Dear ENG 471 students:

On October 4, we will be discussing regulation. I will do my best to give you a general overview. We will also discuss some of the many ways that engineers interact with how—and how well—law and regulation work.

Before we meet, please read the following chapter on "Key Actors" in the U.S. legal system. The chapter is from ARDEN ROWELL & JOSEPHINE VAN ZEBEN, A GUIDE TO U.S. ENVIRONMENTAL LAW (California Press 2021), which provides further information on environmental law if you find yourself interested in this topic.

I have also included two brief supplemental resources (recommended but not required) that you may find helpful either before or after our meeting. These are a brief description of the regulatory process at the U.S. Environmental Protection Agency, and some tips for submitting regulatory comments.

Best regards,

Arden Rowell
Professor of Law

CHAPTER THREE

Types of Law

This chapter sets out the types of U.S. law available to legal actors in creating, implementing, and enforcing environmental legal strategies.

Knowing about the different types of law that make up U.S. environmental law is valuable for several reasons. First, different types of laws are made through different processes and often involve different key actors. Understanding the process underlying different types of law can also be useful in predicting future laws, and in advocating legal change. Second, different types of law require different strategies for researching and understanding what the law is.

To understand U.S. environmental law, it is important to understand some basic facts about four types of law: common law, constitutional law, statutes, and regulations. Each of these types of law originates with different institutional actors, is made in a different way, and is subject to change in a different way as well. Perhaps unsurprisingly, approaches to researching and understanding U.S. environmental law can differ, depending on which type or types of laws apply to the environmental issue in question.

LEGAL SYSTEMS AND U.S. COMMON LAW

What do we talk about when we talk about "law"? As a general matter, a law is a rule binding conduct. But who makes that law, who enforces it, and how can it change? The answers to these questions will vary depending on the "type" of law being considered.

One of the most important distinctions typically drawn between modern legal systems is between "common law" and "civil law" systems. The system a jurisdiction uses affects both how the law operates and how a citizen (or researcher) can find out what the law is. In civil law systems, such as those used in the majority of countries around the world (including most European countries and China), core legal principles are systematically codified into referable systems, or "codes." These are meant to essentially stand on their own, with court judgments serving only to clarify uncertain terms. This means that, in a civil law system, it is often possible to develop a reasonable understanding of the law by searching through the codes.

Common law systems, such as those of the United States, are different.[1] In common law systems, there is no comprehensive compilation of legal rules in a codified form. Even particular rules that have been at least partially codified—such as those found in constitutions, statutes, and regulations—are subject to interpretation by courts. In adjudicat-ing cases, common law courts give precedential authority to prior court decisions and base their own decisions on judge-made common law principles that were developed in prior cases.

The common law system was originally developed in medieval England. Like most other former British colonies, upon declaring independence, the United States retained the common law system. Forty-nine of the fifty states also use a common law system.[2]

Because common law relies on lines of precedent created by judges, it is often necessary to read and interpret lines of precedential judicial opinions to understand what the law is likely to be in any particular scenario. This is a complicated task—so complicated that it is sometimes

used to justify the fact that American attorneys are required to earn a graduate degree in law, rather than the undergraduate degree that suffices throughout much of the world. In any case, to simplify the task of interpreting the law, lawyers in the United States often rely on "treatises," scholarly compendiums that attempt to accurately summarize the common law on particular topics. While these can be very useful aids to research, however, and can sometimes be persuasive to courts, they have no legal power on their own.

Judges play importantly different roles in civil law and common law systems. In civil law systems, judges act as investigators, and often take an active role in developing the judicial record. But they see their role as limited to understanding codified laws. In common law systems, judges tend to take a more hands-off, referee-style approach in the courtroom, allowing advocates to plead their case persuasively, and to take charge of investigation and argument. Because written judicial opinions generally carry precedential authority, in the United States, judges' opinions have substantial ability to shape the substance of environmental (and other) laws.

Like other common law courts around the world, U.S. courts view themselves as bound by precedent, in a principle known as *stare decisis* (Latin: "to stand by things decided"). According to the Supreme Court, courts apply stare decisis because it "promotes the evenhanded, predictable, and consistent development of legal principles, fosters reliance on judicial decisions, and contributes to the actual and perceived integrity of the judicial process."[3] U.S. courts thus defer to prior decisions from superior courts in similar cases—in a principle commonly called vertical stare decisis, or binding precedent. They also often defer to their own prior decisions, through horizontal stare decisis.[4] Even where not bound by precedent, U.S. federal and state courts often cite to the reasoning in similar cases from other U.S. jurisdictions that they find persuasive.

Even within common law systems, different types of law apply depending on whose behavior is being addressed by the law. "Private law" applies to private parties—for example, to individuals entering

into contracts (governed by contract law) or individuals who harm other individuals (governed by tort law). "Public law," by contrast, applies to public actors acting in their public capacity, for example to regulators (whose behavior is governed by administrative law) or to legislators (whose ability to legislate is governed by the Constitution). Because the actions of private individuals and the actions of public servants can affect environmental quality, both private and public law can play important roles in regulating environmental quality.

