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I. INTRODUCTION

Nine principal statutes (the “statutes”) govern the enforcement of federal environmental regulations through criminal prosecution. Section II of this article discusses issues these statutes have in common, including theories of liability, defenses, and sentencing.

Section III examines the Clean Air Act (“CAA”), which imposes penalties on violators of federal and state laws and regulations on air pollution control. Section IV discusses the Federal Water Pollution Control Act (“Clean Water Act” or “CWA”). Sections V and VI address additional water pollution issues discuss-

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ing, respectively, the Rivers and Harbors Act of 1899 ("RHA") and the Safe Drinking Water Act ("SDWA"), which, together with the CWA, restore and protect the quality of the nation’s surface and ground waters. Section VII examines the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), which authorizes the cleanup of hazardous substances at contaminated sites and imposes criminal penalties on those who violate its provisions. Section VIII addresses the Resource Conservation and Recovery Act ("RCRA"), which is a set of amendments reinforcing the Federal Solid Waste Disposal Act ("SWDA"). Section IX reviews the Toxic Substances Control Act ("TSCA"), which governs the manufacture, processing, and distribution or disposal of chemicals that pose a danger to the public or the environment. Section X discusses the Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA"), which regulates the manufacture, registration, transportation, sale, and use of toxic pesticides. Lastly, Section XI examines the efforts of the Endangered Species Act ("ESA") to regulate crimes against wildlife.

A. Criminal versus Civil Penalties

Over time, Congress has elevated some violations from misdemeanors to felonies and has increased potential jail sentences and fines for those convicted. Most of the statutes enumerated above contain overlapping civil, criminal, and administrative penalty provisions. Because the statutes permit simultaneous civil and criminal enforcement actions against violators, the policy of the Environmen-

7. Id. §§ 6901–6908 (imposing criminal penalties on persons who improperly transport, store, or treat hazardous wastes).
The Protection Agency ("EPA") is to evaluate whether the violation would be best addressed through simultaneous proceedings or through either a civil or criminal action alone. The Parallel Proceeding Memo outlines the criteria that the EPA uses to make this determination. The EPA will generally favor a criminal proceeding if complete relief can be achieved criminally, but if remedial measures are necessary, or if the violation is particularly egregious, civil liability may be pursued alone or in conjunction with criminal liability.

The Environment and Natural Resources Division ("ENRD") of the Department of Justice ("DOJ") has issued its own Parallel Proceedings Memo, which also favors criminal enforcement prior to civil penalties, but also provides for certain situations where civil remedies should be given priority, or both types of remedies should be sought simultaneously.

13. See Memorandum from Grant Y. Nakayama, Assistant Adm't for Office of Enforcement and Compliance Assurance, EPA, Parallel Proceedings Policy (Sept. 24, 2007), http://www.epa.gov/compliance/resources/policies/enforcement/parallel-proceedings-policy-09-24-07.pdf [hereinafter Parallel Proceedings Memo] (announcing policy of coordinating criminal and civil enforcement programs to determine whether resolution of violation would best be achieved through criminal liability, civil liability, or both). The memo lists a number of possible ways to pursue parallel proceedings, including: pursuing either a criminal or civil action alone; deferring the civil proceeding until the criminal case is resolved; carving out civil or criminal claims where allegations or defendants in either proceeding do not overlap; proceeding simultaneously while attempting to settle the civil matter through negotiation; filing a civil action where it is necessary to preserve a claim and moving to stay the action; and proceeding with the civil and criminal matters simultaneously. Id.

14. Id. Factors that favor bringing the criminal proceeding first are:

[1] the significant deterrent and punitive effects of criminal sanctions; [2] the ability to use a criminal conviction as collateral estoppel in a subsequent civil case; [3] the possibility that imposition of civil penalties might undermine a prosecution or the severity of a subsequent criminal sentence; [4] preservation of the secrecy of a criminal investigation, including completion of covert sampling; [5] prevention of a defendant's premature discovery of evidence in the criminal case, through a defendant's exploitation of the civil discovery process to obtain evidence regarding the criminal proceeding; [6] avoidance of unnecessary litigation issues, such as unfounded defense claims of misuse of process in the civil or criminal action; [7] avoidance of duplicative interviews of witnesses and subjects; and [8] the Speedy Trial Act requirements that trial be held within specified time frames after indictment.

Id. Factors favoring use of civil liability are:

[1] A threat to human health or the environment that should be expeditiously addressed through preliminary injunctive relief or response action; [2] a threat of dissipation of the defendant's assets; [3] an immediate statute of limitations or bankruptcy deadline; [4] where only a marginal relationship exists between the civil and criminal actions; [5] the civil case is in an advanced stage of negotiation or litigation when the potential criminal liability is discovered; [6] the civil case is integral to a national priority and a decision to postpone the case could substantially and adversely affect implementation of the national effort.


B. Enforcement

The criminal provisions of nearly all of the statutes addressed in this article are enforced by the EPA in conjunction with the DOJ. The ESA, however, is enforced by the Department of the Interior ("DOI") and the EPA may recommend against prosecution of criminal violations if the violating entity has voluntarily disclosed the violations prior to any EPA-initiated investigation.\(^\text{17}\)

In enforcing the environmental statutes, the EPA emphasizes cooperation with other administrative agencies\(^\text{18}\) and focuses on national enforcement priorities that are revised on an annual basis.\(^\text{19}\) Since states have the primary responsibility for implementing many federal environmental laws, a significant amount of enforcement activity takes place at the state level and must be coordinated with federal enforcement efforts.\(^\text{20}\)

The DOJ's policy provides a flexible approach to enforcement. In deciding whether to prosecute violations of federal environmental statutes, the department may consider several factors, including: (i) voluntary disclosure; (ii) "the degree and timeliness of cooperation"; (iii) preventive measures and compliance programs; (iv) pervasive non-compliance; (v) disciplinary systems to punish employ-
ees who violate compliance policies; and (vi) subsequent compliance efforts. These factors are intended "to encourage self-auditing, self-policing, and voluntary disclosure of environmental violations."22

C. Interaction with Other Criminal Violations

General criminal statutes can serve as alternative bases for prosecution of environmental crimes.23 Prosecution of environmental offenses may be pursued under general criminal statutes, which provide for harsher penalties than the applicable environmental statute.24 Prosecutors choosing this path generally append environmental criminal offenses as additional charges.25

II. GENERAL ISSUES

A. Overview of Elements of Environmental Criminal Violations

Although criminal provisions vary among statutes, the basic elements of an environmental criminal violation are (i) an act that substantively violates a statute and (ii) an intent to violate the statute. Common acts that constitute substantive criminal violations include making false statements,26 failure to notify,27 failing to pay required fees,28 operating without a permit,29 and violating the limits or conditions of a permit.30 Generally, environmental criminal provisions require a
mens rea of "knowing." The CWA, however, has some criminal provisions for negligent violations. Courts have interpreted the "knowing" element for some CWA violations to mean a defendant need only have knowledge of the discharge of a pollutant.

B. Liability

1. Corporate Liability

Each statute includes corporations in its definition of "persons" who may be prosecuted for violations of environmental laws. Corporate criminal liability is based on the imputation of agents' or employees' conduct to a corporation, and while this has often been judicially expanded to include all employee actions through the application of the doctrine of respondeat superior, statutes provide varying standards for corporate liability for employee acts. A corporation will

32. E.g., 33 U.S.C. § 1319(c)(1).
33. See United States v. Weitzenhoff, 35 F.3d 1275, 1284 (9th Cir. 1993) (stating that "criminal sanctions are to be imposed on an individual who knowingly engages in conduct that results in a permit violation, regardless of whether the polluter is cognizant of the requirements or even existence of the permit."); see also United States v. Alghazouli, 517 F.3d 1179, 1193-94 (9th Cir. 2008) (upholding the Weitzenhoff interpretation of "knowingly" and applying it to the Clean Air Act); United States v. Cooper, 482 F.3d 658, 666 (4th Cir. 2007) (interpreting the CWA to not require that defendant knew of facts connecting polluted creek bed to "waters of United States"). But see United States v. Wilson, 133 F.3d 251, 262 (4th Cir. 1997) (holding that the defendant must have knowledge of the facts of the elements for which he is charged, but not necessarily their illegality); United States v. Ahmad, 101 F.3d 386, 390-91 (5th Cir. 1996) (distinguishing Weitzenhoff as addressing whether the CWA creates a mistake-of-law defense and finding that defendants must have knowledge as to each element of a CWA violation and as such they can raise a mistake-of-fact defense). See generally Thomas Richard Uiselt, What a Criminal Needs to Know Under Section 309(C)(2) of the Clean Water Act: How Far Does "Knowingly" Travel?, 8 ENVTL. LAW. 303 (2002) (discussing the public welfare offense doctrine and "knowingly").
35. The rationales for criminal prosecution of corporations engaging in environmental crimes are: (i) the harms posed by environmental crimes may be as significant as those posed by traditional crimes; (ii) the corporate environmental criminal may be just as morally culpable as traditional criminals; and (iii) without criminal sanctions, corporations may view environmental sanctions as "a mere cost of doing business" that they may ultimately pass on to their customers. See David M. Uhlmann, Environmental Crime Comes of Age: The Evolution of Criminal Enforcement in the Environmental Regulatory Scheme, 2009 UTAH L. REV. 1223, 1235 (2009) (discussing the responsible corporate officer doctrine in terms of environmental law); see also Richard J. Lazarus, Assimilating Environmental Protection into Legal Rules and the Problem with Environmental Crime, 27 LOY. L.A. L. REV. 867, 879-80 (1994) (discussing difficulties of integrating criminal and environmental law). See generally Maura M. Okamoto, RCRA's Criminal Sanctions: A Deterrent Strong Enough to Compel Compliance?, 19 U. HAW. L. REV. 425 (1997) (discussing increased criminal prosecutions and corporate response).
36. See generally Albert W. Alschuler, Two Ways to Think about the Punishment of Corporations, 46 AM. CRIM. L. REV. 1359 (2009) (comparing criminal punishment of corporations to ancient legal practices of deodand, the punishment of animals and objects for causing harm, and frankpledge, the punishment of all members of a group when one has avoided apprehension, and suggesting that the doctrine of responsible superior has expanded
generally be held criminally liable for acts committed by an employee acting within the scope of his employment\textsuperscript{37} and for the benefit of the corporation,\textsuperscript{38} or under certain statutes for directly or indirectly supervising illegal dumping conducted by high-level employees.\textsuperscript{39} Corporations may also incur liability for the conduct of their subsidiaries\textsuperscript{40} or predecessors.\textsuperscript{41} The EPA has tended towards indicting individual corporate officers instead of—or in addition to—the corporation itself for criminal violations of environmental law.\textsuperscript{42}
2. Individual Liability

Most criminal sanctions under the environmental statutes apply to any "person" who violates a regulation. In the corporate arena, the "responsible corporate officer" doctrine generally imposes individual liability upon those with the responsibility or authority to prevent or correct the violation, rather than those who actually commit the contaminating act.

