



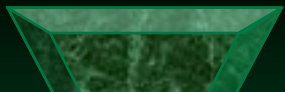
# US Environmental History & Law

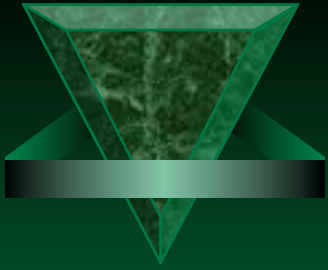




# **The 4 “Stages” of American Environmental History**

- ✓ **Hunter-Gatherer Society**
  - 25,000 – 12,000 ybp
- ✓ **Agricultural Revolution**
  - C.12,000 ybp
- ✓ **Industrial/Medical Revolution**
  - Late 1700's to 1900's
- ✓ **Information/Globalization Revolution**
  - 1980's onwards





# Hunter-Gatherers

- 60,000 – 12,000 ybp
- 1<sup>st</sup> humans immigrated from Siberia c.25,000ybp
- Collecting plant parts, hunting, fishing, scavenging
- Nomadic groups of <50
- High infant mortality
- Lifespan 30-40 years
- Low Env. Impact
  - Small populations
  - Low resource use per person
  - Nomadic/Shifting land use







# Agricultural Revolution

- ✓ 10-12,000 ybp
- ✓ “The Greatest Mistake In Human History” (Diamond)
- ✓ Shift from nomadic hunting/gathering to settled agricultural communities w/domesticated livestock
- ✓ Wheat, Rice, Corn grown year after year on the same piece of land
- ✓ Larger populations supported
  - More waste...
- ✓ Larger resource consumption per person
  - More demand
- ✓ Slash and burn “frontier” lifestyle
  - More habitat destruction



## Trade-Offs

### Agricultural Revolution

#### Good News

More food

Supported a larger population

Longer life expectancy

Higher standard of living for many people

Formation of villages, towns, and cities

Towns and cities served as centers for trade, government, and religion



#### Bad News

Destruction of wildlife habitats from clearing forests and grasslands

Killing of wild animals feeding on grass or crops

Fertile land turned into desert by livestock overgrazing

Soil eroded into streams and lakes

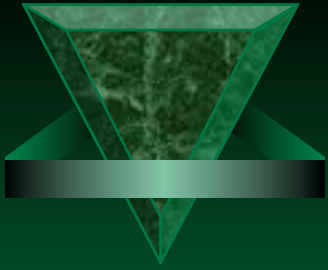
Towns and cities concentrated wastes and pollution and increased spread of diseases

Increase in armed conflict and slavery over ownership of



# **The American Frontier Era**

**1607-1890**







# The Roots of Abuse





# The Roots of Abuse

✓ The First Colonists





# The Roots of Abuse

- ✓ The First Colonists
- ✓ 3 “Things” that would change the continent
  - Guns!
  - Axes!
  - Wheels!



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- The First Colonists
- 3 “Things” that would change the continent
  - Guns!
  - Axes!
  - Wheels!
- Manifest Destiny – “man is controller of the land, not just part of the land”
- Westward Expansion
- “Vast, unlimited resources”

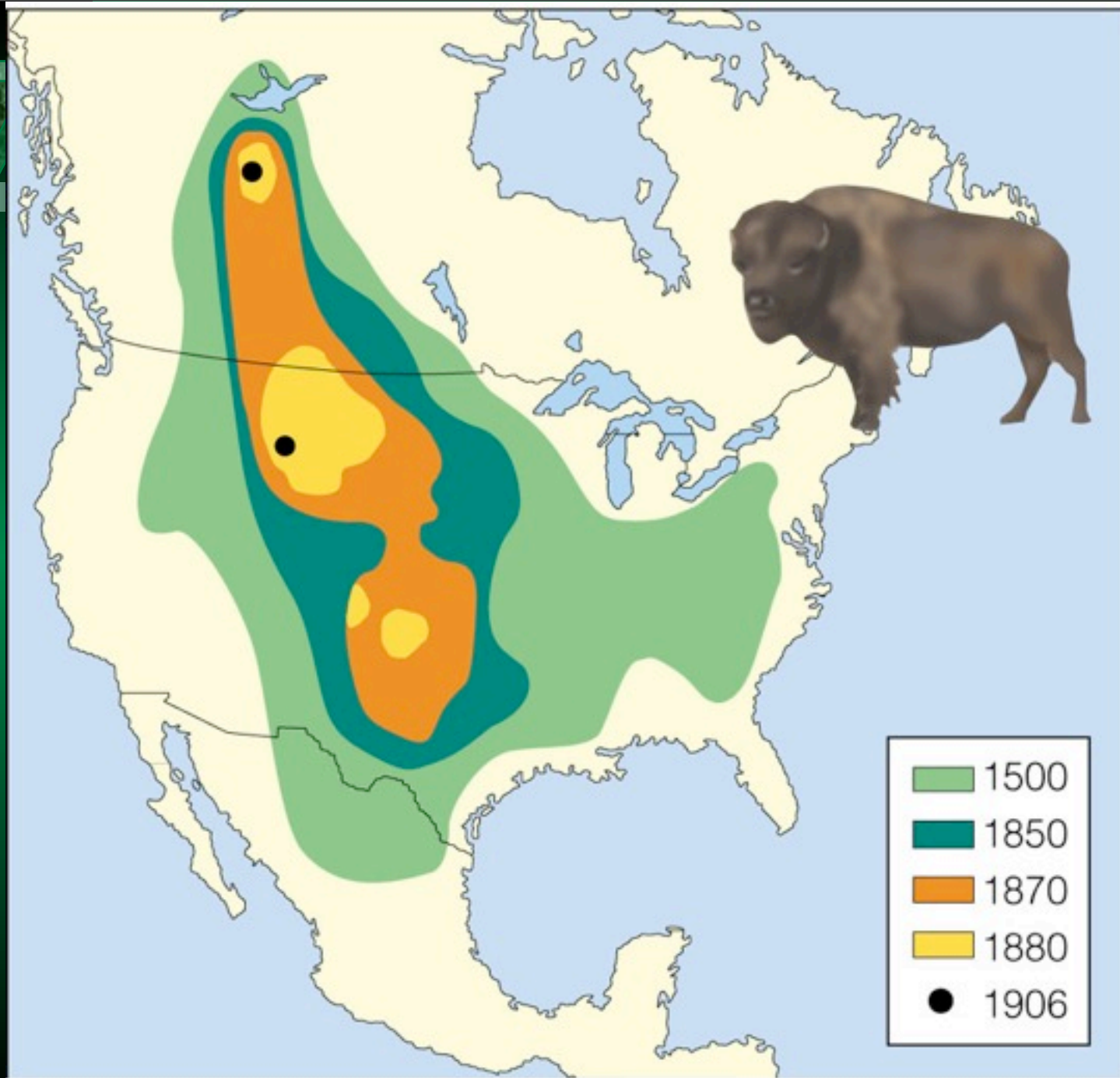


# European Expansion in North America



# Westward Expansion





© 2005 Brooks/Cole - Thomson







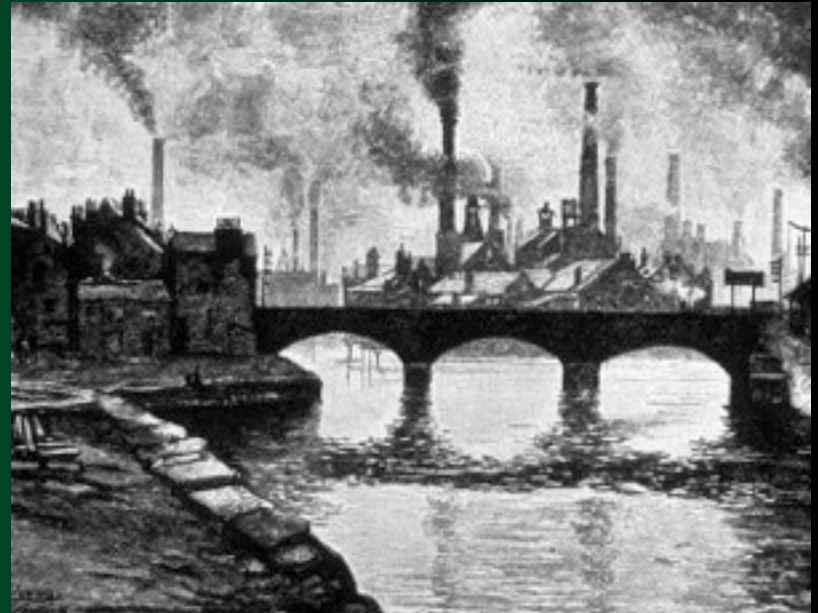
# Romanticizing The Frontier





# Industrial Revolution

- Shift from renewable wood to non-renewable fuels (coal, gas, etc.)
- Switch from small-scale, hand-made, localized production to large-scale manufacturing production
- Factory towns, cities appeared
- Move from rural to urban areas
- Mechanized agriculture increased food production
  - Longer lifespan
  - Larger per-person resource use
  - Increased habitat destruction and pollution





# Trade-Offs

## Industrial—Medical Revolution

### Good News

Mass production of useful and affordable products

Higher standard of living for many

Greatly increased agricultural production

Lower infant mortality

Longer life expectancy

Increased urbanization

Lower rate of



### Bad News

Increased air pollution

Increased water pollution

Increased waste production

Soil depletion and degradation

Groundwater depletion

Habitat destruction and degradation

Biodiversity depletion

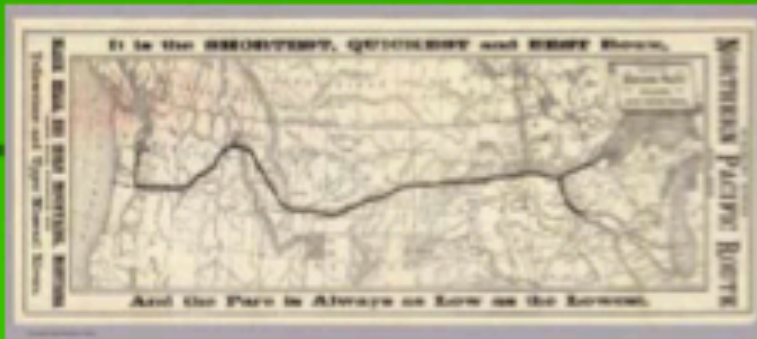


# Industrialization 1830-1900

- Massive recovery of mineral & timber resources



# Transcontinental Railroads







# **The Early Conservation Era**

## ➤ **1832 – 1870**

- Growing public alarm at loss of forests, resources and “wilderness” (Thoreau, Marsh)
- Beginnings of federal control

