

Environmental Risk, Law, and Enforcement



EVSS-PUBA 534: Environmental Law and Regulatory Policy

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Matthew Nowlin, PhD
Department of Political Science
College of Charleston

Overview

Introductions

**Characteristics and themes of
environmental law**

Four analytical frameworks

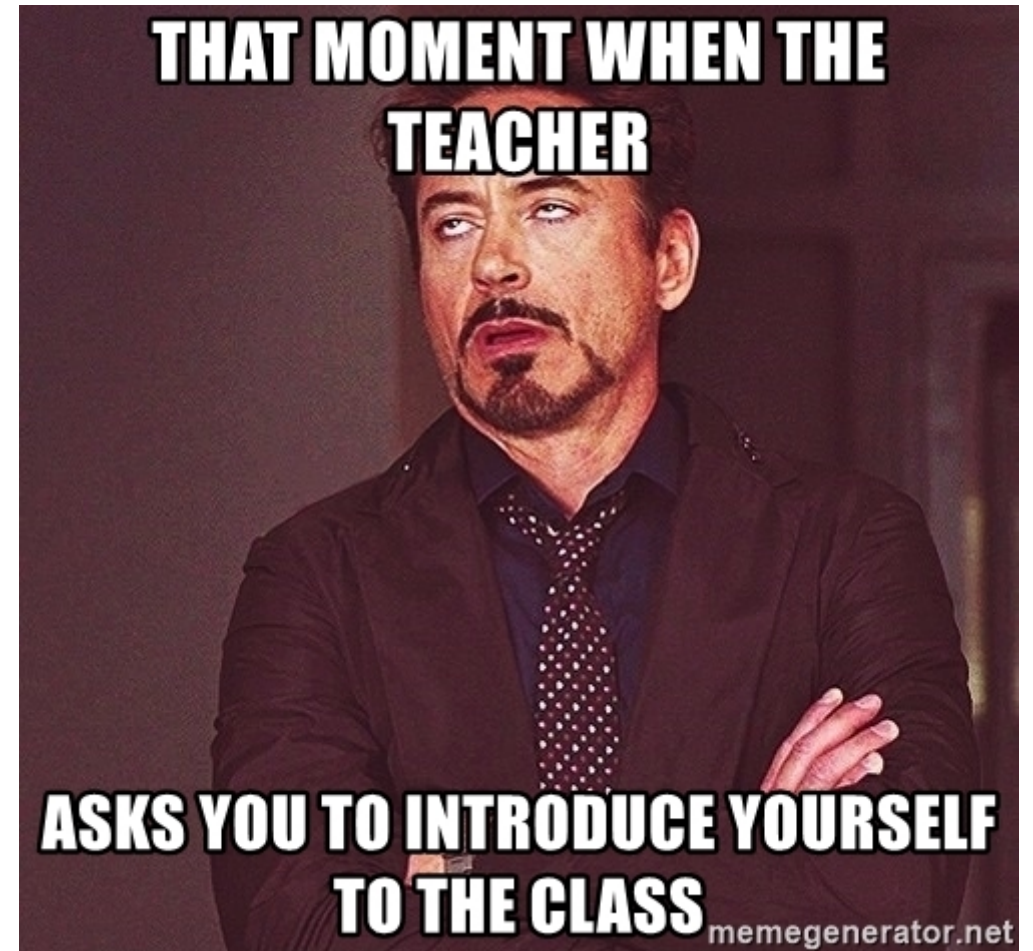
Enforcement

Introductions

Name

Program

Thesis project or career goals



Environmental Law

The use of public authority to *protect* the natural environment and human health from the impacts of pollution and development

-Salzman and Thompson (2014), pg. 3

- How do know when the natural environment and/or human health needs to be protected?
- What does "protect" mean? How do we know we have achieved adequate protection?

Environmental Law

Environmental law regulates human behavior in light of its environmental impacts

-Rowell and van Zeben (2021), pg. 3

- How do we know when impacts are sufficient to require changes in human behavior?
- How responsive is human behavior to changes in environmental laws?

