

Managing Environmental Protection and Economic Considerations Under Select U.S. Environmental Laws and Permitting Systems

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1. Executive Summary

In response to growing concerns over increased air and water pollution, by the early 1970s the United States Congress had begun enacting a series of statutes that continue to shape environmental law today, more than four decades later. The laws authorize federal agencies to regulate air quality, water quality, the management and disposal of solid and hazardous wastes; and to protect threatened or endangered species of plants and animals.

Congress, in enacting these environmental laws, knew that it was imposing significant compliance costs on regulated sectors of the economy. In some instances, Congress allowed the regulating agency to consider economic feasibility; in other cases, economic costs are not to be considered at all. This paper analyzes how the United States has balanced economic considerations and environmental protection through the lens of arguably the four most significant environmental statutes applicable to private actions: (i) the Clean Air Act; (ii) the Clean Water Act; (iii) the Resource Conservation and Recovery Act; and (iv) the Endangered Species Act. Specifically, this paper discusses how provisions in each of the statutes consider economic costs and environmental benefits. This paper is not comprehensive in terms of discussing all federal environmental statutes.

Each of these four statutes is unique, but there are common elements in how some of the statutes, and the policies that have emerged under these statutes, consider economic factors and environmental protection. Examples include:

- Requiring project-specific permits that may impose controls, mitigation measures, or monitoring obligations as a way to quantify and reduce environmental impacts while allowing the activity to proceed;
 - Requiring stricter environmental controls for new facilities and less strict controls for “grandfathered” facilities that predate the law; and
- Allowing mitigation of fines and penalties based on demonstrated inability to pay so that penalty liability alone does not force companies out of business.¹
- Allowing schedules for violators to return to compliance rather than forcing companies who are out of compliance but capable of complying to shut down.

Sections 3 through 6 of this paper discuss each of the four statutes in turn, as summarized below.

- The Clean Air Act
 - The EPA may not consider cost of compliance when establishing primary and secondary National Ambient Air Quality Standards (“NAAQS”), which it has

¹ As discussed below, efforts are nonetheless made to ensure that the penalty at least exceeds the economic benefit gained by virtue of the polluting party’s non-compliance, with payment over time allowed to ameliorate hardship circumstances.

done to-date for six criteria pollutants: sulfur dioxide, particulate matter, nitrogen oxide, carbon monoxide, ozone, and lead.

- In geographic regions that do not meet EPA-established NAAQS, known as “nonattainment areas,” new sources must implement the most stringent of pollution reduction technologies to achieve the Lowest Achievable Emission Rate (“LAER”), even if such technologies are expensive and burdensome to implement.
 - Facilities located in NAAQS attainment zones, on the other hand, are held to less expensive standards because they have to adopt best achievable control technology (“BACT”), which may consider cost effectiveness of a given emission control technology.
 - The Clean Air Act imposed two different permitting systems for new or modified sources in attainment and non-attainment areas, but the permits only apply to major sources that have the potential to emit large quantities of pollutants – generally at least 100 tons per year. These major sources are considered to be more likely to bear the costs associated with the permitting requirements.
 - Unlike new and modified sources, existing sources (regardless of emissions) need only comply with the legal requirements in operation at the time of their construction or modification, which are also referred to as “grandfathered” sources. Experience has shown that by creating two different regulatory regimes for new and existing sources, older, more polluting sources are incentivized to operate past their expected lifetime in order to avoid costs imposed by more stringent standards and technology required of new plants.
- The Clean Water Act
 - Two key permit programs in the Clean Water Act’s regulatory scheme are the Section 402 national pollutant discharge elimination system (“NPDES”) permit and the Section 404 “dredge and fill” permit. Both of these permitting regimes were established to protect the quality of the waters of the United States. Various facets of these permitting programs balance pollution control and prevention goals with economic and technological constraints on regulated entities.
 - Federal regulations for industrial wastewater discharges set technology-based numeric discharge limitations at several different levels of control, depending on whether the regulated entity is an existing direct or indirect discharger or a new direct or indirect discharger. This framework takes into account the economic impacts of regulation by including a cost-benefit analysis.
 - Penalty provisions of the Clean Water Act are designed to take into account the economic effects of regulating water discharges. The law requires the elimination of any economic benefit from violating the law and requires the

heaviest polluters to pay the highest fees compared to those who only have a limited impact.

- The Resource Conservation and Recovery Act

- RCRA is the primary statutory scheme regulating the generation, transportation, treatment, storage, and disposal of solid and hazardous waste in a manner that protects protect human health and the environment. RCRA acts as a “cradle to the grave” program, tracking waste from its generation to final treatment or disposal.
- Compliance with the RCRA and its regulations can be costly and burdensome, but certain provisions and exclusions under the act have favored economic interests. For example, some industry-specific materials generated in large quantities have been excluded from the definitions of solid or hazardous waste. Materials like in-situ mining materials, spent wood preservatives, coke by-product waste, among many others, are not considered to be “solid wastes”, which greatly benefits any industries that manufacture, transport, treat, or dispose of these materials in the regular course of business. Similarly, certain wastes that meet the definitions of agricultural waste, mining and mineral processing waste, and fossil fuel combustion waste are not subject to the more stringent, costly hazardous waste management regulations – an obvious direct benefit for those industries.
- Certain treatment, storage and disposal facilities were afforded “interim status” as a means to avoid immediate noncompliance in the early 1980s. While in fewer numbers today, a handful of facilities still operate without a hazardous waste permit, and are allowed to make certain changes to their operations without losing interim status.”
- The RCRA Subtitle C Hazardous Waste program carves out a number of exceptions for generators that meet the criteria for either “very small quantity generators” (“VSQGs”) and “small quantity generators” (“SQGs”). Facilities that qualify for these exceptions generally need not obtain a hazardous waste permit, but other, less restrictive measures to ensure waste is properly managed. These categories reduce compliance costs for entities that generate quantities of hazardous wastes below a small threshold amount.

- The Endangered Species Act

- The Endangered Species Act (“ESA”) was enacted to conserve the aesthetic, ecological, educational, historical, recreational, and scientific values of endangered and threatened animal and plant species. The law can impose significant economic impacts for business and project developers in the form of permitting delays, modifications to or rejection of projects plans to accommodate listed species, or limitations on land use.

- In the landmark case of *Tennessee Valley Authority v. Hill*, the United States Supreme Court interpreted the plain language of the statute in a way that regarded protection of endangered species as ‘incalculable,’ with the ultimate purpose “to halt and reverse the trend toward species extinction, *whatever the cost.*”
- The decision to list a species as endangered or threatened is based solely on biological data without regard to economic factors. Once a species becomes listed, federal agencies must ensure that any action authorized, funded or carried out by such agencies are not likely to jeopardize that species’s continued existence.
- On the other hand, the decision to designate a species’ critical habitat may take into account economic impacts, along with “any other relevant impact.” Thus, if the benefits of excluding an area of land as critical habitat outweigh its designation as such, the area may be excluded from designation. Moreover, in practice, given the significant impact that designation of critical habitat can have on future development in that area, resource agencies can be slow in designating habitat, if they do so at all.
- Unlike other statutes, which may allow for reduced compliance burdens or exemptions for smaller entities, the ESA makes no such distinction; the unpermitted “take” of even one listed species can be a violation.
- To account for this prohibition, developers and other companies impacted by the Endangered Species Act may obtain authorization to “take” endangered or threatened species through issuance of an incidental take permit (“ITP”). Although obtaining an ITP is costly and requires mitigation efforts, this mechanism offers a degree of flexibility and reduced risk for business activities that may result in a take.

2. Introduction

For decades, the United States has endeavored to ensure that economic growth taking place does not occur at the expense of protecting human health and the environment. All three branches of government – legislative, executive, and judicial – have sought to balance economic and environmental interests in carrying out their respective functions:

The legislative branch, known as the Congress, has exclusive federal lawmaking powers. In this branch, Congress enacts statutes that, in some circumstances, require consideration of the economic impact of an environmental requirement or of a civil penalty for noncompliance, and in other instances mandate the establishment of protective standards without any regard to cost.

The executive branch is vested in the office of the President, whose departments administer and enforce laws. In administering the laws that Congress enacts, the executive branch promulgates regulations to give greater clarity to how the laws will be implemented. In that rulemaking process, the executive branch may balance the costs and benefits of every proposed regulation, except where the statute circumscribes such considerations. Federal departments and agencies also generally take into account the economic impact of actions they may undertake to enforce the law, consistent with the directives in most federal environmental statutes.

Lastly, the judicial branch, with the Supreme Court at its apex, reviews both Congress's action with respect to the constitutionality of an environmental law and the actions of the executive branch with respect to its implementation and enforcement of the law pursuant to congressional intent. Like the executive branch, the judicial branch considers economic impact where Congress has directed that such impacts be factored into agency enforcement.

In addition to this national framework, local governments play an important role in developing environmental laws. Although each state has the power to make and enforce its own environmental laws, that power is strictly limited by federal mandates when the federal government has chosen to act. Additionally, states and the federal government often work together because some federal laws specifically call for state cooperation or action, a characteristic that is particularly common in environmental lawmaking. Because of the relationship between the federal government and each state, the national government enacts environmental laws that allow implementation by the states.

This paper focuses only on the federal government, and primarily on the legislative branch, because it establishes the legal framework that guides the other two branches. Specifically, it centers on Congress's efforts to balance economic growth and environmental protection in enacting the four most important environmental statutes – the Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery Act, and the Endangered Species Act.

The legislative framework for these laws did not develop in the United States until the twentieth century, after pollution had already seriously fouled properties, rivers and air sheds. In spite of rapid industrialization, in the first half of the twentieth century, only common law claims such as trespass and nuisance were available to address environmental issues. After World War II, Congress enacted some environmental legislation, but it was largely aimed at maintaining the responsibility for the environment at the state level. Federal inaction, coupled with the continued industrial growth and development that fouled the environment within and across state boundaries, created increasingly widespread environmental disasters. These disasters magnified the reality that environmental issues could not effectively be dealt with locally, or be ignored. The widespread occurrences of environmental crises created pressure on the federal government to take action.

Accordingly, in 1969 Congress enacted its first national statute addressing the environment, the National Environmental Policy Act of 1969 (“NEPA”). In the following ten years, which became known as the “environmental decade,” the United States Congress enacted the vast majority of statutes that most broadly affect the environment, including those concerning air and water

pollution, endangered species, and solid and hazardous waste. During this time period, the Environmental Protection Agency (“EPA”) was established, by order of the President of the United States, to consolidate the implementation of environmental laws into a single federal agency. The federal government has not enacted such significant environmental legislation since this flurry of comprehensive legislative and executive activity, and has instead refined and implemented the legislation it passed during this formative environmental decade.

3. Clean Air Act

3.1 Introduction and History

For more than six decades Congress has struggled to strike the right balance between economic growth and the protection of air quality while simultaneously attempting to adapt to new technologies and environmental concerns. Today, the Clean Air Act (“CAA” or the “Act”) stands as the key tool by which air quality is protected, but the statute and the regulations promulgated under it have consistently faced criticism from those that believe they fail to adequately protect human health and the environment. At the same time, others argue that these requirements stifle domestic energy production and economic growth. A review of the framework of the Clean Air Act and its implementing regulations, as well as the processes that led to their creation, presents the best introduction to how Congress has managed environmental protection and economic considerations in conjunction.

A. Origins of the Clean Air Act and Economic Considerations

Congress’s initial attempt to regulate air pollution came with the passage of the Air Pollution Control Research and Technical Assistance Act of 1955.² This legislation allowed the then Department of Health, Education and Welfare and the Surgeon General to administer a federal grant funding program for research, training, and support for state and local efforts aimed at mitigating air pollution.³ However, the 1955 Act was seen as largely ineffective and a growing environmental movement beginning in the 1960s would lead to a number of substantial revisions over the next two decades. One of the most commonly accepted theories for the impetus of the environmental movement of the 1960s and 1970s is that financial markets and industries were not “pricing in” environmental externalities.⁴ In other words, businesses were not including the damage caused to the environment by their operations in the price of their goods. As such, the federal government came under pressure, and was eventually compelled, to force polluting industries to internalize the costs of environmental damage, thus limiting the incentive for industries to ignore the environmental damage caused by their processes and operations.

As part of, or perhaps in reaction to, a growing environmental movement, Congress followed up the 1955 Act with the Clean Air Act of 1963.⁵ The new law was seen as addressing the general ineffectiveness of the 1955 Act. While the 1963 Act expanded the federal government’s role in investigating and controlling air pollution, particularly where pollution from one state affected another, it was

² Pub. L. No. 84-16, 69 Stat 322 (1955); HENRY A. WAXMAN, ET AL., CLEAN AIR LAW AND REGULATION 152 (Timothy A. Vanderver, Jr. ed., 1992).

³ *Id.* at 152-53.

⁴ STANLEY ABRAMSON ET AL., L. OF ENVTL. PROT. § 3:2 (2017) (explaining that if there is an established view on the impetus for the environmental movement that this theory is it).

⁵ Pub. L. No. 88-206, 77 Stat. 392 (1963).

the Air Quality Act of 1967 that set out national public health goals to be achieved through science-based air quality criteria.⁶ However, only three years later, the Clean Air Act received wholesale revision as the environmental movement continued and greater national action was demanded.

B. The Clean Air Act Amendments of 1970

The 1970 amendments to the Clean Air Act established the modern day framework for the Act, although subsequent amendments, notably in 1977 and 1990, made significant changes. Indeed, the Supreme Court characterized the 1970 amendments as “a drastic remedy to what was perceived as a serious and otherwise uncheckable problem of air pollution.”⁷ In his message to Congress in 1970, President Nixon said:

Quite inadvertently, by ignoring environmental costs we have given economic advantage to the careless polluter over his more conscientious rival. While adopting laws prohibiting injury to person or property, we have freely allowed injury to our shared surroundings. Conditioned by an expanding frontier, we came only late to a recognition of how precious and how vulnerable our resources of land, water and air really are.⁸

At the heart of President Nixon’s comments and effort to address the problem of air pollution was the question of how to balance economic growth and industrial advancement with public health and environmental conservation. In his message to Congress, President Nixon contemplated that national standards would be required to address air pollutants, that these national standards would need to ensure that “advanced abatement technology is used in constructing new facilities, and that levels of air quality are maintained in the face of industrial expansion.”⁹ In other words, the answer would rely on the concept that current facilities would continue operating as-is, while new facilities would be required to implement new controls and technologies. Under this system, new development would primarily bear the costs and burdens of implementing higher environmental standards.

The tension between environmental conservation and public health and the competing considerations of costs, convenience, and economic growth were a key part of consideration of the 1970 Clean Air Act Amendments.¹⁰ In balancing these goals, the 91st Congress decided that environmental conservation and public health should take precedence and that if they were to err to one side of the equation, it would be in favor of environmental protection. The principal author

⁶ Air Quality Act of 1967, Pub. L. No. 90-148, §§ 101(b), 107, 42 U.S.C. §§ 7401(b), 7407.

⁷ *Union Elec. Co. v. EPA*, 427 U.S. 246, 256, 96 S. Ct. 2518, 2525, 49 L. Ed. 2d 474 (1976).

⁸ President Richard Nixon, Special Message to the Congress on Environmental Quality (Feb. 10, 1970).

⁹ *Id.*

¹⁰ Curtis A. Moore, *The 1990 Clean Air Act Amendments: Silk Purse or Sow’s Ear?*, 2 DUKE ENVIRONMENTAL LAW & POLICY FORUM 26-58, 1 (1992).

of the 1970 amendments, Senator Edward S. Muskie, chair of the Senate Subcommittee on Air and Water Pollution, said:

The first responsibility of Congress is not the making of technological or economic judgments – or even to be limited by what is or appears to be technologically or economically feasible. Our responsibility is to establish what the public interest requires to protect the health of persons. This may mean that people and industries will be asked to do what seems to be impossible at the present time. But if health is to be protected, these challenges must be met. I am convinced they can be met.¹¹

In order to tip the scales towards environmental protection, Congress made a core concept of the 1970 amendments the federal government's greater role in establishing air quality standards. However, states would still have the primary responsibility for developing systems to manage the federal standards through federally-approved state implementation plans ("SIPs"). The 1970 amendments established three sets of standards to regulate and reduce pollution from stationary sources (as opposed to mobile sources, such as cars) in Title I of the Clean Air Act: (1) the National Ambient Air Quality Standards ("NAAQS"); (2) the New Source Performance Standards ("NSPS"); and (3) the National Emission Standards for Hazardous Air Pollutants ("NESHAP").¹² While all of these programs remain part of the core framework under which the Clean Air Act regulates air quality in the United States, a review of the NAAQS and NSPS provides insight into how Congress has sought to balance economic and environmental interests.

3.2 The National Ambient Air Quality Standards

The overarching mechanism for protecting public health and the environment in the Clean Air Act has been the NAAQS. Section 109 of the 1970 amendments required EPA to establish primary and secondary NAAQS for any air pollutant that endangers public health or welfare.¹³ The primary NAAQS were designed to protect public health, while allowing for an adequate margin of safety, while the secondary NAAQS were designed to protect the public welfare from any known or anticipated adverse effects associated with the presence of air pollutants.¹⁴ The 1970 amendments required the primary air quality standards be acquired "within three years."¹⁵ This turned out to be an impossible goal, however, leading Congress to further amend the Clean Air Act in 1977 to develop a bifurcated system addressing areas that have attained the NAAQS, in Part C of Title I, and those that have not, in Part D of Title I.

¹¹ *Id.*

¹² Clean Air Act § 108-112, 42 U.S.C. § 7408-7412.

¹³ Clean Air Act § 109. Section 108 of the Clean Air Act allows EPA to designate air pollutants for the establishment of a NAAQS.

¹⁴ Clean Air Act § 109(a)(1)(A), (b).

¹⁵ Clean Air Act § 111(a)(2)(A) (repealed).