## ➤ **1870-1930**

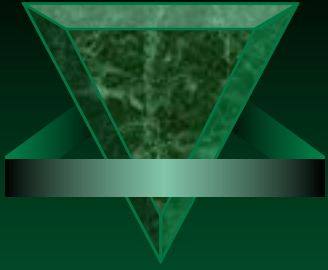
- New gov. and non-gov. groups formed to protect natural resources (many laws/acts passed)
- John Muir, Teddy Roosevelt, Gifford Pinchot
- “Golden Age of Conservation”

## ➤ **1930-1960**

- Great Depression, Dust Bowl, World Wars
- Growing sense of environmental responsibility & connection
- Large tracts of land purchased and managed by gov
- Franklin Roosevelt



# Early “Environmentalists”





# Early “Environmentalists”

- ✓ Henry David Thoreau: Massachusetts wildlife areas (“Walden Pond”, “Life In The Woods”)



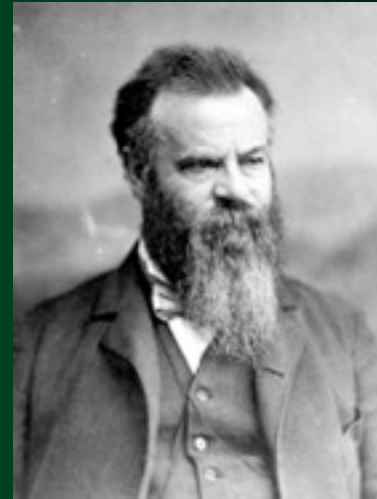


# Early “Environmentalists”

- ✓ Henry David Thoreau: Massachusetts wildlife areas (“Walden Pond”, “Life In The Woods”)
- ✓ George Perkins Marsh: warned about collapse of civilization in “Man and Nature” (1864)

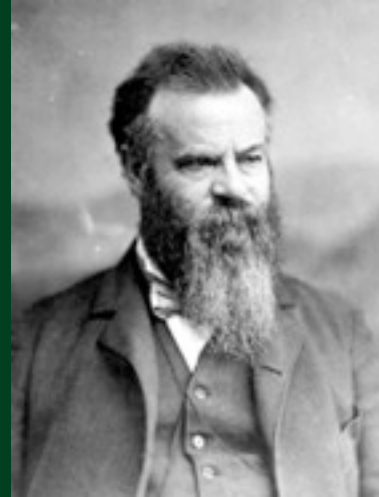








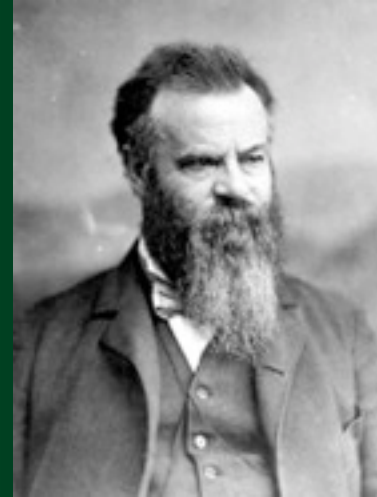
# Early Activists and Actions

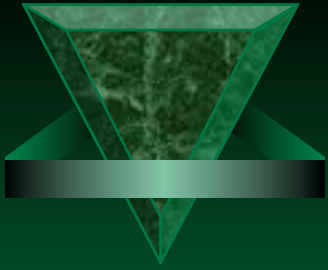




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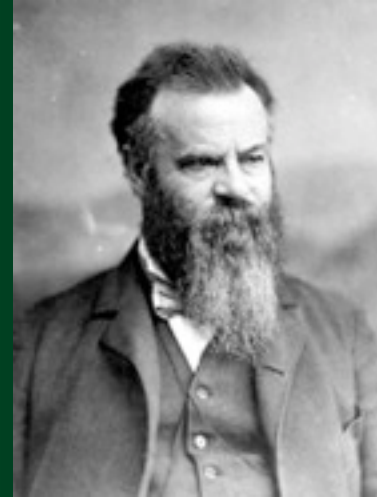
- John Wesley Powell:  
Powell Report – first  
advocate to regulate  
land use



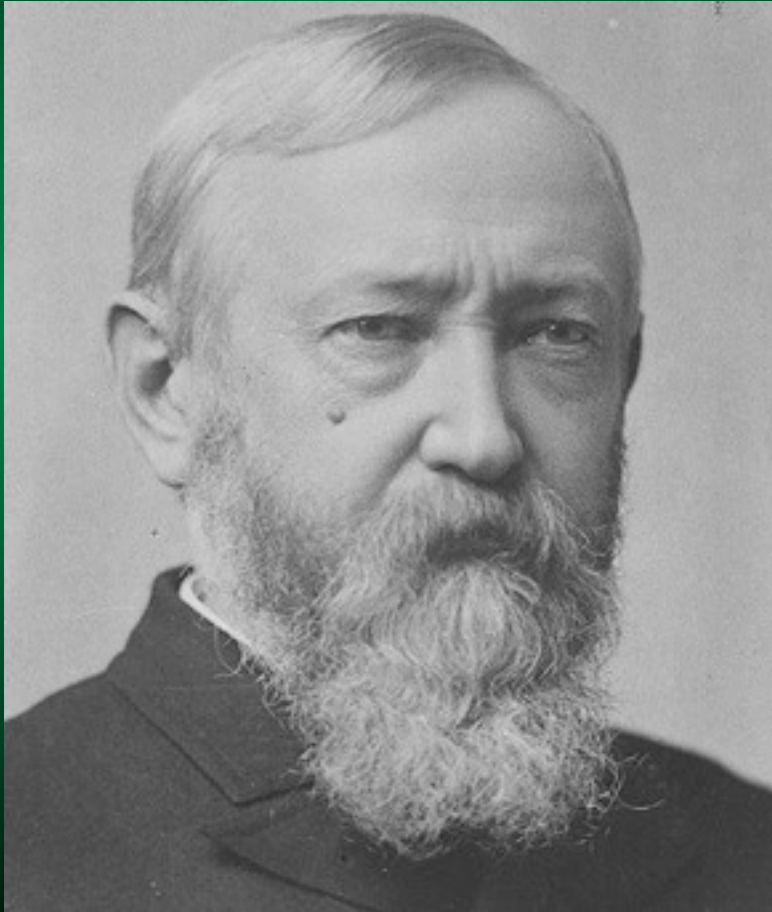


# Early Activists and Actions

- John Wesley Powell:  
Powell Report – first  
advocate to regulate  
land use
- Yellowstone  
National Park  
Created (1872) by  
President Grant

