



The Reagan Revolution & Environmental Policy

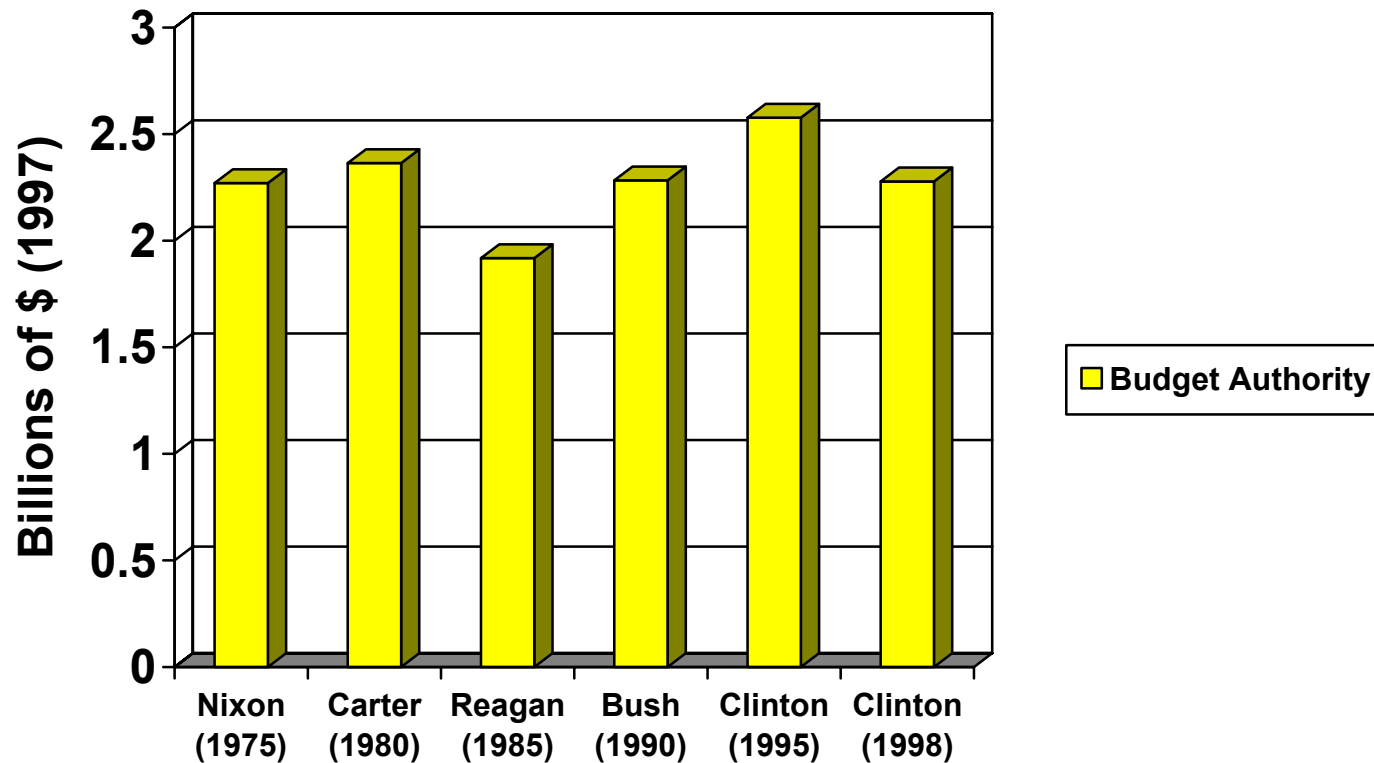
Administration Orientation

- “Prometheans”
 - Natural resources exist for human exploitation
 - Man’s destiny is to conquer nature
- Environmental Regulation
 - *Stifles* the economy
 - Violates property rights
- Environmentalism is an anti-capitalism, anti-business ideology
- Economic Growth and Development takes Precedent over Environmental preservation