SOURCES OF U.S. ENVIRONMENTAL LAW

Constitutional Law

Constitutional law is law that provides for the structure and functioning of the government—for how the government is "constituted." It can also involve descriptions of the rights that individuals have from and against their government.

The United States was the first country in the world to have a written constitution, and the U.S. Constitution remains both the oldest and the shortest national constitution in the world.[5] Unusually, the core of the Constitution has remained unchanged since it was drafted in 1787 and ratified in 1788. The structure of the U.S. government is described, briefly, in seven articles (see spotlight 5). One of these—Article V—describes how the Constitution can be amended.

Amending the federal Constitution is relatively burdensome.[6] Amendment requires a two-thirds majority vote in both the House of Representatives and the Senate (the method through which all twenty-seven amendments to the Constitution have been passed), or a constitutional convention called for by two-thirds of state legislatures (a method that has never yet been used). Either way, three-fourths of the states must affirm the proposed amendment. Despite this daunting set of requirements, proposals to amend the Constitution are common; the U.S. Senate estimates that there have been over 11,700 proposed amendments since

SPOTLIGHT 5. THE U.S. CONSTITUTION

The core of the U.S. Constitution, drafted in 1787, lays out the structure of the federal government.

- Article I: Establishes and describes the powers of the legislative branch, including the House of Representatives and the Senate
- Article II: Establishes and describes the powers of the executive branch, which is led by the President
- Article III: Establishes and describes the powers of the judicial branch, which is empowered to review the constitutionality of laws and their execution
- Article IV: Addresses the responsibilities, duties, and powers of the states
- Article V: Addresses the process for amending the Constitution
- Article VI: Establishes the Constitution as the "supreme law of the land," in a provision known as "the Supremacy Clause"
- Article VII: Describes the process for ratifying the Constitution

1788.[7] But the burdensome procedures for ratification have helped keep successful amendment rare: in total, the Constitution has had only twenty-seven amendments. The first ten of these were adopted simultaneously in 1791 and have come to be known as the "Bill of Rights." These amendments were designed to list specific restrictions on governmental power and protections of personal liberties, including freedom of religion, speech, and assembly, and a guarantee of due process of law before being deprived of life, liberty, or property.

In the United States, when people refer to "the Constitution," they mean the federal U.S. Constitution. That said, each individual state has its own constitution as well. The state constitutions vary in substance, though they often mirror the structure of the U.S. Constitution.[8] Among

the the fifty states, Massachusetts has the oldest constitution, adopted in 1780; in fact, it served as a model for the U.S. Constitution. The youngest state constitution is Rhode Island's, which was ratified by that state's voters in 1986 after a state constitutional convention. Most states have had more than one constitution since joining the United States; Louisiana has had the most, with eleven.

Article VII of the U.S. Constitution establishes the Constitution as the supreme law of the land. Thus, federal courts will overrule as "unconstitutional" any laws—federal or state common law, statutory law, or regulations—that are found to conflict with the federal Constitution. For example, if a federal statute is created that goes against a constitutional requirement—for example, by discriminating against protected groups as prohibited by the Fourteenth Amendment, or by attempting to regulate beyond the jurisdiction of the federal government—the courts will hold that statute invalid.

Unlike some more recently drafted constitutions around the world, the U.S. Constitution never explicitly mentions the environment.[9] And given that changes to the U.S. Constitution are burdensome and extraordinarily rare, it is unlikely that the explicit constitutional status of environmental protection will change any time in the near future.

Nevertheless, to be valid, all federal environmental laws must have a Constitutional basis for federal jurisdiction. Over the years, courts have interpreted general provisions of the Constitution as empowering Con-gress to regulate many environmental issues; among these, the most influential is the Commerce Clause, which allows the fed-eral government "to regulate commerce with foreign nations, and among the several states, and with the Indian tribes."[10]

In some cases, the Constitution also acts as a limit on the federal government's power to effect environmental policies. For example, when government policies affect private property to the point that they are equivalent to the government "taking" the land, constitutional pro-tections that prohibit the government from taking private property for public use may be triggered.[11]

Common Law

The U.S. common law tradition has resulted in an important role for the courts in creating and interpreting law. In the absence of codes, U.S. courts have developed doctrines to deal with similar types of cases. These doctrines are created by a series of judicial opinions that address similar facts.

Common law doctrines can apply to both private law and public law. As mentioned above, private law is law that governs relationships between individuals, rather than between individuals and the government. Someone who is harmed by a private party may bring suit as a plaintiff in a common law suit, against the party who caused the wrong (the defendant). If the plaintiff prevails, she may be awarded damages to compensate her for the harm caused by the defendant, and/or an injunction, a judicial order that requires the defendant to act (or not act) in a particular way.

Areas of private common law include contract law, property law, and tort law. Each of these areas of law can have important implications for environmental quality. For example, agreements to provide environmental services, such as waste management, are governed by contract law. Tort law and property law play an even more important role in regulating environmental quality. Tort law—the law of civil wrongs, which allows individuals to sue other individuals who have harmed them—is important for its role in regulating environmental risks to individuals. And property law plays a particularly important role in land-use decisions, as well as in the management of natural resources.