EPA takes the first step towards establishing an ambient air quality standard by adding a pollutant to the list of air pollutants that are emitted by numerous and diverse sources and the presence of which may reasonably be anticipated to endanger the public.¹⁶ The pollutants on this list are called criteria pollutants. Once listed as a criteria pollutant, EPA must then establish an ambient air quality standard for that pollutant. EPA has promulgated NAAQS for six criteria pollutants: sulfur dioxide, particulate matter, nitrogen oxide, carbon monoxide, ozone, and lead.¹⁷

A. The Role of Cost in Setting the NAAQS

While the Supreme Court held in 1976 that the Clean Air Act did not permit the EPA to consider economic or technological feasibility in approving or disapproving SIPs, industry continued to fight for consideration of such factors in establishing and implementing NAAQS. Following passage of the 1977 amendments, the D.C. Circuit addressed a challenge to EPA's promulgation of a national ambient air quality standard for lead in the case, *Lead Industries Association v. EPA*. The court rejected the argument that because the EPA is allowed to consider an adequate margin of safety in setting NAAQS, the agency is allowed to include economic considerations when establishing NAAQS. Referring to the Clean Air Act, the court held that "the statute and its legislative history make clear that economic considerations play no part in the promulgation of ambient air quality standards under Section 109."¹⁸ As the court explained, the NAAQS requirements must be based solely on public health and public welfare considerations and the Clean Air Act does not allow consideration of economic or technological feasibility to be considered in establishing the NAAQS, unlike the New Source Performance Standards, where the CAA specifically requires economic and technological feasibility considerations.¹⁹

In 1997, EPA revised the NAAQS for ozone and particulate matter ("PM") making them more stringent. The revisions were challenged in the D.C. Circuit in *American Trucking Associations, Inc. v. EPA*.²⁰ The D.C. Circuit clarified that its decision in *Lead Industries* held not only that EPA was not compelled to consider costs of implementing NAAQS, but also that the Clean Air Act *precludes* such consideration.²¹ In addition, the court found that whether EPA is establishing NAAQS for the first time or revising the NAAQS, the Agency is barred from

¹⁶ Clean Air Act § 108.

¹⁷ 40 C.F.R. pt. 50 (2016).

¹⁸ *Lead Indus. Ass'n, Inc. v. EPA*, 647 F.2d 1130, 1148 (D.C. Cir. 1980).

¹⁹ "The legislative history of the Act also shows the Administrator may not consider economic and technological feasibility in setting air quality standards; the absence of any provision requiring consideration of these factors was no accident; it was the result of a deliberate decision by Congress to subordinate such concerns to the achievement of health goals." *Id.*

²⁰ *Am. Trucking Ass'ns, Inc. v. EPA*, 175 F.3d 1027, 1040 (D.C. Cir.), *aff'd in part, rev'd in part sub nom. Whitman v. Am. Trucking Ass'ns, Inc.*, 531 U.S. 457 (2001).

²¹ *Id.* (emphasis added).

considering cost.²² Both the EPA and industry sought review of the D.C. Circuit's decision by the Supreme Court. The Supreme Court held that the Clean Air Act "unambiguously bars cost considerations from the NAAQS setting process."²³ In ending any question as to whether cost can be considered, the court stated:

The text of § 109(b), interpreted in its statutory and historical context and with appreciation for its importance to the CAA as a whole, unambiguously bars cost considerations from the NAAQS-setting process, and thus ends the matter for us as well as the EPA. We therefore affirm the judgment of the Court of Appeals on this point.²⁴

It is now clear that EPA may not consider cost when establishing the NAAQS. However, it is worth noting that the Clean Air Act does not require EPA to regulate air pollution at zero-risk, but rather requires the EPA to ensure that the standards protect public health with an adequate margin of safety. As such, while EPA may not consider the economic costs of establishing or implementing NAAQS, the agency may consider a certain amount of risk in determining whether to subject an air pollutant to the NAAQS process at all.

B. State Implementation Plans

Although this paper focuses on Congress's efforts to balance economic growth and environmental protection, it is appropriate to mention the important role states play in ensuring the NAAQS are achieved and maintained. Under the CAA, states have primary responsibility for determining the optimal mix of emission controls and for creating programs to ensure that the NAAQS are met. Such approaches can vary from facility-specific emission limits to low-emission municipal vehicle fleets. States are incentivized to find the right mix to achieve and maintain the NAAQS, because failure to do so may trigger significant adverse consequences, including a loss of certain federal funds. More notably, states finding themselves in nonattainment areas could have to face some curtailment of economic growth, since states considering whether to add a new emitting facility must first find offsetting emission reductions, either in the form of production curtailment or potentially costly emission controls on existing sources.

C. Prevention of Significant Deterioration and Nonattainment New Source Review

1. Prevention of Significant Deterioration

Areas of the county that have reached attainment with all of the NAAQS must comply with the Prevention of Significant Deterioration ("PSD")

²² *Id.* at 1040-41.

²³ *Whitman v. Am. Trucking Ass'n, Inc.*, 531 U.S. 457, 121 S. Ct. 903, 911 (2001).

²⁴ *Id.*

program in Part C of the Clean Air Act. The PSD program is designed to ensure that areas that are in attainment with the NAAQS do not fall out of compliance and to improve overall air quality in those areas. In attainment areas, a new or modified major source must acquire a PSD permit before beginning construction on that source. The PSD permits ensure that new sources do not significantly degrade existing air quality. In developing the PSD program, Congress made the conscious decision to apply this new permitting system to only major sources that have the potential to emit larger quantities of pollutants—generally 100 tons per year—and are therefore more likely to be able to bear the costs associated with the permitting requirements.

2. Nonattainment New Source Review

The 100 tons per year major source threshold also applies to areas that have not achieved the NAAQS, which are covered by the nonattainment New Source Review provisions in Part D of the Act. The nonattainment program was designed to bring areas that fail to achieve compliance with the NAAQS back into attainment with those standards. At a minimum, Part D also ensures that any source being constructed in a nonattainment area will not further contribute to the nonattainment. The nonattainment program accomplishes this by requiring new sources to obtain offsets for their new emissions and to implement the strictest of pollution reduction technologies available.²⁵ To ensure that the airshed quality actually improves, rather than remains the same, Part D requires sources to obtain more than a ton of offsetting emission reductions for each ton of emissions increases anticipated by the new or modified source. The 1977 amendments extended the deadline for states to achieve attainment (subsequently extended again in the 1990 amendments), but they also required state permits for the construction and operation of new or modified major sources, called a nonattainment new source review (“NNSR”) permit.²⁶ As such, both Part D and Part C are designed to ensure that major sources, which are more likely to have great financial support, as well as a greater environmental impact, are required to comply with permitting procedures. However, Congress also differentiated between these two programs by requiring more stringent, and likely more costly, technology requirements to be borne by new sources being established in the more vulnerable nonattainment areas.

3. Lowest Achievable Emission Rate

In order to construct a new source in a nonattainment area, the source must use technology that satisfies the lowest achievable emission rate

²⁵ DAVID R. WOOLEY & ELIZABETH M. MORSS, CLEAN AIR ACT HANDBOOK: A PRACTICAL GUIDE TO COMPLIANCE 195 (26th ed. 2016).

²⁶ Clean Air Act § 172.

(“LAER”). LAER is the most stringent emission limitation found in a state’s SIP for each category of sources being built, unless there is a more stringent limit that has been shown to be achievable or the SIP limit has been shown to be unachievable by the party seeking to construct the source. The LAER requirement ensures that even if a technology is costly to incorporate into a project, either because the actual pollution preventing hardware is expensive or because operations take more time or otherwise become more challenging, that attainment of the NAAQS takes precedence over financial considerations. In choosing a LAER, economic factors are not a consideration and the only cost consideration is whether the cost of a proposed emission control is so prohibitive that it has never been used for that category of source before.

4. Best Achievable Control Technology

In contrast, applicants for a PSD permit in attainment areas must agree to implement the best achievable control technology (“BACT”), where cost effectiveness of a technology plays an important role in its potential adoption of a control technology.²⁷ For that reason alone, LAER emission control requirements are generally considered to be more stringent than BACT emission control requirements. BACT requires an applicant to comply with an emission limitation that is based on the maximum degree of reduction from each pollutant subject to regulation under the Clean Air Act that would be emitted from the proposed stationary source or major modification that EPA, on a case-by-case basis, determines is achievable for the source after taking energy, environmental, *and cost* considerations into account. EPA may deem a particular control technology to be cost ineffective and therefore not require its use, although in each case, the allowable emissions may not exceed any NSPS or NESHAP standard.

As the LAER and BACT requirements indicate, another decision Congress made in forming the 1970 amendments was to favor a “technology forcing strategy.”²⁸ A key to this strategy was that, even if the required technology appeared difficult or impossible to achieve, companies would still have to abide by the requirements of their state’s SIP. This strategy was judicially recognized in the 1976 case reviewing state implementation of NAAQS, *Union Electric Co. v. EPA*. There, the Supreme Court held that sources are required to abide by strict state emissions requirements regardless of whether they were “economically or technologically

²⁷ EPA, DRAFT NEW SOURCE REVIEW WORKSHOP MANUAL: PREVENTION OF SIGNIFICANT DETERIORATION AND NONATTAINMENT AREA PERMITTING (1990), <https://www.epa.gov/sites/production/files/2015-07/documents/1990wman.pdf>.

²⁸ *Union Elec. Co. v. EPA*, 427 U.S. 246, 256 (1976).

infeasible.”²⁹ The unexpressed concept behind the Court’s ruling was that sources must either comply with the standards or be closed down.

5. “Grandfathering” Existing Sources

As noted above, the PSD and nonattainment NSR programs apply only to new or modified sources of regulated pollutants. Consequently, existing facilities need only comply with the legal requirements in operation at the time of their construction or modification, which are also referred to as “grandfathered” sources. At the time of the Clean Air Act amendments, this scheme of grandfathering was not considered to be particularly consequential because it was believed that facilities would run out their useful lives and be replaced, particularly coal-fired power plants.³⁰ The belief was that plants would last for approximately thirty years and then new plants would be subject to higher federal standards.³¹ However, experience has shown that by creating two different regulatory regimes for new and existing plants, older plants can be incentivized to operate past their expected lifetime in order to avoid costs imposed by the more stringent standards and technology required of new plants. Put another way, grandfathering can create disincentives to constructing new or modified sources with state of the art controls.

A counter-argument to this concern over grandfathering is that requiring new technology only in new or modified sources creates efficiency and cost-savings since a new plant can be designed with the requirements in mind, while it would be excessively costly to try and retrofit an already designed or constructed plant.³² Under this view, grandfathering strikes the right balance between environmental conservation and economic growth. Existing facilities continue to operate, while the costs of new and cleaner technology are borne by new or significantly modified projects, which choose to assume those costs knowingly before making an initial investment. This view appears to be supported by research conducted by EPA. In 2002, EPA produced a report evaluating the impact of NSR on economic growth and energy development.³³ The report concluded that with regard to the energy sector, the NSR program had not “significantly impeded investment in new power plants or refineries.”³⁴ The report found that the NSR program results in “significant environmental and public health benefits.”³⁵ Yet, the report also found that the NSR program

²⁹ *Id.*

³⁰ RICHARD REVEZ & JACK LIENKE, STRUGGLING FOR AIR: POWER PLANTS AND THE “WAR ON COAL” 3 (2016).

³¹ *Id.*

³² *Id.* at 38.

³³ EPA, NEW SOURCE REVIEW: REPORT TO THE PRESIDENT (June 2002), https://www.epa.gov/sites/production/files/2015-08/documents/nsr_report_to_president.pdf.

³⁴ *Id.*

³⁵ *Id.*

had a negative impact on investment at existing facilities.³⁶ As such, the report supports the assertion that the NSR program takes advantage of the efficiencies created by making technology and air pollution standard requirements applicable to only new facilities.

3.3 New Source Performance Standards

The 1970 Clean Air Act amendments included section 111, Standards of Performance for New Stationary Sources, which are also called the New Source Performance Standards (“NSPS”). Like the PSD and NSR programs, this section of the Act was created to ensure that new or modified stationary sources would not add to existing pollution problems or create new pollution problems.³⁷ But unlike the PSD and NSR programs, which are focused on establishing emissions limitations for individual sources, this section of the Act directs EPA to create emissions limits for specific categories of sources (*i.e.*, industry sectors) that “cause[], or contribute[] significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare.”³⁸ Each individual category-specific NSPS defines what constitutes an “affected facility” and then sets standards for those affected facilities.

The NSPS function as a sector-based technological floor, ensuring that all new or modified sources in a category regulated under section 111 meet minimum standards in their use of technology. Like the PSD and NSR programs, the NSPS apply to new, modified, or reconstructed facilities. Also similarly, the definition of modification includes “any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant . . . emitted into the atmosphere by that facility or which results in the emission of any pollutant . . . into the atmosphere not previously emitted.”³⁹ Reconstruction is not defined in the statute, but EPA has defined it in regulation as “the replacement of components of an existing facility,” such that the “fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, and [i]t is technologically and economically feasible to meet [the NSPS].”⁴⁰ In focusing on new facilities and those that undergo substantial changes, the NSPS ensure that greater restrictions are imposed only when substantial investment in the facility is already planned.

A. Standard Setting and Cost Considerations

NSPS are set through a straightforward process that was designed by Congress to prevent the standards from being so costly as to shut sources down. EPA must set

³⁶ *Id.*

³⁷ WAXMAN, *supra* note 1, at 165.

³⁸ 42 U.S.C. § 7411 (2016). The 1970 Amendments provided that source categories were to be regulated if it is determined that “it may contribute significantly to air pollution which causes or contributes to the endangerment of public health or welfare.” Pub. L. 91-604, § 111(b)(1)(A) (1970).

³⁹ 40 C.F.R. § 60.2.

⁴⁰ 40 C.F.R. § 60.15(b).

a standard based on the degree of emissions limitation achievable through the application of the best system of emission reduction (“BSER”) that has been adequately demonstrated as achievable.⁴¹ This standard requires owners or operators of a newly constructed, modified, or reconstructed source to achieve a certain reduction of emissions that is possible based on EPA’s review of the available technology. In other words, an owner or operator must meet a performance standard rather than adopting a particular type of technology. In practice, however, the performance standard often requires a certain type of technology be adopted in order to meet that performance standard. EPA is allowed to consider costs in developing a BSER under the Clean Air Act, and pursuant to Executive Order 12,866, a cost-benefit analysis is used to assess whether the benefits of the NSPS regulation justify the costs.⁴² In addition, recent Executive Orders require federal agencies to approximate the total costs or savings associated with each new regulation, and to refrain from promulgating new regulations unless they identify two existing regulations for repeal.⁴³ To that end, EPA and other federal agencies are identifying candidate regulations for repeal, replacement, or modification.⁴⁴

Unlike the case with the NAAQS, where Congress barred consideration of cost, the NSPS program directs EPA to consider economic and technological feasibility in establishing standards of performance for new stationary sources of air pollution based on the BSER.⁴⁵ The NSPS were designed to ensure a level national playing field for sources by imposing uniform emission limits on each source in a category, unlike the NAAQS, which—although they establish uniform emission standards for overall regions—permit states to impose different emission limits on particular sources. Overall, the sector-based standards are intended to prevent new pollution problems in a more targeted and tailored fashion than the NAAQS. The NSPS program was designed to force the use of advanced technology for new sources on industry, but not to the point of pushing companies to close down. Interestingly, EPA is not required to balance the costs of a NSPS against the environmental benefits, but rather must look at the impact to industry and operating facilities. Under the NSPS program, EPA compares the capital and operating costs of adopting the technological controls of a standard with those of establishing a new facility and then considers whether the facility would still be economical.⁴⁶ Even with the ability to consider cost built into the NSPS program, some have argued that the program establishes requirements that are too onerous and prevents the construction of new sources, which in many cases would be cleaner. According to this view, the potential incremental reductions in emissions

⁴¹ CAA 111(a)(1).

⁴² Exec. Order No. 12,866, 58 Fed. Reg. 51,735 (Oct. 4, 1993); see also Exec. Order No. 13,563, 76 Fed. Reg. 3821 (Jan. 21, 2011) (supplementing and affirming the principles, structures, and definitions governing regulatory review established in Executive Order 12866).

⁴³ Exec. Order No. 13,771, 82 Fed. Reg. 9,339 (Feb. 3, 2017).

⁴⁴ Exec. Order No. 13,777, 82 Fed. Reg. 29,248 (Feb. 24, 2017).

⁴⁵ *Lead Indus. Ass'n, Inc. v. Env'tl. Prot. Agency*, 647 F.2d 1130, 1148 (D.C. Cir. 1980).

⁴⁶ 2 STANLEY ABRAMSON ET AL., L. OF ENVTL. PROT. § 12:62 (2017).

are lost, because rather than making smaller and more frequent emissions reductions through the construction of newer sources, companies are delaying new construction as long as possible, in some cases indefinitely, in order to avoid the stringent NSPS requirements.

3.4 New Efforts Aimed at Greenhouse Gas Emissions

In the 2007 landmark decision *Massachusetts v. EPA*, the Supreme Court ruled that carbon emissions and other greenhouse gas (“GHG”) emissions are “air pollutants” subject to regulation under the Clean Air Act.⁴⁷ The Supreme Court found the text of the Clean Air Act to be unambiguous, notwithstanding EPA’s legitimate policy concerns about regulating these emissions under a statutory framework that was never designed to address such ubiquitous matter. The particular provision at issue related to emissions from vehicles and engines, and required EPA to regulate a pollutant under the Act if the Agency found that it “cause[s], or contribute[s] to, air pollution which may reasonably be anticipated to endanger public health or welfare.”⁴⁸ Two years later, in 2009, EPA issued its endangerment determination, which in turn led to the issuance of regulations governing greenhouse gases.

After the Supreme Court’s ruling, various arguments were put forth on how EPA can and should regulate GHG emissions. Opponents of GHG regulation asserted that the potential benefits of such regulation are greatly outweighed by the economic costs imposed on development of energy resources, and therefore no regulation at all should be pursued. Proponents saw the prospects of legislative reform to be speculative and uncertain, and a sense of urgency to act on GHGs grew each week. EPA understood the Supreme Court’s mandate, but continued to believe that promulgating GHG regulations under the framework of the Clean Air Act was a bit like fitting a square peg into a round hole. EPA nevertheless embarked upon an effort to regulate GHG emissions under its existing Clean Air Act authorities.

In order to regulate GHG emissions under the particular provision at issue in *Massachusetts v. EPA*, EPA first had to determine whether these gases presented an endangerment to human health and welfare. In 2008, EPA issued a proposed finding that that GHG emissions endanger the public health and welfare of current and future generations, and solicited comment.⁴⁹ After considering voluminous comments, EPA confirmed its proposed finding and determined that six specific greenhouse gases are “air pollutants” under the Clean Air Act.⁵⁰

Initially, EPA began regulating GHG emissions from mobile sources, but those regulations meant GHGs had now become “regulated pollutants” under other sections of the Act as well. Regulating stationary sources required a more complicated weighing of

⁴⁷ *Massachusetts v. EPA*, 549 U.S. 497 (2007).

⁴⁸ *Id.* (internal quotations omitted).

⁴⁹ Regulating Greenhouse Gas Emissions under the Clean Air Act, 73 Fed. Reg. 44,354, 44,367 (July 30, 2008).

⁵⁰ Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496 (December 15, 2009).

the various mechanisms under the Clean Air Act that could be used, including consideration of the advantages as well as disadvantages of using each of those mechanisms.