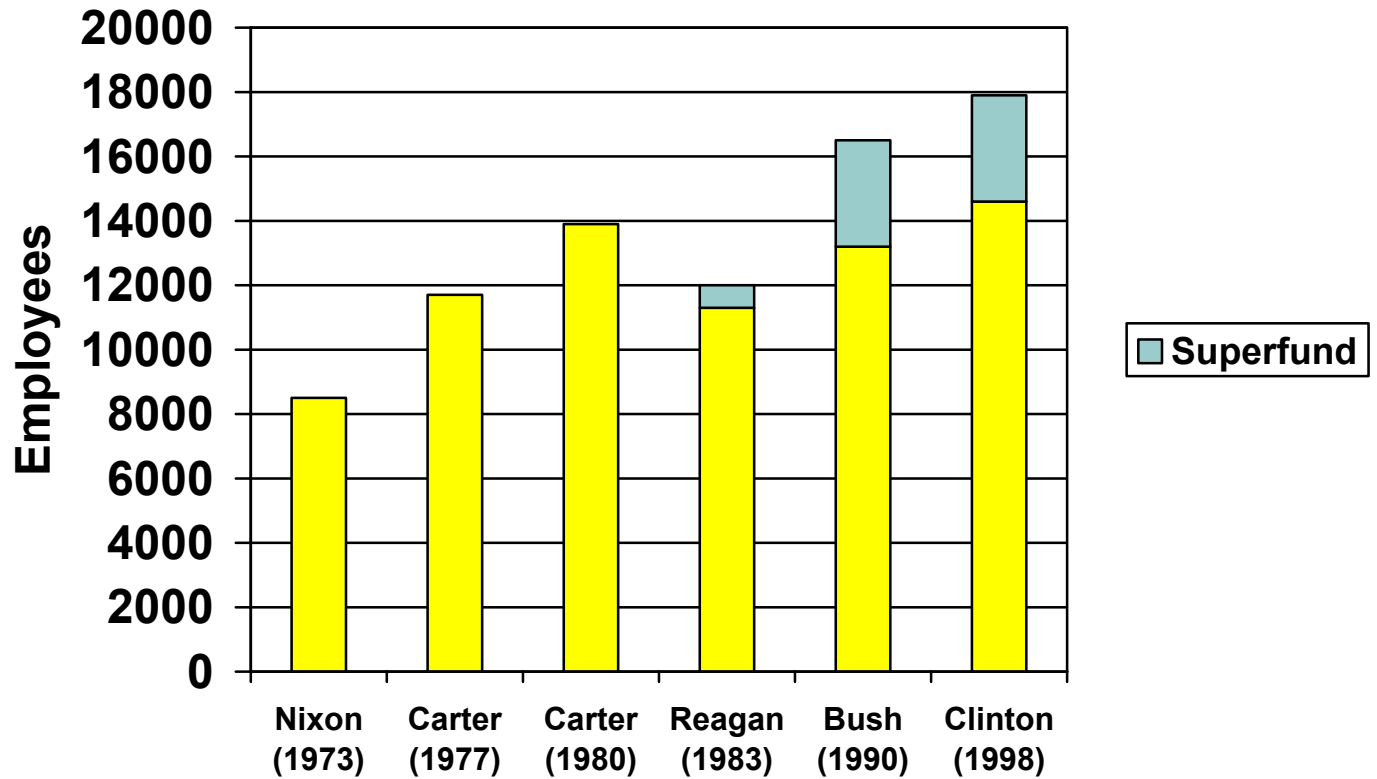


Environmental Policy Impact of Political Appointees

EPA Operating Budget 1975-1998