The degree to which the responsible corporate officer doctrine eliminates the mens rea requirement of various environmental statutes is currently unclear. The First Circuit has held that actual knowledge of the alleged misconduct by the corporation or its employee is required to incur liability under the RCRA. The Fourth and Fifth Circuits require that officers possess actual knowledge of the facts constituting each element of the offense to incur liability under the CWA.

43. See United States v. Gen. Elec. Co., 670 F.3d 377, 382 (1st Cir. 2012) (stating that CERCLA "imposes strict liability for the costs of cleanup on a party found to be an owner or operator, past operator, transport, or arranger." (quoting United States v. Davis, 261 F.3d 1, 29 (1st Cir. 2001)) (internal quotation marks omitted)); United States v. Hercules, Inc., 247 F.3d 706, 720 (8th Cir. 2001) (advocating broad interpretation of "arranger liability" that holds individuals liable who either own or have some degree of control over materials being disposed); Concrete Sales & Servs. v. Blue Bird Body Co., 211 F.3d 1333, 1336 (11th Cir. 2000) (explaining CERCLA imposes liability on any person "who by contract, agreement, or otherwise arranged for disposal or treatment . . . of hazardous substances").

44. See United States v. Dotterweich, 320 U.S. 277, 284 (1943) (holding that all parties in a corporation with a responsible share in furtherance of illegal activity may be criminally liable for illegal shipment of misbranded or adulterated drugs); United States v. Ming Hong, 242 F.3d 528, 531 (4th Cir. 2001) (defining "responsible corporate officer" as person with "such a relationship to the corporation that it is appropriate to hold him criminally liable for failing to prevent the charged violations of the CWA").

45. See Ming Hong, 242 F.3d at 532 (4th Cir. 2001) (finding that under responsible corporate officer doctrine, evidence was sufficient to prove that defendant had authority to prevent illegal discharges, affirming a three-year prison sentence); Heidi Stark Wells, Inserting the Responsible Corporate Officer Doctrine into the Resource Conservation and Recovery Act—And the Mess That Ensues, 21 AM. J. TRIAL ADVOC. 167, 169 (1997) (discussing current application of responsible corporate officer doctrine and arguing that courts applying doctrine to RCRA cases should give effect to Act's knowledge requirement rather than allow knowledge to be inferred).

46. See generally Peter C. White, Environmental Justice Since Hammurabi: From Assigning Risk "Eye for an Eye" to Modern-Day Application of the Responsible Corporate Officer Doctrine, 29 WM. & MARY ENVTL. L. & POL'Y REV. 633 (2005) (discussing how contrary to popular opinion, the responsible corporate officer doctrine did not lead to an explosion of strict liability); see also Martin Petrini, Circumscribing the "Prosecutor's Ticket to Tag the Elite"—A Critique of the Responsible Corporate Officer Doctrine, 84 TEMPLE L. REV. 283, 298 (2012) ("There is still confusion over the state of mind, or mens rea, that is necessary to impose liability under the RCO doctrine.").

47. See, e.g., United States v. MacDonald & Watson Waste Oil Co., 933 F.2d 35, 55 (1st Cir. 1991) (requiring direct or circumstantial proof of knowledge of conduct in question to incur criminal liability under responsible corporate officer doctrine); Brenda S. Hustis & John Y. Gotanda, The Responsible Corporate Officer: Designated Felon or Legal Fiction?, 25 LOY. U. CHI. L.J. 169, 197-98 (1994) (concluding that conviction under responsible corporate officer doctrine should only occur with necessary proof of mens rea).

48. E.g., United States v. Wilson, 133 F.3d 251, 262 (4th Cir. 1997) (holding that the CWA requires only that the defendant have knowledge of "each of the elements constituting the proscribed conduct," without requiring knowledge of the illegality of conduct); United States v. Ahmad, 101 F.3d 386, 391 (5th Cir. 1996) (holding the mens rea requirement of knowledge was not met where defendant was knowingly discharging a fluid, but believed it to be water instead of gasoline). But see United States v. Cooper, 482 F.3d 658, 665–68 (4th Cir. 2007) (finding
The Third Circuit, assessing CERCLA liability, has required personal participation in the liability-creating activity. By contrast, the Tenth Circuit has allowed a jury to infer both knowledge and control of environmental crimes on the part of corporate officers based on circumstantial evidence. Similarly, the Eleventh Circuit has held that a jury could infer the knowledge requirement from a corporate officer’s business plan and knowledge of environmental compliance problems. The Second, Sixth, Seventh, Eighth, and Ninth Circuits have adopted comparatively liberal interpretations of the knowledge requirement.

C. Common Defenses

1. Constitutional Defenses

Constitutional defenses to charges brought under environmental statutes have had limited success in the courts. While dormant Commerce Clause challenges by landfill operators prosecuted under state law have had some success, due

that the government does not need to prove mens rea with respect to the jurisdictional element of a CWA violation).

49. See, e.g., United States v. USX Corp., 68 F.3d 811, 824 (3d Cir. 1995) (limiting personal liability under 42 U.S.C. § 9607(a)(4) to “those who actively participate in the process of accepting hazardous substances for transport and have a substantial role in the selection of the disposal facility”).

50. See United States v. Self, 2 F.3d 1071, 1088 (10th Cir. 1993) (sustaining conviction of corporate president because his oversight of company bills and prior knowledge of hazardous storage was sufficient evidence to allow a jury to infer that defendant knew of current illegal storage of hazardous waste).

51. See United States v. Hansen, 262 F.3d 1217, 1247 (11th Cir. 2001) (finding that an admitted goal “to operate the plant until a buyer could be found” and knowledge of the plant’s problems with environmental compliance allowed the jury to infer that corporate officers had reached a tacit agreement to operate the plant in violation of environmental laws).

52. See United States v. Evertson, 320 F. App’x. 509, 511 (9th Cir. 2009) (finding that to violate the RCRA the defendant must have “knowingly stored materials that he knew to be 1) hazardous and 2) waste” not that he intended to dispose of such materials); United States v. Kelley Technical Coatings, 157 F.3d 432, 439 (6th Cir. 1998) (holding that government need not prove that defendant had knowledge of permit requirement); United States v. Kelly, 157 F.3d 432, 439 (6th Cir. 1998) (holding that government need only prove that defendant knew waste had potential to be harmful to others and was not innocuous substance, not that it was hazardous waste under EPA regulations); United States v. Evertson, 320 F. App’x. 509, 511 (9th Cir. 2009) (holding government need not prove that defendant had knowledge of permit requirement); United States v. TIC Inv. Corp., 68 F.3d 1082, 1090 (8th Cir. 1995) (sustaining conviction of corporate officer as party with ability to control illegal CERCLA disposal despite absence of proof of personal involvement in disposal).

53. See generally Jonathan H. Adler, Judicial Federalism and the Future of Federal Environmental Regulation, 90 Iowa L. Rev. 377, 403–04, 420–22 (2005) (discussing how constitutional challenges against environmental legislation under the Commerce Clause have failed while admitting that such legislation is vulnerable to the Supreme Court’s limited federalism jurisprudence).

54. See Or. Waste Sys., Inc. v. Dept’ of Envtl. Quality, 511 U.S. 93, 108 (1994) (invalidating additional disposal fee imposed by Oregon on solid waste generated outside state as resource protection measure that could not withstand dormant Commerce Clause challenge); City of Philadelphia v. N.J., 437 U.S. 617, 629 (1978) (invalidating New Jersey law prohibiting importation of most solid and liquid waste originating outside state as violating dormant Commerce Clause since out-of-state prohibition placed undue burden on interstate commerce). But see United Haulers Ass’n, Inc. v. Oneida-Herkimer Solid Waste Mgmt. Auth., 550 U.S. 330 (2007) (holding that county flow control ordinances favoring a state-created public benefit corporation did not violate dormant Commerce Clause); Am. Trucking Ass’ns v. Mich. Pub. Serv. Comm’n, 545 U.S. 429, 434 (2005) (finding that a neutral, locally focused fee or tax is not inconsistent with the dormant Commerce Clause); Fednav, Ltd. v.
process arguments against retroactive application of certain statutes\textsuperscript{55} and sovereign immunity claims by federal facilities have been less successful.\textsuperscript{56} Claims that the ESA violates the Takings Clause of the Fifth Amendment have also been unsuccessful.\textsuperscript{57} The Supreme Court has, however, held that extending federal agency jurisdiction to isolated, non-navigable waters would violate the Commerce Clause.\textsuperscript{58}

\textsuperscript{55} Chester, 547 F.3d 607, 624 (6th Cir. 2008) (stating that courts will not engage in dormant Commerce Clause review when Congress acts). Here, a Michigan statute, requiring ocean-going vessels operating in Michigan waters to obtain a permit in order to limit introduction of invasive species, did not violate the dormant Commerce Clause where Congress expressly encouraged state regulation on invasive species through the National Invasive Species Act; On the Green Apartments L.L.C. v. City of Tacoma, 241 F.3d 1235, 1241–42 (9th Cir. 2001) (upholding city ordinance that prevented waste generated within city from being deposited outside city as not implicating Commerce Clause where the plaintiffs alleged only that they would take their garbage to another landfill within state); Houlton Citizens' Coal. v. Town of Houlton, 175 F.3d 178, 189 (1st Cir. 1999) (upholding town's solid waste management scheme as not being a per se violation of the dormant Commerce Clause where bidding process was competitive and burden imposed on interstate commerce was not clearly excessive in relation to putative local benefits); Oltra, Inc. v. Pataki, 273 F. Supp. 2d 265, 278–79 (W.D.N.Y 2003) (holding that a statute that prohibited the direct shipping of cigarettes to in-state consumers, pursuant to New York's police powers, did not violate the dormant Commerce clause). See generally Daniel Shean, The Politics of Trash, 16 BUFF. ENVT'L. L.J. 55 (2009) (discussing the Supreme Court's dormant Commerce Clause jurisprudence and solutions to the crisis).