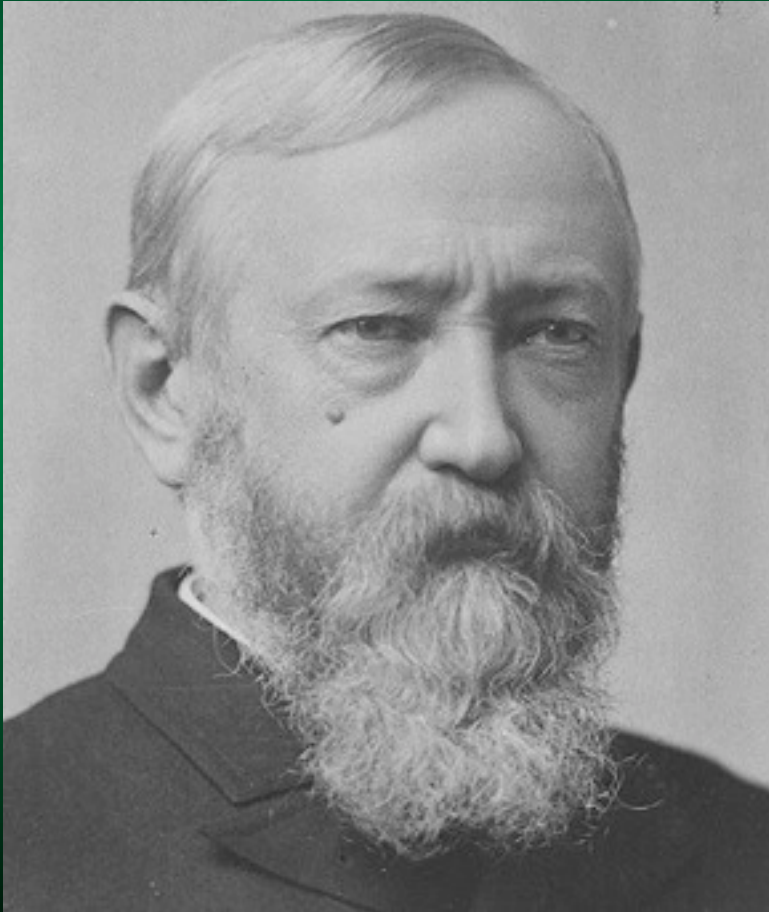






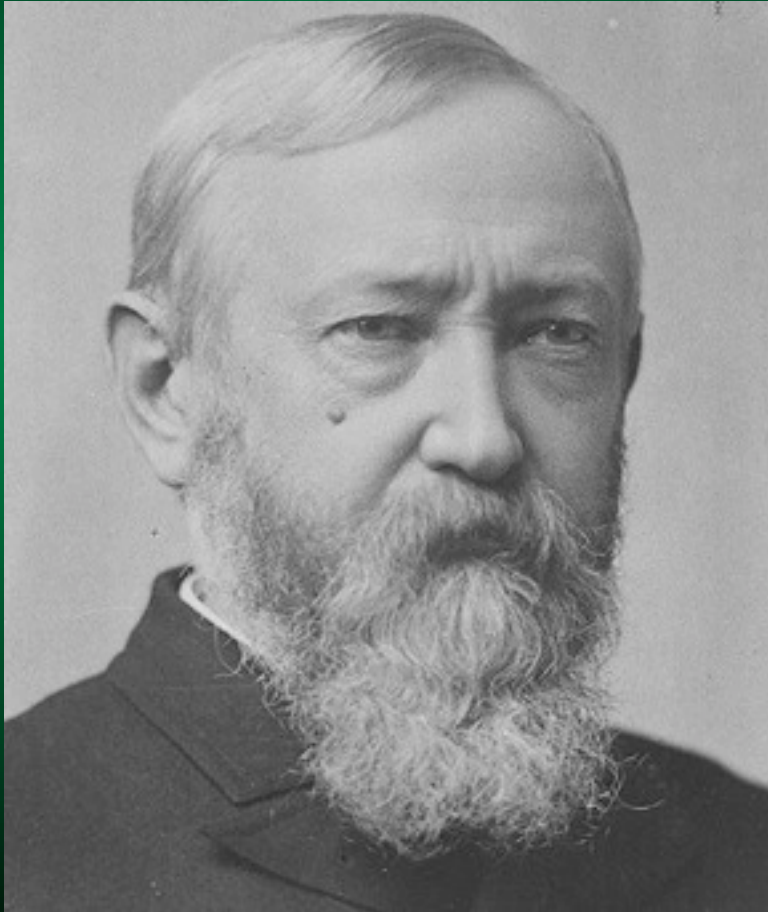


# The Beginnings of Federal Conservation





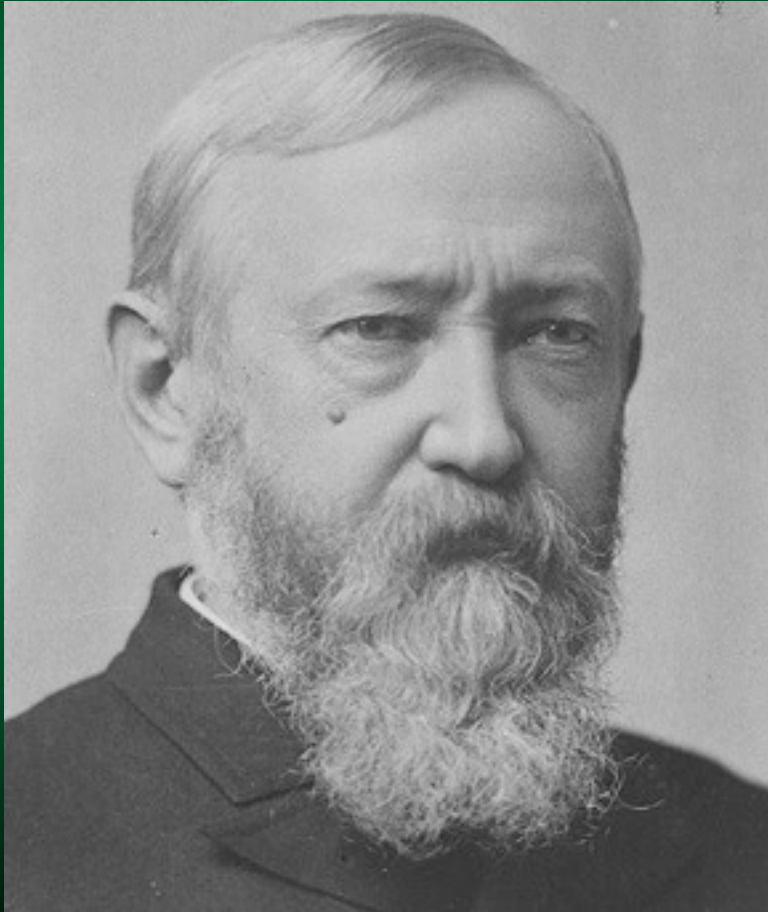
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- President Harrison – passed a law stating that the President could set aside lands for national parks and national forests

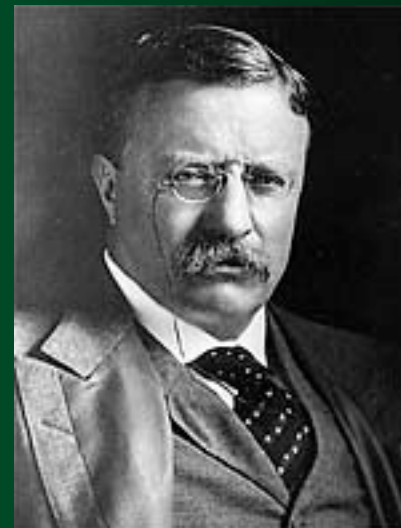
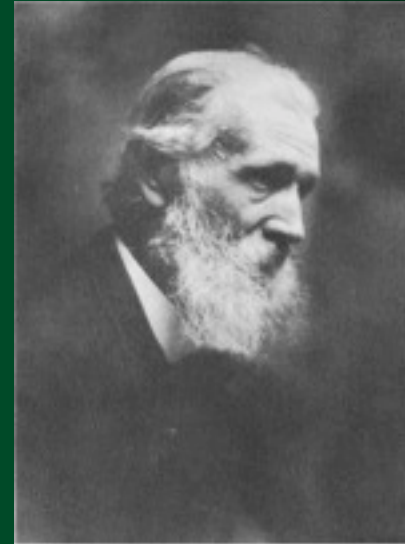


# The Beginnings of Federal Conservation



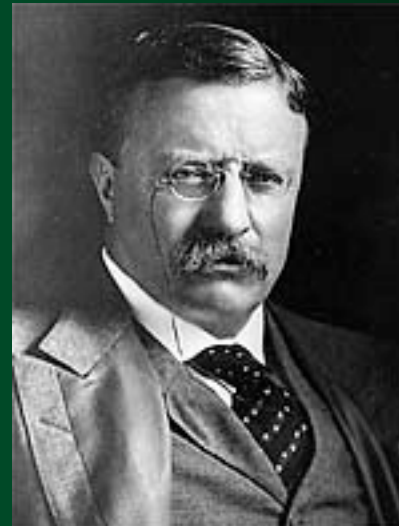
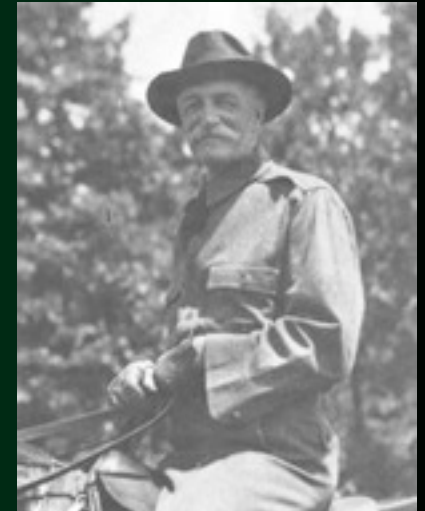
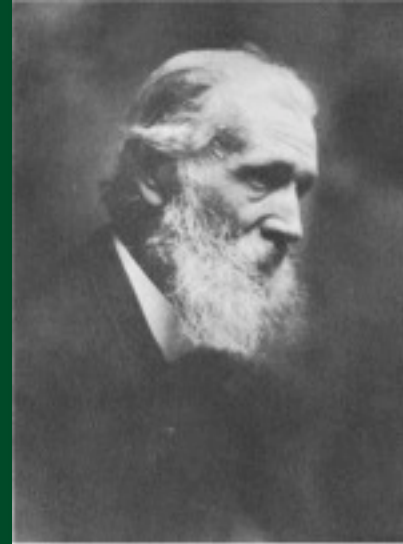
- President Harrison – passed a law stating that the President could set aside lands for national parks and national forests
- Extremely crucial legislation for the environment







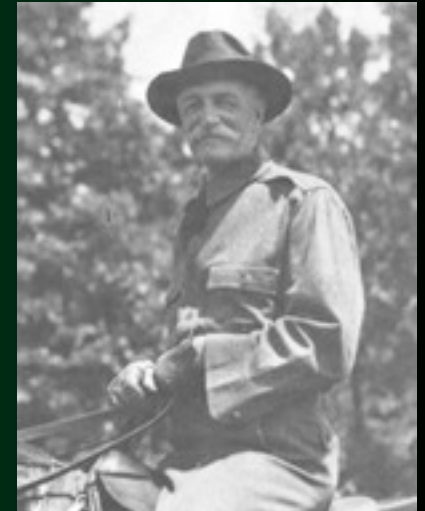
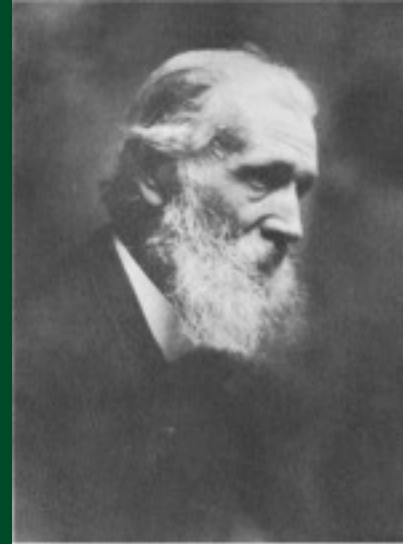
# Early Leaders