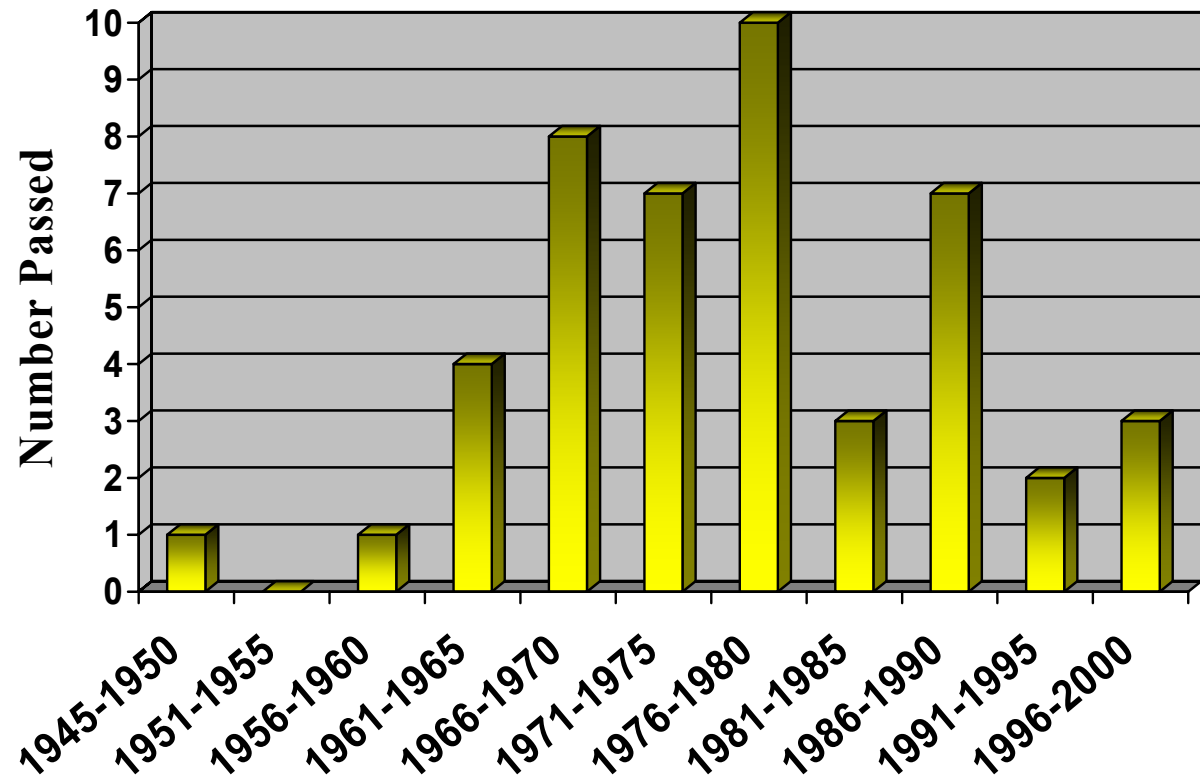


EPA Personnel 1973-1998



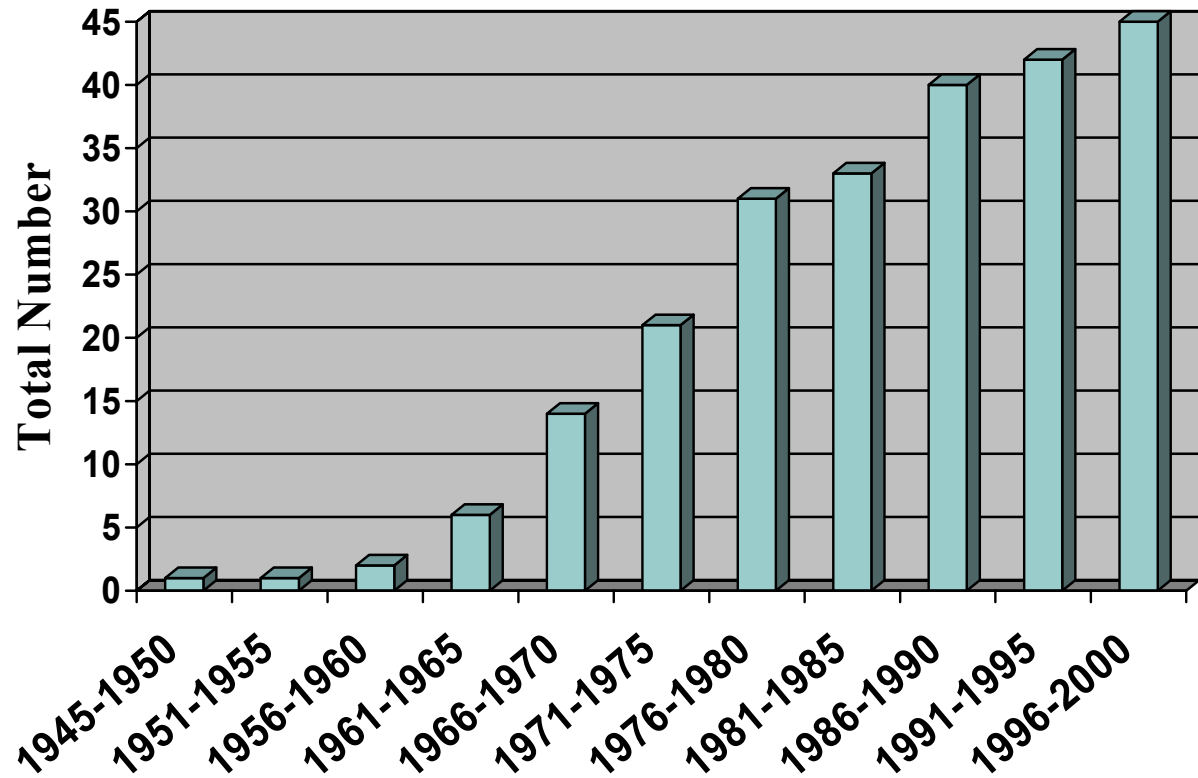
Federal Environmental Laws Passed

(including amendments)