\textsuperscript{56} See United States v. Phillips, 367 F.3d 846, 861 (9th Cir. 2004) (upholding conviction of defendant for violations of the CWA and rejecting due process challenge to retroactive application of new standard of review of Prosecutorial Remedies and Other Tools to end the Exploitation of Children Today Act); United States v. Alcan Aluminum Corp., 315 F.3d 179, 188–90 (2d Cir. 2003) (rejecting due process challenge to retroactive application of CERCLA); United States v. Olin Corp., 107 F.3d 1506, 1512–15 (11th Cir. 1997) (discussing that none of the twenty-two courts that have considered CERCLA's retroactivity have declined to apply CERCLA on retroactivity grounds). But cf. E. Enters. v. Apfel, 524 U.S. 498, 537, 539, 550 (1998) (declaring retroactive liability scheme of Coal Act unconstitutional but garnering only one vote to invalidate the law on due process grounds and four votes to invalidate on takings grounds). The Alcan Aluminum Corp. court examined the Supreme Court's decision and found that the Court's plurality decision was not controlling. Alcan Aluminum Corp., 315 F.3d at 189.

\textsuperscript{57} See United States v. Tenn. Air Pollution Control Bd., 185 F.3d 529, 534 (6th Cir. 1999) (holding that the CAA waives government immunity as to civil penalties imposed by states for past violations of state air pollution law); United States v. Colorado, 990 F.2d 1565, 1569 (10th Cir. 1993) (holding that United States' sovereign immunity from liability for civil fines under the RCRA had been waived by 42 U.S.C. § 6961); United States v. Dee, 912 F.2d 741, 744 (4th Cir. 1990) (finding federal employees can be individually liable for crimes under the RCRA despite sovereign immunity). But see City of Jacksonville v. Dep’t of Navy, 348 F.3d 1307, 1314 (11th Cir. 2003) (finding that the CAA's federal facilities provision did not waive government's immunity with regard to punitive penalties for past violations). See generally Kenneth M. Murchison, Waivers of Immunity in Federal Environmental Statutes of the Twenty-First Century: Correcting A Confusing Mess, 32 WM. & MARY ENVTL. L. & POL’Y Rev. 359 (2008) (discussing the complex nature of sovereign immunity in environmental law).

\textsuperscript{58} See Christy v. Hodel, 857 F.2d 1324, 1329 (9th Cir. 1988) (holding that “the U.S. Constitution does not explicitly recognize a right to kill federally protected wildlife in defense of property” and that application of the ESA is not a substantive violation of the Fifth Amendment).

\textsuperscript{59} Solid Waste Agency of N. Cook Cnty. v. U.S. Army Corps of Eng’rs, 531 U.S. 159, 173–74 (2001) [hereinafter SWANCC] (finding that Army Corp of Engineers could not extend the definition of “navigable waters” to a gravel pit). In response to SWANCC, the courts have found this required nexus by examining the adjacency of the water at issue to any waterway, natural or man-made, that eventually flows into navigable water. See, e.g., Rapanos v. United States, 547 U.S. 715, 739–42 (2006) (holding that “only those wetlands with
Other constitutional defenses have generally failed, including claims that the National Environmental Policy Act ("NEPA") and other environmental statutes improperly delegated power to state and executive authorities, as well as challenges under the Due Process Clause. Claims of property deprivation without due process are also frequently rejected.

Fourth Amendment claims challenging environmental inspections have also been largely ineffective. For such a challenge to be successful the defendant must
establish that a legitimate expectation of privacy existed.\textsuperscript{64} Moreover, the DOJ need only satisfy a low "probable cause" threshold to warrant criminal investigation of environmental offenses.\textsuperscript{65} Likewise, administrative inspection and search warrants, like those granted under the National Pollution Discharge Elimination System ("NPDES"),\textsuperscript{66} require less than criminal probable cause.\textsuperscript{67} The EPA therefore has broad discretion to conduct investigations.\textsuperscript{68}

Fifth Amendment Double Jeopardy Clause challenges to contemporaneous civil and criminal actions\textsuperscript{69} are generally unsuccessful in staying criminal

otherwise the EPA could not request information or impose a fine until it obtained a court order). \textit{But cf.} Hanlon v. Berger, 526 U.S. 808, 809–10 (1999) (finding Fourth Amendment violation when federal agents are accompanied by media crew during execution of warrant; nonetheless, agents are entitled to qualified immunity because the Fourth Amendment right was not clearly established at time of search).

\textsuperscript{64} See Johnson v. Weaver, 248 F. App'x 694, 696–97 (6th Cir. 2007) (Fourth Amendment does not extend to "home's neighboring open fields because those areas 'do not provide the setting for those intimate activities that the [Fourth] Amendment is intended to shelter.'") \textit{citing} Oliver v. United States, 466 U.S. 170, 179 (1984); see also United States v. Rapanos, 115 F.3d 367, 372–74 (6th Cir. 1997) (rejecting defendant's claim that fenced parcel of land that had been prepared for development was not "open fields" for Fourth Amendment analysis despite presence and objection of owner at time of search), \textit{vacated on other grounds}, 533 U.S. 913 (2001).

\textsuperscript{65} See Copar Pumice Co. v. Morris, 632 F. Supp. 2d 1055, 1067 (D.N.M. 2008) (stating there are situations "in which the requirement of a warrant based upon probable cause is ill-suited to achieving certain 'special needs' of government . . . such as . . . allowing administrative searches of the business premises of 'closely-regulated industries'"); United States v. Myers, 553 F. Supp. 98, 101 (D. Kan. 1982) (stating probable cause for issuance of search warrant under FIFRA exists if there are reasonable grounds to believe that property sought is at described location); Pieper v. United States, 460 F. Supp. 94, 97–98 (D. Minn. 1978) (adopting lower probable cause standard for environmental cases than that required for other criminal cases); Cecilia Isaacs-Blundin, \textit{Why Manure May Be the Farm Animal Advocate's Best Friend: Using Environmental Statutes to Access Factory Farms}, 2 J. ANIMAL L. & ETHICS. 173, 183 (2007). \textit{See generally} Richard F. Cauley, \textit{Constitutionality of Warrantless Environmental Inspections}, 15 COLUM. J. ENVTL. L. 83, 83–84 (1990) (explaining "right of entry" provisions in federal environmental regulatory statutes exempting government officials from warrant requirements in order to assess their constitutionality).

\textsuperscript{66} 40 C.F.R. § 122.41(i) (2012).

\textsuperscript{67} \textit{See, e.g.}, Marshall v. Barlow's, Inc., 436 U.S. 307, 320–21 (1978) (stating administrative probable cause for issuing search warrant is shown when: (i) there is specific evidence of a violation; or (ii) reasonable standards for conducting inspection are satisfied with respect to particular establishment and finding that warrant to inspect particular establishment will be reasonable when it is issued pursuant to administrative plan determined according to neutral criteria). The Supreme Court has also held that search warrants are not necessary in the enforcement of certain regulatory programs. \textit{See} Donovan v. Dewey, 452 U.S. 594, 598–606 (1981) (holding if a statutory inspection program provides a "constitutionally adequate substitute for a warrant" in terms of certainty and regularity of application, the Warrant Clause is satisfied). \textit{See generally} Donna Mussio, \textit{Drawing the Line Between Administrative and Criminal Searches: Defining the "Object of the Search" in Environmental Inspections}, 18 B.C. ENVTL. AFF. L. REV. 185, 203 (1990) (discussing differing standards and arguing that criminal probable cause standard should be applied only to instances where inspected facility is a target of criminal investigation).

\textsuperscript{68} The EPA's investigation and enforcement authority is not limited to the methods explicitly enumerated by statute. \textit{See} Dow Chem. Co. v. United States, 476 U.S. 227, 233–34 (1986) (reasoning Congress could not be expected to anticipate all areas of environmental regulation that would invoke EPA authority). \textit{See} Ross Incineration Servs. v. Browner, 118 F. Supp. 2d 837, 844 (N.D. Ohio 2000) (stating that the EPA has discretion to proceed unhampered by judicial review until it initiates enforcement proceedings).

\textsuperscript{69} Constitutional issues are complicated by compound civil, criminal, and administrative enforcement of environmental laws. Generally, parallel proceedings do not violate the Double Jeopardy Clause, but can be a
The imposition of civil fines subsequent to a criminal prosecution usually does not trigger the Double Jeopardy Clause, even if the civil fine is arguably punitive and penalizes the same conduct as the criminal prosecution. The double jeopardy defense is also unavailable for defendants seeking to resist prosecution by separate sovereigns, pursuant to different statutory provisions, for the same conduct—for example, imposition of federal criminal sanctions following state assessment of civil fines that may be punitive in nature.

Defendants have been similarly unsuccessful in arguing that the self-reporting, monitoring, and record-keeping provisions of the environmental statutes violate the Fifth Amendment protection against self-incrimination. In addition, at least one defendant has unsuccessfully claimed that reporting requirements were violation if the civil penalties are punitive in nature. See Parallel Proceedings Memo, supra note 13. During parallel civil and criminal proceedings, courts will issue protective orders to prevent the government from obtaining information via civil discovery channels for use in criminal proceedings. Compare In re Grand Jury Subpoena Duces Tecum Apr. 19, 1991, 945 F.2d 1221, 1225–26 (2d Cir. 1991) (using civil protective order to shield discovery materials from grand jury subpoena), with In re Grand Jury Subpoena, 836 F.2d 1468, 1478 (4th Cir. 1988) (denying use of civil protective order to shield discovery materials from grand jury). See generally Larry D. Thompson, The Interrelationship of Civil and Criminal Proceedings in Environmental Laws, 1994 ALI-ABA COURSE OF STUDY: CRIMINAL ENFORCEMENT OF ENVIRONMENTAL LAWS 157, 167–69 (1994) (arguing protective orders can serve to protect parties' legitimate interests). Parallel proceedings or the threat of criminal charges may also create a double-edged sword for the civil litigant. See id. at 160–61 (explaining dilemma created by secondary effects of extensive disclosure). But see Elizabeth M. Ojala, Legal Issues Arising in Parallel Proceedings, NAT'L ENVT'L ENFORCEMENT J., Apr. 1996, at 3–6 (arguing that the EPA's use of parallel proceedings will not violate defendant's constitutional rights, "[as] long as the government does not engage in impermissible deception or improper use of one enforcement action solely to aid the other").