At the very outset, EPA understood that economic considerations would be critical to ensuring the success of any regulation of GHG emissions. For instance, the PSD provisions of the Clean Air Act apply to sources that emit 100 tons per year (tpy) of a pollutant or 250 tpy of any combination of pollutants. But these limits were established for more traditional criteria pollutants, whereas GHGs are typically emitted in much higher amounts. Accordingly, applying these thresholds to GHGs would capture a great number of sources, and not just larger industrial sources. This would lead to the unintended consequence that the PSD program would apply to small commercial or residential facilities that cannot afford the regulatory costs of complying with the program. For this reason, EPA issued a rule to phase in the application of the PSD program to GHG emissions standards and to create an alternative threshold that makes more economic sense, and that is triggered only when PSD is triggered for other criteria pollutants at the 100/250 tpy level.⁵¹

EPA also regulates GHGs under the NSPS provisions of section 111(d) of the Act, which allow states to develop performance standards for existing sources, subject to EPA approval. This section also not only allows, but requires EPA to take into account economic and technological feasibility in setting the NSPS standards. Perhaps for this reason, the main thrust of GHG regulation has come through the NSPS program. So far, rules promulgated through this program have targeted new and existing electric generating units, typically coal-fired power plants, as well as oil and gas production and transmission operations.

Most recently, EPA promulgated new standards for the oil and gas industry aimed at reducing direct and fugitive emissions of methane—a potent GHG—from well sites and operations associated with processing and transmission of oil and natural gas. In justifying the oil and gas methane regulations, EPA relied on the rationale that by capturing methane emissions, rather than letting them vent to the atmosphere, companies would actually receive an economic benefit from the sale of the additional gas thereby reducing the overall cost of implementing the new technology to meet emission reduction standards. Still, the necessity and economic viability of these regulations as been called into question by the current administration. As a whole, cost and economic viability are a critical consideration in EPA’s regulation of GHG emissions, but such considerations have continued to be a primary argument against regulation.

3.5 Enforcement and Compliance under the Clean Air Act

Enforcement and compliance under the Clean Air Act exemplify the statute’s broader goal of balancing environmental protection and economic growth. Both the statutory

⁵¹ Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule, 75 Fed. Reg. 31,514 (June 3, 2010) (commonly referred to as the Tailoring Rule). *But see Util. Air Regulatory Grp. v. E.P.A.*, 134 S. Ct. 2427 (2014) (reversing the Tailoring Rule in part).

language and EPA's implementing policies try to marry these objectives by pursuing the most serious violators and then assessing a substantial penalty, but one not so large it would put the violator out of business. When a violator is unable to immediately pay the full penalty amount allowed by statute, EPA can discount the initial penalty based on the violator's demonstrated inability to pay or provide a payment schedule over time to soften the financial blow. Similarly, when a violator is unable to immediately comply, EPA commonly puts the violator on an enforceable schedule for returning to compliance and/or taking necessary corrective actions, rather than forcing shut-down. EPA may also allow the violator to implement environmentally beneficial projects in exchange for reduced penalties.⁵²

The 1970 CAA provisions on enforcement were much narrower in scope than they are today.⁵³ At the time, EPA was consigned to bringing most actions in court; the sole administrative remedy under § 120 simply allowed EPA to "recoup the economic benefit a source gained from noncompliance."⁵⁴ The CAA did not authorize penalties based on the gravity of violations, and criminal enforcement provisions treated even serious violations as misdemeanors.⁵⁵

In response, the 1990 Amendments substantially strengthened EPA's CAA enforcement mechanisms.⁵⁶ The new provisions expanded "the scope of violations that can result in civil or criminal penalties; [e]stablished a new framework for agency imposition of administrative penalties; [i]ncreased potential monetary fines and jail terms;" and created a federal operating permit program under Title V.⁵⁷ Today, EPA maintains numerous policies and guidance to help make sense of the enforcement mechanisms to further EPA's goal of deterring potential violators and cleaning up harm already caused by noncompliance.

A. Statutory Enforcement Provisions

Much like the rest of the statute, CAA enforcement mechanisms are complex—the statute provides enforcement authority to federal, state, and local governments as well as to private citizens, and contemplates multiple forms of action. Generally, authority comes from three sections: § 113's federal enforcement

⁵² It is possible that a recent memorandum from the Department of Justice ("DOJ") could curtail use of certain types of supplemental environmental projects (SEPs). *See* DEPT. OF JUSTICE, PROHIBITION ON SETTLEMENT PAYMENTS TO THIRD PARTIES (June 5, 2017) (prohibiting DOJ attorneys from entering "into any agreement on behalf of the United States in settlement of federal claims or charges . . . that directs or provides for a payment or loan to any non-governmental person or entity that is not a party to this dispute").

⁵³ WOOLEY & MORSS, *supra* note 24, at 665-667.

⁵⁴ *Id.*

⁵⁵ *Id.*

⁵⁶ *See* Clean Air Act Amendments of 1990, Pub. L. No. 101-549, sec. 701, § 113, 104 Stat. 2399, 2672-80 (codified at 42 U.S.C. § 7413 (1994)).

⁵⁷ WOOLEY & MORSS, *supra* note 24, at 665-667. The Title V permit program requires certain sources to monitor compliance with CAA requirements and send compliance reports to EPA or a delegated state agency every six months, including self-reported violations.

provisions for most permit or SIP violations; § 120’s penalty provisions for stationary source noncompliance; and § 205’s civil penalty provisions for mobile sources.⁵⁸

1. Types of Enforcement Actions

State and local governments and agencies are the primary enforcers of the CAA—they issue permits, monitor source compliance, and conduct most inspections.⁵⁹ These entities also have the authority to issue compliance orders to federal facilities, or require injunctive relief from federal agencies. At the federal level, EPA may generally take action against “any person” who violates the CAA or its implementing regulations.⁶⁰ Various sections of the Act permit EPA enforcement against states that fail to enforce a SIP or permit program, federal agencies and facilities, and other individual violators.⁶¹ In addition, the CAA also expressly permits citizens to file suits against individuals, states, or the EPA for certain violations involving emission standards and limitations.⁶²

The CAA also provides for several avenues of enforcement, including through civil administrative actions, civil judicial actions, and criminal judicial actions for those committing “knowing” violations.⁶³ These actions may come in the form of field citations for minor violations, administrative compliance orders, administrative penalty orders, civil lawsuits and settlements, and criminal cases.⁶⁴ Civil relief may include monetary penalties (*e.g.*, noncompliance penalties assessed by states), injunctive relief (*i.e.*, requiring or prohibiting certain actions), and Supplemental Environmental Projects (“SEPs”) or other types of mitigation.⁶⁵ Criminal sanctions include fines and even imprisonment.⁶⁶

⁵⁸ 42 U.S.C. § 7413; 42 U.S.C. § 7420; 42 U.S.C. § 7524.

⁵⁹ DAVID M. BEARDEN, ET AL., CONG. RESEARCH SERV., RL30798, ENVIRONMENTAL LAWS: SUMMARIES OF MAJOR STATUTES ADMINISTERED BY THE ENVIRONMENTAL PROTECTION AGENCY 17 (2013), <https://fas.org/sgp/crs/misc/RL30798.pdf>.

⁶⁰ 42 U.S.C. § 7413(a)(3).

⁶¹ *See* BEARDEN, ET AL., *supra* note 58.

⁶² The CAA permits citizen suits against corporations or government agencies for alleged emission standard or permit violations, or against EPA for allegedly failing to perform nondiscretionary duties. *See* 42 U.S.C. § 7604(a)(1)-(3). This review will not focus on citizen suits.

⁶³ *See, e.g.*, 42 U.S.C. § 7413; 42 U.S.C. § 7604; 42 U.S.C. § 7524(b);

⁶⁴ *See* 42 U.S.C. § 7413(a) (administrative compliance orders); 42 U.S.C. § 7413(b) (civil judicial enforcement); 42 U.S.C. § 7413(c) (criminal sanctions); 42 U.S.C. § 7413(d) (administrative civil penalty orders).

⁶⁵ *See, e.g.*, 42 U.S.C. § 7420 (state and federal noncompliance penalties). “SEPs are environmental improvement projects that a violator voluntarily agrees to perform. These projects are in addition to actions required to correct the violations specified in the settlement.” *Enforcement Basic Information*, EPA, <https://www.epa.gov/enforcement/enforcement-basic-information> (last updated Feb. 1, 2017). SEPs are undertaken by violators in exchange for a reduction in the penalty assessed against them.

2. Seeking Relief and Assessing Penalties

The type of enforcement action EPA uses depends largely on the relief sought. For instance, when EPA brings a civil judicial action against certain violators, it is authorized to seek injunctive relief and penalties of up to \$93,750 per day per violation, adjusted for inflation.⁶⁷ Administrative penalty orders—which may be issued for almost any violation of the CAA, except for mobile source violations—are subject to the same per day per violation cap, but the full penalty sought generally may not exceed \$ 356,312.⁶⁸ These orders are often issued in conjunction with administrative compliance orders, which require violators to come into compliance with statutory requirements.⁶⁹

Penalties are assessed based in part on the economic benefit a violator gained from noncompliance or the monetary value of damage to the environment. However, assessments also require consideration of other criteria designed to disincentivize violations without putting violators out of business. Considerations include, for instance: the size of the violating business, the economic impact of the penalty on the business, and the economic benefit the violator received from noncompliance and/or belated compliance.⁷⁰

Injunctions to compel or prohibit certain activities are the second main avenue of relief authorized under the CAA, followed by SEPs and other mitigation to reduce or offset harm caused by a violator’s past or ongoing

⁶⁶ 42 U.S.C. § 7413(c); *see, e.g., United States v. Smith*, 4:16MJ-10-HBB (W.D. Ky. Nov. 30, 2016) (90 days in jail for failing to follow safety guidelines for hazardous materials, including asbestos); *United States v. KTX Ltd.*, 1:16-CR-00075-001 (E.D. Tex. Oct. 12, 2016) (\$3.5 million fine for falsifying permits on a tank that collapsed, severely injuring two workers and killing a third); *United States v. Morrissette*, 3:12-CR-37-002-CAR (M.D. Ga. Apr. 17, 2013) (6.5 years in prison and \$179,000 fine for stealing parts from air conditioners, resulting in damage to a business, a church, and the environment).

⁶⁷ Civil Monetary Penalty Inflation Adjustment Rule, 81 Fed. Reg. 43,091, 43,095 (Jul. 1, 2016). Civil penalties apply to: violations of any applicable implementation plan or permit; violations of any CAA § 303 or subchapters IV, V, or VI requirements; and attempts to construct or modify a major stationary source that have failed to comply with new source requirements. *See* 42 U.S.C. § 7413(b).

⁶⁸ *See* 42 U.S.C. § 7413(d); Civil Monetary Penalty Inflation Adjustment Rule, 81 Fed. Reg. 43,091, 43,095 (Jul. 1, 2016); EPA, CLEAN AIR ACT STATIONARY SOURCE CIVIL PENALTY POLICY 1 (issued Oct. 25, 1991, clarified Jan. 17, 1992).

⁶⁹ 42 U.S.C. § 7413(a).

⁷⁰ 42 U.S.C. § 7413(e). Penalties for mobile source violators also take into account ability to pay. For instance, CAA § 205 lays out the criteria EPA must consider, including: the economic benefit or savings (if any) resulting from the violation; the size of the violator’s business; and the effect of the penalty on the violator’s ability to continue in business. 42 U.S.C. § 7524(b). Noncompliance penalties under §120 may be assessed according to how long a violator was out of compliance, and must be at least equal to the economic benefit of the violator’s delayed compliance minus the cost of bringing the source into compliance. 42 U.S.C. § 7420(d)(2).

activities.⁷¹ EPA provides guidance on the different types of relief and how penalties are calculated in its general and CAA-specific guidance documents, discussed later in this section.

3. Compliance Timelines

Before the 1990 amendments, violators had to comply with relevant compliance orders in 30 days, and penalties could be calculated only beginning on the date a violator was notified of the violation.⁷² Often, violators were almost immediately out of compliance with an order and such a tight timeframe could be entirely untenable. Today, compliance schedules have more flexibility and may be up to one year or more, allowing violators enough time to make necessary changes.⁷³

However, not all violations warrant longer compliance timeframes. High threat violations, for instance, typically demand immediate responses to avoid substantial harm. CAA § 303 authorizes EPA to issue emergency compliance orders requiring immediate action for any source presenting “an imminent and substantial endangerment to public health or welfare, or the environment.”⁷⁴ Orders are immediately effective and may remain effective for up to 60 days.

B. Guidance on Enforcing the CAA

EPA maintains numerous official guidance and policy documents intended to help potential violators understand CAA enforcement. These documents explain how and against whom EPA decides to bring actions, how it calculates penalties, and how it determines a violator’s ability to pay. Generally, EPA’s guidance reflects a judgment that the United States will not put people out of business when penalties are assessed against them. Still, this is not a hard and fast rule, with exemptions, for example, when violations are particularly egregious, or when reducing penalties would be unfair to other market players. EPA attempts to explain enforcement nuances with guidance that is both generally applicable and specific to CAA violations.

1. Enforcement Targets

⁷¹ See *Enforcement Basic Information*, EPA, <https://www.epa.gov/enforcement/enforcement-basic-information> (last updated Feb. 1, 2017). For instance, EPA may halt construction of a new or modified source under the NSR and PSD programs.

⁷² ARNOLD W. REITZE, JR., *AIR POLLUTION CONTROL LAW: COMPLIANCE AND ENFORCEMENT* 525 (2001).

⁷³ For example, Bandit Industries committed 2,552 violations of the CAA, including illegally stockpiling engines meeting older standards in an attempt to grandfather in the cheaper goods. The ability-to-pay settlement agreement orders Bandit to pay \$3 million over a three year period in equal installments, with prejudgment interest beginning 90 days after entry of the order. For each day Bandit’s civil penalty is delayed beyond its due date, Bandit will have to pay a \$1,000 stipulated penalty. See Stipulation, Settlement Agreement and Order of Judgment, *United States v. Bandit Indus., Inc.*, 1:17-CV-00056 (W.D. Mich. Jan. 18, 2017).

⁷⁴ 42 U.S.C. § 7603.

Since EPA does not have the time or resources to bring an enforcement action in response to every environmental law violation, it instead develops specific enforcement targets. These targets focus on environmental problems coming from significant non-compliance in areas where EPA efforts may be most beneficial. Often, targeting violations this way leads to enforcement actions against large companies that may have access to more resources to pay fines or other costs associated with enforcement. This allows the most significant environmental damage to be avoided or remedied with the fewest possible economic casualties.

An example of this targeting includes the National Enforcement Initiatives, which are selected every three years with public input.⁷⁵ Currently, EPA has two National Enforcement Initiatives related to air: (1) Reducing Air Pollution from the Largest Sources and (2) Cutting Hazardous Air Pollutants.⁷⁶ Both initiatives focus on reducing emissions from large sources.

EPA also targets enforcement using official guidance dedicated to identifying and processing high priority violations (“HPV’s”), and thereby “direct[s] scrutiny to those violations that are most important.”⁷⁷ The HPV guidance generally applies only to violations at major sources or that are related to major pollutants. For example, HPVs include: failure to obtain a PSD or NSR permit; violations of NESHAP emissions thresholds; and violations of any substantive term of a government order, consent decree, or administrative order.⁷⁸

2. Assessing Penalties

EPA’s 1984 Policy on Civil Penalties, which largely remains in place today, outlines the agency’s penalty assessment procedures for violations

⁷⁵ *National Enforcement Initiatives*, EPA, <https://www.epa.gov/enforcement/national-enforcement-initiatives> (last updated June 13, 2016); *see also Coal-Fired Power Plant Enforcement*, EPA, <https://www.epa.gov/enforcement/coal-fired-power-plant-enforcement> (last updated Sept. 6, 2016).

⁷⁶ *National Enforcement Initiative: Reducing Air Pollution from the Largest Sources*, EPA, <https://www.epa.gov/enforcement/national-enforcement-initiative-reducing-air-pollution-largest-sources> (last updated Dec. 19, 2016) (“This initiative has focused on ensuring that large industrial facilities, like coal fired power plants and acid, glass and cement manufacturing facilities, comply with the Clean Air Act when building new facilities or making modifications to existing ones.”); *National Enforcement Initiative: Cutting Hazardous Air Pollutants*, EPA, <https://www.epa.gov/enforcement/national-enforcement-initiative-cutting-hazardous-air-pollutants> (last updated Dec. 19, 2016) (“EPA has worked to identify and address illegal and excess emissions of toxic air pollutants from leaks and flares at facilities that have a significant impact on air quality and health in communities since this initiative began in 2004.”).

⁷⁷ EPA OFFICE OF ENFORCEMENT AND COMPLIANCE ASSURANCE, THE TIMELY AND APPROPRIATE ENFORCEMENT RESPONSE TO HIGH PRIORITY VIOLATIONS (June 23, 1999), <https://www.epa.gov/sites/production/files/documents/hpvmanualrevised.pdf>.

⁷⁸ *Id.* at 3-1 to 3-3.

from stationary sources.⁷⁹ This policy describes EPA’s goals for assessing penalties in administrative and judicial actions as “deterrence, fair and equitable treatment of the regulated community, and swift resolution of environmental problems.”⁸⁰

EPA has two components to every civil penalty calculation it makes. The Agency first determines how much a violator benefitted economically from delaying or avoiding costs, or from capturing competitive advantage. This provides EPA with what it considers to be the “Economic Benefit Component” of the noncompliance penalty, and is designed to “level the playing field” between the violator and other companies that invested the time and resources to timely comply with the law. Calculation of this element of a penalty is enabled by a computer model.⁸¹ The second component of every penalty is an additional amount added by EPA to reflect the gravity of the violation (the “Gravity Component”), which includes the seriousness of the violation as well as actual or possible harm.⁸² EPA’s latest guidance for assessing civil penalties also adjusts Gravity Component amounts for inflation.⁸³

EPA adds together the Economic Benefit Component and the Gravity Component to come up with a preliminary penalty demand, which it calls the “preliminary deterrence amount.” EPA can modify this preliminary deterrence amount up or down based on multiple factors, including degree of willfulness or negligence, degree of cooperation throughout the action, history of noncompliance, a company or individual’s ability to pay, and other unique factors.⁸⁴ Typically, EPA attempts to keep violators from going out of business due to high monetary penalties they cannot afford. To this end, EPA has a computer model for assessing ability to pay, and will generally adjust penalties downward to avoid putting companies out of business.⁸⁵

⁷⁹ EPA, GM-21, EPA GENERAL ENFORCEMENT POLICY: POLICY ON CIVIL PENALTIES (1984)[hereinafter, EPA GM-21], <https://www.epa.gov/sites/production/files/documents/epapolicy-civilpenalties021684.pdf>.