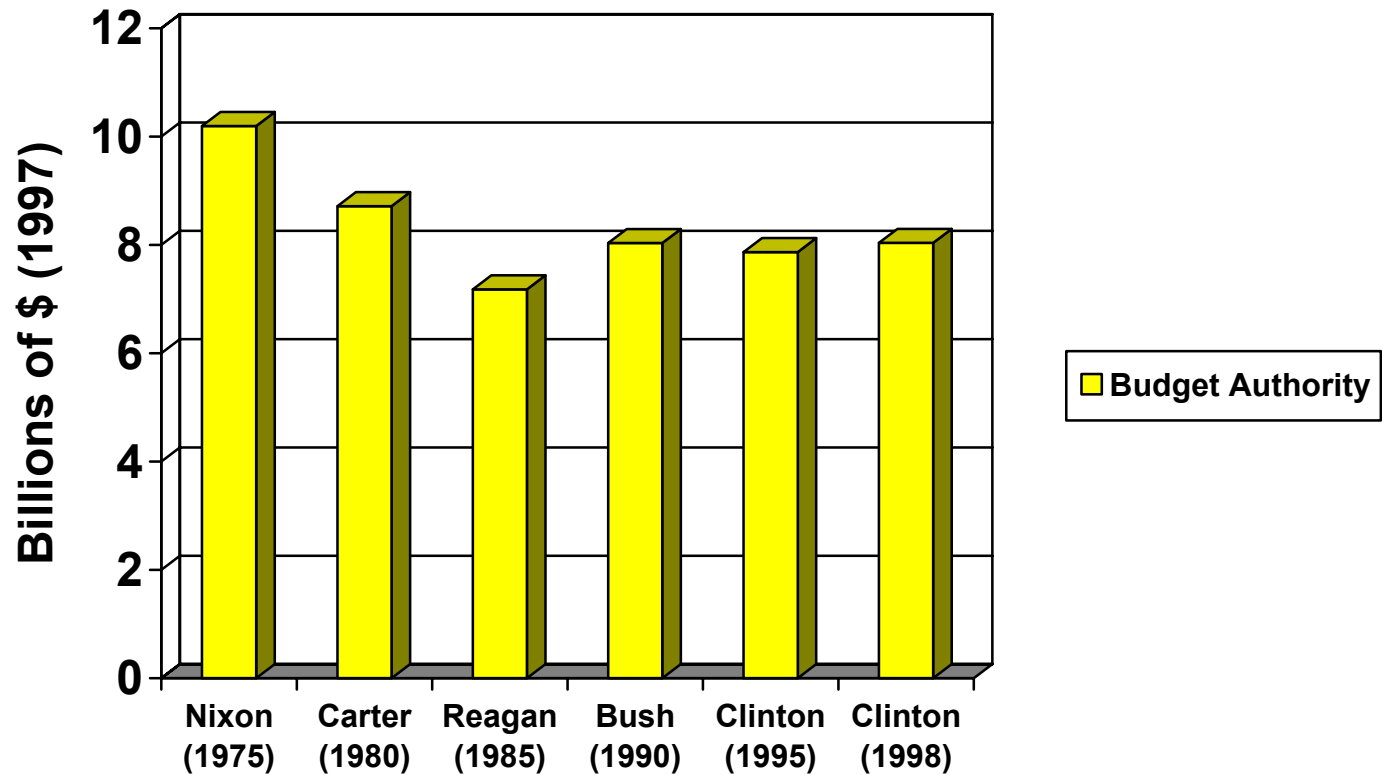


Federal Environmental Laws Passed

(including amendments)



DOI Operating Budget 1975-1998





Amendments to Environmental Laws

- Nuclear Waste Policy Act (1982)*
- RCRA (1984)
- TSCA (1986)
- SARA (1986)
- Safe Drinking Water Act (1986)
- Clean Water Act (1987)



Nuclear Waste Policy Act – 1982

- National Plan for building nuclear waste repositories
 - To house spent nuclear fuel from commercial reactors
- 1983 DOE selects 9 potential sites
- 1987 NWPA Amendments
 - Limited to a single site: Yucca Mountain

RCRA Amendments – 1984

- Hazardous & Solid Wastes Amendments
- Due to frustration with Reagan EPA “foot-dragging” implementing RCRA
- Scientific & Implementation Reports point to problems
 - OTA & NAS (1983)
 - GAO
- Sets 29 mandated deadlines for EPA action
- Mandates Specific Actions
 - Interim construction standards for underground storage tanks in 120 days
 - End to bulk liquid storage in lands fills within 6 months
 - Small Waste Generators Covered by law
 - 1000kg → 100kg per month