70. See United States v. Louisville Edible Oil Prods., 926 F.2d 584, 588 (6th Cir. 1991) (finding indictment of company for improper asbestos removal under the CAA and CERCLA did not violate double jeopardy); United States v. Alder Creek Water Co., 823 F.2d 343, 345–46 (9th Cir. 1987) (ruling district court’s issuance of contempt order and magistrate's assessment of civil penalties of RCRA violation did not violate constitutional prohibition against double jeopardy). But see United States v. Hugo Key & Son, Inc., 672 F. Supp. 656, 658–59 (D.R.I. 1987) (stating that because of previously initiated federal civil enforcement suit, stay was necessary to protect prosecution strategy and threat of perjury in possible criminal prosecution, outweighing possible harm to defendant from delay).

71. See Hudson v. United States, 522 U.S. 93, 99 (1997) (holding Double Jeopardy Clause "protects only against the imposition of multiple criminal punishments for the same offense").

72. See Louisville Edible Oil Prods., 926 F.2d at 587 (finding that a United States v. Halper, 490 U.S. 435 (1989), double jeopardy bar for a criminal prosecution would not defeat the dual sovereignty exception). Halper was subsequently abrogated by Hudson v. United States, 522 U.S. 93 (1997), but the finding in Louisville, that the indictment of a company for improper asbestos removal under the CAA and CERCLA did not violate double jeopardy, still stands because the defendants in Louisville were prosecuted by different sovereigns and required proof of different elements. See generally Katherine C. Kellner, Separate But Equal: Double Jeopardy and Environmental Enforcement Actions, 28 ENVTL. L. 169, 181 (1998) (arguing dual sovereignty exception should not apply to enforcement of environmental statutes).

73. E.g., United States v. Ward, 448 U.S. 242, 254–55 (1980) (finding § 1321(b)(6) of the CWA, which requires defendant to report oil spills and allows that information to be later used against defendant, does not violate the Fifth Amendment because it does not entail criminal penalty); see also In re Grand Jury Witnesses, 92 F.3d 710, 712 (8th Cir. 1996) ("The Fifth Amendment does not protect corporations and other 'collective entities' from compelled self-incrimination. Because corporate document custodians hold corporate records in a representative rather than a personal capacity, those records 'cannot be the subject of the [custodian's] personal privilege against self-incrimination.'" (internal citations omitted)); cf. United States v. Tivian Lab., Inc., 589 F.2d
invalid because of the Thirteenth Amendment’s prohibition against involuntary servitude.74

2. Other Defenses

A potentially effective defense is that the defendant justifiably relied on and was affirmatively misled by administrative action.75 A claim that the applicable regulation was not adopted pursuant to statutory procedural requirements may also be successful.76

Courts have generally declined to recognize ignorance of permit requirements or lack of knowledge that a particular waste had been classified as hazardous as defenses.77 The good faith compliance efforts of a defendant, however, may be considered in the assignment of penalties.78

49, 54 (1st Cir. 1978) (ruling the EPA may obtain administrative subpoena to compel parties under investigation to provide information without court’s prior permission because such investigation is authorized by Congress).

74. See Tivian Lob., 589 F.2d at 54. The defendant also unsuccessfully claimed that the EPA subpoena was unconstitutional because the time and resources required for compliance with the demands for information constituted forced labor, which is illegal under the Thirteenth Amendment. Id.

75. See United States v. Pa. Indus. Chem. Corp., 411 U.S. 655, 674–75 (1973) (reversing RHA conviction because failure to allow defendant to present evidence that he had been misled deliberately by government about required permits at trial deprived defendant of potentially effective defense). But cf. United States v. Marine Shale Processors, 81 F.3d 1329, 1349–50 (5th Cir. 1996) (allowing the EPA to claim hazardous waste treatment facility violated RCRA permit requirements despite facility’s reliance on Louisiana Department of Environmental Quality’s letter indicating facility had interim status, because letter was the result of negligence and not of an attempt to intentionally mislead facility); EPA v. Envtl. Waste Control, 917 F.2d 327, 332, 334 (7th Cir. 1990) (finding reliance on information provided by government hotline operator unreasonable given clarity of regulations).

76. See Whitman v. Am. Trucking Ass’ns, 531 U.S. 457, 466–68 (2001) (finding that the CAA makes no implied authorizations to the EPA to consider costs of implementing air quality standards; explicit authorization is required to permit Agency to consider such costs); Bd. of Regents of Univ. of Wash. v. EPA, 86 F.3d 1214, 1222 (D.C. Cir. 1996) (holding CERCLA section providing Congress opportunity to veto rule listing on National Priorities List violates Constitution, as it makes no provision for presentment of vetoing resolution to President). But see Entergy Corp. v. Riverkeeper, Inc., 556 U.S. 208, 218–24 (2009) (allowing the EPA cost-benefit analysis in creating national performance standards when the CWA provision mandating best use of available technology did not “unambiguously” preclude cost-benefit analysis). See generally Amy Porter, Legal Doctrine Used to Strike Down PM, Ozone Rules Could Apply to Other Actions, 96 Daily ENV’T REP. (BNA), at AA-1 (May 21, 1999) (debating whether non-delegation doctrine will be used by courts to challenge the EPA’s reach into wetlands protection and expansion of chemical release reporting under Toxic Release Inventory).

77. See United States v. Ahmad, 101 F.3d 386, 391 (5th Cir. 1996) (holding government must prove defendant knew he was discharging the hazardous material in question to find violation of the CWA, and finding a lack of knowledge due to defendant’s belief that he was discharging water). See also supra notes 43–52 and accompanying text on individual liability.

78. See United States v. Hoechst Celanese Corp., 128 F.3d 216, 229 (4th Cir. 1997) (holding plant owner’s good faith efforts to comply with national ambient air quality standards under the CAA should not have absolved his guilt, but could be considered in assignment of penalties). While not explicitly recognized as a defense, some commentators assert that courts may consider good faith efforts as some form of a defense to violations of
Bankruptcy is also not a guarantee for avoiding environmental liability. Many courts have exempted enforcement of environmental laws from the automatic stay provision under 11 U.S.C. § 362(b)(4)-(b)(5). Furthermore, companies claiming bankruptcy may not abandon contaminated property "without formulating conditions that will adequately protect the public's health and safety." The state of the law for dischargeability of environmental claims along with debts as part of a bankruptcy proceeding is much more ambiguous. There has also been a tendency to treat environmental protection costs that arise after the bankruptcy action as priority administrative expenses.

Finally, defendants prosecuted for underlying environmental offenses pursuant to the Racketeer Influenced and Corrupt Organizations Act ("RICO") have asserted several unsuccessful defenses. Although environmental crimes are not themselves predicate acts for a RICO prosecution, such offenses may be committed in conjunction with chargeable RICO predicate acts, such as mail fraud.
D. Voluntary Compliance and Sentencing

Although compliance is not a defense, the EPA and the DOJ look favorably upon voluntary compliance efforts by regulated entities. In 1996, the EPA implemented a policy making penalty reductions contingent upon self-auditing; the policy encompassed infractions found in the course of an objective self-audit. The EPA revised this policy in 2000 to clarify its language, expand its availability, and conform its provisions to actual EPA practice. The basic structure and terms of the policy, however, remain largely the same. An organization must disclose any violation discovered within twenty-one days to qualify for penalty reduction. The EPA will completely eliminate gravity-based (or punitive) penalties for companies or public agencies that voluntarily identify, disclose, and correct violations, and it will eliminate up to seventy-five percent of gravity-based penalties for those who meet most of the conditions.

Moreover, except in situations where: (i) violations involve criminal acts of individual managers or employees; (ii) there exists a management philosophy condoning environmental violations; or (iii) there is conscious participation in, or willful blindness to, the violations by high-level corporate employees, the EPA will refrain from making criminal referrals to the DOJ if an entity acts in good faith to identify, disclose, and correct violations.

Self-audits can be a double-edged sword. A thorough audit may become a

88. See e.g., B.F. Goodrich Co. v. Murtha, 754 F. Supp. 960, 973 (D. Conn. 1991) (stating that “compliance with regulations is not a valid defense” to liability under CERCLA).


90. See PROSECUTIONS FOR ENVIRONMENTAL VIOLATIONS, supra note 21 and accompanying text (outlining criteria for decision to prosecute and giving illustrations of policy applications).


94. See id.

95. See id. at 19,618. The previous policy required disclosure within ten days for penalty reduction. See Incentives for Self-Policing, supra note 91.

96. See PROSECUTIONS FOR ENVIRONMENTAL VIOLATIONS, supra note 21 (outlining criteria for decision to prosecute and giving illustrations of policy applications); see also Audit Policy, 65 Fed. Reg. at 19,618 (discussing elimination of gravity-based penalties). The EPA has recently instituted an interim policy applying to the new owners of offending facilities allowing greater penalty mitigation for self-reporting new owners, and greater leniency given to owners who may have derived economic benefits from violations preceding their ownership. See generally Interim Approach for Applying the Audit Policy to New Owners, 73 Fed. Reg. 44,991–92 (Aug. 1, 2008).