In the United States, private common law is traditionally governed by state rather than federal law. As a result, the specific rules and doctrines applied by courts tend to vary from state to state. Nevertheless, several particularly important doctrines in tort and property law apply in most states. Three common law tort doctrines that are particularly relevant to environmental cases are negligence, trespass, and nuisance (see spotlight 6).

SPOTLIGHT 6. IMPORTANT TORT DOCTRINES

NEGLIGENCE

The failure to satisfy a standard of reasonable care while performing acts that foreseeably harm other people.

Example: A manufacturing facility that unreasonably failed to maintain chemical storage containers, leading to contamination of groundwater, could be liable in negligence for the cost of cleanup, and for any damages caused by the contamination.

TRESPASS

The intentional interference with the property interest of a property owner.

Example: A restaurant that purposely dumped its trash on a neighboring lot could be liable in trespass for the cost of cleanup, and for any damages caused by the dumping.

NUISANCE

The substantial and unreasonable interference with a property right. Nuisance doctrine commonly distinguishes between *private nuisance* and *public nuisance.*

Private Nuisance

A substantial and unreasonable interference with the private use and enjoyment of land.

Example: A newly built factory farm generating foul odors and noise could be liable in private nuisance to a neighboring property owner who was nauseated by the stench or unable to enjoy time outside because of the noise and smell.* Traditionally in the United

* Some states have "right to farm" statutes, which prohibit suits in nuisance against agricultural uses of land that has historically been used for agriculture. When these statutes apply, they generally overrule state common law on nuisance.

States, courts awarded injunctions to successful plaintiffs in nuisance suits. Modern U.S. courts now also consider damages as an alternative to injunction, up to the value of the interference with enjoyment of land.**

Public Nuisance

A substantial and unreasonable interference with the rights of the public.

Example: A copper smelter that caused acid rain and air pollution over a county-wide area could be sued in public nuisance, on behalf of all the members of the public affected by the pollution. Public nuisances commonly result in injunctions; if the smelter's behavior were unreasonable, it would likely be required to stop or curtail its smelting.

** Academics and courts continue a lively debate about when it is better policy to award injunctions, and when to grant damages. The modern practice of considering damages as an alternative to injunctions as a remedy in nuisance is often traced to the influential case of *Boomer v. Atlantic Cement Co.,* 287 N.Y.S.2d 112 (1967), in which a multimillion-dollar cement plant exposed its neighbors to serious noise and air pollution. The court held that the cement plant was a private nuisance, but granted the neighbors damages rather than an injunction to shut down the plant, because the cost of complying with an injunction would have been far more than the fair value of the cost to the plaintiffs of the cement plant continuing its operations.

Another type of torts that sometimes apply in environmental contexts are strict liability torts, particularly torts in product liability. Product liability torts arise when someone manufactures and/or distributes a product that causes harm to a person or property. In most U.S. jurisdictions, product liability is "strict" liability, because it arises even if the harm was not foreseeable, and even if the tortfeasor had no intent to harm. For example, manufacturers of lead paint in the United States have been held strictly liable in product liability for harm caused

by the paint—particularly to children, who will often eat chips of the paint, which tastes sweet. Tort liability for abnormally dangerous activities, such as storing toxic waste or using explosives, is also strict. In general, lawsuits that involve toxic substances, and are based in tort law, are called "toxic torts."

Property law, which governs the legal relationships between people and things, is particularly relevant to environmental quality through its impact on land use and on people's use of natural resources. In the United States, landowners are subject to relatively few restrictions on their use of their land. They moreover enjoy constitutional protection under the Takings Clause from taking of private property for public use without just compensation. Some of the most important limitations on landowners' behaviors come from nuisance law (as described above), which prevents landowners from using their land in ways that unreasonably interfere with others' rights. Property rights are also constrained through zoning law, an administrative body of law that creates localized restrictions on building and use (see spotlight 7). Property law also offers a suite of legal tools that property owners can use to promote land uses with important environmental impacts. One of the most important of these is the creation of easements, which are rights to access or use land, often for a particular purpose or time period. In environmental law, conservation easements—voluntary legal agreements between landowners and a trust or government agency, which permanently limit use of the land to protect its conservation value—can play a valuable role in preserving local ecosystems and in promoting conservation. Conservation easements alone protect an estimated forty million acres of natural habitat, in part because of federal and state tax incentives.[12]

In addition to private common law, courts also administer public law doctrines. Public law is law that governs issues that affect the general public or state. Areas of public law include constitutional law, adminis-trative law, and criminal law. These areas of law often involve several types of law: constitutional law, for example, obviously involves

SPOTLIGHT 7. ZONING

Zoning is the process of dividing land into "zones" in which certain land uses are either permitted or prohibited. Zoning was first practiced in the United States in the early twentieth century, and the practice of restricting land use with zoning has been held to be Constitutional by the Supreme Court.*

In the United States, zoning is primarily done by local (municipal) agencies, who set, enforce, and interpret zoning ordinances. Zoning restrictions routinely constrain how property owners may use their land. Building and construction restrictions can have important impacts on a number of local environmental quality issues, including soil erosion, storm water management and flooding, landscaping and tree preservation, and population density and traffic patterns.

Although zoning is almost universally practiced in municipalities throughout the United States, one notable exception to its common use is the city of Houston—the nation's fourth-largest city, with a population of 2.3 million—which famously has no zoning ordinances.