TSCA Amendments – 1986

- Asbestos Hazard Emergency Response Act
 - EPA to develop plan for inspecting schools for asbestos hazards and plan to control the threat where found

SARA – 1986

- Adds \$8.5 billion for NPL cleanup
 - Petroleum tax = \$2.75 billion
 - Chemical Feed stock tax = \$1.4 billion
 - Business tax = \$2.5 billion
 - General revenue = \$1.25 billion
- Public near sites to be informed of all stages of work
- Emergency Planning & Community Right to Know Act
 - Industry must disclose to “local emergency planning committee” information of 400 chemicals used/stored on site
- EPA to create TRI

Safe Drinking Water Act – 1974

- EPA authority to set standards for public water supplies
 - Oversee state programs
 - Including ground water
 - 50% of US population (95% of rural population) uses groundwater for domestic needs
 - 40% of agricultural irrigation
- National Priority Drinking Water Standards by 1977
 - Maximum Concentration Limits (MCLs)
 - Microbes
 - Turbidity
 - Chemicals (22 substances)



SDWA Amendments – 1986

- Reauthorized SDWA
- Grants to states
 - Implementation & enforcement
- Adds 61 contaminants to list of those (22) with MCL standards



Clean Water Act (1987)

- Revised EPA mandate to include non-point source pollution
 - NPSP believed to be responsible for failure of 65% of stream miles to meet state designated uses
 - States must devise plan to include “best management practices”
 - States can choose to make these voluntary or mandatory



Cost Benefit Analysis

How should government decide what to do?



Government Action

- Constrained by Limited Resources
- Setting Priorities among “problems” to address
- Tradeoffs
 - Environment vs. economy
 - Defense vs. education
- How do we maximize *net benefits* to society?

Executive Order 12291

- February 1981
- Regulatory Impact Analyses
 - Cost-Benefit Analysis required
 - Submitted by all agencies
 - Reviewed by Office of Information & Regulatory Affairs
 - OMB office in White House

Executive Order 12291

- Potential benefits to society must outweigh potential costs
- Regulatory objectives must maximize net benefits to society
- Regulations must impose least net costs to society in achieving objectives
- Regulatory priorities must maximize aggregate net benefits to society taking into account
 - The state of the economy
 - The state of particular industries

Net-Benefit Example

Which is Preferred?

- CO Anti Pollution Device on Tailpipes
 - Cost = \$100m
 - Benefit = prolong 1000 lives 1 year
- Special Ambulances Equipped for Heart attack victims
 - Cost = \$100m
 - Benefit = 10,000 lives prolonged 1 year



Elements of Cost Benefit Analysis

- Monetizing all costs & benefits for direct comparison
- Discounting for Time value of money
- Discounting for Uncertainty of Outcomes
- Risk Analysis
- Maximizing Net Benefits

Issues

- Who are “stakeholders?”
 - Whose costs & benefits count?
 - Future generations
 - Non-human stakeholders
- What about non-tangible and hard to monetize costs & benefits?
 - Existence Values
 - Nuisance Values
 - Moral Values
- What about intensity of preferences?



Costs of Environmental Protection

- To the Regulated
 - Easiest to estimate & monetize
 - Systematically overestimated



Benefits of Environmental Protection

- To Public
 - Difficult to Monetize Benefits
 - Averted “costs” of not protecting the environment
 - Benefits of Grizzly Bears in Montana
 - Willingness to pay
 - Travel Cost
 - Eco-tourism
- Benefits are Systematically underestimated

Doing Cost-Benefit Analysis – USACE Style

- Net benefit example 1
- Net benefit example 2
- Discounting example



How Good are We at Predicting Regulatory Costs?

Accuracy of Regulatory Costs – I

as Predicted by EPA/OSHA

All Regulations (N=28)	Accurate	Over	Under	?
Amount of Pollution reduction	13	9	4	2
Unit cost	8	14	6	0
Total cost	5	15	3	5

Accuracy: within range predicted, or \pm 25% of point estimate



Accuracy of Regulatory Costs – II

as Predicted by EPA/OSHA

Harrington, et al. (2000) "Accuracy of Regulatory Cost Estimates," *JPAM*, 19(2), 297-322.



Accuracy of Regulatory Costs – III

as Predicted by EPA/OSHA

Accuracy: within range predicted, or $\pm 25\%$ of point estimate

Harrington, et al. (2000) "Accuracy of Regulatory Cost Estimates," *JPAM*, 19(2), 297-322.