⁸⁰ *Id.*

⁸¹ *See Penalty and Financial Models*, EPA, <https://www.epa.gov/enforcement/penalty-and-financial-models> (last updated July 6, 2016).

⁸² EPA General Enforcement Policy, *supra* note 78.

⁸³ 2016 Civil Monetary Penalty Inflation Adjustment Rule, 81 Fed. Reg. 43,091 (July 1, 2016).

⁸⁴ EPA GM-21, *supra* note 76. For example, a 2016 Consent Agreement and Final Order assed a \$0 penalty on a company that was initially facing a \$112,500 penalty for violations of the CAA. *See* Consent Agreement and Final Order, *In re Golden Leaf Energy, Inc.*, EPA Docket No. CAA-06-2013-3351 (EPA May 27, 2014). According to the Order, the full reduction was based on the respondent’s inability to pay, an agreement to engage a third party hazard analyst and perform any work based on the analysis, and consideration of § 113’s other factors. *Id.*

⁸⁵ EPA, GUIDANCE ON DETERMINING A VIOLATOR’S ABILITY TO PAY A CIVIL PENALTY (Dec. 16, 1986), <https://www.epa.gov/sites/production/files/documents/civilpenalty-violators.pdf>; EPA, GUIDANCE ON

EPA will nonetheless try to ensure that violators pay at least the Economic Benefit Component of a penalty, thereby putting them in the same economic position they would have been without the violation.⁸⁶ According to civil penalty guidance, “it is important that the regulated community not see the violation of environmental requirements as a way of aiding a financially troubled business.”⁸⁷ In cases where a company lacks the resources to pay a reduced, economic benefit-based penalty in a lump sum, EPA may allow payment of the penalty over time.

The general policies and guidance documents referenced above apply to most violations of the CAA.⁸⁸ However, EPA has issued supplemental guidance on assessing CAA penalties involving new source review, stationary sources, mobile sources, and mercury and air toxics. For instance, EPA penalty guidance on certain stationary source violations calls for the Agency to plead the highest possible penalty in a complaint, so later calculations based on more detailed information are not capped by the earlier pleading.⁸⁹ In addition, multiple policies specifically discuss mobile source violation penalties because the relevant CAA statutory provisions and regulations are highly detailed.⁹⁰ Regardless of the type of enforcement, EPA continues to push for settlement penalties that, *at a minimum*, recover the economic benefit a violator gained from noncompliance.

3. Injunctive Relief, SEPs, and Mitigation

EVALUATING A VIOLATOR’S ABILITY TO PAY A CIVIL PENALTY IN AN ADMINISTRATIVE ENFORCEMENT ACTION (June 29, 2015) [hereinafter EPA 2015 ABILITY TO PAY GUIDANCE], <https://www.epa.gov/sites/production/files/2015-06/documents/atp-penalty-evaluate-2015.pdf>. Inputs for the computer model includes tax returns and several years of financial statements.

⁸⁶ EPA GM-21, *supra* note 76. “The removal of the economic benefit of noncompliance only places the violator in the same position as he would have been if compliance had been achieved on time. Both deterrence and fundamental fairness require that the penalty include an additional amount to ensure that the violator is economically worse off than if it had obeyed the law. This additional amount should reflect the seriousness of the violation. In doing so, the penalty will be perceived as fair. In addition, the penalty’s size will tend to deter other potential violators.” *Id.*

⁸⁷ *Id.*

⁸⁸ EPA, CLEAN AIR ACT STATIONARY SOURCE CIVIL PENALTY POLICY (Jan. 17, 1992) (discussing the Timely and Appropriate Enforcement Response to High Priority Violations in Appendix B).

⁸⁹ EPA, OFFICE OF REGULATORY ENFORCEMENT, GUIDANCE ON THE APPROPRIATE INJUNCTIVE RELIEF FOR VIOLATIONS OF MAJOR NEW SOURCE REVIEW REQUIREMENTS 2, 3 (Nov. 17, 1988) [hereinafter EPA NSR VIOLATIONS].

⁹⁰ Many of the policies utilize the same general framework of calculating the economic benefit component, the gravity component, and other factors. *See, e.g.*, EPA, CIVIL PENALTY POLICY FOR ADMINISTRATIVE HEARINGS (Jan. 14, 1993) (for volatility, tampering and defeat device, unleaded gasoline, section 211(f) violations, and lead phasedown); EPA, CLEAN AIR ACT MOBILE SOURCE FUELS CIVIL PENALTY POLICY – 40 CFR PART 80 FUELS STANDARDS REQUIREMENTS (Feb. 3, 2016); EPA, AMENDED SECOND INTERIM ENFORCEMENT RESPONSE POLICY – VIOLATIONS ARISING FROM THE USE OF INVALID RENEWABLE IDENTIFICATION NUMBERS (Feb. 5, 2014); EPA, MERCURY AND AIR TOXICS STANDARD ENFORCEMENT RESPONSE POLICY (Dec. 16, 2011).

CAA-specific guidance also encourages use of injunctive relief in consent orders and settlements as a way to ensure ongoing compliance once an enforcement action is over. For example, orders involving major NSR violations should:

[A]t a minimum, require the installation and operation of control technology or process changes that result in emission reductions equivalent to the best available control technology (BACT) in PSD cases and the lowest achievable emission rate (LAER) in nonattainment cases . . . NSR is a key component to ensuring that economic growth and expansion occur in a way that minimizes any adverse impact on air quality. Thus, NSR violations often result in hundreds of tons of excess emissions.⁹¹

To some extent, EPA recognizes that a new source will not always know what its exact emissions will be until it has begun emitting. As a result, a source may in good faith obtain a permit with emissions limits that seem reasonable, only to later find it is unable to meet them. Such errors or miscalculations, if done innocently, may mitigate the penalty assessed, but are unlikely to result in lesser emission control requirements. As stated by EPA, “[a]lthough this is a concern when determining the appropriate penalty, it should not affect the appropriate injunctive relief.”⁹²

Supplemental Environmental Projects are a flexible way for violators to reduce the Gravity Component of a penalty that would otherwise be assessed against them, in exchange for agreeing to undertake one or more certain environmentally beneficial projects.⁹³ To be accepted by EPA as part of a settlement, these projects must meet certain legal requirements and fit into one of eight EPA-set categories of acceptable SEPs.⁹⁴ Among other things:

⁹¹ EPA NSR VIOLATIONS, *supra* note 88, at 2-3.

⁹² *Id.* at 6.

⁹³ EPA, U.S. ENVIRONMENTAL PROTECTION AGENCY SUPPLEMENTAL ENVIRONMENTAL PROJECTS POLICY 2015 UPDATE 21 (2015), <https://www.epa.gov/sites/production/files/2015-04/documents/sepupdatedpolicy15.pdf>. There are exceptions to this rule, including “[f]or defendants that are small businesses, government agencies or entities, or non-profit organizations, the penalty mitigation amount may be set as high as one hundred percent (100%) of the estimated SEP cost, if the defendant can demonstrate the project is of outstanding quality.” *Id.* at 24.

⁹⁴ SEPs for CAA violations must advance at least one of the CAA’s objectives, and “[t]here must be relationship between the underlying violation and the human health or environmental benefits that will result from the SEP.” *Supplemental Environmental Projects (SEPs)*, EPA, <https://www.epa.gov/enforcement/supplemental-environmental-projects-seps> (last updated Apr. 3, 2017). A violator may also benefit from the SEP, but this must be a secondary matter.

- There must be a relationship between the underlying violation and the human health or environmental benefits that will result from the SEP;
- The SEP must improve, protect, or reduce risks to public health or the environment, although in some cases a SEP may, as a secondary matter, also provide the violator with certain benefits; and
- The SEP must be undertaken in settlement of an enforcement action as a project that the violator is not otherwise legally required to perform.

For example, in 2016, EPA settled an action against Detroit Diesel Corp. based on allegations the company sold almost 8,000 heavy duty diesel engines that did not comply with emission standards.⁹⁵ The consent decree outlined two “clean diesel projects,” whereby the company had to replace certain older, high-polluting school buses and switch locomotives, totaling \$14.5 million in all. Even with this high price tag (and substantial projected health and environmental benefits), Detroit Diesel was still on the hook for a civil penalty of \$14 million.⁹⁶

4. Preventative Measures

EPA does not address noncompliance solely under a punitive approach. It also provides incentives for routine compliance monitoring and voluntary auditing of facilities.⁹⁷ Such programs encourage regulated businesses to discover and report their own violations by offering significant penalty reductions, eliminating the possibility of criminal prosecution, and refraining from routinely requesting audit reports.⁹⁸ Regulated entities must satisfy nine conditions to be eligible for full audit policy benefits, but may still be eligible for reduced benefits if fewer than all nine conditions are met. The policy generally requires violations to be corrected within 60 days of discovery, but EPA may allow extensions of time for complex matters. Newly acquired entities may also participate in the audit policy,

⁹⁵ Consent Decree, *United States v. Detroit Diesel Corp.*, No. 1:16-cv-01982 (D.D.C. Oct. 6, 2016).

⁹⁶ See also Consent Decree, *United States v. CITGO Petroleum Corp.*, No. 1:16-cv-10484 (N.D. Ill. Nov. 10, 2016) (requiring CITGO to spend \$2 million on environmental projects on top of \$42 million in injunctive relief and nearly \$2 million for a civil penalty); Consent Decree, *United States v. Guardian Indus. Corp.*, 2:15-cv-13426-MAG-MJH (E.D. Mich. Sept. 29, 2015) (requiring a company to give \$150,000 to a clean burn program on top of a \$312,000 civil penalty and an estimated \$70.6 million spent on injunctive relief).

⁹⁷ See *How We Monitor Compliance*, EPA, <https://www.epa.gov/compliance/how-we-monitor-compliance> (last updated Dec. 11, 2016); *Clean Air Act (CAA) Compliance Monitoring*, EPA, <https://www.epa.gov/compliance/clean-air-act-caa-compliance-monitoring> (last updated Feb. 8, 2017).

⁹⁸ See *EPA’s Audit Policy*, EPA, <https://www.epa.gov/compliance/epas-audit-policy> (last updated Jan. 17, 2017); see also *Incentives for Self-Policing: Discovery, Disclosure, Correction and Prevention of Violations*, 65 Fed. Reg. 19,618 (Apr. 11, 2000); EPA, *AUDIT POLICY: FREQUENTLY ASKED QUESTIONS* (Apr. 2007).

which encourages new owners to immediately begin monitoring facilities for compliance.

Because they are at an economic disadvantage, small businesses, governments, and organizations are unlikely to have the same environmental expertise as their larger and often more sophisticated counterparts. EPA handles this reality with a small entity policy that loosens requirements needed to obtain the largest penalty reductions.⁹⁹ For example, small businesses need not conduct regular systematic environmental audits to be eligible for EPA audit policy protection, and the correction period after discovering a violation is extended from 60 to 180 days.¹⁰⁰ Variations in policies like these allow smaller companies to remain in business while complying with environmental regulations.

⁹⁹ See Small Business Compliance Policy, 65 Fed. Reg. 19,630 (Apr. 11, 2000); *see also* Small Business Regulatory Enforcement Fairness Act of 1996, Pub. L. 104-121 (Mar. 29, 1996), *amended by* Pub. L. 110-28 (May 25, 2007).

¹⁰⁰ 65 Fed. Reg. 19,630, 19,630 (Apr. 11, 2000).

4. Clean Water Act

4.1 Introduction

A. Historical Background

Water pollution control laws in the United States have reflected the tension between environmental protection and economic productivity for over a century. These laws have their roots in legislation that was designed with commerce rather than natural resource protection in mind. Over the years, however, water pollution regulation has come to reflect a continuing effort to strike a balance between preserving the nation's navigable waters and recognizing the economic and technological hurdles companies can face when undertaking water pollution control compliance efforts.

The principles of federal water pollution control have their roots in legislation passed long before the 1972 amendments to the Federal Water Pollution Control Act ("FWPCA"), which are now referred to as the Clean Water Act ("CWA"). As early as 1899, the Refuse Act, also known as the Rivers and Harbors Act of 1899, barred "dumping of refuse that would obstruct navigation of navigable waters, except under a federal permit." While the Refuse Act's purpose was primarily commerce-focused—to keep navigable waterways clear from obstruction, rather than to address concerns regarding environmental or public health—the concept of federal regulation of discharges into navigable waters laid the groundwork for the 1948 FWPCA, which was the springboard for the current CWA.

The 1948 FWPCA recognized a role for government in pollution control, but left most responsibility for water quality and control with the states and treated waste disposal as a fundamental use of water. Then, critically, in 1965, the Water Quality Act amended the FWPCA to create water quality standards that enabled increased involvement of the federal government in managing water quality. This represented a fundamental shift away from the premise that the nation's waterways could and should be used for waste disposal. Amendments to the FWPCA in 1966 and 1970 further expanded the federal government's role in water quality management. Significantly, the 1970 amendments imposed civil and criminal penalties for prior acts of pollution.

In total, the FWPCA was amended five times before 1972, when it was completely overhauled by the CWA. While these amendments tailored federal involvement in water pollution control regulation, they also encompassed provisions designed to acknowledge and consider the economic costs associated with regulatory compliance. The 1972 amendments reduced the level of control and discretion provided to states in the setting of water quality standards, embracing the cooperative federalism model, which advocated maximum cooperation between local, state, and federal government by setting minimum federal standards, but allowing states to implement more stringent standards.

Although the CWA has been amended since 1972, the general framework established by the 1972 amendments remains in place today.

4.2 The Basic CWA Framework

The CWA, as it exists today, is composed of two permit programs—the Section 402 national pollutant discharge elimination system (“NPDES”) permit program and the Section 404 “dredge and fill” permit program, which applies only to discharges of “dredged or fill material” into navigable waters of the United States. The principal regulatory program is the NPDES; it is administered by the EPA, though the states may develop and implement their own NPDES program pursuant to EPA approval, which most states have done. Section 402 authorizes EPA to issue permits under NPDES, while Section 301 prohibits “discharges of pollutants” to waters of the United States without a permit. Section 404 carves out an exception to EPA’s permitting authority and grants it to the Secretary of the U.S. Army Corps of Engineers (“USACE”) to issue permits for discharge of dredged and fill material to waters of the United States.

The question of what constitutes “waters of the United States,” and therefore what waters are subject to the jurisdiction of EPA or USACE for the purposes of CWA permitting and enforcement, has been the subject of significant debate in the courts. EPA recently issued the “Clean Water Rule”¹⁰¹ in an attempt to clarify the term. Although the Clean Water Rule contemplates a somewhat expansive definition of “waters of the United States,” the application of particular CWA permitting schemes is limited by the Act itself: Section 402 NPDES permitting requirements are applicable only to discharges from point sources, and similarly, Section 404 permit requirements are limited to discharge of dredge or fill materials.¹⁰² The Clean Water Rule became effective on August 28, 2015, and has been the subject of litigation in federal court since that time.¹⁰³ The Trump Administration has proposed a two-step process to withdraw the Clean Water Rule, recodify the previous regulations, and later evaluate options for replacing the rule with new reforms.

Various facets of the existing CWA take into account the need to balance pollution control and prevention goals with economic and technological constraints on regulated entities. For example, federal regulations for industrial wastewater discharges set technology-based numeric discharge limitations at several different levels of control, depending on whether the regulated entity is an existing direct or indirect discharger or a

¹⁰¹ 80 Fed. Reg. 37054 (June 29, 2015). Included in the definition of “waters of the United States” under the Rule are “(i) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (ii) All interstate waters, including interstate wetlands....”

¹⁰² 33 U.S.C. §1344(a), (d) (1987).

¹⁰³ 40 CFR 230.3 (2016). Thirty-one states challenged the constitutionality of the Rule, and the Trump administration has indicated its intention to rescind and replace the Rule. See Executive Order *Restoring the Rule of Law, Federalism and Economic Growth by Reviewing the “Waters of the United States Rule”* (February 28, 2017).

new direct or indirect discharger.¹⁰⁴ This framework takes into account the economic impacts of regulation by including a cost-benefit analysis. In other words, the technology required at a particular facility to control discharges is dependent to some degree on its affordability in relation to the likely benefit in effluent reduction from utilizing the technology.

The penalty provisions of the CWA are also designed to take into account the economic effects of regulating water discharges. The law requires the elimination of any economic benefit from violating the law and requires the heaviest polluters to pay the highest fees compared to those who only have a limited impact. To that end, the CWA establishes monetary penalties for violations of standards, as described in more detail below.

4.3 NPDES Permitting

Section 402 regulates the discharge of pollutants from private or public facilities via point sources¹⁰⁵ into waters of the United States.¹⁰⁶ The NPDES program is broad and covers permitting for discharges from industrial, commercial, retail, institutional, municipal, and construction-related activities. The discharges may consist of wastewater from industrial processes or stormwater that is exposed to industrial and municipal pollution.¹⁰⁷

A. Permitting Authority and Types of Permits

EPA is the central permitting authority under the NPDES program. However, built into the statutory framework is the ability for states to develop and administer their own NPDES program, subject to EPA approval.¹⁰⁸ EPA administers the permitting program in states that have not been delegated NPDES authority, and states with NPDES delegation manage their own NPDES programs.

¹⁰⁴ EPA, LEARN ABOUT EFFLUENT GUIDELINES (2016), <https://www.epa.gov/eg/learn-about-effluent-guidelines#levels>. (“National regulations for industrial wastewater discharges set technology-based numeric limitations for specific pollutants at several levels of control: BPT, BAT, BCT, NSPS, PSNS or PSES.”)

¹⁰⁵ 40 CFR 122.2 (2016). (“*Point source* means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.”)

¹⁰⁶ EPA, EXEMPTIONS TO PERMIT REQUIREMENTS (2017), <https://www.epa.gov/npdes/npdes-permit-basics>.

¹⁰⁷ There are two phases of permitting, depending on either the type of activity, the size of the area affected (either measured by population or acreage), or a combination of both. *See generally* EPA, STORMWATER DISCHARGES FROM MUNICIPAL SOURCES (2017), <https://www.epa.gov/npdes/stormwater-discharges-municipal-sources>. (“...the Phase I regulation requires medium and large cities or certain counties with populations of 100,000 or more to obtain NPDES permit coverage for their stormwater discharge . . . the Phase II regulation requires regulated small MS4s [municipal separate storm sewer systems], as well as small MS4s outside the urbanized areas that are designated by the permitting authority, to obtain NPDES permit coverage for their stormwater discharges.”)

¹⁰⁸ *See generally* 33 USC 1342(b) (2014).