* See *Village of Euclid, Ohio v. Ambler Realty Co.* (1926).

constitutions, as well as common law interpretations of constitutional text. Similarly, administrative law routinely involves agency regulations, as well as common law doctrines governing the interpretation of regulations. Criminal law routinely involves both statutes and a series of common law doctrines that courts have developed to interpret those statutes. Constitutional law, regulations, and statutes are discussed in more detail below. For purposes of environmental law, perhaps the most important judicial doctrine is the *Chevron* doctrine, which governs how courts interpret regulatory statutes (see spotlight 8).

SPOTLIGHT 8. AGENCY DISCRETION AND THE *CHEVRON* DOCTRINE

When it is unclear what a statute requires, who gets to decide what the statute means—courts or agencies? The Supreme Court took up this question in 1984, in the influential case of *Chevron v. Natural Resources Defense Council.* The case required the Court to evaluate the Environmental Protection Agency's interpretation of what counted as a "source" of air pollution under the Clean Air Act. While the statute had created far more stringent standards for "new or modified major stationary sources" of air pollution, the statute did not explain whether a "source" was a single smokestack or an entire facility (like an oil refinery, which might contain hundreds of smokestacks). The EPA, given general authority by Congress to regulate pursuant to the CAA, interpreted the statute as applying to entire facilities, rather than individual smokestacks. This interpretation was challenged by an environmental group, which argued that it violated the statute and would lead to degradation of air quality.

In its consideration of this question, the Supreme Court explained that, when a court reviews an agency's interpretation of a statute the agency administers, it faces two questions:

> First, always, is the question whether Congress has directly spoken to the precise question at issue. If the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress. If, however, the court determines Congress has not directly addressed the precise question at issue, the court does not simply impose its own construction on the statute, as would be necessary in the absence of an administrative interpretation. Rather, if the statute is silent or ambiguous with respect to the specific issue, the question for the court is whether the agency's answer is based on a permissible construction of the statute.

Applying this two-step approach, the Supreme Court held that the EPA had the discretion to adopt the facility-wide interpretation of

the word *source.* The effect of this standard is that agencies have a great deal of power to interpret the statutes they administer. Courts step in to overrule agency interpretations only in rare circumstances, when Congress has "directly spoken to the precise question at issue" and told the agency to do the opposite of what it has done. Otherwise, courts will allow any reasonable statutory interpretation by an agency to stand—even if the court believes that there is another, better interpretation. This approach to evaluating agency authority has come to be known as the *Chevron* doctrine, and it is widely applied to environmental and other agency actions.

The *Chevron* doctrine has been highly influential in the creation of the modern regulatory state. That said, critics of *Chevron*—including several Supreme Court Justices—have expressed concern that *Chevron* may grant too much power to agencies, and that courts may need to increase the level of scrutiny with which they review agencies' statutory interpretations. If *Chevron* were weakened or overturned in the future, it could substantially change the amount of power that administrative agencies have to set environmental (and other) policy.

Statutes, Regulations, and Executive Orders

Apart from constitutional law and common law, laws created by the U.S. federal and state legislatures (statutes), and laws created by agencies (regulations) are crucial sources of U.S. environmental law. Executive orders—written directions from the President—also play an important role in influencing how agencies regulate.

STATUTES

In the United States, statutes—written laws enacted by legislatures—are created by legislatures at the federal level, and by legislatures or through direct democracy at the state level (see spotlight 9). The U.S.

(Paragraph continues on p. 50)

SPOTLIGHT 9. CREATION OF STATUTES

HOW ARE STATUTES MADE?

At the federal level, statutes must pass through multiple stages to become law. They begin when a bill—a piece of proposed legislation that has not yet become a statute—is proposed or sponsored by a legislator in either the House or the Senate. The bill goes to committee, where small groups of Representatives or Senators research, discuss, and amend the bill. If the committee votes to accept the bill, it is sent to the House or the Senate for debate and amendment. If the bill passes the first chamber, it is sent to the other to go through a similar process of committees, debate, and voting. Both the House and Senate must then agree to the same version of the final bill—a process known as reconciliation. The bill is then sent to the President, who can then approve or veto the bill. If it is approved, it becomes law.* Most state governments have a very similar legislative process, with the final say on the statute being provided by the governor. Some states also provide for direct democratic methods of creating statutes, using initiatives or referenda that place legal questions directly in front of state voters.

HOW CAN THEY BE CHANGED?

When a proposed statute is still in bill form, it can be changed by congressional committees or by the houses of Congress. Once the bill has become law, the legislature can change it only by enacting amendments, which might change some or all of the statute, or through rescission, both of which require substantially the same procedure as passing new legislation. Statutes can also be overruled by courts as unconstitutional, and state statutes can be preempted by federal statutes, in which case the federal law governs. Judicial interpretations of statutory terms can also change over time.

HOW CAN I FIND OUT WHAT STATUTES SAY ON A PARTICULAR TOPIC?

All federal and state statutes are written down and published. Federal statutes are officially published in the United States Code (U.S.C.), and copies of federal statutes are widely available online. State statutes are frequently available on state websites.