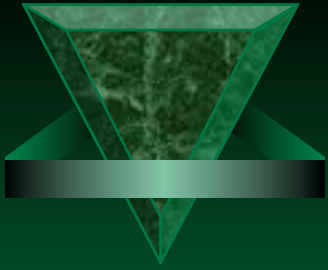




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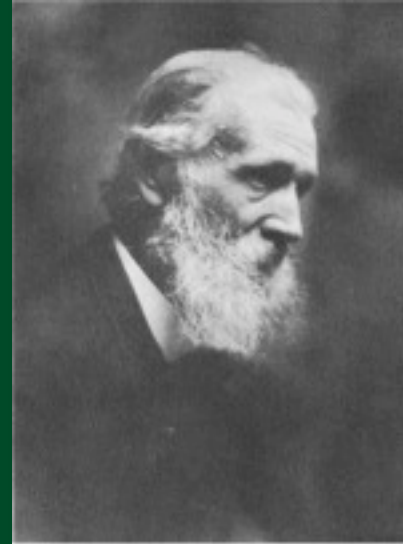
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  - Conservationists vs.  
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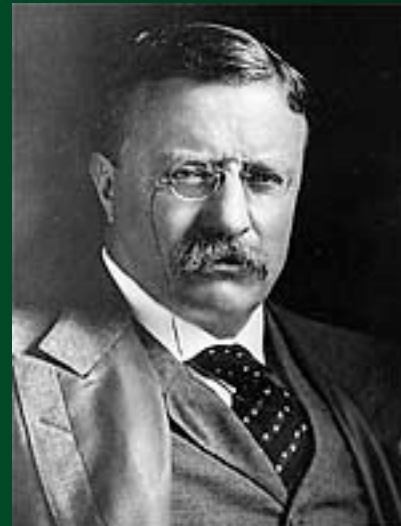
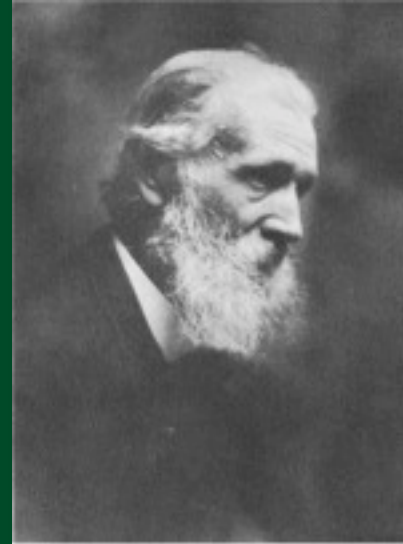






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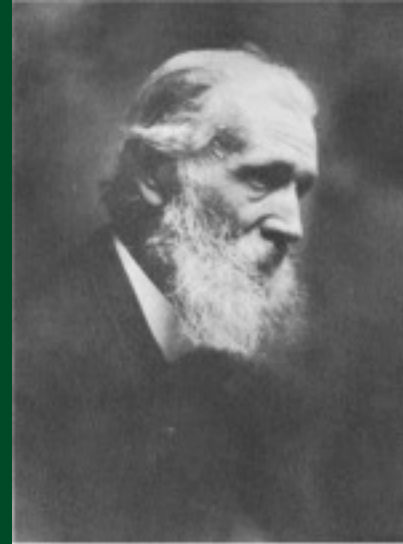
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- ✓ Theodore Roosevelt (1901 – 1909): Created 40+ wildlife refuges, tripled forest reserves





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  - Conservationists vs. Preservationists (Hetch-Hetchy Valley debate)
- ✓ Theodore Roosevelt (1901 – 1909): Created 40+ wildlife refuges, tripled forest reserves
- ✓ Reclamation Act: put Powell's ideas into effect







# The Park Service







# The Park Service

- ✓ National Park Service created in 1916





# The Park Service

- ✓ National Park Service created in 1916
- ✓ Stephen Mather: 1<sup>st</sup> Head of Park Service









# Citizen Conservation Groups







# Citizen Conservation Groups

➤ Sierra Club





# Citizen Conservation Groups

- Sierra Club
- Audubon



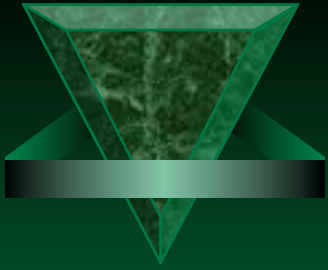


# Citizen Conservation Groups



- Sierra Club
- Audubon
- Wilderness Society





# **Decline of Private Lands**

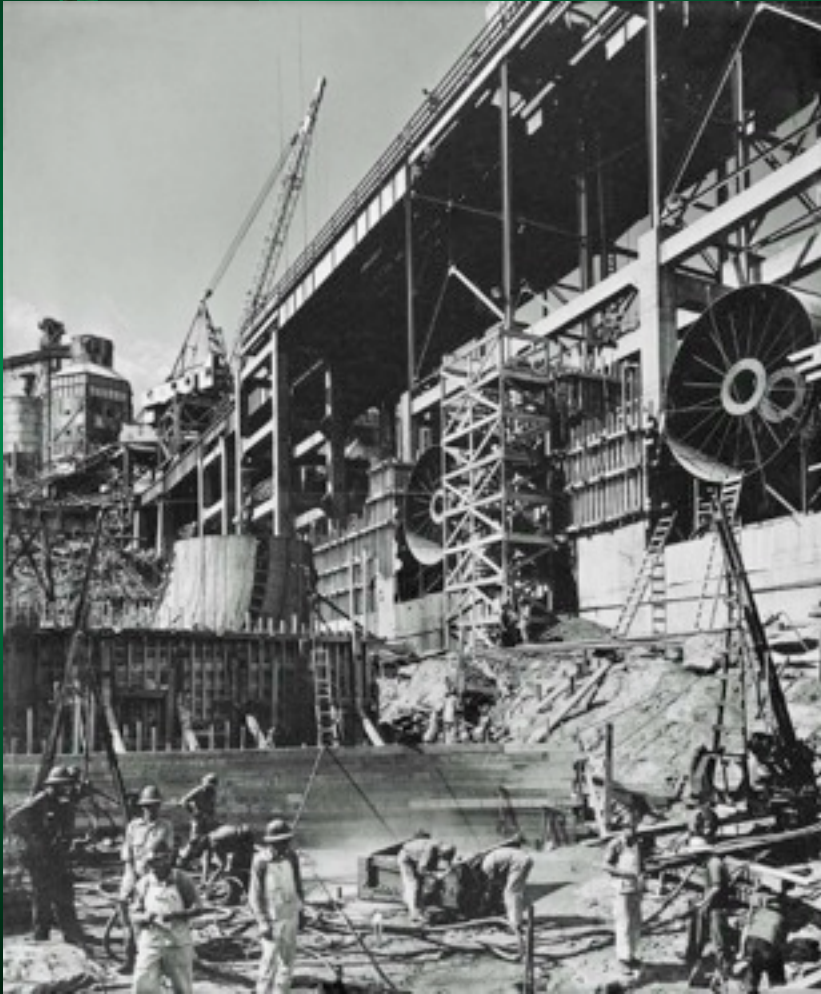




# Decline of Private Lands



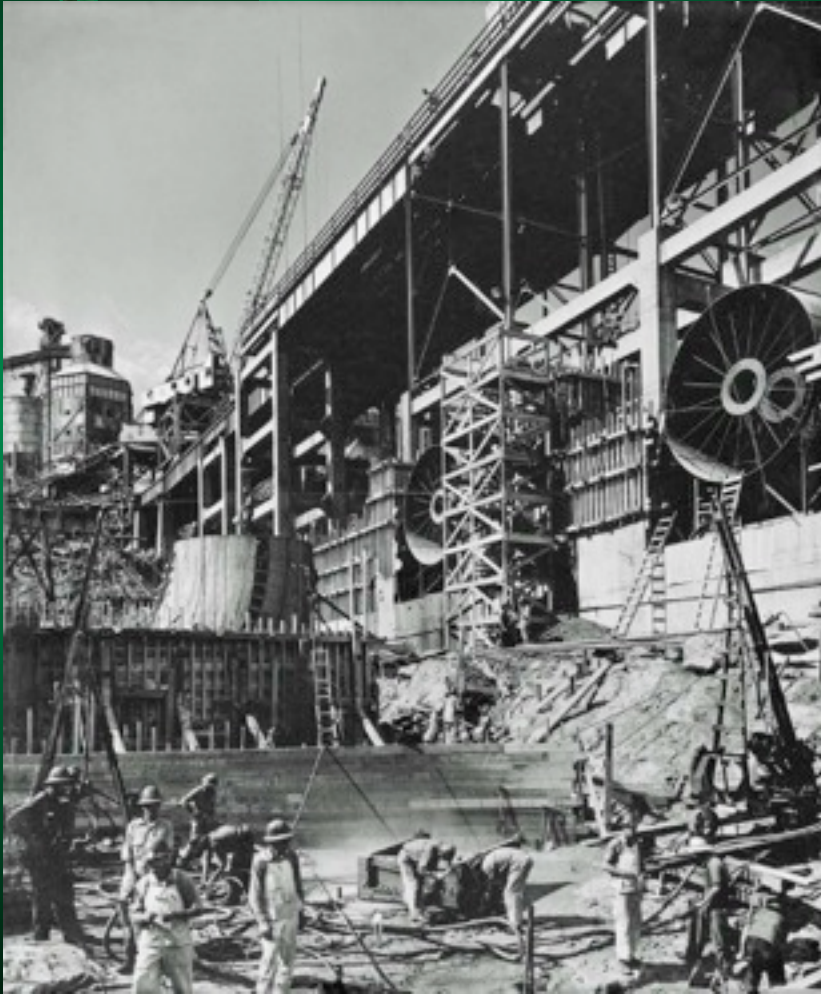








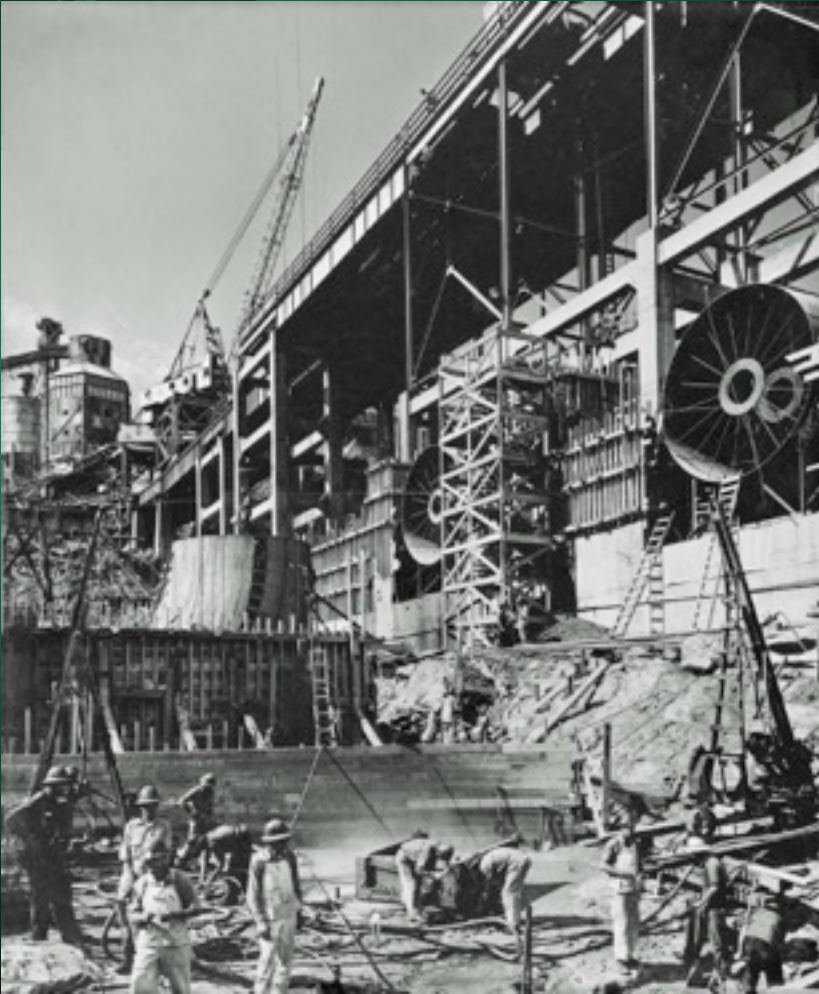
# FDR and Renewed Conservation Initiatives