¹⁰⁹ To be delegated NPDES authority, a state must have a program that is at least as strict as EPA's federal program.¹¹⁰

There are two types of NPDES permits: general and individual. General permits cover many facilities in a given state or industrial category and are not site-specific, as the permit allows for multiple dischargers to obtain coverage under that permit.¹¹¹ Many states offer similar permits. General permits require dischargers to prepare and submit to EPA an annual comprehensive site compliance review.¹¹² Individual permits on the other hand, are processed and conditioned based on site-specific conditions of a single discharger based on information provided in their individual application.¹¹³ Generally, in order to obtain coverage under a general permit, a Notice of Intent must be filed with the appropriate agency; some general permits provide automatic coverage when the permit conditions are fulfilled and others make the granting of coverage from the permitting agency a prerequisite. In order to obtain individual permit coverage, a site-specific individual application must be filed. General permits provide the benefit of reduced administrative processing time and expense for both the applicant and the agency and are particularly appropriate for facilities with common characteristics. Individual permits provide for greater site-specific focus and reduction or elimination of unnecessary and overly burdensome general conditions, but they require a greater investment of resources for the development, processing, implementation, and enforcement of the permit.

NPDES permits are for fixed terms not to exceed 5 years, although in practice, EPA allows an expired permit to continue in force as long as the permittee submits a timely and complete application for a new permit.¹¹⁴

B. State Program Delegation Process

The NPDES state delegation process begins with a state's governor submitting to the Administrator of the EPA a "full and complete description of the program it proposes to establish and administer under State law or under an interstate compact."¹¹⁵ The requirements for the state program are outlined in the statute

¹⁰⁹ An outlier to this general structure is the U.S. Virgin Islands, which is the only U.S. territory with NPDES delegation but no permitting authority. EPA, CONDITIONS IN THE U.S. VIRGIN ISLAND WARRANT EPA WITHDRAWING APPROVAL AND TAKING OVER MANAGEMENT OF SOME ENVIRONMENTAL PROGRAMS AND IMPROVING OVERSIGHT OF OTHERS, REP. No. 15-P-0137 (April 17, 2015).

¹¹⁰ A state program may be more stringent than the federal program. *See generally* 33 U.S.C. 1342(b) (2014). *See also* EPA, STATE PROGRAM AUTHORIZATION INFORMATION, (2017), <https://epa.gov/npdes/npdes-state-program-information>.

¹¹¹ EPA, NPDES PERMIT BASICS, (2017), <https://www.epa.gov/npdes/npdes-permit-basics>.

¹¹² *See* EPA ANNUAL REPORTING FORM, https://www3.epa.gov/npdes/pubs/msgp2008_appendixi.pdf

¹¹³ NPDES PERMIT BASICS, *supra* note 107.

¹¹⁴ 40 C.F.R. 122.6 (1985).

¹¹⁵ 33 U.S.C. 1342(b) (2014).

and EPA regulations.¹¹⁶ The delegation process includes a public review, comment period, and a public hearing. If EPA approves the program, the state assumes permitting authority, EPA may delegate all or just certain components of the NPDES permitting program.¹¹⁷

C. Standard-Setting for Sources of Water Pollution

Section 306 of the CWA provides for the development of effluent standards and differentiates between conventional and toxic pollutants and existing and new sources. To develop effluent guidelines, EPA gathers information on industry practices, technologies, or practices that are used to prevent or treat discharges, characteristics of discharges (for example, whether they are stormwater discharges, the flow variability of a discharge, the pollutants involved), and economic factors.¹¹⁸ Based upon this information, EPA identifies the best available technology that is economically achievable for an industry, and sets regulatory requirements based upon the performance of that technology. While the effluent guidelines do not require a facility to install the particular technology that has been identified by EPA, facilities must achieve the regulatory standards that were developed based on the model technology.¹¹⁹ This standard-setting mechanism exemplifies the balancing of economic costs and environmental protection objectives contemplated by the CWA. Built into the law is an understanding of the financial pressures regulated entities face, but the law does not go so far as to undermine the law's purpose of water pollution control.

Standards applicable to new versus existing direct dischargers—grandfathered and non-grandfathered—also reflect this balancing act. Modifications to existing sources were exempted from new source provisions under the CWA in a recognition that older facilities may need time to upgrade and catch up to current technology levels, while new sources have the benefit of starting with a clean slate. New source performance standards apply to direct dischargers and are based on the “best available demonstrated control technology,” which must take account of the cost of achieving the effluent reduction and any non-water quality environmental impacts and energy requirements. New sources that are constructed in accordance with Section 306 of the CWA may be exempted from more stringent standards for ten years or the period for depreciation of the facility, whichever ends first.¹²⁰

The NPDES program also includes a national pretreatment program for discharges into publicly owned treatment works (“POTWs”). There are three

¹¹⁶ EPA, STATE PROGRAM AUTHORIZATION INFORMATION, (2017), <https://epa.gov/npdes/npdes-state-program-information>.

¹¹⁷ *Id.*

¹¹⁸ EPA, LEARN MORE ABOUT EFFLUENT GUIDELINES (2016) <https://www.epa.gov/eg/learn-about-effluent-guidelines>.

¹¹⁹ *Id.*

¹²⁰ 33 U.S.C. § 1316(d) (1972).

types of standards—general and specific prohibitions, categorical pretreatment standards, and local limits—all of which can be enforced by the EPA, as well as state and local governments.¹²¹ In general, discharge of any pollutant to a POTW that can cause pass through or interfere with a water of the United States is forbidden.¹²² The program also outlines specific prohibitions on certain pollutants that are designed to prevent hazardous wastes from entering POTWs.¹²³

For categorical pretreatment standards, the national pretreatment program again balances economic and pollution control factors by setting up effluent limitations guidelines and pretreatment standards that are uniform, technology-based national standards for specific industrial categories. Standards are based on the greatest pollutant reductions economically achievable for each industry and are applicable to indirect dischargers as well.¹²⁴ Local limits focus on the needs and concerns of a specific POTW.¹²⁵ Local limits can be site-specific and numeric or narrative effluent discharge limits.¹²⁶ The POTWs must establish these limits to prevent receiving any wastes that pass through or interfere with the POTW's operations.¹²⁷

In implementing standards for sources of water pollution, EPA establishes total maximum daily loads (“TMDLs”) of pollutants for waters designated as water quality impaired, i.e., not meeting water quality standards established for that waterbody. A TMDL essentially establishes the maximum amount of pollutant a body of water can receive while still safely meeting water quality standards.¹²⁸ TMDLs are based on a variety of factors, including waste load allocations for point sources, margins of safety, cumulative effects (including load allocations for nonpoint sources, which are not regulated to these standards), and sometimes include a reserve allocation.¹²⁹ These waste load and load allocations are in turn used to develop NPDES permit limits and other measures that the state may adopt into its water quality control programs relating to nonpoint source pollution.

¹²¹ EPA, PRETREATMENT STANDARDS AND REQUIREMENTS: APPLICABILITY OF STANDARDS AND REQUIREMENTS, (2017) <https://www.epa.gov/npdes/pretreatment-standards-and-requirements>.

¹²² 40 C.F.R. § 403.5(a) (2005).

¹²³ 40 C.F.R. § 403.5(b) (2005).

¹²⁴ EPA, PRETREATMENT STANDARDS AND REQUIREMENTS: CATEGORICAL PRETREATMENT STANDARDS, (2017), <https://www.epa.gov/npdes/pretreatment-standards-and-requirement>. (These standards apply regardless of whether or not the POTW has an approved pretreatment program or the discharger has a permit).

¹²⁵ EPA, PRETREATMENT STANDARDS AND REQUIREMENTS: LOCAL LIMITS, (2017) *available at* <https://www.epa.gov/npdes/pretreatment-standards-and-requirement>.

¹²⁶ *Id.*

¹²⁷ *Id.*

¹²⁸ 33 U.S.C. § 1313(d)(1)(C) (2000).

¹²⁹ 33 U.S.C. § 1313(d)(4) (2000).

4.4 Section 404 Permitting

As discussed above, Section 404 of the CWA establishes a program, administered by the USACE, designed to regulate the discharge of dredged or fill material into waters of the United States.¹³⁰ It is important to note that Section 404 permits only apply to the discharge of dredged¹³¹ or fill¹³² material, not to the action of dredging itself. These permits are required of all private, state, and federal entities, including the USACE, unless the activity is exempted by statute.¹³³

The statutory exemptions are listed in Section 404(f)(1) and they include ongoing farming, ranching, and silviculture activities; maintenance of drainage ditches; construction and maintenance of irrigation ditches; farm or stock ponds; farm and forest roads; and maintenance and emergency repair of existing structures such as dams, dikes, and levees.¹³⁴

A. The Permitting Process

In addition to individual permits, USACE utilizes Nationwide Permits, Regional General Permits, and other mechanisms that meet established minimum standards and conditions to reduce administrative process and ensure greater uniformity. As of 2017, there are 50 Nationwide permits designed for particular types of projects, e.g., linear transportation. Some Nationwide permits provide coverage through compliance without notice to USACE; others require “preconstruction notification” and USACE approval, potentially including consultation on endangered species and historic preservation issues where those issues are relevant.

¹³⁰ 33 U.S.C. § 1344 (1987). As discussed above, the scope of “waters of the United States” remains an open issue, and as the application of the Clean Water Rule is challenged in federal court, regulated parties must look to complicated and sometimes conflicting case law to resolve the question of whether the CWA applies to the particular location of discharge. In an effort to provide slightly more clarity to regulated parties, a line of cases, including among them *Sackett v. Environmental Protection Agency*, 132 S. Ct. 1367 (2012), have provided regulated parties with an opportunity to challenge USACE’s jurisdiction over a particular discharge before Section 404 enforcement formally occurs.

¹³¹ “Dredged” material means “material that is excavated or dredged from waters of the United States” and does not include “incidental fallback.” 33 C.F.R. § 323.2(c) (2008).

¹³² “Fill material” means “material placed in waters of the United States where the material has the effect of: (i) replacing any portion of a water of the United States with dry land; or (ii) changing the bottom elevation of any portion of a water of the United States.” 33 C.F.R. § 323.2(e)(1) (2008). Examples of fill material include, but are not limited to: “rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mining or other excavation activities, and materials used to create any structure or infrastructure in the waters of the United States. The term fill material does not include trash or garbage.” 33 C.F.R. § 323.2(e)(2)-(3) (2008).

¹³³ 33 U.S.C. § 1344(f)(1) (1987).

¹³⁴ *Id.* See also 33 CFR 323.4(a)(2), EPA, EXEMPTIONS TO PERMIT REQUIREMENTS (2016), <https://www.epa.gov/cwa-404/exemptions-permit-requirements>. (“You do *not* generally need a permit under Section 404 if your discharges of dredged or fill material are associated with normal farming, ranching, or silviculture activities such as plowing, cultivating, minor drainage, and harvesting for the production of food, fiber, and forest products or upland soil and water conservation practices. This exemption pertains to “normal farming” and harvest activities that are part of an established, ongoing farming or forestry operation.”)

The individual permitting process begins with an optional pre-application consultation, which provides the permit applicant with a venue to discuss USACE's preliminary determinations with respect to its jurisdiction and the permit generally.¹³⁵ USACE will provide the permit applicant with an initial jurisdictional determination that remains valid for five years, unless there is a revision due to new information within that timeframe.¹³⁶ Once the initial jurisdictional determination is made, the applicant will submit an application to USACE for review; USACE will issue a public notice within 15 days of a determination that the application is complete.¹³⁷ Interested stakeholders may then submit comments to USACE for a period that typically ranges between 15 to 30 days, depending on the activity and scope of the requested permit.¹³⁸ Infrequently, a public hearing on a permit application may also be held; such a hearing can either be mandated by USACE or requested by another party.¹³⁹ Relatively few requests for public hearing are granted by the agency.

In evaluating an application, the USACE considers overarching general criteria, in addition to those listed in 33 C.F.R. §320.4, including:

1. The relevant extent of public and private need for the proposed work;
2. Where unresolved conflicts of resource use exist, the practicability of using reasonable alternative locations and methods to accomplish the objective of the proposed structure or work; and

¹³⁵ U.S. ARMY CORP OF ENGINEERS, "PERMITTING PROCESS INFORMATION" (2016), <http://www.lrl.usace.army.mil/Portals/64/docs/regulatory/Permitting/PermittingProcessInformation.pdf>; *see also* U.S. ARMY CORPS OF ENGINEERS, "JURISDICTIONAL DETERMINATION FORM INSTRUCTIONAL GUIDEBOOK," (2007),

http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/cwa_guide/jd_guidebook_051207final.pdf.

While it is advisable for a permit applicant to seek a preliminary jurisdictional determination for clarification in advance of the formal permitting process, in practice, it is possible for USACE to make the jurisdictional determination as part of the formal permit process rather than in advance of it.

¹³⁶ *LEADING CASE: III. FEDERAL STATUTES AND REGULATIONS: Clean Water Act -- Jurisdictional Determination -- Finality -- United States Army Corps of Engineers v. Hawkes Co.*, 130 HARV. L. REV. 447, 448 (2016) (discussing when a jurisdictional determination is treated final and binding).

¹³⁷ U.S. ARMY CORP OF ENGINEERS, "PERMITTING PROCESS INFORMATION", *supra* note 131; *see also* U.S. ARMY CORPS OF ENGINEERS, "JURISDICTIONAL DETERMINATION FORM INSTRUCTIONAL GUIDEBOOK," *supra* note 131. The purpose of the public notice is to solicit comments and feedback from all interested stakeholders, including the public, adjacent property owners, and local, state and federal agencies. This allows the agency to gather additional information to evaluate the effects of potentially approving the permit application. An applicant may respond to issues raised in public comment.

¹³⁸ *Id.*

¹³⁹ 33 U.S.C. § 1344 (h)(1)(C) (1987).

3. The extent and permanence of the beneficial and/or detrimental effects the proposed structure or work is likely to have on public and private uses to which the area is suited.¹⁴⁰

A permit, once granted, specifies the duration of the permitted activity, although it may not exceed a period of 5 years.¹⁴¹ The USACE District Engineer¹⁴² prepares a statement of findings that details the District Engineer's position on the probable effect of the proposed work under the permit.¹⁴³ If the permit is granted, USACE sends a copy to the applicant for execution.¹⁴⁴ If a permit is denied, the USACE will provide a written explanation regarding the denial to the applicant.¹⁴⁵

Section 404(b)(1) of the CWA provides the authority for EPA to develop Guidelines for considering alternatives in permit actions. The main purpose of the Guidelines, which are binding, is to prohibit "discharges of dredged or fill material into waters of the United States, including wetlands [...] unless it can be demonstrated that such discharges, either individually or cumulatively, will not result in unacceptable adverse effects on the aquatic ecosystem."¹⁴⁶ The Guidelines require potential dischargers to assess practicable alternatives to their original proposed discharge.¹⁴⁷ A permit will not be issued in those cases where a less environmentally damaging and practicable alternative is found (except as provided under Section 404(b)(2) of the CWA).¹⁴⁸

Where impacts to aquatic resources are unavoidable, compensatory mitigation is required to replace the loss of wetland and aquatic resource functions in a watershed.¹⁴⁹ Compensatory mitigation can take the form of restoration (i.e., re-

¹⁴⁰ U.S. ARMY CORP OF ENGINEERS, "PERMITTING PROCESS INFORMATION," *supra* note 131; *see also* U.S. ARMY CORPS OF ENGINEERS, "JURISDICTIONAL DETERMINATION FORM INSTRUCTIONAL GUIDEBOOK," *supra* note 131.

¹⁴¹ 33 U.S.C. § 1344(e)(2) (1987).

¹⁴² The USACE operates under a project manager system, which essentially assigns one individual responsible for handling an application from start to finish.

¹⁴³ U.S. ARMY CORP OF ENGINEERS, "PERMITTING PROCESS INFORMATION," *supra* note 131; *see also* U.S. ARMY CORPS OF ENGINEERS, "JURISDICTIONAL DETERMINATION FORM INSTRUCTIONAL GUIDEBOOK," *supra* note 131. This document can call for an environmental assessment (EA) or environmental impact statement (EIS), which will then require further research into the potential effects in granting the permit. Where an EA or EIS is involved, the permitting process can take significantly longer.

¹⁴⁴ U.S. ARMY CORP OF ENGINEERS, "PERMITTING PROCESS INFORMATION," *supra* note 41; *see also* U.S. ARMY CORPS OF ENGINEERS, "JURISDICTIONAL DETERMINATION FORM INSTRUCTIONAL GUIDEBOOK," *supra* note 131. A permit form will include any special conditions applicable to the particular project.

¹⁴⁵ U.S. ARMY CORP OF ENGINEERS, "PERMITTING PROCESS INFORMATION," *supra* note 41; *see also* U.S. ARMY CORPS OF ENGINEERS, "JURISDICTIONAL DETERMINATION FORM INSTRUCTIONAL GUIDEBOOK," *supra* note 41.

¹⁴⁶ EPA, "MEMORANDUM: APPROPRIATE LEVEL OF ANALYSIS REQUIRED FOR EVALUATING COMPLIANCE WITH THE SECTION 404(B)(1) GUIDELINES ALTERNATIVES REQUIREMENTS" (2016), <https://www.epa.gov/cwa-404/memorandum-appropriate-level-analysis-required-evaluating-compliance-section-404b1>.

¹⁴⁷ *Id.* This is required in every case, and mandates that the applicant "evaluate opportunities for use of non-aquatic areas and other aquatic sites that would result in less adverse impact on the aquatic ecosystem."

¹⁴⁸ *Id.*

¹⁴⁹ ¹⁴⁹ EPA, "WETLANDS COMPENSATORY MITIGATION" (2008), https://www.epa.gov/sites/production/files/2015-08/documents/compensatory_mitigation_factsheet.pdf

establishing or rehabilitating an aquatic resource with the goal of restoring natural or historic functions), establishment (creating an aquatic resource where one did not previously exist), enhancement (conducting activities within an existing wetland to improve wetland functions), or preservation (the permanent protection of aquatic resources).¹⁵⁰

The first two measures typically result in a net gain in wetland function or acreage, while the latter two may not produce a net gain in acreage but are focused on maintaining and improving existing aquatic resources. Preservation, in particular, may only be used as compensatory mitigation in limited circumstances for this reason.¹⁵¹ Compensatory mitigation may be achieved through different mechanisms: the Section 404 permittee may perform the mitigation itself, the permittee may purchase credits from a mitigation bank (a wetlands area that is set aside to compensate for future wetlands conversions), or the permittee may provide funds to an in-lieu fee sponsor (a public agency or non-profit organization that pools fees from multiple permittees to maintain a mitigation site).¹⁵² These three different pathways to mitigation are yet another example of how the CWA takes into account economic impacts to permittees—a permittee may not have the time or resources to develop and oversee mitigation itself—while still ensuring that environmental protection measures are taken and ensuring consistency in the mitigation itself.