* Many Americans are familiar with this legislative process in part through a famous (and remarkably accurate) song, "I'm Just a Bill," written for the 1970s children's educational program *Schoolhouse Rock*. The original video and song are widely available online, including at www.youtube.com/watch?v=FFroMQlKiag.

Congress, made up of the House of Representatives and the Senate, is responsible for passing federal statutes; state legislatures, organized according to state constitutions, pass state statutes. In some cases, states have also delegated authority to local (e.g., county or city) officials; when these officials pass statutes, those statutes are often called *ordinances*. Federal statutes may not violate the U.S. Constitution; state stat-utes may not violate the U.S. Constitution, or the state constitution.

Many of the most important U.S. environmental laws are federal statutes. These include the Clean Air Act, the Clean Water Act, the Endangered Species Act, and the National Environmental Policy Act. States often have their own environmental statutes as well. In some cases, these address similar environmental concerns as the key federal statutes; most states, for example, have their own environmental policy acts, and many also have air and water pollution statutes. State statutes and local ordinances also address a number of environmental topics not addressed by federal statutes, including local land management practices.

Generally speaking, when federal and state statutes address the same environmental issue, the federal statute is interpreted to create a minimum floor, but not a œiling. In this case, states may choose to

adopt more stringent environmental requirements than the federal standards would require, but they may not choose to adopt less stringent standards.

One feature of U.S. statutes that sometimes surprises outsiders is that they are often far more broadly written than statutes in many civil law countries. This can leave a number of ambiguities and potential grounds for disagreement about what the law is on any particular issue. Generally, the U.S. legal system manages these ambiguities through two methods. First, U.S. courts have the authority to say "what the law is" and to resolve statutory ambiguities. So, when there are disputes about what statutes mean, courts get the final word in interpretation—though the legislature can always amend the statute if it does not like how the court has interpreted it. Second, U.S. legislators often purposefully use statutes to create and delegate significant authority to administrative agencies. When that happens—as it often does in environmental cases—agencies then issue regulations (laws made by agencies), which typically provide more specific guidance about how the agency has interpreted the requirements of the statute.

REGULATIONS

Regulations are laws made by administrative agencies (see spotlight 10). In the United States, regulations include two types of agency action: rulemaking, or the creation of prospectively applicable general rules; and agency adjudication, where the agency formulates an order about more particularized facts. When agencies regulate by rulemaking, they must typically notify the public of the proposed rule, provide an opportunity for public comment, and consider submitted comments before publishing a final version of the rule in the Federal Register. When agencies adjudicate, they must follow any procedural requirements in the underlying statute, as well as due process and other constraints that follow from the Constitution. In some cases, they must also hold formal hearings. Agency adjudications are typically performed by Administrative Law Judges, who are agency employees.

SPOTLIGHT 10. CREATION OF REGULATIONS

HOW ARE REGULATIONS MADE?

Unless a specific statute directs otherwise, federal agencies must follow the procedures outlined in the Administrative Procedure Act. Most states have their own procedural rules for state agencies, often following the Model State Administrative Procedure Act. At both the federal and state levels, there are generally two types of procedure that agencies use in regulating: *rulemaking* and *adjudication.* Rulemaking involves setting general and prospectively applicable rules. Adjudication involves more particularized facts and may apply only to the parties before the agency.

HOW CAN REGULATIONS BE CHANGED?

Before most rulemakings are finalized, agencies must offer the public the opportunity to comment on the proposed rule. This provides an opportunity for commenters to participate in changing the rule before it becomes law. Once a regulation is final, it can often be challenged in court. The most common grounds for judicial challenge are that the agency exceeded the scope of its authority in passing the regulation, that the regulation is "arbitrary and capricious," that the agency failed to follow required procedures, and/or that the regulation is unconstitutional.

HOW CAN I FIND OUT WHAT REGULATIONS SAY ON A PARTICULAR TOPIC?

Notices of Proposed Rulemaking (NPRMs) are published in the Code of Federal Regulations, as are *final rules.* It can be more difficult to find agency adjudications, though agency websites publish some of them. States each maintain their own regulations; most publish these online.

Agencies are empowered to make regulations based on statutes that define their powers and responsibilities. Often, however, the statutory direction given to the agency is quite vague; to satisfy the Constitution, the statute only has to incorporate an "intelligible principle" through which the agency can regulate. As a result, U.S. administrative agencies often have significant discretion to decide how to interpret and adminis-ter statutes, and have many options about which particular standards they will require through regulation. For example, when it drafted the Clean Air Act, Congress indicated that National Ambient Air Quality Standards (NAAQS) should be set for key air pollutants. The statute itself did not contain any actual limits for those pollutants, however; instead, it directed that NAAQS be set at the level "requisite to protect the public health" "with an adequate margin of safety." It then delegated to an agency—the Environmental Protection Agency—the power to determine what those levels of pollution should be. The EPA has subse-quently issued a series of regulations setting NAAQS for key air pollut-ants, based on what it believes to be requisite to protect the public health with an adequate margin of safety.

Generally, federal agencies are also required to comply with the terms of the Administrative Procedure Act (APA), which provides the default requirements for the procedures that agencies follow in regulat-ing. Among other requirements, the APA directs courts to overturn agency action that is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law" or that is "unsupported by sub-stantial evidence." Courts also overturn agency regulations when they find that the regulation exceeds the agency's statutory authority, and where the regulation is found to violate the Constitution.