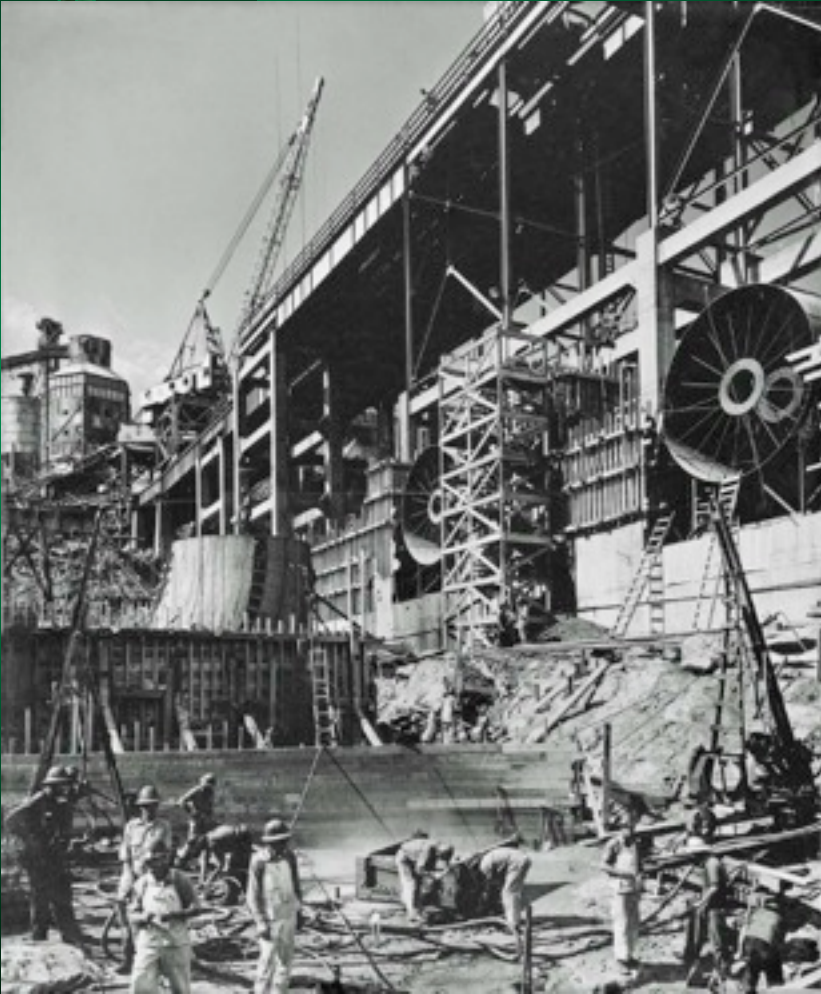
# FDR and Renewed Conservation Initiatives

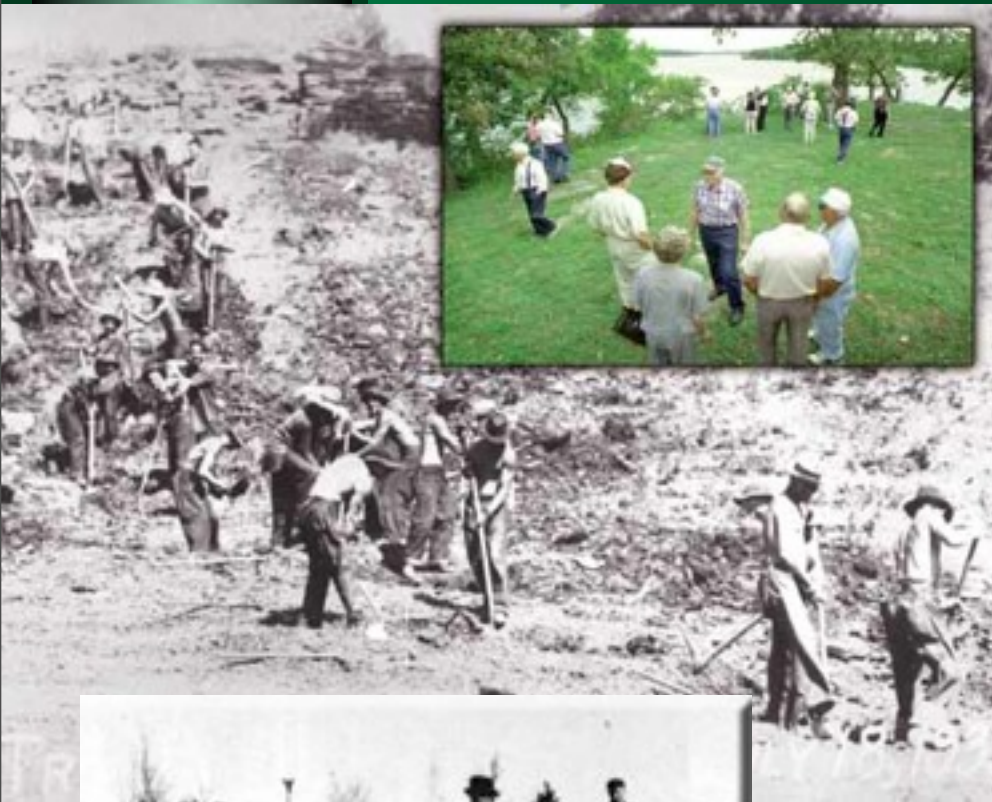
- ✔ Post-depression, economy needed employment and industrial production



# FDR and Renewed Conservation Initiatives

- ✔ Post-depression, economy needed employment and industrial production
- ✔ Tennessee Valley Authority (TVA) – 1<sup>st</sup> Federal Land Restoration Project