All Section 404 permits require state certification of consistency with the State’s water quality standards (discussed above in Section II) and, if applicable, the State’s Coastal Protection program.¹⁵³ Such certification may be provided either programmatically or individually, depending on the state in which the project is located. In addition, EPA may authorize states to administer the federal program under conditions similar to those for delegation of NPDES permitting authority.

4.5 Clean Water Act Enforcement

A variety of enforcement mechanisms may be utilized under the CWA to penalize violators, but also assist them in coming into compliance with the CWA. Many of these enforcement mechanisms exemplify the CWA’s balance of water pollution control with a cognizance of the economic and technical constraints affecting regulated entities. Each enforcement mechanism is discussed in greater detail in this section, but generally, enforcement mechanisms include administrative orders, which oftentimes are negotiated with a violator; penalties for violations, which take into account the nature of the alleged violation and the economic constraints facing a violator; alternatives to penalties in the form of SEPs, which can mitigate penalties and provide incentives for compliance; and, in some cases, litigation by either the government or a citizen group.

¹⁵⁰ *Id.*

¹⁵¹ *Id.*

¹⁵² *Id.*

¹⁵³ CWA §401(a)(1); 33 USC1341(a)(1); 16 U.S.C. 1456(c).

While EPA or a state that has been delegated NPDES permitting authority are the usual enforcement agencies in the context of Section 402 violations, Section 404 enforcement authority is divided between EPA and USACE depending on the type of Section 404 violation at issue.¹⁵⁴

A. Administrative Orders

Under Section 402, continued discharge in violation of permit limits is unlawful, but EPA will generally exercise its enforcement discretion in a manner that avoids facility shut-down. Typically, EPA will work with an alleged violator to establish a compliance schedule, which is often memorialized in an administrative order issued by the agency.¹⁵⁵ States with delegated NPDES permitting authority can enforce the program in a similar fashion.¹⁵⁶ EPA may proceed independently under its enforcement authority if it finds a violation of the CWA in a delegated state.¹⁵⁷

Enforcement actions require violators to quickly correct any violations and remedy harms caused by any violations. Monetary penalties, which are discussed below, are typically sought in conjunction with an enforcement action to deter future violations by the same violator and members of the regulated community, and to ensure that violators do not receive an economic advantage over competitors from violating pollution control laws. However, in addition to penalties, administrative orders can serve as valuable tools for achieving compliance by memorializing compliance activities and schedules. EPA administrative orders under section 402 are enforceable in court.

Under Section 404, USACE may issue an order requiring compliance with the conditions or limits of a Section 404 permit. USACE also holds the authority to issue cease and desist orders for unpermitted discharges of dredge and fill materials.¹⁵⁸ The CWA does not authorize penalties for the violation of USACE

¹⁵⁴ There are two main categories of Section 404 violations: (1) failure to comply with the terms and conditions of an existing permit; or (2) unauthorized discharging of dredged or fill material into waters of the United States. Enforcement against such violations is shared by EPA and USACE pursuant to a Memorandum of Agreement between the two agencies. See MEMORANDUM BETWEEN THE DEPARTMENT OF THE ARMY AND THE ENVIRONMENTAL PROTECTION AGENCY, FEDERAL ENFORCEMENT FOR THE SECTION 404 PROGRAM OF THE CLEAN WATER ACT (1989), <https://www.epa.gov/cwa-404/federal-enforcement-section-404-program-clean-water-act>. USACE, as the agency that grants Section 404 permits, conducts initial investigations with respect to alleged violations of any discharge permit. Further, if USACE issues a determination that an activity is in compliance with the terms of a permit, that decision will represent the final enforcement decision by the government for that particular case. However, with respect to unpermitted discharges, EPA and USACE jointly determine the appropriate agency to lead the investigation.

¹⁵⁵ 33 U.S.C. § 1319(a)(3) (1990).

¹⁵⁶ 33 U.S.C. § 1319 (1990).

¹⁵⁷ EPA, CLEAN WATER ACT (CWA) AND FEDERAL FACILITIES, (2016), <https://www.epa.gov/enforcement/clean-water-act-cwa-and-federal-facilities#EPA%20Enforcement>.

¹⁵⁸ FIELD LEVEL AGREEMENT BETWEEN THE U.S. ARMY CORPS OF ENGINEERS, SOUTH PACIFIC DIVISION AND THE U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION IX : “Concerning Federal Enforcement for the Section 404 Permit Program of the Clean Water Act” at § 2(g) (2009),

administrative orders, including cease and desist orders. However, if the government initiates a lawsuit against the alleged violator, a violator does remain liable for continuing CWA violations, and courts tend to penalize violators more severely if they continue illegal activities after notification of their violation by the USACE.

B. Administrative Penalties and Alternatives to Penalties

Under Section 402, CWA penalties are broken down into two types: Class I and Class II. Class I penalties may not exceed \$11,000 per day, with a total maximum of \$32,500, while Class II penalties may also not exceed \$11,000 per day, but with a total maximum of \$157,500. Civil actions can be brought by the EPA against an alleged violator without first issuing an administrative order and with no maximum total penalty limit.¹⁵⁹ Criminal actions can be brought for dischargers that either negligently¹⁶⁰ or willfully¹⁶¹ violate the CWA. In these cases, the EPA refers the case to the U.S. Department of Justice for criminal prosecution, which can result in imprisonment.

Under Section 404, the authority to impose administrative penalties is also split between EPA and USACE: USACE has the authority to assess penalties for violations of a condition or limitation of a Section 404 permit, while the EPA has authority to assess penalties for unpermitted discharges of dredged and fill materials.¹⁶² In this context, a Class I civil penalty may not exceed \$10,000 per violation, “except that the maximum amount of any class I civil penalty . . . shall not exceed \$25,000.” Class II civil penalties, by contrast, may not exceed \$10,000 per each day of violation, with a maximum penalty amount of \$125,000.¹⁶³ USACE has issued regulations for assessing Class I penalties,¹⁶⁴ and EPA has issued regulations for assessing Class II penalties.¹⁶⁵

In general, in assessing penalties, the agencies consider a variety of factors, including the economic benefit the violator received from committing the violation, the severity and duration of the violation, and the violator’s ability to pay the penalties.¹⁶⁶ Similar to how penalties are computed under other statutes,

http://www.spk.usace.army.mil/Portals/12/documents/regulatory/pdf/agreements/Field_Level_Agreement_EPA_I_X.pdf.

¹⁵⁹ 33 U.S.C. § 1319 (b) (1990).

¹⁶⁰ 33 U.S.C. § 1319(c)(1) (1990).

¹⁶¹ 33 U.S.C. § 1319(c)(2) (1990).

¹⁶² EPA, SECTION 404 PERMIT PROGRAM (2017), <https://www.epa.gov/cwa-404/section-404-permit-program>.

¹⁶³ 33 U.S.C. § 1319(g)(2)(A)-(B) (1990).

¹⁶⁴ 33 C.F.R. 326.6.

¹⁶⁵ 33 U.S.C. § 1319(g) (1990) (In assessing penalties, 33 U.S.C. § 1319(g)(3) calls for the Administrator or Secretary to “take into account the nature, circumstances, extent and gravity of the violation, or violations, and, with respect to the violator, ability to pay, any prior history of such violations, the degree of culpability, economic benefit or savings (if any) resulting from the violation, and such other matters as justice may require.”).

¹⁶⁶ *See, e.g.*, EPA, INTERIM CLEAN WATER ACT SETTLEMENT PENALTY POLICY (1995), <https://www.epa.gov/sites/production/files/documents/cwapol.pdf>.

assessment begins with calculation of the economic benefit of noncompliance, using the economic benefit computer model.¹⁶⁷ The penalty is then adjusted upward based on the severity and duration of the violation. Reflecting the policy decision not to force plants out of operation because of penalties that exceed violator's capacity to pay, the government will allow for a decreased penalty based on demonstrated inability to pay, determined through application of an ability to pay computer model.¹⁶⁸ Even in inability to pay settings, the government will generally seek to recover at least the economic benefit of noncompliance, but may allow the violator to pay the penalty over time. SEPs may also be taken into account in a penalty calculus. Ultimately, the goal of the penalty policy is to deter violations, ensure the violator does not benefit from a violation, and bring a violator back into compliance while still taking into account the financial status of the violator.

The agency assessing civil penalties must provide the alleged violator with notice of the agency's intent to issue a penalty order and must give the alleged violator 30 days to request a hearing on the proposed order.¹⁶⁹ Following any hearing, the public must be given notice and an opportunity to comment on the proposed civil penalty order.¹⁷⁰ Civil penalty orders are reviewable in court and may be challenged either by the alleged violator or by a third party who participated in public comment on the order. For Class I penalties, an order may be reviewed by the U.S. District Court of the District of Columbia or the district court for the district where the violation occurred, and for Class II penalties, an order may be reviewed by the U.S. Court of Appeals for the District of Columbia Circuit or for any other circuit where the alleged violator resides or transacts business.¹⁷¹ In addition to administrative penalty provisions, the SEP mechanism exists to assist regulated entities in achieving compliance while mitigating administrative penalties.

C. Judicial Enforcement

Both EPA and USACE may elect to refer an enforcement action against an alleged violator to the Department of Justice for litigation. Because judicial penalties are assessable on a per-day and per-violation basis, and are not subject to a penalty cap, judicial enforcement is the option of choice in cases warranting major penalties or which involve complex corrective action which might benefit from judicial supervision. With respect to Section 404, under the language of the CWA, EPA has the authority to bring enforcement actions for the unpermitted discharge of dredged or fill material¹⁷² and USACE holds authority to bring an

¹⁶⁷ EPA Enforcement Policies *supra* note 80.

¹⁶⁸ *Id.*

¹⁶⁹ Only hearings on Class II civil penalty orders must follow the procedures set forth in the Administrative Procedures Act. *See generally* 5 U.S.C. Subchapter II § 551-559 (2011).

¹⁷⁰ 33 U.S.C. § 1319(g)(4)(a).

¹⁷¹ 33 U.S.C. § 1319(g)(8)(A)-(B) (1990).

¹⁷² 33 U.S.C. § 1319(g)(2)(A) (1990).

enforcement action for violation of a condition or limitation of a Section 404 permit.¹⁷³ The penalty assessment factors and methodology described for administrative penalty also guide penalty computation in judicial enforcement cases.

D. Citizen Suits

Finally, under Section 505 of the CWA, citizens can file a civil action against alleged violators, the EPA, and delegated states for failure to perform a nondiscretionary duty under the CWA.¹⁷⁴ In these cases, relief can include civil penalties payable to the U.S. Treasury and an injunction to prevent an ongoing violation.¹⁷⁵ Any person may bring suit against an alleged violator to compel compliance with the CWA, provided that the federal government is not already diligently prosecuting an enforcement action against the alleged violator.¹⁷⁶ Any person may also bring suit against the EPA Administrator for an alleged failure to enforce the CWA or “to perform any act or duty under this chapter which is not discretionary with the Administrator.”¹⁷⁷ USACE is subject to suit under the federal Administrative Procedure Act if it fails to comply with any of the procedural requirements for issuing permits or administrative orders under Section 404.¹⁷⁸

¹⁷³ 33 U.S.C. § 1319(g)(2)(B) (1990). USACE provides general guidance on whether the matter should be referred to the Department of Justice as a civil or criminal enforcement action. 33 C.F.R. 326.5. EPA assesses civil and criminal penalties differently. Civil liability does not take into consideration knowledge of the responsible party, but criminal liability requires some level of intent. *See generally* EPA, Enforcement Basic Information (2017) available at <https://www.epa.gov/enforcement/enforcement-basic-information>. USACE policy is typically not to pursue enforcement against activities that were completed more than five years prior to discovery.

¹⁷⁴ 33 U.S.C. § 1365(a) (1987).

¹⁷⁵ 33 U.S.C. § 1365(a)(2) (1987); 33 U.S.C. § 1319(d) (1990).

¹⁷⁶ Carie Goodman McKinney, *Statute of Limitations for Citizen Suits Under the Clean Water Act*, 72 CORNELL L. REV. 195, 195 footnote 1 (1986); 33 U.S.C. § 1365(a)(1) (1987).

¹⁷⁷ 33 U.S.C. § 1365(a)(2) (1987).

¹⁷⁸ *See generally* 5 U.S.C. §§ 500 *et seq.*

5. Resource Conservation and Recovery Act

5.1 Introduction

The Resource Conservation and Recovery Act (“RCRA”) is the United States’ primary statutory scheme for regulating the generation, transportation, treatment, storage and disposal of solid and hazardous waste. RCRA passed Congress on September 30, 1976, and was later signed into law by President Gerald Ford on October 21 of that same year. While the original version of RCRA signifies the United States’ first major step towards toward regulating waste, much of the regulatory regime we have today stems from the Hazardous and Solid Waste Amendments of 1984 (“HSWA”). The 1984 amendments set forth criteria for the management of solid and hazardous waste and requirements for generators, transporters, and facilities that treat, store, or dispose of hazardous waste.

At its core, RCRA represents a response to growing concerns over increased volumes and improper dumping of municipal and industrial waste. An EPA-issued press release from December 21, 1976 described the issues RCRA was intended to address:

“Partly as a result of pollution controls that keep wastes out of the air and water, growing amounts of solid wastes are being generated and deposited on the land. Disposal on land has gone largely uncontrolled, resulting in numerous instances of serious effects on human health and environmental quality. The contamination of groundwaters by substances leaching from disposal sites is a primary concern. The most urgent objective of the new law is to prevent this and other environmental effects of improper disposal.”¹⁷⁹

Thus, through RCRA, Congress sought to create a comprehensive program to track and regulate waste in a manner that protected human health and the environment.

The statute is intended to be a “cradle to grave” system that tracks waste from generation to its ultimate treatment or disposal. RCRA consists of the following components: The Subtitle C Hazardous Waste program,¹⁸⁰ the Subtitle D Solid Waste program,¹⁸¹ the “imminent and substantial endangerment” provisions,¹⁸² and the Subtitle I Underground Storage Tank (“UST”) program.¹⁸³ EPA has a number of enforcement mechanisms to ensure facilities comply with RCRA’s statutory provisions and EPA regulations, including corrective action orders, compliance monitoring and civil and criminal penalties. Like the Clean Air Act, Clean Water Act and other environmental laws, RCRA embraces the doctrine of cooperative federalism. The law is largely enforced by authorized states with regulatory programs no less stringent than federal standards. As

¹⁷⁹ U.S. EPA, Press Release: *New Law to Control Hazardous Wastes, End Open Dumping, Promote Conservation of Resources*, December 13, 1976, available at <https://archive.epa.gov/epa/aboutepa/new-law-control-hazardous-wastes-end-open-dumping-promote-conservation-resources.html>.

¹⁸⁰ 42 U.S.C. §§ 6921-39.

¹⁸¹ §§ 6941-49.

¹⁸² § 6973.

¹⁸³ § 6991.

with other EPA delegated programs, for the few states without an approved program, EPA retains the authority to enforce RCRA in those jurisdictions. The statute also contains three citizen suit provisions that allow any person to commence a civil action against: (i) any person that is in violation of any permit, standard, or regulation under RCRA;¹⁸⁴ (ii) any person that has who has contributed to the handling, storage, treatment, or disposal of solid or hazardous waste “which may present an imminent and substantial endangerment to health or the environment;”¹⁸⁵ or (iii) directly against the EPA Administrator for failing to perform any nondiscretionary act or duty required by the statute.¹⁸⁶

Compliance with RCRA regulation can be costly and burdensome. Nevertheless, EPA has made a number of efforts to strike a proper balance between protecting human health and the environment from risks associated with mismanagement of wastes and economic development. The following sections summarize a few examples, including waste exclusions, “interim status” provisions, generator annual status changes, as well as exceptions for small generators.

The Subtitle C Hazardous Waste program aims to manage hazardous wastes in a way that protects human health and the environment. RCRA defines “hazardous waste” as any solid waste or combination thereof that “may cause, or significantly contribute to an increase in mortality or an increase in serious, irreversible, or incapacitating reversible, illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.”¹⁸⁷ Before a waste is deemed hazardous, it must meet the statutory definition of “solid waste” under RCRA Subtitle C. This is always a crucial determination, as materials that are not solid wastes are not subject to regulation under RCRA. The statute broadly defines “solid waste” as “any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material [...] resulting from industrial, commercial, mining, and agricultural operations, and from community activities...”¹⁸⁸ Solid waste may be deemed hazardous by one of two means: it demonstrates one or more hazardous characteristics (i.e., ignitability, corrosivity, reactivity or toxicity); or is included on one of four lists (the F, K, P, and U lists) maintained in the Code of Federal Regulations.¹⁸⁹ Once a waste is deemed hazardous, companies that generate, transport, or treat, store, and dispose it are subject to strict regulatory oversight.

¹⁸⁴ § 6972(a)(1)(A).

¹⁸⁵ § 6972(a)(1)(B).

¹⁸⁶ § 6972(a)(2).

¹⁸⁷ 42 U.S.C. § 6903(5).

¹⁸⁸ 42 U.S.C. § 6903(27).

¹⁸⁹ 40 C.F.R. Part 261.31-32 (2015) (**the F-list** includes non-specific source wastes from common manufacturing and industrial processes; the K-list includes source-specific wastes from certain industries (e.g., agricultural, petroleum refining); the P and U-lists are made up of discarded commercial products).

A. Industry-specific exclusions

Categorically excluding specific wastes is one example of how RCRA has balanced economic and environmental considerations. Many materials that would otherwise classify as solid or hazardous waste are categorically excluded from these definitions. EPA has excluded certain materials from regulation under RCRA to avoid duplicative regulation (e.g., point source discharges already subject to the CWA, radioactive waste under the Nuclear Waste Policy Act). However, some industry-specific wastes have also been excluded to afford those industries reprieve from high compliance costs.

The following represent some of the materials excluded from the definition of solid waste: domestic sewage, in-situ mining materials, spent sulfuric acid, spent wood preservatives, coke by-product waste, scrap metal intended for recycling, shredded circuit boards, solvent contaminated wipes used for cleaning and sent for reuse, secondary materials used to make zinc fertilizers, and petrochemical recovered oil from an organic chemical manufacturing facility.¹⁹⁰ The following materials that would otherwise classify as hazardous waste are treated only as solid waste: agricultural waste, mining and mineral processing waste, fossil fuel combustion waste, cement kiln dust, injected groundwater, spent chlorofluorocarbon refrigerants.