States also have their own agencies that issue regulations. Often, state and federal regulators work together to address common prob-lems, and in fact many of the major federal environmental statutes allo-cate authority to both federal and state agencies. The Clean Air Act, for example, requires EPA to regulate to set NAAQS. But the statute

delegates the primary authority to determine *how* the NAAQS will be met to states, which develop State Implementation Plans for achieving the NAAQS. The EPA then reviews the state plans for compliance with the statutory requirements, and typically works with the state agency to solve compliance challenges.

EXECUTIVE ORDERS

As the head of the executive branch, the President of the United States plays an important role in guiding agency discretion. Some of this guidance comes through informal means, such as the President calling the heads of administrative agencies to express a policy preference, or to threaten to fire the heads of agencies under executive direction, if they do not implement presidential preferences. Other mechanisms are more public. One particularly important mechanism for environ-mental law is the President's authority to issue executive orders, which are written directions from the President that are legally binding so long as they fall within the President's Constitutional authority. Presi-dents use executive orders for a wide range of purposes, ranging from declaring a new national holiday to giving specific directions to agen-cies on how to regulate in the absence of countervailing direction from the legislature. Since 1981, U.S. agencies have operated under a set of executive orders that centralize regulatory planning and review, and that direct them on how to address regulatory issues, including envi-ronmental issues. Other executive orders address environmental issues directly, as with Executive Order 11,990, encouraging the protection of wetlands; or Executive Order 12,898, directing agencies to consider the environmental justice impacts of their actions. While executive orders can be powerful, they are also subject to unilateral reversal by subsequent Presidents. For example, President Barack Obama issued an executive order in 2016 to adopt the Paris Agreement on Climate Change, but this order was reversed by Obama's successor, President Donald Trump.

SUMMARY

Different types of U.S. environmental law are created through different processes and by different actors. This affects their content, scope of application, and how they are interpreted by the courts.

TAKEAWAYS

- ✓ U.S. environmental law is affected by many types of U.S. law, including private and public law made at federal, state, and international levels, and incorporating statutes, judicial opinions, administrative regulations, and executive actions.
- ✓ Administrative regulations play a particularly important role in U.S. environmental law.
- ✓ Common law also affects U.S. environmental law, by "filling in the gaps" between environmental laws as written and the legal principles that underlie those laws.
- ✓ The effectiveness of U.S. environmental law relies on relationships between federal and state actors.

KEY TERMS

ADMINISTRATIVE LAW Law that governs administrative agencies.

ADMINISTRATIVE PROCEDURE Rules that govern procedures used by agencies and in agency proceedings.

CIVIL LAW A legal system that codifies core principles into referable systems, such as statutes.

CIVIL PROCEDURE The rules that must be followed in noncriminal judicial courts.

COMMON LAW Law made by judges, published in the form of judicial opinions, which gives precedential authority to prior court decisions (may be public or private law).

CONSTITUTIONAL LAW Law that provides for the structure and functioning of a government—for how the government is "constituted"—and how the government is supposed to interact with individuals (a form of public law).

CONTRACT LAW Law that governs how promises between individuals are enforced (a form of private law).

CRIMINAL LAW Law that governs the punishment and behavior of those who commit crimes—behaviors that are considered so socially damaging that they are punishable by law (a form of public law).

CRIMINAL PROCEDURE Rules that govern criminal legal procedures.

PRIVATE LAW Law that governs relationships between individuals (e.g., contract law, tort law, and property law).

PROPERTY LAW Law about the relationships between people and things.

PUBLIC LAW Law that governs issues that affect the general public or state (e.g., constitutional law, administrative law, and criminal law).

TORT LAW Law that governs how people can use law to receive compensation for harms or injuries that other individuals have caused them (a form of private law).

DISCUSSION QUESTIONS

1. Who is best positioned to make environmental law: judges, legislatures, agencies, the President, or some other actor?
2. Does it make sense to have a constitution that does not address the environment? Should the U.S. Constitution be amended to include the environment? If so, how?
3. Should criminal law play a role with respect to environmental impacts? What challenges do you see in using criminal law to regulate the environment?

4. How important is it for environmental law to be able to change quickly, in response to changing circumstances or improving information? Which type(s) of law are most likely to be able to respond quickly to changes, and which would you expect to be slower to change?

NOTES

1. A few jurisdictions, including the state of Louisiana, have so-called mixed systems that combine principles of civil and common law.

2. The exception is Louisiana, which developed its laws originally when it was a French colony and which continues to use a civil code based on the Napoleonic Code. That said, Louisiana's criminal law is mostly based on common law, which makes it a mixed legal system.

3. *Kimble v. Marvel Enterprises,* 135 S. Ct. 1697 (2015).

4. For example, a federal district court—which is a trial-level court—in Chicago is in the Seventh Federal District. That district court is bound by precedent set at the Seventh Circuit Court of Appeals—an example of binding precedent and of vertical stare decisis. Similarly, the district court is bound by the precedent of the U.S. Supreme Court. The district court has the authority to overrule its own prior precedent, but it generally will not: most of the time, it—like other courts—will follow its own precedent as per horizontal stare decisis. The federal district court is not bound to follow the precedent of any other federal district or circuit court—although it may find opinions from those courts highly persuasive.