Characteristics of Environmental Law

Environmental law is necessarily almost as complex and dynamic as the ecosystem it seeks to protect

-Lazarus (2004), pg. 6

Complexity

- Workings of the ecosystem
- Highly industrialized economy

Characteristics of Environmental Law

Scientific uncertainty

- The workings of the ecosystem and the *causal mechanisms underlying its transformation*
- Spatial dimensions
- Temporal dimensions
- Types, levels, and exposure to contaminants
- **Demands of public policy**

Characteristics of Environmental Law

Scientific uncertainty

In many respects scientific uncertainty is *the* defining feature of environmental policy [law]

-Salzman and Thompson (2014), pg. 3

- Complex interrelations among environmental harms

Characteristics of Environmental Law

Scientific uncertainty

Responses to scientific uncertainty

- Develop better information
- The *precautionary principle*
 - Caution in the face of significant but uncertain threats
 - Shifting burden of proof

Characteristics of Environmental Law

Dynamism

Much of environmental law is based on "scientifically informed value judgments"

- New scientific information
- Other changes: Demographic shifts (population changes, age, diets) and technology
- Nature changes and ecosystems evolve

Characteristics of Environmental Law

Precaution

- Environmental law is focused on prevention rather than redress

Controversy

- Distributional conflicts over costs and benefits
- Environmental values

Themes of Environmental Law

Market failures

- **Public goods:** clean air, clean water, ecosystem services
- **Common-pool goods:** the tragedy of the commons
- **Externalities:** costs shifted to the public (e.g., pollution)

Property rights

The rights of ownership or control of property including the right to use, transfer ownership, or exclude from use

Themes of Environmental Law

Mismatched scales

- Environmental impacts are often *diffuse*, where the consequences are geographically and spatially distant from the causes
- Mismatched political and natural boundaries
 - Who should make environmental law, national or local authorities?
- *Race-to-the-bottom*

Themes of Environmental Law

Risk

Environmental law is about mitigating risk to the environment and human health

Risk can be defined as the *exposure to the **chance of injury or loss***

- **Chance:** risk is probabilistic
- **Injury or loss**

Risk assessment uses scientific information to estimate harm to the environment and human health from various sources