EPA continues to exempt materials as solid and hazardous waste via formal rulemaking. In 2015, the EPA promulgated the Definition of Solid Waste rule (“2015 DSW rule”) to disincentivize over-accumulation and mismanagement of hazardous secondary material and promote safe and legitimate recycling.¹⁹¹ Under the 2015 DSW rule, if the following four criteria are met, the secondary material will not be considered hazardous waste: (1) the secondary material must provide a useful contribution to the recycling process; (2) the recycling must produce a valuable product; (3) the secondary material must be managed as a valuable commodity; and (4) the recycled product must be comparable to a legitimate product or intermediary.¹⁹² The 2015 DSW also exempts hazardous secondary materials sent for reclamation at a verified recycler. More recently, in 2016, EPA exempted three more materials as non-waste fuels: wood processed from construction and demolition debris, paper residuals from paper recycling, paperboard and corrugated containers and combusted by paper recycling mills whose boilers are designed to burn solid fuel; and creosote treated railroad ties that are processed and then combusted.¹⁹³

Illustrative of how these exemptions were aimed at easing the regulatory burden on industry is the treatment of the oil and gas industry under RCRA. Though they may exhibit hazardous characteristics, EPA excluded drilling fluids, produced

¹⁹⁰ 40 C.F.R. Part 261.4(a) (2015).

¹⁹¹ 80 Fed. Reg. 8, 1694 (Jan. 13, 2015).

¹⁹² *Id.*

¹⁹³ 81 Fed. Reg. 25, 6687 (Feb. 8, 2016).

waters, and other materials associated with oil and gas exploration, development, and production. In a 1987 report to Congress, EPA stated that imposing “Subtitle C regulations for all oil and gas wastes could subject billions of barrels of waste to regulation . . . and would cause a severe economic impact on the industry and on oil and gas production”, and cause capacity strains on Treatment, Storage, and Disposals Facilities (“TSDFs”).

Although benefits may vary depending on the type of exclusion involved and how prevalent a material is in a facility’s operation, companies have undoubtedly benefitted from being able to manage the materials outside the purview of hazardous waste regulations.

B. Small generator exceptions and annual status changes

Generators, defined as those that first cause a hazardous waste to become subject to regulation, generally must abide by pre-transportation storage and labeling requirements, minimize the amount of waste generated through reduction and recycling efforts, and notify EPA before engaging in any hazardous waste activity otherwise subject to regulation.¹⁹⁴ Unlike TSDFs, generators need not obtain a hazardous waste permit unless they accumulate enough hazardous waste to exceed the regulatory weight threshold. Because waste cannot be treated immediately after it is generated, EPA regulations allow a 90-day grace period for all facilities regardless of size and generating waste capacity. Generators may accumulate waste for less than 90 days without obtaining a permit as long as the waste is properly stored in suitable, clearly labeled container tanks.¹⁹⁵ Generators of any size may also accumulate up to 55 gallons of hazardous waste or one quart of acutely hazardous waste near the point of initial generation without triggering the 90-day grace period or a permit.¹⁹⁶

The Subtitle C program provides a number of *exceptions* to generator regulations that respect small operations and practical aspects of the industry. Recognizing that compliance can be especially burdensome and costly on smaller facilities, EPA carved out exceptions to the permitting scheme for “very small quantity generators” (“VSQGs”) and “small quantity generators” (“SQGs”). VSQGs generate 100 kg or less of hazardous waste per month or one kilogram or less of acutely hazardous waste per month. These facilities need not obtain a permit, but must ensure that hazardous waste is either properly managed on-site or at an authorized TSDF. SQGs generate between 100 kilograms and 1,000 kilograms of hazardous waste per month. SQGs are subject to more stringent requirements than VSQGs, but may nevertheless operate without a permit as long as they accumulate hazardous waste for less than 180 days (or 270 days if shipping the waste more than 200 miles away).

¹⁹⁴ 40 C.F.R. Part 262 (2015).

¹⁹⁵ 40 C.F.R. Part 262.34(a)(1) (2016).

¹⁹⁶ 40 C.F.R. Part 262.34(b) (2016).

More recently, EPA promulgated regulations that allow flexibility for small generators that experience an episodic event that would otherwise alter or destroy their respective classification. VSQGs and SQGs occasionally experience events whereby the total amount of hazardous waste generated at their facility may exceed monthly limits. Rather than enforce a rigid system that would trigger frequent classification changes, on November 11, 2016, EPA issued a final rule allowing VSQGs and SQGs to temporarily generate additional hazardous waste that exceed categorical limits while maintaining their category.¹⁹⁷ An “episodic event” may include short term development projects or a response to unexpected market forces, such as a product recall or production upsets.¹⁹⁸

VSQGs and SQGs seeking to use this flexibility must notify EPA at least thirty calendar days prior to initiating a planned episodic event or within seventy-two hours after an unplanned episodic event, identify the start and end dates of the event, use a hazardous waste manifest, and waste transporter to ship the waste to a designated facility. This approach may only be used once per year and for episodic events lasting less than sixty days.

C. Interim status for TSDFs

Operators of TSDFs must obtain and comply with a hazardous waste management permit before treating, storing, or disposing of hazardous waste. When RCRA was enacted, EPA realized it would be impossible to issue permits to all operating TSDFs before the Subtitle C program took effect on November 19, 1980. To alleviate a situation of immediate noncompliance, RCRA’s “interim status” provisions allow certain facilities to operate without the site-specific, more stringent hazardous waste permit, as long as certain conditions are met.

Interim status applies to TSDFs that were operating prior to November 19, 1980 (the effective date of RCRA’s Subtitle C) or to the effective date of any subsequent “statutory or regulatory change” that first subjects the facility to permitting requirements. While some facilities were grandfathered into interim status by the very nature of being antiquated (i.e., operating before 1980), the protection also applies to facilities newly thrust into the Subtitle C program via new rulemaking. This has occurred when regulations subject new materials to permitting requirements or require a facility to alter operations in a way that subjects it to permitting. In either case, interim status authorizes TSDFs to operate in accordance with 40 C.F.R. Part 265, until EPA approves or denies the facility’s hazardous waste management permit or until interim status is terminated.

The interim status provisions are also somewhat forgiving in that they allow TSDF operators to make changes without losing this status. If an operator

¹⁹⁷ 81 Fed. Reg. 228 (Nov. 28, 2016).

¹⁹⁸ *Id.*

submits a revised interim status application with a statement justifying any of the following changes, a facility's interim status will not be lost:

1. Managing different or additional hazardous wastes not included in original permit application,
2. Changing or adding treatment, storage, or disposal processes,
3. Changing operations to comply with a corrective action order,
4. Site has new ownership or operator.

Changes that amount to a "reconstruction" will generally result in a loss of interim status. Reconstruction occurs when capital expenditures of an alteration exceed fifty percent of what it would cost to construct a new, comparable facility. Unless changes amounting to this cost are made to comply with new restrictions or a corrective order, the significant changes cannot be taken without risking revocation of the facility's interim status.

The interim status provisions allow grandfathered-in facilities to operate in accordance with generalized, non-site specific standards set forth in 40 C.F.R. Section 265.¹⁹⁹ The standards are essentially identical to that of permitted facilities, except in a few areas. TSFDs are required to have closure plans that dictate how operators will be fully or partially closed in a way that minimizes need for future maintenance and controls. Closure plans must provide detailed directions of the necessary steps taken to cease operations and remove hazardous waste residues, but must also set forth a closure schedule. Unlike permitted facilities, interim status TSDFs can withhold submitting closure plans to EPA until 45 or 180 days before the anticipated closure date, and may amend these plans any time before they are submitted to EPA.²⁰⁰

5.2 Penalties

The RCRA civil and criminal penalty scheme is prescribed by statute and the penalty amounts are periodically adjusted via EPA rulemaking.²⁰¹ For violations that occur in states without EPA-approved regulatory programs, EPA may pursue penalties via compliance orders of up to \$57,391 per violation, per day and \$71,264 for penalties pursued through civil suit.²⁰² Those that *knowingly* violate the statute may face significant penalties and possible imprisonment.²⁰³ Any person that knowingly places

¹⁹⁹ Compare 40 C.F.R. Part 265 with 40 C.F.R. Part 264.

²⁰⁰ 40 C.F.R. Part 265.112 (2016).

²⁰¹ 82 Fed. Reg. 8, 3633 (Jan. 12, 2017)(adjusting civil monetary penalty amounts for statutes administered by EPA)

²⁰² § 6928(a); *see also* 82 Fed. Reg. 8, 3633 (Jan. 12, 2017).

²⁰³ § 6928(d).

another person in imminent danger of death or serious bodily injury may be subject to a fine up to \$250,000 and possible imprisonment not to exceed fifteen years.²⁰⁴

To complement the statute, EPA established the RCRA Civil Penalty Policy (“RCRA Penalty Policy”) to provide national, concordant guidance for the development of civil penalties in enforcement actions and settlements.²⁰⁵ The RCRA Penalty Policy followed Section 3008’s directive that the “seriousness of the violation” and “good faith efforts to comply” be considered in assessing a penalty amount. Enforcement authorities are encouraged to use the following calculation methodology:

Penalty Amount = gravity-based component + multi-day component +/- adjustments + violator’s economic benefit²⁰⁶

While the purpose of this paper is not to examine the calculation methodology in depth, certain aspects of it exemplify a balance between punishing and deterring future misconduct, while avoiding the crippling effect penalties may have on violators.

First, the “seriousness” of the violation is accounted for in the gravity-based component of the calculation. Not all violations are considered equal in the eyes of the RCRA Penalty Policy—the more serious the violation, the higher one can expect to be penalized. A RCRA violation has a greater potential for harm if there is a higher risk of human and environmental exposure, a greater quantity and toxicity of wastes involved, or enhanced mobility via air and water pathways. Enforcement authorities may find a greater potential for harm based on the existence, size or proximity of residents and/or wildlife exposed. Presumptively, a significant release of toxic waste near a metropolitan city would elicit a greater penalty than a release of the same magnitude in a remote or unpopulated location. The determination of how severe the potential for harm is carries significant ramifications and the difference between a minor and a major potential for harm can be tens of thousands of dollars.

Under the RCRA Civil Penalty Policy, a violator’s penalty may increase or decrease through a number of “adjustments.” While a violator’s history of noncompliance, e.g., prior violations with RCRA or other environmental laws, may inflate the penalty, the RCRA Civil Penalty Policy requires agencies to consider good faith efforts to comply. Such efforts may take the form of promptly notifying regulators of a violation, rather than hiding the problem. Reliance on guidance from authorities that is later deemed unlawful will also be considered if it relates to a violation.

One traditional tenet to administrative civil penalties is to deprive the violator of any economic benefit that is received as a result of noncompliance. The purpose of this is to completely disincentivize noncompliance with environmental regulations. In the context of RCRA, an economic benefit might include the failure to install groundwater monitoring technologies, a refusal to retrofit storage equipment, or the use of improper disposal techniques. As with penalties assessed under other statutes, assessment often

²⁰⁴ § 6928(e).

²⁰⁵ See EPA, RCRA CIVIL PENALTY POLICY (2003), <https://www.epa.gov/sites/production/files/documents/rcpp2003-fnl.pdf>.

²⁰⁶ *Id.* at 1.

begins with calculation of the economic benefit of noncompliance, using the economic benefit computer model.²⁰⁷ The penalty is then adjusted upward based on the severity and duration of the violation. Reflecting the policy decision not to force plants out of operation through penalties that exceed violator's capacity to pay, the government will allow for a decreased penalty based on demonstrated inability to pay, determined through application of the ABEL computer model.²⁰⁸ Even in inability to pay settings, the government will generally seek to recover at least the economic benefit of noncompliance, but may allow the violator to pay the penalty over time.

A violator may mitigate potential penalties in settlement discussions by agreeing to perform SEPs (environmentally beneficial projects or activities, not required by law, that a party agrees to undertake as part of a settlement agreement).²⁰⁹ Prior consent decrees incorporating SEPs have provided for such measures as purchasing land for preservation,²¹⁰ remediating seepage breakouts,²¹¹ retrofitting a facility,²¹² even funding a high school green chemistry curriculum and initiative to identify toxic contaminants in aging schools.²¹³

Although the RCRA Civil Penalty Policy is only guidance material, enforcement agencies follow its approach in civil actions and settlement discussions.

5.3 Corrective Action Program

The RCRA corrective action program was established through the Hazardous and Solid Waste Amendments of 1984. The program requires TSDFs to investigate and cleanup releases of hazardous wastes and hazardous constituents that pose an unacceptable risk to human health and the environment.²¹⁴ Specifically, RCRA section 3004(u) requires any TSDF seeking a permit to undertake corrective action for any release from a solid waste management unit ("SWMU"), regardless of when the waste was placed at the unit. SWMUs are any discernible unit where solid or hazardous wastes have been placed at any time, or any area where solid wastes have been routinely and systematically

²⁰⁷ EPA Enforcement Policies supra note 80.

²⁰⁸ *Id.*

²⁰⁹ See *Supplemental Environmental Projects Policy 2015 Update* (May 10, 2015), at 1, <https://www.epa.gov/sites/production/files/2015-04/documents/sepupdatedpolicy15.pdf>.

²¹⁰ Notice of Lodging of Consent Decree Pursuant to the Resource Conservation and Recovery Act, 67 Fed. Reg. 109 (Jan. 2, 2002)(parties agreeing to SEP to purchase land for preservation in *United States v. Mobil Oil Corporation*, (No. CV-96-1432, E.D.N.Y. (Dec.13, 2001).

²¹¹ Consent Decree, *United States, et al. v. Mosaic Fertilizer, LLC*, (No. 15-cv-02286) (Sept.30, 2015); see also 80 Fed. Reg. 217, 69700 (Nov. 10, 2015).

²¹² Consent Agreement and Final Order, *In the Matter of Agrifos Fertilizer LLC*, Dkt. No. RCRA-06-0211-0960 (requiring company to install a concrete storm water collection and containment wall to contain all spills and leaks from its process unit).

²¹³ Consent Agreement and Final Order, *In the Matter of E.I. du Pont de Nemours and Company*, (Dec. 14, 2005), Dkt.No. RCRA-HQ-2004-0016.

²¹⁴ 42 U.S.C. § 6924; 6928.

released.²¹⁵ Section 3004(v) accounts for off-site contamination in requiring facilities to clean up hazardous waste that extend beyond their property boundaries.

The program is primarily enforced by EPA and authorized states through administrative compliance orders or permits. EPA has authority to issue orders requiring corrective action to past and current TSDFs, as well as those with interim status.²¹⁶ EPA may also impose corrective action provisions directly in a hazardous waste permit when a facility initially requests or renews an existing permit. In 2004, roughly 3,780 facilities were in the process of performing corrective action.²¹⁷

The corrective action program uses a results-based approach to cleanups. In an effort to improve the efficiency of cleanups, in 1996 EPA issued an advanced notice of proposed rulemaking that fundamentally shifted the goals and procedures of the corrective action program. The “results-based approach” focuses on attaining a positive result rather than strict adherence to process.²¹⁸ The goals under the results-based approach are to control human exposure and migration of contaminated groundwater. This approach seeks greater input from the regulated community, noting that corrective action implementation should provide for “meaningful inclusion of all stakeholders through full, fair, and equitable public participation.”²¹⁹

Facilities subject to corrective action plans arguably benefitted from this shift. Less process and greater procedural flexibility, in some cases, has led to speedier cleanups.²²⁰

5.4 Compliance Monitoring

RCRA compliance monitoring is a cooperative effort between EPA and authorized states. Typically, authorized states determine a generator, transporter, or TSDF’s compliance, and are responsible for providing adequate inspection coverage. EPA focuses its efforts less on individual violations, and more on overseeing the effectiveness of state programs. EPA also manages issues that require federal intervention, such as multi-state compliance issues.

EPA adopted the Compliance Monitoring Strategy for the Subtitle C Program in September 2015 to consolidate and provide guidance on the various elements of national RCRA compliance monitoring.²²¹ The overarching goals of the program are to assess conformity with permits, enforcement orders, and/or consent decrees; collect evidence in

²¹⁵ EPA, RCRA ORIENTATION MANUAL 2014, at III-120, <https://www.epa.gov/sites/production/files/2015-07/documents/rom.pdf>.

²¹⁶ 42 U.S.C. § 6924(u); 6928(h).

²¹⁷ RCRA ORIENTATION MANUAL 2014, *supra* note 205.

²¹⁸ 61 Fed. Reg. 85, 19432 (May 1, 1996).

²¹⁹ *Id.*

²²⁰ See *Results-Based Approaches and Tailored Oversight Guidance for Facilities Subject to Corrective Action Under Subtitle C of the Resource Conservation and Recovery Act* (Sept. 2003); available at <https://www.epa.gov/sites/production/files/2013-10/documents/prp-oversight-tailored.pdf>.

²²¹ Compliance Monitoring Strategy for the Resource Conservation and Recovery Act (RCRA) Subtitle C Program (Sept. 2015), <https://www.epa.gov/sites/production/files/2013-11/documents/racms.pdf>.

the event enforcement actions are necessary; deter violations; and understand implementation challenges that operators may face. According to the guidance document, compliance monitoring may occur both on and off-site. Compliance investigations may consist of as little as reviewing a facility's own reports (e.g., waste manifests, waste analysis records, etc.), or as much as an on-site, extended visit to collect data using advanced monitoring technologies, such as ground water monitoring, infrared cameras, and fence-line monitors. The results of on-site evaluations are posted online at RCRAInfo, EPA's hazardous waste management and inventory system.

EPA is required to conduct a "thorough inspection" of TSDFs once every two years and federally owned or operated TSDFs on an annual basis. A "thorough investigation" of a TSDF should confirm that the facility properly reports and maintains records, complies with its waste manifest, properly treats, stores or disposes of hazardous waste received by the facility, and complies with financial assurances obligations. EPA aims to have fifty percent of non-federally operated TSDFs inspected each year. Moreover, EPA and authorized states must in total inspect at least twenty percent of large quantity generators ("LQGs") each year. There are no stated inspection frequency goals for transporters or small and conditionally-exempt generators of hazardous waste.

Like the CWA and CAA, RCRA compliance occurs when a facility's operation conforms to the terms of its permit, rather than EPA regulations. This "permit shield" does not apply to the statutory provisions of RCRA or land disposal restriction regulations. An authorized state's regulatory body will continue to monitor all facilities (whether past violators have occurred or not), to ensure each facility's requirements are being met.

6. Endangered Species Act

6.1 **Balancing Endangered Species Protection and Economic Development**

While the ESA was enacted to conserve the aesthetic, ecological, educational, historical, recreational, and scientific values of endangered and threatened species, it also can impose significant economic impacts. These impacts can take the form of permitting delays, modifications to or rejection of projects plans to accommodate listed species, limitations on land use and job losses due to restrictions on economic activity.²²² With that said, perhaps no environmental law exemplifies the tension between environmental protection and economic development as starkly as the Endangered Species Act (“ESA”).