97. See PROSECUTIONS FOR ENVIRONMENTAL VIOLATIONS, supra note 21.
prosecutor’s roadmap,\(^98\) as the DOJ retains full discretion to use voluntary audits for criminal prosecution.\(^99\) Unless there is an independent reason to suspect a violation, the EPA will not request voluntary environmental audits to trigger enforcement actions.\(^100\) The EPA has also implemented an approach for applying the audit policy that encourages new facility owners to report previous violations and bring their facilities up to compliance without facing prosecution.\(^101\)

The EPA refuses to treat the environmental audit as privileged information protected from public disclosure.\(^102\) Despite this controversial policy, the confidentiality of a corporate self-audit is ensured by attorney-client, work product, and critical self-analysis privileges.\(^103\) Additionally, some states provide statutory privileges,\(^104\) and Congress has debated bills that would grant similar federal protection.\(^105\)

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98. See Donald A. Carr & William L. Thomas, Devising a Compliance Strategy Under the ISO 14000 International Environmental Management Standards, 15 Pace ENVT'L. L. Rev. 85, 89 (1997) (discussing the use of voluntary audits in criminal proceedings). But see Robert Darnell, Environmental Criminal Enforcement and Corporate Environmental Auditing: Time for a Compromise?, 31 Am. CRIM. L. Rev. 123, 142 (1993) (arguing that because no criminal charges have been brought to date on basis of information revealed from any self-audit, no change is warranted in environmental auditing policy).

99. See PROSECUTIONS FOR ENVIRONMENTAL VIOLATIONS, supra note 21.

100. Id.


102. See BNA, supra note 89 (stating the EPA remains "firmly opposed" to statutory and regulatory audit privileges and immunity because audit privileges "undermine law enforcement, impair protection of human health and the environment, and interfere with the public’s right to know of potential and existing environmental hazards"); Michael Moore, Final EPA Policy on Voluntary Audits Draws Praise, Criticism, DAILY ENV’T. REP. (BNA), (Jan. 12, 1996). Voluntary audits expose organizations to potential litigation because of the information disclosed. For a background discussion of the critical aspects and repercussions of the environmental audit policy, see generally Ellen Page Delsole, An Environmental Audit Privilege: What Protection Remains After EPA’s Rejection of the Privilege?, 46 CATH. U. L. Rev. 325 (1997) (discussing environmental audit privilege law at the state and federal level) and Mia Anna Mazza, Comment, The New Evidentiary Privilege for Environmental Audit Reports: Making the Worst of a Bad Situation, 23 ECOLOGY L.Q. 79 (1996) (discussing actions taken to create an evidentiary privilege for environmental audits).


105. See Hawks, supra note 17, at 249–62.
E. Sentencing Guidelines

Sentencing for most federal environmental crimes is governed by section 2Q of the United States Sentencing Guidelines ("Guidelines"). The CWA, CAA, RHA, and other statutes delineating environmental crimes explicitly provide that "knowing endangerment" is a criminal offense. Knowing endangerment resulting from mishandling of hazardous or toxic substances warrants a base offense level of twenty-four under the Guidelines. If death or serious bodily injury resulted, an unspecified upward departure may be warranted.

A base offense level of eight will be awarded for the mishandling of, or unlawful transporting of, hazardous or toxic substances. A sentencing enhancement may be given when: (i) environmental contamination occurs; (ii) the offense resulted in substantial likelihood of death or serious bodily injury; (iii) the public health was seriously endangered; or (iv) a required permit was violated or not obtained.

The SDWA implicates section 2Q1.4, which designates the base offense level


107. For more discussion of “knowing endangerment” see infra Section IV.D.1.c. (CWA) and VIII.B.2.b. (RCRA) of this Article.


109. Id. § 2Q1.1, cmt. 1 (noting upward departures are governed by Chapter 5, Part K of Guidelines).

110. Id. § 2Q1.2. This provision governs some CWA violations, TSCA violations, FIFRA violations, and CERCLA violations.

111. Id. § 2Q1.2(b)(1)(A)-(B) (distinguishing between repetitive or ongoing contamination warranting a six-level enhancement and one-time discharge, release, or emission warranting a four-level increase); see also id. § 2Q1.2, cmt. 5 (explaining this penalty enhancement was intended to apply to broad range of activity). Some circuits do not require proof of actual contamination for this sentencing provision to apply. Compare United States v. Cunningham, 194 F.3d 1186, 1201–02 (11th Cir. 1999) (holding that the government does not need to prove actual contamination, but that contamination is assumed where "discharge, release or emission of a hazardous substance" is shown), with United States v. Ferrin, 994 F.2d 658, 663 (9th Cir. 1993) (requiring actual contamination). In addition, the contamination does not have to be the result of dumping directly into the environment for sanctions to apply, but instead may be applied where the dumped material is processed by a public utility. See United States v. Paynard, 2009 WL 1099257 (E.D. Mich. 2009) (finding that the environment includes "publicly-owned treatment works").

112. U.S.S.G. MANUAL § 2Q1.2(b)(2) (permitting upward adjustment of nine levels).

113. Id. § 2Q1.2(b)(3) (permitting an upward adjustment of four levels). This enhancement only applies where a "public disruption, evacuation or cleanup at substantial expense" was required. Id. § 2Q1.2, cmt. 7. There are, however, exceptions to the enhancement rules. See United States v. Agrobar, 459 F.3d 430, 437 (3d Cir. 2006) (holding vessel that made oily discharges outside of U.S. waters and failed to keep accurate records did not qualify for six-level enhancement of offense).

114. U.S.S.G. MANUAL § 2Q1.2(b)(4). Upward departures may also be justified where the defendant has been punished for similar conduct in a civil adjudication or has violated an administrative order, where the violation has caused "extreme psychological injury," or if the offense was an attempt to intimidate or coerce the government. Id. § 2Q1.2, cmt. 9.

115. Id. § 2Q1.3. The potential enhancements discussed in § 2Q1.3 are similar to those discussed as applicable to § 2Q1.2. See id. § 2Q1.3(b)(1)–(5) (providing specific offense characteristics and base offense levels).
for tampering or threatening to tamper with a public water system on a sliding scale from sixteen to twenty-six.\textsuperscript{116} Enhancements under this provision depend on the injuries caused, public inconvenience, repetitiveness of the violation, and the violator's purpose.\textsuperscript{117}

Sentencing for violations of the ESA is governed by section 2Q2.1 of the Guidelines.\textsuperscript{118} Enhancements depend upon whether the motivation for the violation was pecuniary gain, whether there was a pattern of similar violations, and the types of fish, wildlife, or plants involved.\textsuperscript{119}

\section*{III. CLEAN AIR ACT}

Part A of this Section examines Congress's purpose in enacting the Clean Air Act.\textsuperscript{120} Part B provides an overview of the elements of criminal violations under the Clean Air Act. Part C addresses available defenses to a CAA violation. Finally, Part D reviews the penalties imposed upon violators.

\subsection*{A. Purpose}

The CAA was enacted in 1963 and developed into its current form after an extensive set of amendments was passed in 1970.\textsuperscript{121} The general purpose of the CAA is "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population."\textsuperscript{122} To that end, the CAA authorizes the EPA to establish National Ambient Air Quality Standards ("NAAQS"),\textsuperscript{123} to protect the public's health. The CAA has also been used to direct the states to establish State Implementation Plans ("SIPs") for reducing air pollution.\textsuperscript{124} With the exception of the Acid Deposition and Stratospheric Ozone programs,\textsuperscript{125} the resolution of regulatory disputes under the

\begin{enumerate}
\item[116.] \textit{Id.} § 2Q1.4. A base offense level of twenty-six applies to actual tampering. \textit{Id.} A base offense level of sixteen applies where an individual has threatened to tamper but has not engaged in conduct evidencing an intent to tamper, whereas a base offense level of twenty-two applies if there has been a threat accompanied by some conduct evidencing an intent to tamper. Prosecutions for this offense include a presumption that there was an inherent risk of bodily injury to the tampering. As a result, a downward departure from the Guidelines may be applied where this risk was not present. \textit{Id.} § 2Q1.4 cmt. 3(A).
\item[117.] \textit{Id.} While the provisions here apply where the violations caused "permanent," "life-threatening," or "serious" bodily injuries, offenses resulting in death implicate the Guidelines for first and second-degree murder. \textit{Id.} § 2Q1.4(c).
\item[118.] \textit{Id.} § 2Q2.1 (setting a base offense level of six).
\item[119.] \textit{Id.}
\item[120.] 42 U.S.C. §§ 7401–7671 (2012).
\item[121.] \textit{See, e.g., Coal. for Clean Air v. S. Cal. Edison Co.}, 971 F.2d 219, 221 (9th Cir. 1992) ("[I]t was the Clean Air Amendments of 1970 that gave the Clean Air Act the basic structure it retains today.") (citations omitted).
\item[122.] \textit{See infra} notes 143–146.
\item[123.] 42 U.S.C. § 7401(b)(1); \textit{see also} Sierra Club v. Larson, 2 F.3d 462, 464 (1st Cir. 1993) (stating purpose of the CAA "to control and mitigate air pollution").
\item[124.] \textit{See infra} notes 148–152.
\item[125.] Because acid deposition and ozone depletion affect public health indirectly by degrading the environment, the CAA seeks to reduce or eliminate the air emissions that cause these problems so as to prevent their
CAA is guided by its stated goal of promoting public health. One court has held that the CAA unconstitutionally delegates judicial power to a non-Article III court to impose penalties for failures to comply with an administrative order.

**B. Elements of a CAA Offense**

Criminal sanctions are available if the CAA standards are violated either knowingly or negligently. Criminal sanctions apply to any person who: (i) violates the CAA by making false statements; (ii) fails to notify or report as required; (iii) interferes with or fails to install EPA monitoring devices; or (iv) fails to pay

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[126] For example, in *United States v. La. Pac. Corp.*, the court held that the government need only show that defendant knew that the material being released was asbestos, not that defendant knew his acts were unlawful.

[127] For example, in *United States v. Rubenstein*, the court held that the government need only prove that a defendant knew that the material being released was asbestos, not that defendant knew his acts were unlawful.

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Moreover, civil and administrative sanctions are also available whenever the CAA is violated. One court has held that a knowing violation “requires knowledge of facts and attendant circumstances that comprise a violation of the statute, not specific knowledge that one’s conduct is illegal.” United States v. Weintraub, 273 F.3d 139, 147 (2d Cir. 2001); see also United States v. Buckley, 934 F.2d 84, 88 (6th Cir. 1991) (“[T]he statute requires knowledge only of the emissions themselves, not knowledge of the statute or of the hazards that emissions pose.”). Civil and administrative sanctions are also available whenever the CAA is violated. See *United States v. Weintraub*, 336 F.3d 1236, 1258–60 (11th Cir. 2003) (holding that a defendant who makes false statement to the EPA may be prosecuted under act prohibiting general false statements to the government, even though the CAA contains specific prohibition).

