, the health and livelihood of all wildlife species depends on the preservation of natural habitats and nature reserves. Preservation not only benefits wildlife species and local and regional environments, but provides numerous individuals with a source of entertainment and relaxation.

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