5. The U.S. Constitution was ratified in 1788, at which point it was 4,400 words long. Including all its twenty-seven modern amendments, it has now reached 7,591 words in length. Compare this to the longest national constitution in the world—India's—which clocks in at 117,000 words.

6. State constitutions generally feature less restrictive amendment processes, and many provide for multiple avenues to constitutional change. These often provide for direct democratic participation—through constitutional initiatives, for example. In a constitutional initiative process, citizens can collect signatures on a petition to place a constitutional amendment on the ballot, for voters to then adopt or reject. Through these means, such states can have constitutional amendments without any direct involvement of either the Governor or members of the state legislature. For a description of state

constitutions and their amendment processes, see Marvin Krislov and Daniel Katz, *Taking State Constitutions Seriously,* 17 Cornell J.L. & Pub. Pol'y 295 (2008).

7. The U.S. Senate keeps a record of the number of proposals for amendment on its website, available at www.senate.gov/legislative/MeasuresProposedToAmendTheConstitution.htm.

8. Although it is common for state constitutions to mirror the U.S. Constitution, not all do so. The Alabama Constitution is one notable example. Drafted in 1901 and amended many times, the Alabama Constitution is 310,296 words long—forty-four times longer than the U.S. Constitution, and the longest constitution in the world.

9. Some state constitutions do explicitly address the environment or environmental concerns. Six states, for example—Illinois, Pennsylvania, Massachusetts, Hawaii, Montana, and Rhode Island—guarantee their citizens some kind of constitutional right to a clean environment.

10. U.S. Const. art. I, § 8, clause 3. For a detailed overview of the development of the federal power to regulate the environment and its basis in the U.S. Constitution, see Robert V. Percival, *Greening the Constitution—Harmonizing Environmental and Constitutional Values,* 32 Envtl. L. 809 (2002).

11. Robert Meltz, Dwight Merriam, and Rick Frank, The Takings Issue: Constitutional Limits on Land Use Control and Environmental Regulation (Island Press 1998).

12. Conservation easements protect significant swaths of U.S. land, but their designation and management are increasingly controversial. For a readable introduction into many of the issues, see Richard Conniff, *Why Isn't Publicly Funded Conservation on Private Land More Accountable?* Yale Environment360 (July 23, 2019), https://e360.yale.edu/features/why-isnt-publicly-funded-conservation- on-private-land-more-accountable.

The Basics of the Regulatory Process

Writing regulations is one of EPA's most significant tools to protect the environment. Regulatory requirements help put environmental laws passed by Congress into effect, and can apply to individuals, businesses, state or local governments, non-profit institutions, or others.

Related Resources

- Other tools for learning about laws and regulations

On This Page:

Creating a law

Step 1: Congress Writes a Bill

A member of Congress proposes a bill. A bill is a document that, if approved, will become law. To see the text of bills Congress is considering or has considered, go to Congress.gov

Step 2: The President Approves or Vetoes the Bill

If both houses of Congress approve a bill, it goes to the President who has the option to either approve it or veto it. If approved, the new law is called an act or statute. Some of the better-known laws related to the environment are the Clean Air Act, the Clean Water Act, and the Safe Drinking Water Act.

- Summaries of the laws EPA administers
- Congress.gov: for more information about the legislative process

Step 3: The Act is Codified in the *United States Code*

Once an act is passed, the House of Representatives standardizes the text of the law and publishes it in the *United States Code* (U.S.C.). The U.S.C. is the codification by subject matter of the general and permanent laws of the United States. Since 1926, the U.S.C. has been published every six years. In between

editions, annual cumulative supplements are published in order to present the most current information.

- United States Code: This database is available from the Government Printing Office (GPO). GPO is the sole agency authorized by the federal government to publish the U.S.C.

Putting the law to work

Once a law is official, here's how it is put into practice: Laws often do not include all the details needed to explain how an individual, business, state or local government, or others might follow the law. The *United States Code* would not tell you, for example, what the speed limit is in front of your house. In order to make the laws work on a day-to-day level, Congress authorizes certain government agencies - including EPA - to create regulations.

Regulations set specific requirements about what is legal and what isn't. For example, a regulation issued by EPA to implement the Clean Air Act might explain what levels of a pollutant - such as sulfur dioxide - adequately protect human health and the environment. It would tell industries how much sulfur dioxide they can legally emit into the air, and what the penalty will be if they emit too much. Once the regulation is in effect, EPA then works to help Americans comply with the law and to enforce it.

- Find out more about Compliance.
- Learn more about Enforcement.

Creating a regulation

Get Involved!

Learn more about commenting on EPA regulations and how you can get involved

When developing regulations, the first thing we do is ask if a regulation is needed at all. Every regulation is developed under slightly different circumstances, but this is the general process:

Step 1: EPA Proposes a Regulation

The Agency researches the issues and, if necessary, proposes a regulation, also known as a Notice of Proposed Rulemaking (NPRM). The proposal is listed in the *Federal Register (FR)* so that members of the public can consider it and send their comments to us. The proposed rule and supporting documents are also filed in EPA's official docket on Regulations.gov.