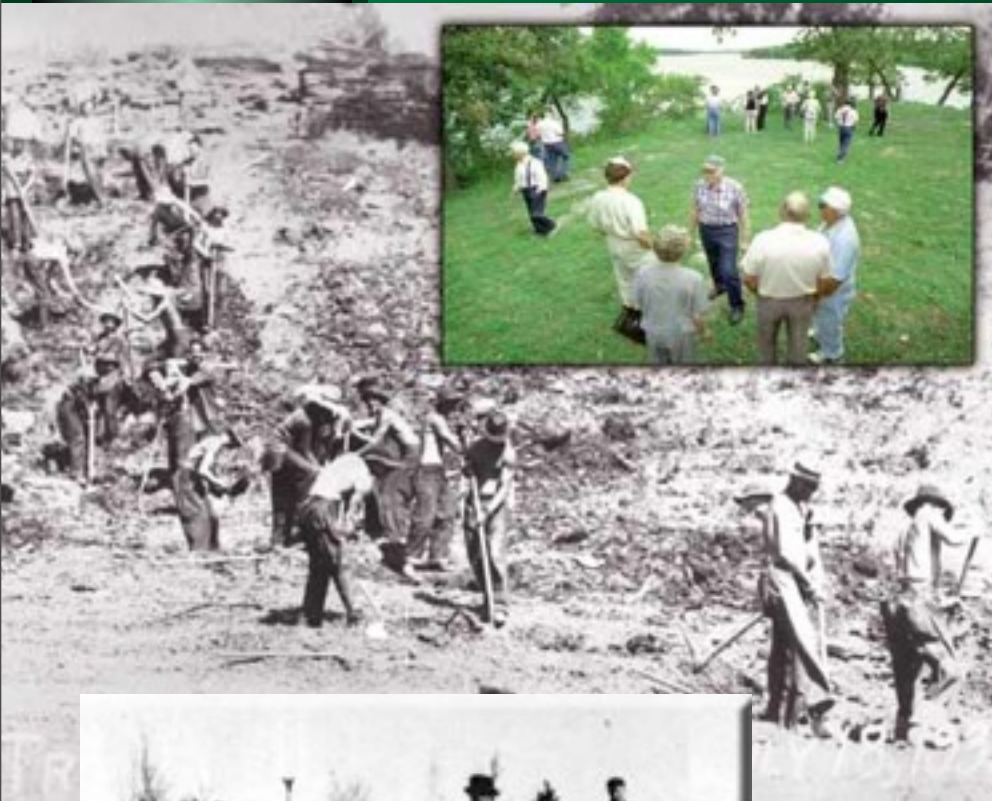






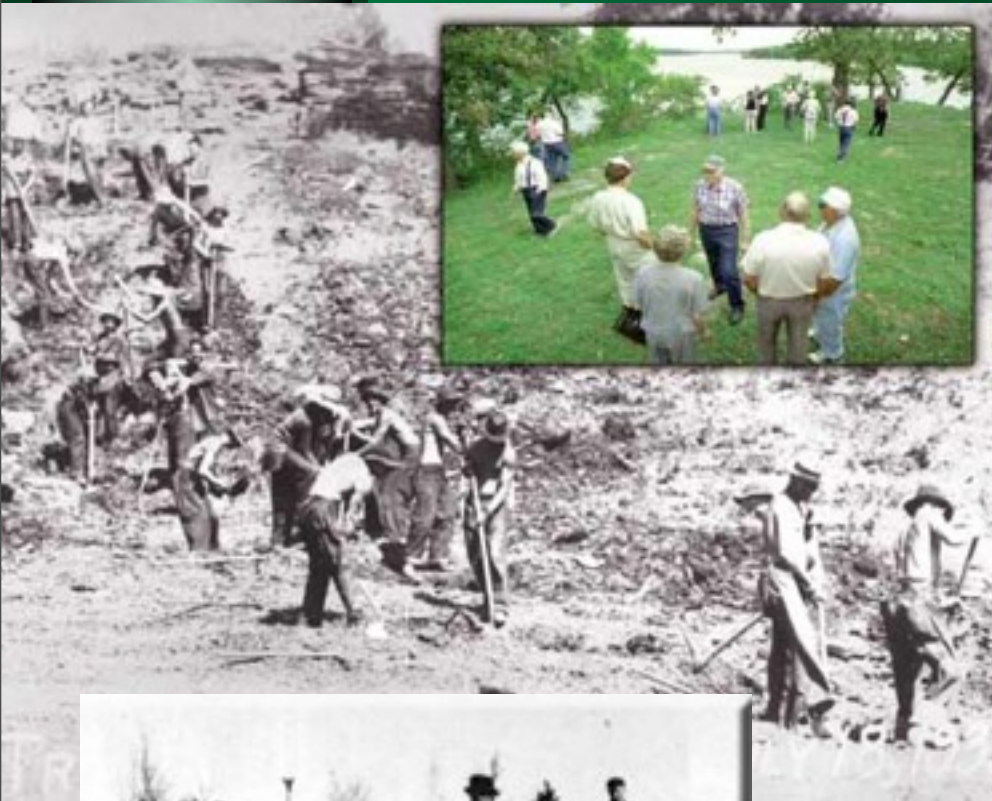


# FDR (cont.)





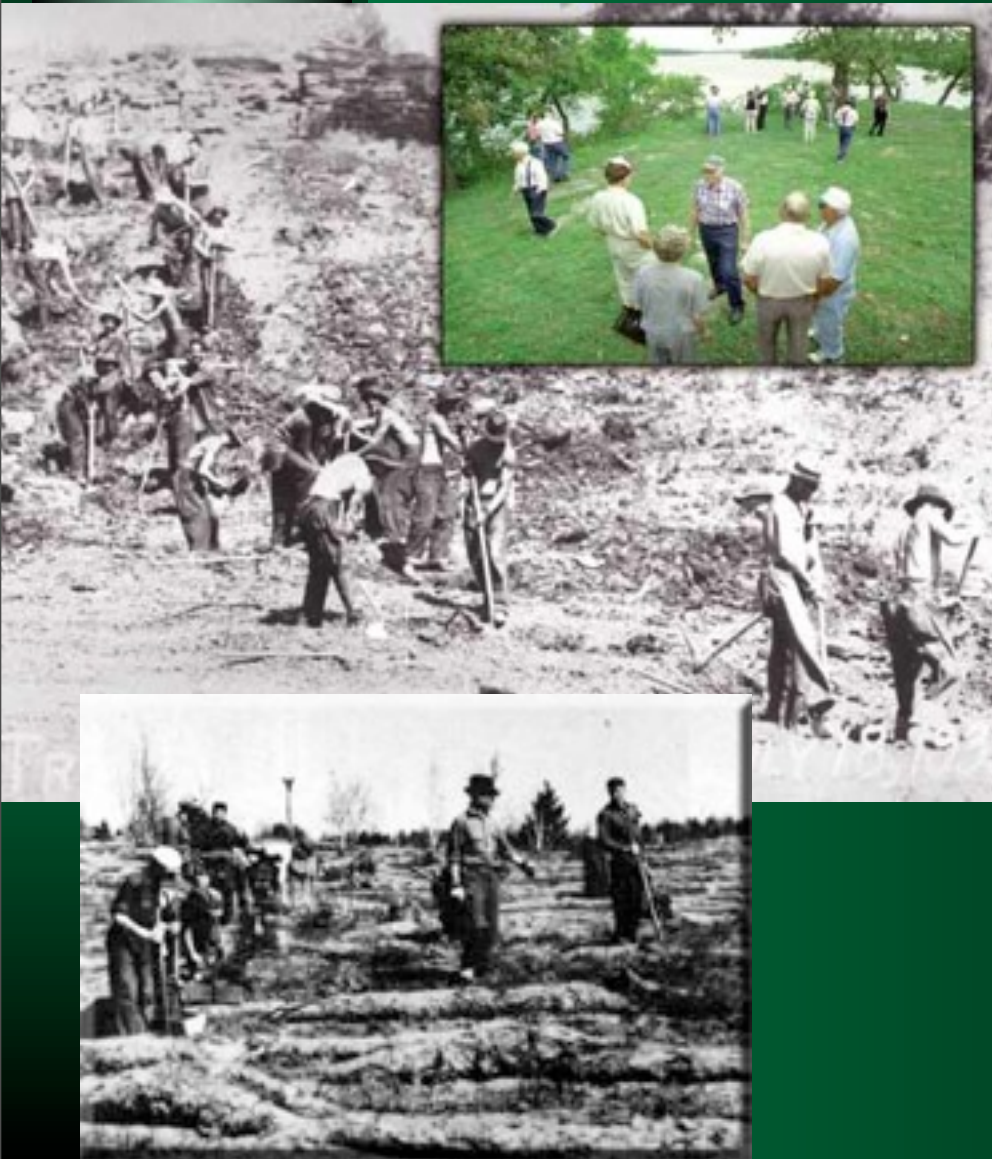
# FDR (cont.)



- ✓ 1933: Civilian Conservation Corps (CCC) – planted trees, erosion control, nature trails, etc.



# FDR (cont.)



- 1933: Civilian Conservation Corps (CCC) – planted trees, erosion control, nature trails, etc.
- Federal program to give unemployed men jobs during the depression
  - Employed 2 million unemployed people!

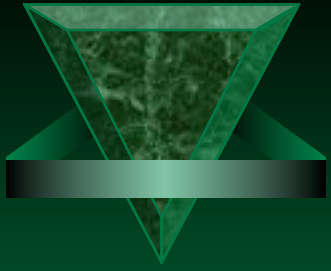


# FDR (cont.)

- 1935 Soil Conservation Act
  - professional soil conservationists tasked to prevent erosion and loss of soil nutrients
  - Became the “Soil Conservation Service”
  - Now the “Natural Resource Conservation Service” (NRCS)







# FDR (cont.)

- ✓ Taylor Grazing Act – regulated the grazing of public land







# WW II

## The end of the Conservation Era?

*“Our primary goal must be to consume...”*



# The Environmental Era

- 1960-present
- Rachel Carson: modern environmental movement began
- Space travel: a public sense of Earth's vulnerability
- Environmental back-lash in the 80's
  - Rise of the oil companies...





# Aldo Leopold







# Aldo Leopold

## ✓ Environmental Philosophy





# Aldo Leopold

- ✓ Environmental Philosophy
- ✓ “Sand County Almanac”





# Aldo Leopold

- Environmental Philosophy
- “Sand County Almanac”
- Humans are part of a “community” that includes natural resources



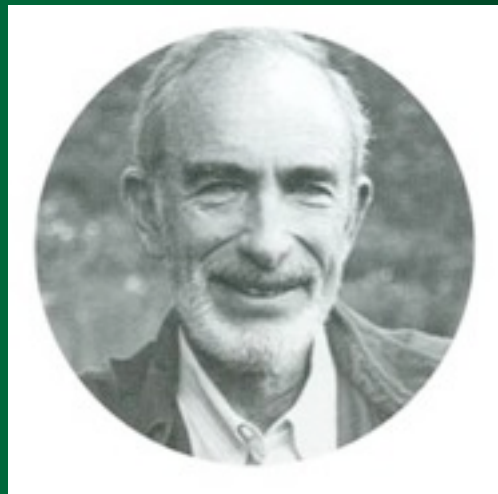
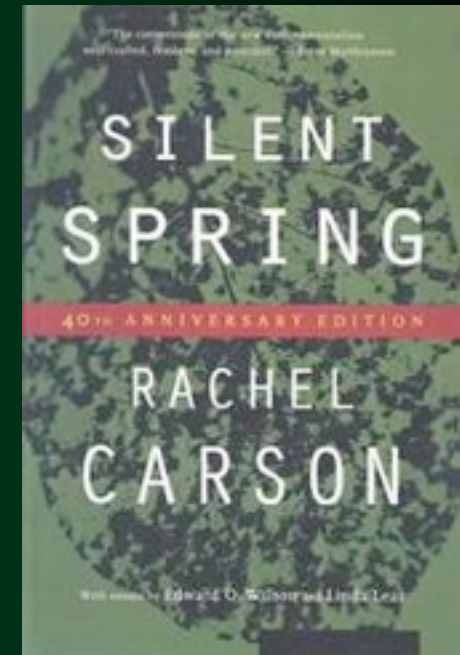


# Aldo Leopold

- Environmental Philosophy
- “Sand County Almanac”
- Humans are part of a “community” that includes natural resources
- Problems arise when land is viewed as a “commodity”