The resulting conflicts can be dramatic, particularly when a listed species is small and relatively unknown and the project in jeopardy is considered important. In *Tennessee Valley Authority v. Hill*, the Supreme Court enjoined the completion of a multi-million dollar dam that was almost completed, so as to protect critical habitat for a small fish population of a relatively obscure species, the snail darter.²²³ The Court stated that “the plain language of the Act, buttressed by its legislative history, shows clearly that Congress viewed the value of endangered species as ‘incalculable’” and that the purpose of enacting the ESA in 1973 “was to halt and reverse the trend toward species extinction, *whatever the cost.*”²²⁴

With such uncompromising language, it could seem as though the ESA allows little room for economic considerations. However, in response to high-profile outcomes like *Tennessee Valley Authority v. Hill*, subsequent legislative amendments and regulatory changes have authorized and, in some cases, required consideration of economic impacts when determining critical habitat or reasonable alternatives to a project and have introduced additional flexibility through permitted take of listed species.

The major provisions of the ESA are contained in five sections: Section 4 provides that species be listed as “endangered” or “threatened” and their critical habitat designated; Section 7 limits federal actions that adversely affect a listed species or habitat and also requires proactive interagency consultation to protect species; Section 9 prohibits individual and agency actions that harm or harass individuals of listed species without express authorization; Section 10 authorizes issuance of “incidental take” permits for listed species; and Section 11 provides for penalty and enforcement. As discussed further below, some of these sections allow for economic considerations; others do not.

A. Determining What to Regulate: Listing Species and Designating Critical Habitats

No species can be protected under the ESA unless it is listed as endangered or threatened. Notably, the decision to list a species is based only on biological data

²²² See Hoffman, Bazerman, and Yaffee, *Balancing Business Interests and Endangered Species Protection*, MIT Sloan Management Review (October 15, 1997).

²²³ *Tennessee Valley Authority v. Hill*, 437 U.S. 153, 157-58, 171 (1978).

²²⁴ *Id.* at 184,187 (1978)(emphasis added).

without regard to economic factors.²²⁵ Listing a species results in certain protections, including a requirement that federal agencies “insure that any action authorized, funded, or carried out by such agency [...] is not likely to jeopardize the continued existence of any endangered species or threatened species.”²²⁶

In contrast to the listing of a species, when deciding to designate a species’ critical habitat, “economic impact” may be considered along with “any other relevant impact.”²²⁷ If the benefits of exclusion outweigh the benefits of specifying critical habitat, an area that otherwise would be considered critical habitat may be excluded from designation.²²⁸ Designation as critical habitat limits federal land and resource development that would destroy or adversely modify designated critical habitat.²²⁹

In practice, about half of listed species have not had a corresponding critical habitat listed for them.²³⁰ This is due in part to the fact that the two agencies tasked with listing species and designating critical habitat, the U.S. Fish and Wildlife Service (“FWS”) and the National Oceanic and Atmospheric Administration – Fisheries (“NOAA Fisheries”), retain discretion not to designate critical habitat for species listed before the 1978 ESA amendments.²³¹ In addition, the agencies, who already face a backlog of requests to list species, often postpone designating critical habitat for newly listed species “until forced to do so by court order”—even though the statute does not grant them this discretion.²³² During one three-year period in the late 1990s, FWS and NOAA Fisheries had listed 250 species pursuant to the ESA, but had designated critical habitat for only two of the newly listed species.²³³

Although economic impacts may be considered, the economic consequences of designating critical habitat are limited to the habitat designation alone. In other words, any costs related to the listing of a species is considered part of a regulatory “baseline” that is not included in the economic analysis released at the time critical habitat is proposed. The net effect of the policy is to make critical habitat designations easier. The Tenth Circuit Court of Appeals held that the FWS’s “baseline” approach rendered the economic analysis meaningless, and instead the court required the economic analysis to account for impacts that might have resulted to that area from the listing decision itself as well as the habitat

²²⁵ See 16 U.S.C. § 1533(b)(1)(A) (“[S]olely on the basis of the best scientific and commercial data available”).

²²⁶ Section 7 (16 U.S.C. § 1536(a)(2)).

²²⁷ § 1533(b)(2); see H.R. Rep. No. 95-1625, at 17 (“The committee expects that in some situations, the resultant critical habitat will be different from that which would have been established using solely biological criteria. In some situations, no critical habitat would be specified.”).

²²⁸ *Id.*

²²⁹ See 16 U.S.C. § 1536(a)(2).

²³⁰ See U.S. Fish and Wildlife Service, <https://www.fws.gov/endangered/what-we-do/critical-habitats-faq.html>.

²³¹ *Conservancy of Sw. Fla. v. U.S. Fish & Wildlife Serv.*, 677 F.3d 1073, 1079 (11th Cir. 2012).

²³² *N.M. Cattle Growers Ass’n v. U.S. Fish and Wildlife Service*, 248 F.3d 1277, 1283 (10th Cir. 2001).

²³³ *Id.* (citing S.Rep. No. 106–126, at 2 (1999)).

designation.²³⁴ The Ninth Circuit, however, later rejected the Tenth Circuit’s reasoning and upheld the “baseline” approach as logical because it would be “strange to conclude that Congress intended the FWS to consider costs at the critical habitat phase that the agency was barred from considering at the listing phase.”²³⁵ The FWS and NOAA Fisheries adopted the Ninth Circuit’s interpretation when they promulgated a rule in 2013 clarifying aspects of the economic analysis.²³⁶ The trend since *New Mexico Cattle Growers* is for economic analyses to become increasingly detailed and thorough.

B. Considering Reasonable Alternatives and Authorizing Incidental Take

As seen in *Tennessee Valley Authority v. Hill*, under Section 7 of the statute, FWS or NOAA Fisheries can prohibit federal activities that jeopardize listed species or adversely modify designated critical habitat, regardless of the economic cost. Section 7 requires that a federal agency contemplating an action impacting a listed species consult with either FWS or NOAA Fisheries to ensure that the action will not jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species.²³⁷ Federal activities can include certain actions undertaken by private individuals but that nevertheless require federal approval or authorization, such as a license granted by the Federal Energy Regulatory Commission to operate a privately-owned hydroelectric facility.²³⁸ As a result, in the ensuing decades since enactment of the ESA, a number of conflicts have arisen pitting endangered species against large development projects. For instance, in the 1980s and 1990s newly designated spotted owl habitat conflicted with logging operations on federal lands,²³⁹ and more recently water diversions for California farm irrigation were limited to provide sufficient freshwater for delta smelt fish.²⁴⁰

While legislative amendments to ESA authorized an Endangered Species Committee to grant exemptions from the law when specified criteria have been met,²⁴¹ in practice this mechanism (nicknamed the “God Squad”) has only been utilized four times, with two exemptions granted. Instead, what more frequently occurs is that when a federal action is determined to cause jeopardy to, or an adverse habitat modification of, an endangered or threatened species, FWS or NOAA Fisheries suggests “reasonable and prudent alternatives” (“RPAs”) that

²³⁴ *New Mexico Cattle Growers Ass’n v. U.S. Fish and Wildlife Service*, 248 F.3d 1277 (10th Cir. 2001).

²³⁵ *Arizona Cattle Growers’ Ass’n v. Salazar*, 606 F.3d 1160, 1173 (9th Cir. 2010).

²³⁶ See Amy Sinden, *The Economics of Endangered Species: Why Less Is More In the Economic Analysis of Critical Habitat Designations*, 28 HARV. ENV’L. L.R. 132 (2004)

²³⁷ See 16 U.S.C. §1536(a).

²³⁸ See 16 U.S.C. §1536(a)(2); 50 C.F.R. § 402.03 (specifying federal action as one “in which there is discretionary Federal involvement or control”); *City of Tacoma v. Nat’l Marine Fisheries Serv.*, 383 F.Supp.2d 89, 90 (D.D.C. 2005).

²³⁹ See, e.g., *Babbitt v. Sweet Home Chapter of Cmty. for a Great Or.*, 515 U.S. 687 (1995).

²⁴⁰ See *Luis & Delta-Mendota Water Auth. v. Jewell*, 747 F.3d 581, 595-601 (9th Cir. 2014).

²⁴¹ 16 U.S.C. §1536(e).

would avoid jeopardy to a species or adverse habitat modification and can be implemented as part of the federal action.²⁴² The “reasonable and prudent alternatives” identified must be considered to be “economically and technologically feasible.”²⁴³

However, courts differ on the extent to which the economic impacts of implementing the RPAs must be considered and deemed to be reasonable. The Ninth Circuit, in *San Luis & Delta-Mendota Water Auth. v. Jewell*, considered whether the FWS permissibly ignored the economic cost of a RPA that restricted water supply for agricultural use and human consumption for over 20 million Californians so as to provide adequate water flow to the tiny delta smelt fish.²⁴⁴ The court concluded that the “economically and technologically feasible” language in 50 C.F.R. 402.02 only concerns whether the proposed alternative to ceasing the activity entirely is financially and technologically possible.²⁴⁵

Citing *Tennessee Valley Authority v. Hill*, the court firmly rejected the idea that the ESA allowed for “balancing the life of the delta smelt against the impact of restrictions on” the California water project²⁴⁶ because Congress already “afforded the highest of priorities” to listed species even at the sacrifice of the anticipated benefits of the project and of many millions of dollars in public funds.”²⁴⁷

In contrast, the Fourth Circuit interpreted the ESA differently with regard to the economic feasibility of RPAs. An insecticide manufacturer challenged as unreasonable a RPA suggesting “buffer zones” around salmonid habitats wherein pesticide use would be restricted.²⁴⁸ While the agency argued it did not have to explain one alternative over another, the court stated, “We cannot agree with this position, as it effectively reads out the explicit requirement of Regulation 402.02 that the agency evaluate its reasonable and prudent alternative recommendation for, among other things, economic and technological feasibility.”²⁴⁹ Thus, under this reading, the economic feasibility requirement is more than simply a limitation that the reasonable and prudent alternative be economically possible; rather, the agency must analyze economic impacts of the RPA and discuss its reasoning.²⁵⁰

Section 9 of the ESA describes prohibited actions under the ESA. Specifically, the “taking” of an individual member of a listed species is prohibited unless

²⁴² 16 U.S.C. § 1536(b)(3)(A); *see also* 50 C.F.R. §§402.14(h)(3), 402.14(g)(5).

²⁴³ 50 C.F.R. § 402.02 (2015).

²⁴⁴ *San Luis & Delta-Mendota Water Auth. v. Jewell*, 747 F.3d at 595-601.

²⁴⁵ *Id.* at 635.

²⁴⁶ *Id.* at 636-37.

²⁴⁷ *Id.* at 593 (quoting *Tenn. Valley Auth. v. Hill* 479 U.S. at 174).

²⁴⁸ *Dow AgroSciences LLC v. Nat. Marine Fisheries Service*, 707 F.3d 462, 466 (4th Cir. 2013).

²⁴⁹ *Id.* at 474-75.

²⁵⁰ *See id.*

expressly authorized by FWS or NOAA Fisheries.²⁵¹ The term “take” is interpreted broadly to include “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct.”²⁵² “Harm” encompasses actions that result in “significant habitat modification or degradation that cause actual death or injury.”²⁵³

Prior to 1982, the prohibition on take was almost absolute, except for some exceptions for scientific research or certain conservation actions. Congress amended the ESA in 1983 to add a mechanism intended to balance economic development and conservation interests. This mechanism, codified in Section 10 of the ESA, authorizes the FWS or NOAA Fisheries to issue a permit for “take” that is incidental to an otherwise lawful activity.²⁵⁴ In order to obtain this incidental take permit (“ITP”) the applicant must commit to minimizing and mitigating the effects of the taking and submit a habitat conservation plan (“HCP”).²⁵⁵

Pursuing an ITP can be a lengthy and expensive proposition. The required habitat conservation plan must consider how the action will not appreciably reduce the likelihood of survival and recovery of the listed species and must ensure adequate funding to implement the plan.²⁵⁶ One advantage of an HCP is that it provides certainty: “As long as the permittee is properly implementing the HCP, the Services will not impose additional requirements or restrictions. If an unforeseen circumstance occurs, unless the permittee consents, the Services will not require him/her to commit additional land, water, or financial compensation or impose additional restrictions on the use of land, water, or other natural resources beyond the level agreed to in the HCP.”²⁵⁷ As of December 2016, approximately 1,000 habitat conservation plans representing 46 million acres have been approved.²⁵⁸

The FWS also issues enhancement of survival permits to non-federal landowners in conjunction with Safe Harbor Agreements and Candidate Conservation Agreements with Assurances (CCAAs). These permits and agreements with the wildlife agencies provide landowners assurance that if they take actions to benefit species on their land, they will not be subject to additional restrictions that might

²⁵¹ See 16 U.S.C. §1538(a)(1).

²⁵² 16 U.S.C. §1532(19).

²⁵³ See 50 C.F.R. §17.3.

²⁵⁴ 16 U.S.C. §1539(a)(1)(B).

²⁵⁵ 16 U.S.C. §1539(a)(2).

²⁵⁶ 16 U.S.C. §1539(a)(2)(B).

²⁵⁷ FISH AND WILDLIFE SERVICE, HCP HANDBOOK, 1-3 (December 2016).

²⁵⁸ *Id.* In addition to permitting incidental take by private parties, take as a result of actions authorized by a funder or carried out by federal agencies may also be authorized in an ESA Section 7 consultation process. An incidental take statement (ITS) may be included in the biological opinion issued by FWS or NOAA Fisheries. In drafting the terms of an ITS, FWS or NOAA Fisheries may include “reasonable and prudent measures” (“RPMs”) that minimize the impacts from the incidental taking. See 50 C.F.R. §402.02. The RPMs cannot “alter the basic design, location, scope, duration, or timing of the action and may involve only minor changes.” §402.14(h)(2).

otherwise arise as a result of their conservation action. For example, Safe Harbor Agreements protect landowners from future restrictions that might otherwise result from attracting federally listed species to the land as a result of habitat improvement measures. CCAAs encourage landowners to engage in conservation actions that will preclude the need for listing of species that, due to their condition, are candidates for future listings. The CCAA and ESP gives the landowners assurances that no additional restrictions beyond those agreed to in the CCAA will be imposed on the ESP holder should the species be listed in the future.

More recently, the FWS has extended the duration of ITPs issued in conjunction with the Bald and Golden Eagle Protection Act.²⁵⁹ Under this new rule, which became effective in January 2017, FWS has provided greater certainty by extending the duration of an ITP for bald and golden eagles from five years to 30 years, even though the permits will come with conservation and monitoring requirements. As FWS noted, many activities that incidentally take eagles have durations that extend well beyond five years, and FWS wanted the duration of the permit to align better with the duration and scale of these industrial activities.²⁶⁰ While the new eagle take permit may extend up to 30 years, FWS still will evaluate each permit on a five-year basis to assess fatality rates, the effectiveness of measures to reduce eagle take, the appropriate level of compensatory mitigation, and eagle population status.²⁶¹ Although the permit holder can avoid the public comment process at each five year review, they will be required to utilize “qualified independent entities” to monitor eagle take and to report directly to FWS, who will make the data public.²⁶² Permit holders will also be subject to a new compensatory mitigation scheme to at least equally offset the impact of eagle taking, although the mitigation must be implemented in the same regional eagle management unit (“EMU”) where the permitting taking occurs, unless it can be shown that the affected population reaches other EMUs.²⁶³

C. Enforcement and Penalties

Section 11 authorizes civil and criminal penalties against knowing violations of the ESA. A civil penalty can be sought administratively; the Department of Justice handles criminal litigation. The maximum monetary penalty for a knowing violation of the ESA’s prohibitions on unpermitted taking, importing and possessing of endangered species and related provisions is approximately \$50,000, per violation; the maximum for other knowing violations of the ESA is approximately \$23,000, per violation; and the maximum for any other violation of

²⁵⁹ The bald eagle was delisted under the ESA in August 2007 but, of course, remains protected under the Bald and Golden Eagle Protection Act.

²⁶⁰ 81 Fed. Reg. 91494, 91495 (Dec. 16, 2016).

²⁶¹ *Id.* at 91500.

²⁶² *Id.* at 91503-04.

²⁶³ *Id.*

the ESA is up to \$1,270, per violation.²⁶⁴ In addition to a fine, a violator may have to pay restitution for the value of the wildlife taken; and federal permits, leases, and agreements can be suspended or revoked. Any item used to commit a crime under the ESA can be seized and forfeited. In a plea agreement, the Department of Justice often will seek a statutory fine and criminal probation.

The ESA invites public participation in enforcing aspects of the law and shaping its implementation. For instance, the ESA citizen suit provision allows third parties to bring a suit enjoining a violation of the ESA or against the FWS or NOAA Fisheries for failure to perform a nondiscretionary act.²⁶⁵ The provision authorizing reasonable attorney's fees establishes an economic incentive to bring ESA citizen suits. As the Supreme Court noted, the "obvious purpose of the particular provision in question is to encourage enforcement by so-called 'private attorneys general.'"²⁶⁶ However, the citizen suit provision also applies to plaintiff actions against the government asserting over-enforcement.²⁶⁷ Challenging "uneconomic (because erroneous) jeopardy determinations [...] is plainly within the zone of interests that the provision protects."²⁶⁸ As referenced above, members of the public also may challenge various rulemaking actions of FWS and NOAA Fisheries such as listing decisions and critical habitat designations provided they meet the prerequisites for doing so established under the Administrative Procedure Act, such as participating in the rulemaking process.²⁶⁹

In assessing penalties, the relevant agencies consider such factors as the gravity of the offense, the culpability of the parties, the proceeds of any unlawful activity, and any other economic benefit.²⁷⁰ The language of the Endangered Species Act provides an offending party with only one affirmative defense: a good faith belief that the party acted "to protect himself or herself, a member of his or her family, or any other individual, from bodily harm from any endangered ... species."²⁷¹ The agency may also take into account the economic impact of the proposed penalty, and may adjust the penalty upwards or downwards based on its findings in this regard.²⁷² Ultimately, the goal of the penalty policy is to deter violations, ensure the violator does not benefit from a violation, and bring a violator back into compliance while still taking into account the financial status of the violator.

²⁶⁴ 50 C.F.R. §11.33.

²⁶⁵ 16 U. S. C. § 1540(g).

²⁶⁶ *Bennett v. Spear*, 520 US 154, 165 (1997).

²⁶⁷ *Id.* at 166.

²⁶⁸ *Id.* at 177.

²⁶⁹ 5 USC §551 *et seq.*

²⁷⁰ See NOAA, Policy for the Assessment of Civil Administrative Penalties and Permit Sanctions 4, http://www.gc.noaa.gov/documents/Penalty%20Policy_FINAL_07012014_combo.pdf (last updated July 1, 2014).

²⁷¹ 16 U.S.C. §1540(a)(3), (b)(3).

²⁷² NOAA Penalties and Permit Sanctions *supra* note 273.



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1730 M Street, NW, Suite 700

Washington, DC 20036

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