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[128] See *United States v. Weintraub*, 336 F.3d 1236, 1258–60 (11th Cir. 2003) (holding that a defendant who makes false statement to the EPA may be prosecuted under act prohibiting general false statements to the government, even though the CAA contains specific prohibition).

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fees owed to the United States.132 Criminal sanctions may be imposed upon both an organization133 and the individuals responsible for the actions of the organization.134

1. Violation

The primary ways135 in which an actor may violate the CAA include: (i) emitting criteria pollutants136 in violation of SIPs implementing NAAQS;137 (ii) emitting hazardous air pollutants in excess of the applicable National Emission Standards For Hazardous Air Pollutants ("NESHAP");138 (iii) emitting pollutants in excess of the applicable New Source Performance Standards ("NSPS") for new or modified sources;139 (iv) emitting sulfur dioxide in excess of its emissions limitation requirement;140 or (v) producing or emitting an unauthorized ozone-

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133. See id. § 7413(c)(5)(E) ("The term "organization" means a legal entity, other than a government, established or organized for any purpose, and such term includes a corporation, company, association, firm, partnership, joint stock company, foundation, institution, trust, society, union, or any other association of persons."). Organizations convicted of an offense are subject to a fine not to exceed $1,000,000 per violation. Id. § 7413(c)(5).
134. Id. § 7602(e) (defining "person" to include an "individual, corporation, partnership, association, State, municipality, political subdivision of a State, and any agency, department, or instrumentality of the United States and any officer, agent or employee thereof"); id. § 7413(c)(6) (defining "person" as defined in § 7602(e) with the addition of "any responsible corporate officer"); id. § 7413(h) (defining exceptions to the terms "person" and "operator").
135. This portion of the article is restricted to the more prevalent violations of the CAA. See 42 U.S.C. § 7413(c)(1)–(5) (2012) for a complete summary of the ways a person can criminally violate the CAA.
137. 42 U.S.C. § 7413(c)(1). This section provides that criminal sanctions are available to "[a]ny person who knowingly violates any requirement or prohibition of an applicable implementation plan . . . [or] any order under [42 U.S.C. § 7413(a)] . . . ." These requirements include SIPs enacted by the states pursuant to 42 U.S.C. § 7410, and regulations establishing NAAQS under 42 U.S.C. § 7409. While SIPs for NAAQS can be revised by the state, pollution sources are held to the standard established in the pre-existing SIP until the EPA approves the revised SIP. See Gen. Motors Corp. v. United States, 496 U.S. 530, 540 (1990).
138. 42 U.S.C. § 7412(c) (2012). This section provides the procedures for creating NESHAP standards. Violations of these standards are made criminal under § 7413(c)(1).
139. Id. § 7411(e). There has been considerable debate surrounding the EPA's authority to regulate carbon dioxide and other "greenhouse gases." See generally J. Christopher Baird, Trapped in the Greenhouse? Regulating Carbon Dioxide after FDA v. Brown & Williamson Tobacco Corp., 54 DUKE L.J. 147 (2004) (discussing the controversy and difficulty surrounding the EPA's authority to regulate carbon dioxide). However, the Supreme Court has required the EPA to regulate carbon dioxide emissions. Massachusetts v. EPA, 549 U.S. 497, 528 (2007); see also Am. Elec. Power Co. v. Connecticut, 131 S. Ct. 2527, 2535 (2011) (a divided court finding that states had standing under Massachusetts v. EPA to challenge refusal of the EPA to regulate greenhouse gases).
140. 42 U.S.C. § 7651j(a) (2012). No penalty will be assessed when excess emissions are authorized under § 7651j.
affecting substance.\textsuperscript{141} Failures to file reports or to comply with an EPA order are also violations of the CAA.\textsuperscript{142}

\textit{a. Emissions Standards}

Pollution standards under the CAA are administered in three basic stages. First, the EPA sets national emissions standards for clean air. Second, the states, and to a lesser extent the Native American tribes, work with the EPA to develop a plan for meeting the national standards at the local and regional levels. Third, the EPA, states, and tribes cooperate to monitor and enforce CAA programs.

\textit{i. National Ambient Air Quality Standards}

The CAA directs the EPA administrator to create primary\textsuperscript{143} and secondary\textsuperscript{144} national ambient air quality standards ("NAAQS")\textsuperscript{145} for certain "criteria pollutants."\textsuperscript{146}

\begin{itemize}
\item[141.] \textit{Id.} § 7671a. The EPA is licensed to bring enforcement for violations of this provision under § 7413(a)(3).
\item[142.] \textit{Id.} § 7413(c)(1)-(2). The Eleventh Circuit found it unconstitutional to impose criminal sanctions for failure to comply with an administrative compliance order. Tenn. Valley Auth. v. Whitman, 336 F.3d 1236, 1258-60 (11th Cir. 2003) (finding a violation of the Fifth Amendment when an administrative compliance order could impose criminal sanctions without providing defendant with a hearing before an "impartial tribunal").
\item[143.] Primary standards are set for each of the criteria pollutants to protect the public health. NAAQS presently cover six criteria pollutants: carbon monoxide, sulfur oxides, nitrogen dioxide, particulate matter, ozone, and lead. Protection of Environment, 40 C.F.R. §§ 50.4-50.9, 50.11-50.12, 50.15-50.16 (2012). There are presently two standards pertaining to lead; as of late 2009, the standards set forth in § 50.12 apply universally. The standards must allow an adequate margin of safety. 42 U.S.C. § 7409(b) (2012); \textit{see also} Whitman v. Am. Trucking Ass’n, 531 U.S. 457, 465 (2001) (‘The EPA, ‘based on’ the information about health effects contained in the technical ‘criteria’ documents compiled under § 108(a)(2), 42 U.S.C. § 7408(a)(2), is to identify the maximum airborne concentration of a pollutant that the public health can tolerate, decrease the concentration to provide an ‘adequate’ margin of safety, and set the standard at that level.’). Costs of implementation are not a valid consideration for the EPA in setting NAAQS. Whitman, 531 U.S. at 465. Whether the promulgated primary NAAQS provide an adequate margin of safety will be reviewed to determine if the selected margin is rational. \textit{See, e.g.}, Am. Petroleum Inst. v. Costle, 665 F.2d 1176, 1187 (D.C. Cir. 1981) (subjecting the EPA’s twenty-four hour and annual NAAQS for particulate matter to rationality standard of review).
\item[144.] Secondary standards are set for each of the criteria pollutants, \textit{see supra} note 143, “to protect the public welfare from any known or anticipated adverse effects associated with their presence. 42 U.S.C. § 7409(b)(2) (2012). Secondary standards are evaluated by determining the pollutant’s effects on, among other things, “soils, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility, and climate, damage to and deterioration of property, and hazards to transportation, as well as effects on economic values, and on personal comfort, and well-being . . . .” 42 U.S.C. § 7602(h) (2012).
\item[145.] NAAQS, which prescribe allowable concentration levels of pollutants in the atmosphere, are designed to reduce the quantity of pollutants in the air and also to prevent the deterioration of the air quality in areas where pollutants are found in lower concentration than the limits imposed by the CAA. \textit{See Ober v. Whitman, 243 F.3d 1190, 1197 (9th Cir. 2001) (NAAQS are intended to protect the public health)}; \textit{Nat’l Asphalt Pavement Ass’n v. Train, 539 F.2d 775, 783 (D.C. Cir. 1976) (stating purpose of air quality standards). NAAQS are measured in parts per million (ppm) by volume, parts per billion (ppb) by volume, and micrograms per cubic meter of air (μg/m³). Air and Radiation: National Ambient Air Quality Standards (NAAQS), EPA, http://www.epa.gov/air/criteria.html (last updated Dec. 14, 2012) (listing the current primary and secondary NAAQS for criteria pollutants).
\end{itemize}
The CAA places the responsibility for the attainment and maintenance of the NAAQS with states and tribes; states are charged with implementing the standards through an EPA-approved SIP. In devising SIPs, states and tribes must consider the regional impact of their air emissions. States are bound by their SIP and are not free to amend or repeal aspects of their SIP without prior EPA approval. If the EPA determines that a SIP will not bring the state into attainment, it must then devise a Federal Implementation Plan ("FIP"). However, the EPA’s attempts to address states’ nonattainment have met with limited

147. The EPA is given the authority to treat tribal lands as states, and to provide regulations specifying which provisions of the CAA treat the two entities in the same manner. 42 U.S.C. § 7601(d)(1)–(2) (2012). Where the EPA Administrator determines that similar treatment is “inappropriate or administratively infeasible,” he has the discretion to provide regulations providing other means of administering the affected provisions. Id. § 7601(d)(4). The EPA has passed a “tribal authority regulation” providing that tribal lands which meet the necessary criteria will be generally treated as states, with a limited set of listed exceptions. 40 C.F.R. §§ 49.3–49.4 (2012). Tribal jurisdiction must be found before the EPA will treat the territory as tribal land. Michigan v. EPA, 268 F.3d 1075, 1079 (D.C. Cir. 2001) (“Tribes may be treated as states if: they have a governing body; the functions they are to exercise pertain to the management and protection of air resources within the tribe’s jurisdiction; and the tribe is capable of carrying out these functions.”).

148. 42 U.S.C. § 7410(a) (2012); Appalachian Power Co. v. EPA, 249 F.3d 1032, 1037 (D.C. Cir. 2001) ("States, in turn, are required to adopt state implementation plans ("SIPs") providing for the attainment of the NAAQS."); United States v. E. Ky. Power Comm’n, 498 F. Supp. 2d 995 (E.D. Ky. 2007); see also 42 U.S.C. § 7407(a) (2012) (explaining that states “have the primary responsibility for assuring air quality . . . by submitting an implementation plan for such State which will specify the manner in which national primary and secondary ambient air quality standards will be achieved and maintained . . . .”). The fact that this authority is delegated to the states does not preclude the EPA from initiating enforcement actions. 42 U.S.C. § 7413 (2012); see also Alaska Dep’t of Envtl. Conservation v. EPA, 540 U.S. 461, 502 (2004) (upholding the EPA’s finding of NSPS noncompliance over state’s contrary determination). But see United States v. Gen. Motors Corp., 702 F. Supp. 133, 137–38 (stating that the EPA could not directly enforce stricter standards on source which was in compliance with the EPA-approved SIP that allowed standards substantially equivalent to the EPA’s own guidelines).