Themes of Environmental Law

Four principal steps in the risk assessment process

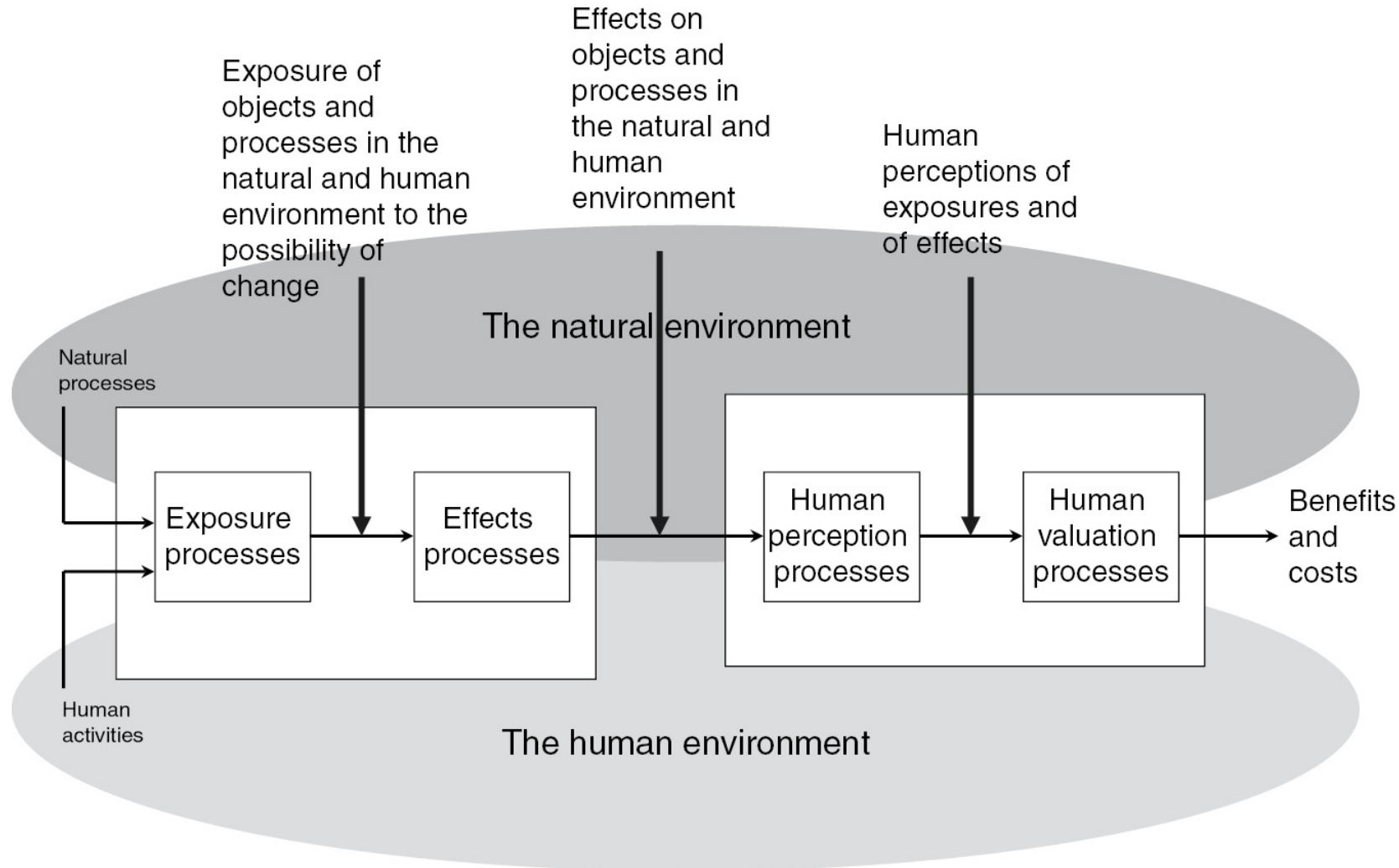
- *Hazard identification*: Is the item under study (e.g., chemical) causally linked to particular health (or public welfare) effects?
- *Dose-response assessment*: What is the relationship between the magnitude of exposure and the probability that the health (or public welfare) effects will occur?

Themes of Environmental Law

Four principal steps in the risk assessment process

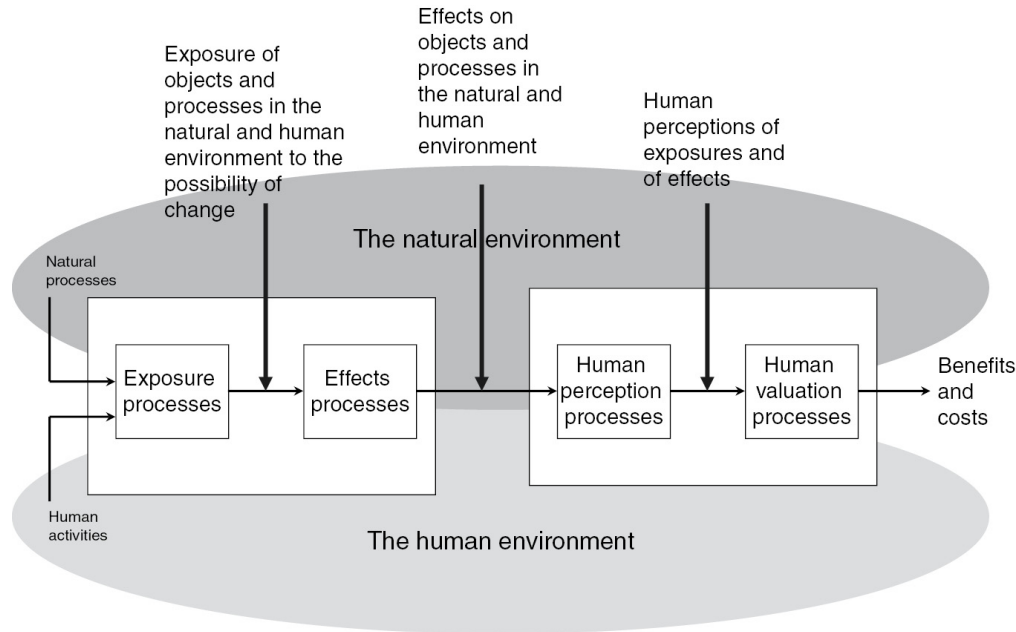
- *Exposure assessment*: What is the level of exposure of humans (or the environment) to the hazard?
- *Risk characterization*: What is the overall magnitude of the risk?
 - Combines the first three steps