Step 2: EPA Considers Your Comments and Issues a Final Rule

Generally, once we consider the comments received when the proposed regulation was issued, we revise the regulation accordingly and issue a final rule. This final rule is also published in the FR and in EPA's official docket on Regulations.gov.

Step 3: The Regulation is Codified in the *Code of Federal Regulations*

Once a regulation is completed and has been printed in the FR as a final rule, it is codified when it is added to the *Code of Federal Regulations* (CFR). The CFR is the official record of all regulations created by the federal government. It is divided into 50 volumes, called titles, each of which focuses on a particular area. Almost all environmental regulations appear in Title 40. The CFR is revised yearly, with one fourth of the volumes updated every three months. Title 40 is revised every July 1.

- Code of Federal Regulations database - a searchable database of the entire CFR from GPO.

How you can get involved

Go to Get Involved with EPA Regulations to learn how you can comment on our regulations and keep tabs on rulemakings.

TIPS FOR SUBMITTING EFFECTIVE COMMENTS*

Overview

A comment can express simple support or dissent for a regulatory action. However, a constructive, information-rich comment that clearly communicates and supports its claims is more likely to have an impact on regulatory decision making.

These tips are meant to help the public submit comments that have an impact and help agency policy makers improve federal regulations.

Summary

- ✓ Read and understand the regulatory document you are commenting on
- ✓ Feel free to reach out to the agency with questions
- ✓ Be concise but support your claims
- ✓ Base your justification on sound reasoning, scientific evidence, and/or how you will be impacted
- ✓ Address trade-offs and opposing views in your comment
- ✓ There is no minimum or maximum length for an effective comment
- ✓ The comment process is not a vote – one well supported comment is often more influential than a thousand form letters

Detailed Recommendations

1. Comment periods close at 11:59 eastern time on the date comments are due - begin work well before the deadline.

2. Attempt to fully understand each issue; if you have questions or do not understand a part of the regulatory document, you may ask for help from the agency contact listed in the document.

   Note: Although the agency contact can answer your questions about the document's meaning, official comments must be submitted through the comment form.

3. Clearly identify the issues within the regulatory action on which you are commenting. If you are commenting on a particular word, phrase or sentence, provide the page number, column, and paragraph citation from the federal register document.
   a. If you choose to comment on the comments of others, identify such comments using their comment ID's before you respond to them.

4. If a rule raises many issues, do not feel obligated to comment on every one – select those issues that concern and affect you the most and/or you understand the best.

5. Agencies often ask specific questions or raise issues in rulemaking proposals on subjects where they are actively looking for more information. While the agency will still accept comments on any part of the proposed regulation, please keep these questions and issues in mind while formulating your comment.

6. Although agencies receive and appreciate all comments, constructive comments (either positive or negative) are the most likely to have an influence.

7. If you disagree with a proposed action, suggest an alternative (including not regulating at all) and include an explanation and/or analysis of how the alternative might meet the same objective or be more effective.

8. The comment process is not a vote. The government is attempting to formulate the best policy, so when crafting a comment it is important that you adequately explain the reasoning behind your position.

9. Identify credentials and experience that may distinguish your comments from others. If you are commenting in an area in which you have relevant personal or professional experience (i.e., scientist, attorney, fisherman, businessman, etc.) say so.

10. Agency reviewers look for sound science and reasoning in the comments they receive. When possible, support your comment with substantive data, facts, and/or expert opinions. You may also provide personal experience in your comment, as may be appropriate. By supporting your arguments well you are more likely to influence the agency decision making.

11. Consider including examples of how the proposed rule would impact you negatively or positively.

12. Comments on the economic effects of rules that include quantitative and qualitative data are especially helpful.

13. Include the pros and cons and trade-offs of your position and explain them. Your position could consider other points of view, and respond to them with facts and sound reasoning.

14. If you are uploading more than one attachment to the comment web form, it is recommend that you use the following file titles:

    Attachment1_<insert title of document>
    Attachment2_<insert title of document>
    Attachment3_<insert title of document>

    This standardized file naming convention will help agency reviewers distinguish your submitted attachments and aid in the comment review process.

15. Keep a copy of your comment in a separate file – this practice helps ensure that you will not lose your comment if you have a problem submitting it using the Regulations.gov web form.

Form Letters

Organizations often encourage their members to submit form letters designed to address issues common to their membership. Organizations including industry associations, labor unions, and conservation groups sometimes use form letters to voice their opposition or support of a proposed rulemaking. Many in the public mistakenly believe that their submitted form letter constitutes a "vote" regarding the issues concerning them. Although public support or opposition may help guide important public policies, agencies make determinations for a proposed action based on sound reasoning and scientific evidence rather than a majority of votes. A single, well-supported comment may carry more weight than a thousand form letters.

* Throughout this document, the term *"Comment"* is used in place of the more technically accurate term *"Public Submission"* in order to make the recommendations easier to read and understand.

Disclaimer: This document is intended to serve as a guide; it is not intended and should not be considered as legal advice. Please seek counsel from a lawyer if you have legal questions or concerns.