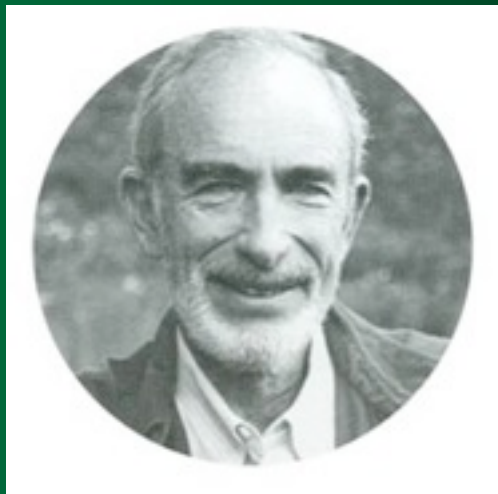
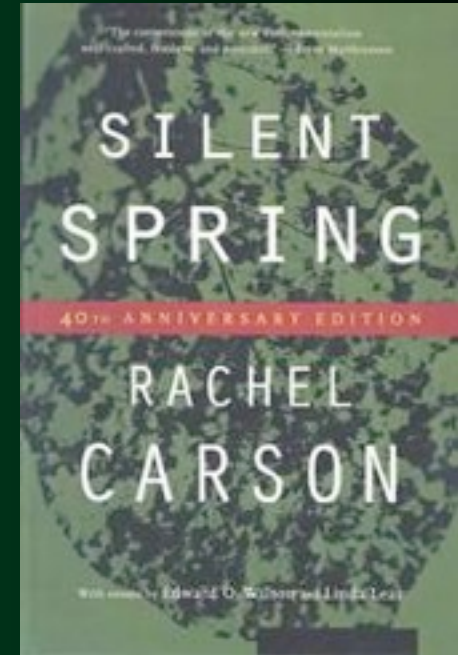








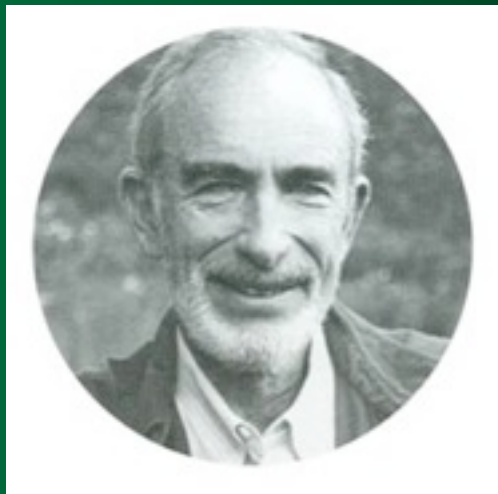
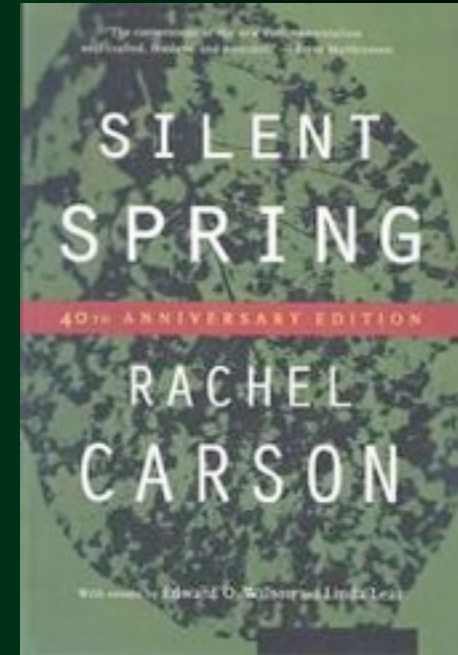
# Awakening of Environmental





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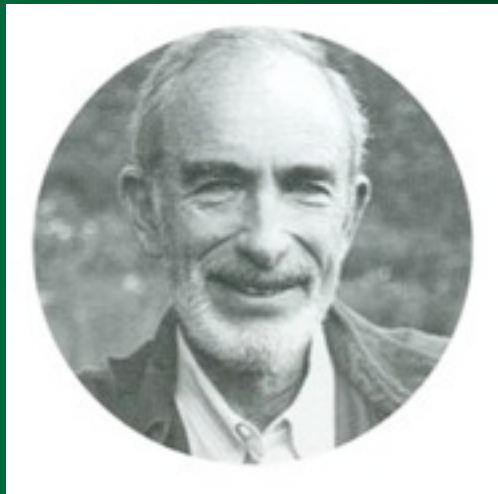
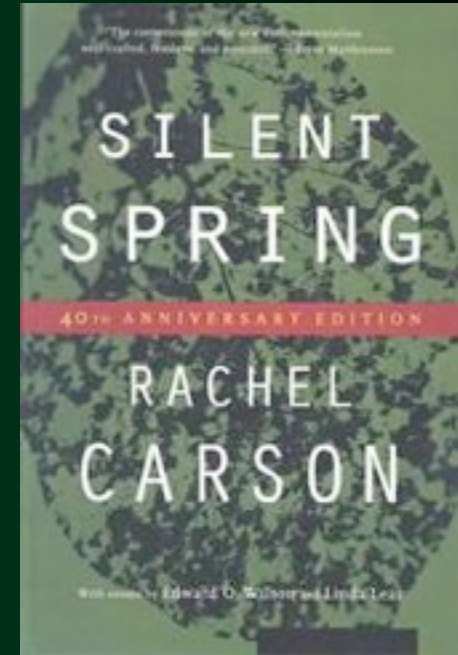
- Rachel Carson: “Silent Spring”





# Awakening of Environmental

- Rachel Carson: “Silent Spring”
- Paul Ehrlich’s: “Population Bomb”







*SB Oil Spill, Union Oil's Platform A, 1969*



The part of Cleveland through which the Cuyahoga River runs is still highly industrialized, but today the water is much cleaner than it once was.



# Decade of Unrest (1960's)

*SB Oil Spill, Union Oil's Platform A, 1969*



The part of Cleveland through which the Cuyahoga River runs is still highly industrialized, but today the water is much cleaner than it once was.



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➤ Racism and Vietnam



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- Racism and Vietnam
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- Cuyahoga River Burns: Cleveland
- A View from Space



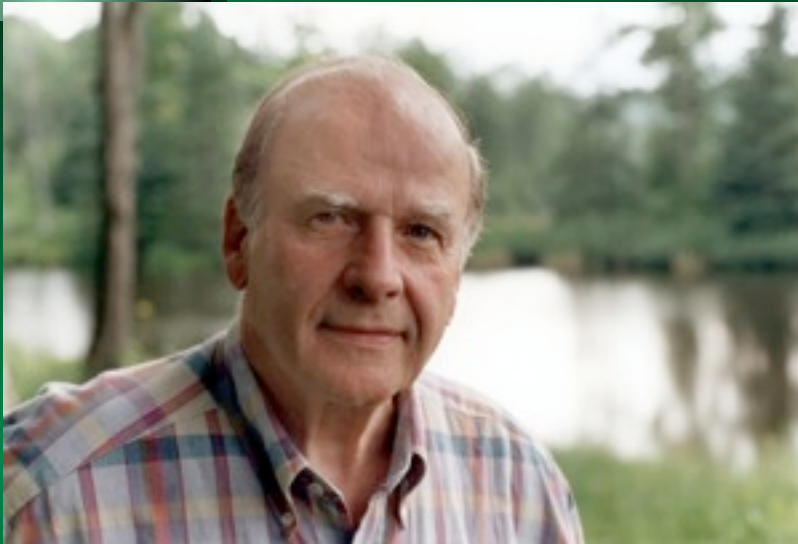
The part of Cleveland through which the Cuyahoga River runs is still highly industrialized, but today the water is much cleaner than it once was.





Thursday, November 1, 12









# Earth Day





# Earth Day



✓ First official “Earth Day”





# Earth Day



- ✔ First official “Earth Day”
- ✔ January 1<sup>st</sup> 1970





# Earth Day



- First official “Earth Day”
- January 1<sup>st</sup> 1970
- Gaylord Nelson
  - Wisconsin Governor and Senator







# Earth Day



- First official “Earth Day”
- January 1<sup>st</sup> 1970
- Gaylord Nelson
  - Wisconsin Governor and Senator
- 1<sup>st</sup> “teach-in” on the environment (April 22)



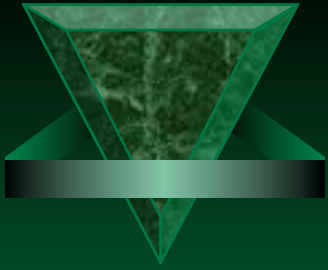




# **“Environmental Decade”**

## **Key Legislation**





# **“Environmental Decade”**

## **Key Legislation**

✓ Wilderness Act: 1964







# **“Environmental Decade”**

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- Wilderness Act: 1964
- Wild and Scenic Rivers Act: 1968





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# **“Environmental Decade”**

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- Wilderness Act: 1964
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- National Environmental Policy Act: 1969
- The Clean Air Act: 1972







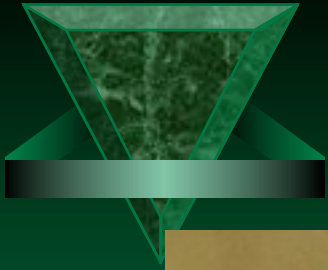
# **“Environmental Decade”**

## **Key Legislation**

- Wilderness Act: 1964
- Wild and Scenic Rivers Act: 1968
- National Environmental Policy Act: 1969
- The Clean Air Act: 1972
- The Clean Water Act: 1972







# Legislation (cont.)



# Legislation (cont.)



- Pesticide Control Act: 1972



# Legislation (cont.)



- Pesticide Control Act: 1972
- Endangered Species Act: 1973





# Legislation (cont.)



- Pesticide Control Act: 1972
- Endangered Species Act: 1973
- Resource Conservation and Recovery Act: 1976

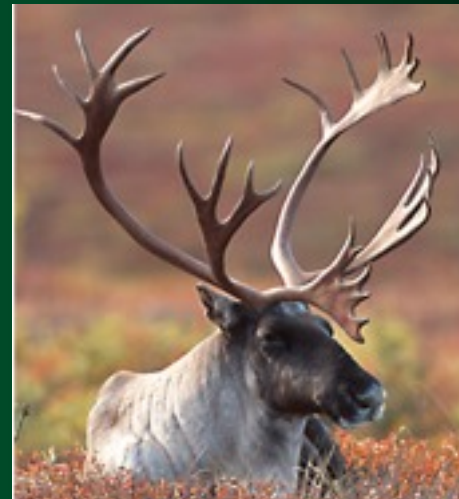
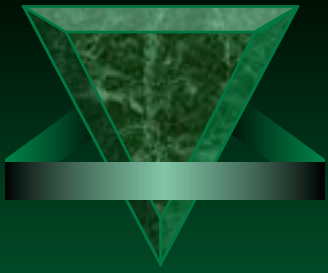


# Legislation (cont.)



- Pesticide Control Act: 1972
- Endangered Species Act: 1973
- Resource Conservation and Recovery Act: 1976
- Surface Mining Control and Reclamation Act: 1977