149. See 42 U.S.C. § 7410(a)(2)(D)(ii)(I) (2012) (requiring states to create provisions prohibiting “emissions activity” affecting the ability of other states to comply with NAAQS); North Carolina v. EPA, 531 F.3d 896, 908–09 (D.C. Cir. 2008) (requiring the EPA to take into account whether state pollutants from SIPs will interfere with attainment or maintenance of air quality in downwind states); Appalachian Power Co., 249 F.3d at 1037 (upholding the EPA’s authority to directly regulate emissions in “upwind states” when it finds that those emissions “contribute significantly to non-attainment” in downwind states).

150. 42 U.S.C. § 7410 (2012); see also Ass’n of Am. Railroads v. S. Coast Air Quality Mgmt. Dist., 622 F.3d 1094 (9th Cir. 2010) ("Once approved by the EPA, state implementation plans have “the force and effect of federal law.”"); Safe Air for Everyone v. EPA, 488 F.3d 1088, 1097 (9th Cir. 2007) (holding that once the EPA approved a SIP, it became federal law and could not be repealed without the consent of the EPA; a state may not “unilaterally alter the legal commitments of its SIP once the EPA approves the plan”).

151. 42 U.S.C. § 7410(c)(1) (2012); see also Ober v. Whitman, 243 F.3d 1190, 1193 (9th Cir. 2001) (holding that the EPA had duty to devise FIP when it decided to reject Arizona SIP). States are required to design SIPs that will satisfy NAAQS, but they can impose more stringent standards if they so choose. 42 U.S.C. § 7416 (2012); see also Union Elec. Co. v. EPA, 427 U.S. 246, 264–65 (1976) (determining that the EPA may not declare ambitious SIPs infeasible; it must approve plans if they meet minimum federal requirements).

Additionally, the EPA may have an affirmative duty to issue a FIP when it disapproves a revision to a SIP, or in the event that the EPA becomes aware that an existing SIP is no longer adequate under the CAA. See Ass’n of Irrigated Residents v. EPA, 686 F.3d 668, 674–77 (9th Cir. 2011) (finding that the EPA was required to review existing California SIP and issue a FIP if it was inadequate, when the EPA rejected a proposed revision, simultaneously becoming aware of possible inadequacy in its existing SIP).
success.152

ii. National Emission Standards for Hazardous Air Pollutants153

The CAA also directs the EPA to promulgate National Emissions Standards for Hazardous Air Pollutants ("NESHAPs") in order to regulate the emission of Hazardous Air Pollutants ("HAPs")154 from new or existing155 major or area sources.156 The standards are required to provide an ample margin of safety to

152. The 1970 amendment to the CAA, enacted mainly to address widespread state nonattainment with previously minimal Federal involvement, envisioned attainment by 1977 at the latest by establishing that the EPA should institute SIPs within six months for any states that failed to submit adequate SIPs. See Robert A. Wyman, Thomas R. Freeman & J. Wesley Skow, The Clean Air Act Nonattainment Program, 432 A.L.I.-A.B.A. COURSE OF STUDY 479, 482 (1989). The 1977 CAA amendments attempted to address ongoing nonattainment, extending the expected deadline generally to 1987. Id. at 483. The last extensive revision to the CAA, in 1990, reworked several SIP requirements for reaching attainment, requiring increased reporting and extending deadlines. Among other things, the amendments redefined stationary sources and created a more complex structure for defining nonattainment areas within states. See generally Arnold W. Reitze, Jr., Air Quality Protection Using State Implementation Plans—Thirty-Seven Years of Increasing Complexity, 15 VILL. ENVT. L.J. 209 (2004) (detailing history of the CAA). Although the FIP program has remained in place since its implementation in 1970, the EPA has usually avoided actually implementing FIPs because of the high cost and reluctance to insert itself into state and local politics. Id. at 233.

In the last two decades, the EPA has attempted to promulgate rules attacking specific ongoing causes of air pollution. For instance, in April 2006 the EPA implemented the Clean Air Interstate Rule ("CAIR") under 42 U.S.C. 7410(a)(2)(D)(i) (2012) promoting a cap and trade system to regulate sources that emit sulfur dioxide and nitrogen oxide contributing to downwind states' nonattainment. See Harry Moren, Note, The Difficulty of Fencing in Interstate Emissions: EPA's Clean Air Interstate Rule Fails to Make Good Neighbors, 36 ECOLOGY L.Q. 525, 526 (2009) (providing overview of CAIR). Under various challenges, the court remanded the rule so that the "EPA may remedy CAIR's flaws." North Carolina v. EPA, 550 F.3d 1176, 1178 (D.C. Cir. 2008). In response, the EPA replaced CAIR with the Transport Rule in 2011, but this was recently vacated in EME Homer City Generation, L.P. v. EPA, 696 F.3d 7, 37–38 (D.C. Cir. 2012), cert. granted, 133 S. Ct. 2857 (2013) (holding that the EPA overstepped statutory limits in the Transport Rule).


154. HAPs include asbestos, chloroform, chromium, copper, inorganic arsenic, mercury, nickel, phenol, and zinc. For a complete listing, see 42 U.S.C. § 7412(b)(1) (2012) and 40 C.F.R. § 61.01 (2012). Controlling HAPs is a central purpose of the CAA. See United States v. Anthony Dell'Aquilla, Enters., 150 F.3d 329, 332 (3d Cir. 1998) (summarizing the CAA as it pertains to NESHAP).

155. 42 U.S.C. § 7412(d) (2012). A polluting facility is categorized as a "new source" if it is constructed or modified after one of its emissions is designated a HAP by the EPA. See id. § 7412(a)(4) (defining a "new source" as "a stationary source the construction or reconstruction of which is commenced after the Administrator first proposes regulations . . . establishing an emission standard applicable to such source"). New and existing sources are subject to differing emissions standards, with standards for existing sources permitted to be less stringent than for new sources. See id. § 7412.

156. 42 U.S.C. § 7412(a)(1) defines "major source" with regards to the emission of HAPs as "any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit, considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants." An "area source" is a stationary source that is not a major source. Id. § 7412(a)(2). Major sources are subject to more stringent regulation than area sources. See Nat'l Lime Ass'n v. EPA, 233 F.3d 625, 628–29 (D.C. Cir. 2000) (ruling the EPA's definition of "major" sources for the purposes of NESHAP regulation was reasonable); 40 C.F.R. § 63.2 (2012) (providing the EPA's definition of the terms "area source" and "major source").
protect the public health.\textsuperscript{157} The EPA can approve state programs that establish more stringent standards for HAPs.\textsuperscript{158} As with NAAQS, state standards must be at least as stringent as those established by the EPA.\textsuperscript{159}

\begin{itemize}
  \item[iii.] New Source Performance Standards
\end{itemize}

In order to control the emission of air pollutants\textsuperscript{160} by newly constructed sources, the CAA directs the EPA to set New Source Performance Standards ("NSPS") for new\textsuperscript{161} or modified\textsuperscript{162} stationary sources\textsuperscript{163} that are major

\textsuperscript{157} 42 U.S.C. § 7412(d)(4) (allowing Administrator to consider established health thresholds in promulgating emissions standards); \textit{see also} Whitman v. Am. Trucking Ass’n, 531 U.S. 457, 475-76 (2001) (holding that the requirement that the EPA set NAAQS at a level "not lower or higher than is necessary—to protect the public health with an adequate margin of safety" is a permitted level of agency discretion). The public health interests involved in the regulation of hazardous air pollutants entitle the EPA to substantial deference in its interpretation of NESHAP. See United States v. Hoechst Celanese Corp., 128 F.3d 216, 221-23 (4th Cir. 1997). \textit{But see Am. Trucking Ass’n}, 531 U.S. at 481-86 (finding the EPA’s classification of ozone nonattainment areas for NAAQS unreasonable, though the public health interest is similar to NESHAP).

\textsuperscript{158} 42 U.S.C. § 7412(l)(1) (outlining process by which individual states may obtain approval for state programs to establish and enforce emissions standards); \textit{see Reitez & Lowell}, supra note 153, at 277-80 (providing an overview of the relationship between the EPA and state hazardous air pollutant programs). Such delegation to a state program does not preclude the EPA from enforcing NESHAP. 42 U.S.C. § 7412(l)(7).

\textsuperscript{159} 42 U.S.C. § 7412(l)(5) (governing the approval or disapproval of state programs by the EPA).

\textsuperscript{160} The air pollutants regulated by NSPS overlap with those regulated in NESHAP, and include, but are not limited to, nitrogen oxides, acid mist, sulfur oxides, volatile organic compounds, particulate matter, fluorides, visible emissions, carbon monoxide, total reduced sulfur, and lead. See 40 C.F.R. § 60 (2012) for the complete regulations governing NSPS. \textit{See also Technology Transfer Network Air Toxics Web Site}, EPA, http://www.epa.gov/ttn/atw/eparules.html (last updated Jan. 14, 2014) (providing information on current regulations, implementation, and related policies and guidelines).

\textsuperscript{161} A "new source" is a facility of any type that is regulated by the EPA under NSPS and whose construction or modification is commenced after those regulations are promulgated. 42 U.S.C. § 7411(a)(2) (2012). Construction is commenced when an owner or operator has entered a contractual obligation to complete, within a reasonable time, the construction of a regulated facility. \textit{Compare} United States v. City of Painesville, 431 F. Supp. 496, 501 (N.D. Ohio 1977) (holding construction of regulated boiler did not begin when city began planning to build new electrical generating unit, but instead began when specifications in contract to purchase boiler could no longer be altered without additional expense), \textit{with Potomac Elec. Power Co. v. EPA}, 650 F.2d 509, 519 (4th Cir. 1981) (holding that the EPA’s definition of "construction" as applied to a power plant’s installation of a new boiler, as opposed to construction of a new facility, was erroneous and "inconsistent with the position taken . . . in Painesville").