Risk Assessment



Risk Assessment

Example: Air pollution from a power plant

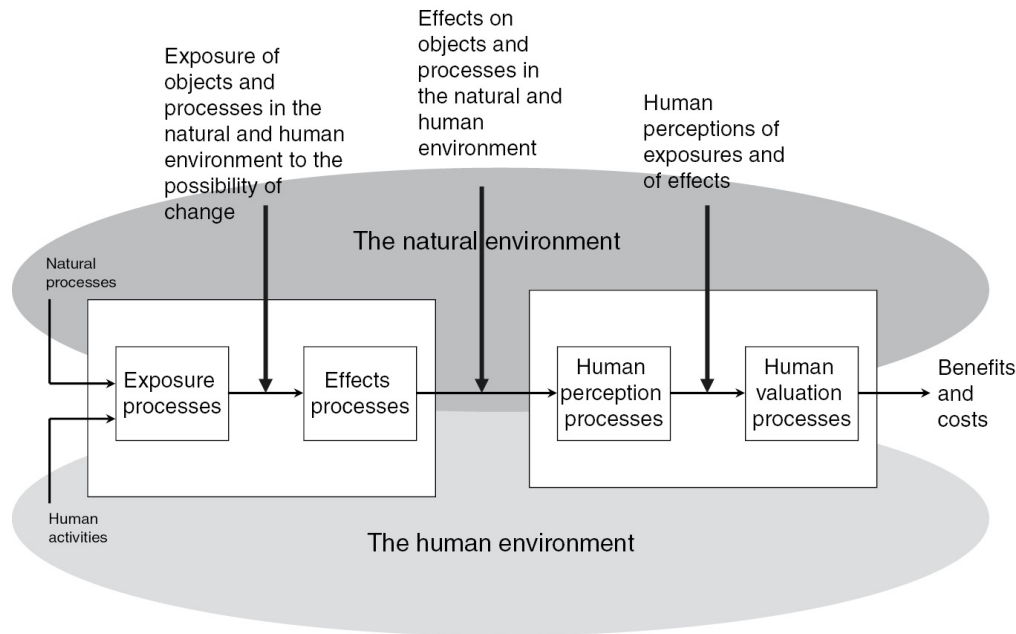


Exposure processes: models of pollution movement through air and water

Effects processes: measured through *dose-response functions*

Risk Assessment

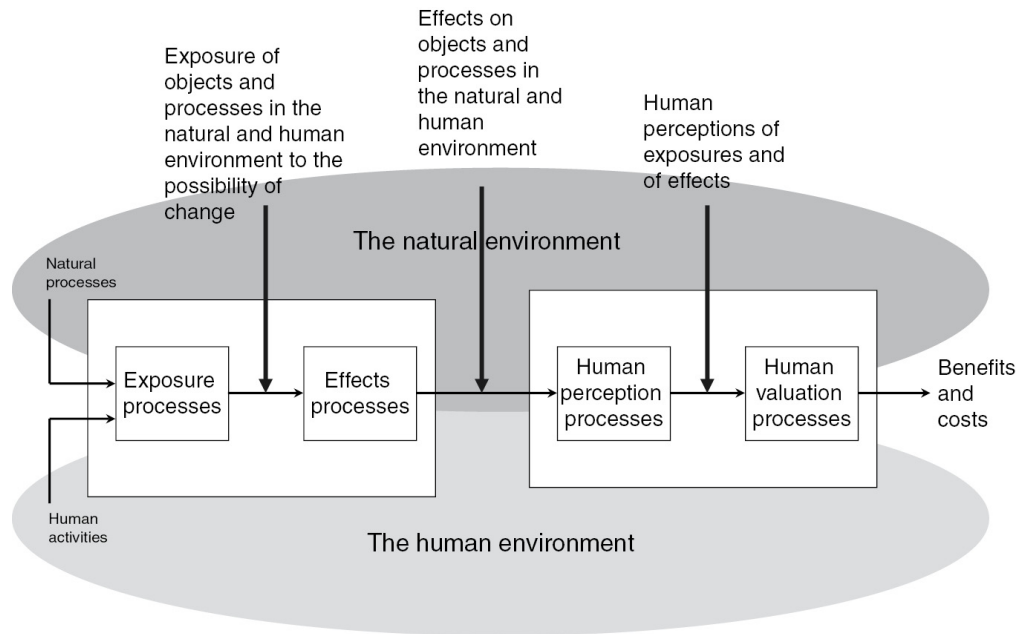
Example: Air pollution from a power plant



