

## Environmental History

Environmental movement is historically tied to two origins: wilderness protection/conservation and public/ecosystem health

Seminal authors: Wilderness- John Muir (founds Sierra Club in 1892) Public health & pollution- Rachel Carson (196

## History of Public Land Management and Conservation

Public Lands tied to agencies

First national parks managed by US Dept Interior, National Park Service:

Hot Springs in 1832

Yellowstone in 1872

National Park Service evolved from national monuments which were protected as antiquities for historical value. Antiquities were expanded to include aesthetic value in the form of wilderness.

US Dept Agriculture: National Forest Service (created by legislation in 1905)

1891: first forest reserves

1898: Gifford Pinchot first director of forest management who institutionalized multiple use: managing land for the greatest good for greatest number of people.

US Dept Interior: US Fish and Wildlife Service

National Wildlife Reserves: first was Pelican Island Florida, created in 1903 instigated by Teddy Roosevelt

US Dept Interior: Bureau of Land Management: agency was created in 1946 by merging the federal grazing service and public land management service

## History of concepts in federal legislation

1897 concept to protect and manage forests

1916 concept of National Park System

1934 Congress closes settlement of unassigned land. Unsettled land is reserved for the federal government, especially in Alaska and western states.

1960 Multiple Use and Sustained Yield stated as the mission of the Forest Service in legislation (manage for recreation, timber, range, watershed, and extractive uses)

1964 Wilderness Act- concept of protecting land in wilderness, not use

1968 Scenic Trails and Scenic Rivers established

1978 Carter doubles size of national park system with changes in Alaska and adding national monuments

## Other Significant Dates

1892 Sierra Club founded

1935 Wilderness Soc founded (Aldo Leopold one of founders)

Pollution policy (biggest acts all occur in Vietnam era)

1. National Environmental Policy Act (1969): prior evaluation of environmental impacts of an activity (source of EPA and environmental impact statements or EIS)

2. Endangered Species Act (1973): conservation of biodiversity as a priority and basis for land acquisition and use (see handout)
3. Clean Air Act of 1970 (Amended 1990): classification of sources: point, on-road and off-road mobile, and area permits for large sources and market system for offsets  
classification of areas and SIPs  
see handout
4. Clean Water Act (1972):  
goal to return water bodies to historical uses, i.e. drinkable, swimmable and fishable  
pollution levels in the environment are set and enforced according to two types of sources,  
**point source** (permits based on National Pollution Discharge Elimination System or NPDES)  
**non-point source** (allocation of right to pollute under Total Maximum Daily Load process)
5. Wetlands Protection under CWA  
Protection of federal "navigable waterways" given to Corps of Engineers based on Rivers and Harbors Act of 1899  
Section 404 gives responsibility for permits for dredging and filling to Army Corps of Engineers,  
expanded to protect wetlands if they are connected in any way to federal waters.  
Wetlands conversion permits issued by Corps with consent of other agencies
6. Comprehensive Environmental Response, Compensation, and Liability Act of 1980: established Superfund program, sites with accumulation of hazardous chemicals are identified, polluters responsible for release of hazardous compounds to the environment are liable for costs of clean up or "polluter pays" principal, sites are cleaned to high standards (How clean is clean?), most sites involve legal conflict among EPA, PRPs and local stakeholders, lawyers get much of the funding; led to environmental site assessment business

#### Relationship of Environmental Quality and Human Activities

Impact = Population \* Affluence \* Technology

History of population: in U.S. 2 trends rural to urban and dispersed to concentrated along coasts

Urban centers have special environmental problems associated with high population density

Example impervious surfaces and water quality

As proportion of impervious surface goes up water quality goes down

Industrial and mobile source air emissions

Increasing number of industrial plants around Houston

Increasing number of cars and vehicle mile traveled

Coastal wetland loss

Subsidence, bulkheads, dredging, and filling

Sealevel rise from climate change = loss of coastal land

History of affluence: assorted trends, e.g. automobile ownership and home size

Trend of increasing vehicles per capita  
Trend of increasing floor space of new homes

History of technology: assorted trends, e.g. development of industrial agriculture = application of synthetic chemicals such as pesticides and fertilizers

Industrial agriculture = using land to convert petroleum into food

CFCs (hairspray and deodorant) and loss of stratospheric ozone