# Legislation (cont.)







# Legislation (cont.)

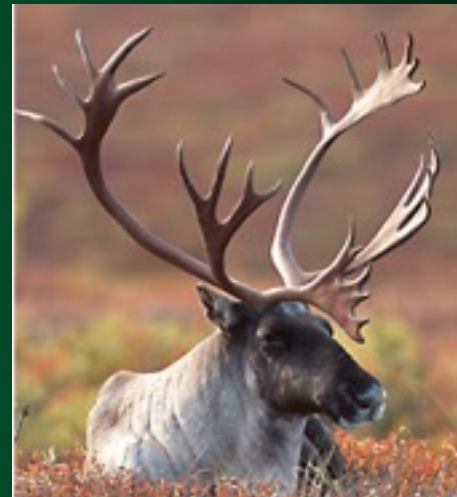
## ✓ Alaska Lands Bill: 1980





# Legislation (cont.)

- ✓ Alaska Lands Bill: 1980
- ✓ Superfund: 1980





## Superfund

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You are here: [EPA Home](#) » [Superfund](#) » Basic Information

### Basic Information

#### What is Superfund?

Superfund is the name given to the environmental program established to address abandoned hazardous waste sites. It is also the name of the fund established by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended ([CERCLA statute](#), [CERCLA overview](#)). This law was enacted in the wake of the discovery of toxic waste dumps such as [Love Canal](#) and [Times Beach](#) in the 1970s. It allows the EPA to clean up such sites and to compel responsible parties to perform cleanups or reimburse the government for EPA-lead cleanups.

#### How Superfund Works

The [Superfund cleanup process](#) is complex. It involves the steps taken to assess sites, place them on the [National Priorities List](#), and establish and implement appropriate cleanup plans. This is the long-term cleanup process. In addition, the Agency has the authority


- to conduct [removal actions](#) where immediate action needs to be taken;
- to [enforce](#) against potentially responsible parties;
- to ensure [community involvement](#);
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# Institutionalizing Environmental Protection





Superfund Home

Basic Information

Superfund Sites Where You Live

Contaminated Media, Human Health, and Environmental Effects

Accomplishments & Performance Measures

Cleanup Process

Community Involvement

Training & Learning Center

Laws, Policy & Guidance

Emergency Response

## Superfund

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### Basic Information

#### What is Superfund?

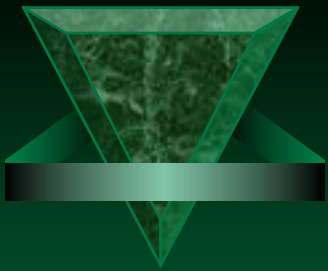
Superfund is the name given to the environmental program established to address abandoned hazardous waste sites. It is also the name of the fund established by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended ([CERCLA statute](#), [CERCLA overview](#)). This law was enacted in the wake of the discovery of toxic waste dumps such as [Love Canal](#) and [Times Beach](#) in the 1970s. It allows the EPA to clean up such sites and to compel responsible parties to perform cleanups or reimburse the government for EPA-lead cleanups.

#### How Superfund Works

The [Superfund cleanup process](#) is complex. It involves the steps taken to assess sites, place them on the [National Priorities List](#), and establish and implement appropriate cleanup plans. This is the long-term cleanup process. In addition, the Agency has the authority

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# Institutionalizing Environmental Protection

- Environmental Protection Agency (EPA): federal \$ for studying & improving environmental quality!



**Superfund**

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## Basic Information

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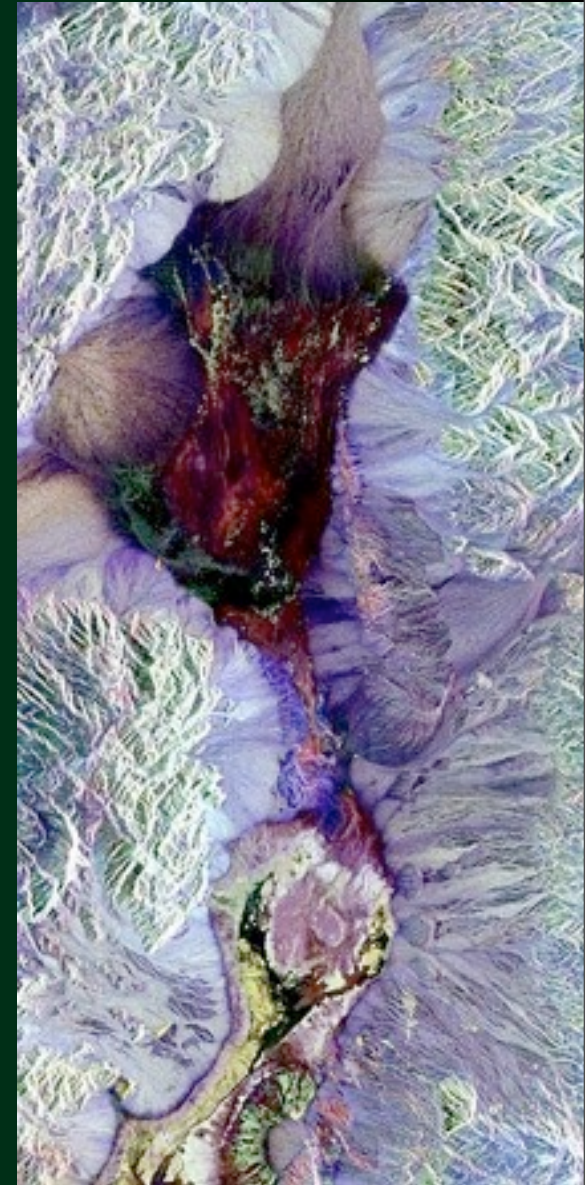
# What About The


**Trade-Offs**

**Information—Globalization Revolution**

Good News	Bad News
Computer-generated models and maps of the earth's environmental systems	Information overload can cause confusion and sense of hopelessness
Remote-sensing satellite surveys of the world's environmental systems	Globalized economy can increase environmental degradation by homogenizing the earth's surface
Ability to respond to environmental problems more effectively and	Globalized economy can decrease cultural diversity

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# **Which Laws/Treaties/Agencies Should I Know Something About?**

- **EPA**
- **NRCS**
- **Clean Air Act**
- **Clean Water Act**
- **Safe Drinking Water Act**
- **Endangered Species Act**
- **CITES**
- **Superfund/CERCLA**
- **Wilderness Act**
- **TSCA**
- **Energy Policy Act**
- **FIFRA**
- **Food Quality Protection Act**
- **HFI**
- **Kyoto Protocol**
- **Lacey Act**
- **NEPA**
- **Wild & Scenic Rivers**
- **RCRA**



# Organizations

## ✓ NRCS

- Natural Resources Conservation Service
- Originally the Soil Conservation Service
- Established in 1935 ( in response to the dust bowl)
- Monitors private land use, advises landowners on soil/water conservation methods
- “Educates” and “Advises”

## ✓ CITES

- Convention on International Trade in Endangered Species
- A 1975 international agreement between world governments, to penalize those who trade in endangered organisms or their body parts

## ✓ EPA

- Environmental Protection Agency
- Established in 1970 (Nixon!)
- Charged with protecting human health & the environment
- Monitors air & water quality
- “Regulates” & “Enforces”





# International Agreements/Committees

## ✓ Montreal Protocol

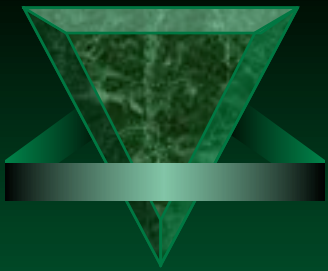
- 1987 international agreement, initiated by UNEP to phase out use of ozone-depleting chemicals by 2000/2005
- Very successful with CFC's, but new ozone-depleting chemicals are constantly being discovered

## ✓ Kyoto Protocol

- A 1997 international agreement to reduce the emission of greenhouse gases by 5% by 2012
- Not signed by the USA

## ✓ IPCC

- Intergovernmental Panel on Climate Change (1998)
- Thousands of scientists monitor, share and publish reports on atmospheric change



# US Environmental Laws

## ✓ Clean Air Act

- 1962 (revised 1970)
- Law requires the EPA to protect the public from exposure to “criteria” and “hazardous” airborne pollutants

## ✓ Clean Water Act

- 1972/1977/1988 act to restore all of America’s surface waterways so that they are navigable, swimmable & fishable

## ✓ NEPA

- National Enviro. Policy Act
- 1962 requirement for all federal agencies to produce E.I. statements

## ✓ Wilderness Act

- 1964 law defining and protecting wilderness (minimally altered by humans)

## ✓ FIFRA

- Federal Insecticide, Fungicide and Rodenticide Act
- 1972 law to regulate the use of agricultural and domestic pesticides



# US Environmental Laws

## ✓ Marine Protection Act

- 1972 law to regulate the disposal of municipal, solid or hazardous waste at sea or into the sea

## ✓ Endangered Species Act

- 1973 law to protect endangered species from extinction, and protect the ecosystems on which they

## ✓ Safe Drinking Water Act

- 1974 law to ensure safe drinking water for the public
- Establishes National Primary Drinking Water Standards

## ✓ TSCA

- Toxic Substances Control Act
- 1976 law that inventories *all* chemicals in use in the US

## ✓ Resource Conservation and Recovery Act

- 1976 law that regulates solid and hazardous waste disposal
- “cradle to grave” monitoring



# US Environmental Laws

## ✓ Surface Mining Control And Reclamation Act

- 1979 law regulating coal mining, and enforces reclamation of altered land

## ✓ CERCLA/"Superfund"

- Comprehensive Enviro. Response, Compensation and Liability Act
- 1980 law requiring polluters to clean up abandoned sites ("brownfields") that are

## ✓ Food Quality Protection Act

- 1996 law that enforces safe pesticide levels in food

## ✓ HFI

- Healthy Forests Initiative
- 2003 law to help prevent damaging forest fires
- Mandatory thinning of trees and clearing of understory

## ✓ Energy Policy Act

- 2005 law providing big tax incentives for research and use of alternative energies