Human perception processes:
the *psychology* of risk and uncertainty; subject to biases and heuristics

Human valuation processes:
willingness-to-pay; value of a statistical life

Managing Risk



- Modify nature and human environment
- Modify exposure processes
- Modify effects processes
- Modify how people perceive and value effects
- Mitigate or compensate

Managing Risk

Hazard assessment, exposure assessment, and risk assessment processes at the federal level (*Shaffer 2021*)

Where is the chemical found?

- **In the environment:** EPA
- **Public health:**
NIH/NIEHS/DNTP
- **Workplace:** NIOSH/OSHA
- **Hazardous waste sites:**
ATSDR
- **Food or cosmetics:** FDA
- **Consumer products:** CPSC

Environmental Law

Four analytical frameworks

- Environmental rights
- Sustainable development
- Utilitarianism and cost-benefit analysis
- Environmental justice

Which of the four analytical frameworks do you view as most useful for examining environmental law and why?

Enforcement

How are environmental laws enforced?

Enforcement should achieve:

- *Force of law: compliance*
- *Rule of law: fair application*

Types of violators

- *Amoral calculators*
- *Political citizens*
- *Incompetents*

Most environmental statutes provide a combination of criminal, civil, and administrative penalties

Enforcement: The Players

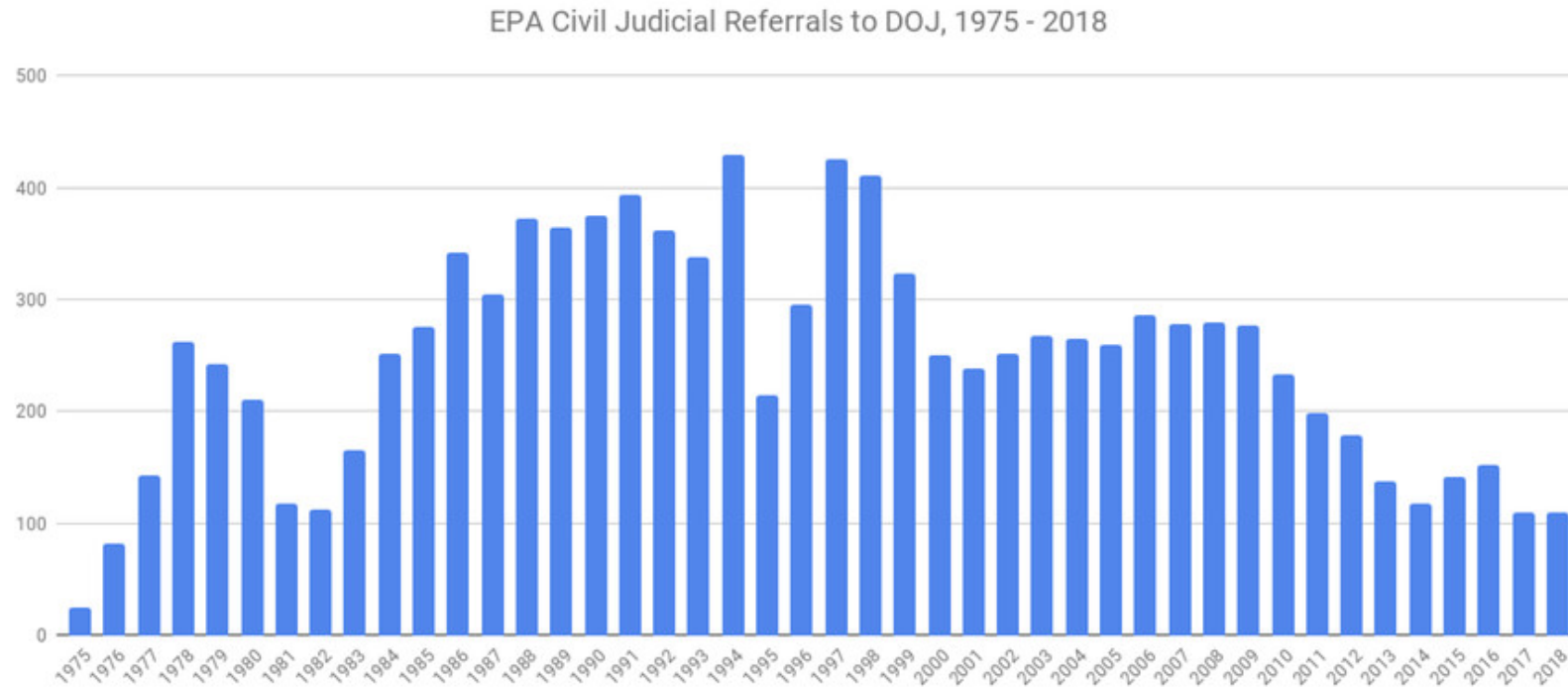
Federal, state, and local governments

- Degree of centralization
- Assist with compliance vs. sanctions
- State and local government capture

Environmental Protection Agency

- Refers cases to the DOJ for litigation
- *Overfiling* if state response is too slow or too lenient

Enforcement: EPA Referrals



source: https://envirodatagov.org/wp-content/uploads/2019/02/C_Seller_EDGI_Testimony__Appendix_2_26_19_EC.pdf

Enforcement: The Process

Detection

- Trade-off between
 - How diligently to monitor
 - How to punish

Primary source is *self-reporting*

- Paperwork violations are treated the same as physical violations

Enforcement: The Process

Civil enforcement

- Administrative hearings
 - <https://www.epa.gov/alj>
- Civil litigation
 - EPA represented by DOJ attorneys

Criminal enforcement

- *Scienter*: knowledge
- *Mens rea*: intent
- <https://www.epa.gov/enforcement/enforcement>

Enforcement: Citizens Suits

Individuals and organizations can bring enforcement actions

Can sue:

- Any organization alleged to be in violation of environmental law
- The EPA administrator or other government officials for failing to carry-out a non-discretionary duty

Unless...

- It's being "diligently prosecuted" by a federal or state government

Enforcement: Citizens Suits

Standing

Must meet four requirements

- **Injury in fact:** *“an invasion of a legally protected interest which is (a) concrete and particularized, and (b) actual or imminent, not conjectural or hypothetical.”* Lujan, 504 U.S. at 560
- Injury can be traced to the challenged action

Enforcement: Citizens Suits

Standing

Must meet four requirements

- **Redressability:** courts can provide a remedy or redress
- **Zone of Interests:** Injury falls under the interests or concerns in which the law is intended to protect

For Next Time

Actors, Administrative Law, and the Environment

- *Readings:*
 - **Rowell and van Zeben**, Chapter 2: *Key Actors* and Chapter 3: *Types of Laws*, from Rowell, Arden, and Josephine van Zeben. 2021. *A Guide to U.S. Environmental Law*. Oakland, CA: University of California Press.
 - **Rosenbloom**, Chapter 1: *What is Administrative Law?*, from Rosenbloom, David H. 2015. *Administrative Law for Public Managers*. Boulder, CO: Westview Press.
 - **SKIM**: Tatel, David S. 2010. “The Administrative Process and the Rule of Environmental Law.” *Harvard Environmental Law Review* 34: 1–8.