\textsuperscript{162} "Modification" is defined in 42 U.S.C. § 7411(a)(4) as “any physical change in, or change in the method of operation of, a stationary source which increases the amount of any air pollutant emitted by such source or which results in the emission of any air pollutant not previously emitted.” According to the D.C. Circuit Court of Appeals, Congress limited the meaning of physical change to changes resulting in increased emissions, but included no limitation requiring significant physical changes (such as major plant modifications) to trigger § 7411(a)(4). New York v. EPA, 443 F.3d 880, 890 (D.C. Cir. 2006) (invalidating the EPA’s definition of “any physical change” and therefore an EPA regulation allowing sources to avoid the modification requirement for equipment replacement which coincidentally raises emissions). To determine emission levels that trigger a "modification," the EPA “must determine whether the change increases the facility’s hourly rate of emission.” Wis. Elec. Power Co. v. Reilly, 893 F.2d 901, 905 (7th Cir. 1990) (holding that renovation of electric plant installing new turbine-generators, boilers, mechanical and electric auxiliaries, and common plant support facilities constitutes “modification” when the renovations increase emissions). In fact, no physical change need actually take place to constitute a modification, so long as a change in operation of the stationary source results in
sources of air pollution. The EPA Administrator is authorized to identify categories of sources whose emissions pose a public health risk. Any new or modified source that falls within one of these categories must comply with NSPS. NSPS are enforced by the states through EPA-approved SIPs or by the EPA itself. Selection of a strategy to control NSPS is accomplished through top-down “Best Available Control Technology” (“BACT”) analysis.

increased emissions. See United States v. Cinergy Corp., 384 F. Supp. 2d 1272, 1278 (S.D. Ind. 2005) (holding that increased emissions which result only from increased operational hours or production rates, without corresponding physical changes, are a modification under § 7411(a)(4)). But see United States v. Duke Energy Corp., 411 F.3d 539, 550 (4th Cir. 2005), rev'd on other grounds sub nom. Envtl. Def. v. Duke Energy Corp., 549 U.S. 561 (2007) (holding that emission rates must be measured on an hourly basis, and upgrades to a plant’s coal-fired generating units which allow increased hours of operation, leading to an increase in yearly emissions but not hourly, do not count as modification). De minimis changes in output resulting from physical changes may, however, be exempted from new source review. See New York v. EPA, 443 F.3d at 888 (noting the EPA’s “inherent power to overlook ‘trifling matters’”); Ala. Power Co. v. Costle, 636 F.2d 323, 360 (D.C. Cir. 1979) (noting that an agency has discretion to make categorical exemptions even to express statutory language “to overlook circumstances that in context may fairly be considered de minimis”); Sierra Club v. Pub. Serv. Co. of Colo., 894 F. Supp. 1455, 1461 (D. Colo. 1995) (holding that repair and replacement of electrostatic precipitator did not constitute a physical change even though plant continued to operate with increased emissions during the nineteen days that it was being repaired).

163. A “stationary source” is “any building, structure, facility, or installation which emits or may emit any air pollutant.” 42 U.S.C. § 7411(a)(3). Stationary sources may include, but are not limited to, Portland cement mills, fossil-fuel fired steam electric plants, coal cleaning plants, primary zinc plants, iron and steel mills, copper smelters, municipal incinerators, lime plants, fuel conversion plants, and fossil-fuel boilers. 40 C.F.R. § 51.166(b)(1)(i) (2012). Stationary sources do not include structures that attract automobiles and, hence, emit pollution indirectly, such as roads, highways, parking lots, or similar installations. 42 U.S.C. § 7410(a)(5)(A) (2012); see also Sierra Club v. Larson, 2 F.3d 462, 468 (1st Cir. 1993) (“Although indirect sources are not in terms excluded from the definition of stationary sources—the former provision is cast instead as a limitation on EPA authority—the effect of the amendment is to treat indirect sources as a separate category of sources subject to a different legal regime.”).

164. A major stationary source of air pollution is defined as “any stationary facility or source of air pollutants which directly emits, or has the potential to emit, one hundred tons per year or more of any air pollutant . . . .” 42 U.S.C. § 7602(j) (2012). Though this is a general definition under the CAA, it applies “except as otherwise expressly provided,” and has been held to cover those CAA sections which do not include alternative definitions. See Chevron, U.S.A., Inc. v. Natural Res. Def. Council, Inc., 467 U.S. 837, 860 (1984) (stating that § 7602(j) provides the definition of the term “major source”); Nat’l Mining Ass’n v. EPA, 59 F.3d 1351, 1359–61 (D.C. Cir. 1995) (relying on Ala. Power Co., 636 F.2d at 353–55 to decide that § 7602(j) generally defines “major stationary source,” unless it is defined differently in a subsection); see also 40 C.F.R. § 51.166(b)(1)(i) (2012) (defining “major stationary source”). Though “major source” is defined differently with regards to the emission of HAPs in 42 U.S.C. § 7412(a)(l), courts have defined major stationary sources as regards NSPS consistently with § 7602(j).


166. The EPA is directed to publish, and from time to time modify, categories of major stationary sources of pollution that are subject to performance standards. Id. § 7411(b)(1).

167. Id. § 7411(c). The EPA is not precluded from enforcing NSPS by delegating enforcement authority to the state. Id.; see also Alaska Dep’t of Envtl. Conservation v. EPA, 298 F.3d 814, 818–22 (9th Cir. 2001) (upholding the EPA’s finding of NSPS noncompliance over state’s contrary determination).

169. Under this method, the applicant lists all available control policies in descending order of effectiveness. The most effective method of control is accepted as BACT, unless it is shown to be technically infeasible, or other considerations demonstrate that this enforcement could not be achieved. If shown to be infeasible or unachiev-
iv. Acid Deposition Regulation

Congress has found that at least one causal factor in the formulation of “acid rain” is the release of sulfur dioxide (“SO₂”) and nitrogen oxides into the air. The CAA sets SO₂ and nitrogen oxides allowances for emitting sources in order to reduce acid deposits and acid rain. These allowances are allocated annually to the operator of each applicable emitting unit. The program gradually reduces SO₂ emissions through two phases of planned reductions in the number of available allowances. Phase I requirements took effect on January 1, 1995, affecting 110 mostly coal-burning electric utility plants located in twenty-one states. Phase II requirements took effect on January 1, 2000, and tightened the annual emissions limits imposed on the original 110 plants and set regulations on smaller, existing plants and new utility units. On April 13, 2012, the EPA proposed new restrictions on coal-fired power plants, which would have had a significant effect on new plants. Due to industry and political opposition, the

able, the policy is eliminated. The most stringent policy not eliminated then becomes BACT. See Alaska Dep’t of Envtl. Conservation, 298 F.3d at 822 (explaining the “top-down method” for determining BACT for new pollutant-emitting sources, pursuant to the CAA). An applicant can reject a control method for economic reasons when: the applicant shows that “costs of control are disproportionately high” compared to other recent permit decisions, the cost-effectiveness of this policy is outside the range of costs borne by similar facilities in recent decisions, or when the cost of control will cause “adverse economic impact to the facility.”


171. 42 U.S.C. § 7651(a)(1)-(2) (2012); see also What is Acid Rain?, supra note 170 (“[A]cid rain formation result[s] from both natural sources . . . and man-made sources, primarily emissions of sulfur dioxide (SO₂) and nitrogen oxides (NOₓ). . .”).

172. Id. § 7651(b); see Clean Air Mtks. Grp. v. Pataki, 338 F.3d 82, 84 (2d Cir. 2003) (outlining the CAA’s statutory scheme regarding acid rain). See generally Jennifer Yelin-Kefer, Note, Warming Up to an International Greenhouse Gas Market: Lessons from the U.S. Acid Rain Experience, 20 STAN. ENVTL. L.J. 221, 234–41 (2001) (providing overview and assessment of the CAA’s acid rain program). Each “allowance” is an authorization for an affected unit to emit one ton of sulfur dioxide during or after a specified calendar year. 42 U.S.C. § 7651a(3) (2012). These allowances are traded like currency. See id. § 7651b(f) (“Allowances, once allocated to a person by the Administrator, may be received, held, and temporarily or permanently transferred . . .”); North Carolina v. EPA, 531 F.3d 896, 921–22 (D.C. Cir. 2008) (invalidating EPA regulations allowing for the automatic retiring of allowances or their removal from the market, as the CAA does not confer authority to terminate or limit allowances).

173. Allowances are given in an amount equal to that unit’s “annual tonnage emission limitation,” calculated using different formulas in 42 U.S.C. §§ 7651(c), 7651(d), 7651(e), 7651(h), and 7651(i) (2012), except as otherwise specifically provided. 42 U.S.C. § 7651b(a)(1).

174. Id. §§ 7651c–7651d.

175. Id. § 7651c(a)(1) (2012).

176. Id. § 7651d(a)(1) (2012).


178. EPA Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units 77 Fed. Reg. 22, 392 (proposed Apr. 13, 2012). The proposed regulation, intended to limit greenhouse gas emissions, would have had a significant impact on the introduction of new coal-fired plants,
EPA rescinded the April 13, 2012 proposal and proposed new standards of performance on September 20, 2013.\(^{179}\)

\textit{v. Stratospheric Ozone Protection}

In 1990, Congress expanded the CAA in an attempt to deal with the problems associated with stratospheric ozone depletion.\(^{180}\) The program created two classes of substances based on their ozone depletion potential\(^{181}\) and created a plan to phase out their production and consumption.\(^{182}\) Similar to the acid rain...
program, the regulations establish allowances for individual manufacturing facilities.  

b. EPA Monitoring of Emissions Standards

Under the CAA, the EPA Administrator or his authorized representative may require any operator of an air emission source to maintain records, install and maintain monitoring equipment, sample emissions as the Administrator shall prescribe, provide the EPA with relevant information, or submit compliance certifications. Furthermore, the EPA may request additional relevant records from a source if the EPA first obtains an administrative warrant. Authorized representatives include only government employees and not employees of private contractors.

In order to monitor emissions standards, administrative warrants may be issued based on suspicion of less-than-criminal probable cause. The EPA need

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183. 40 C.F.R. §§ 82.4–82.8 (2012) (detailing program’s prohibitions and allowances).


185. Id. § 7414(a)(2)(B). Access is not limited to only those records required by the EPA. See Ced’s Inc. v. EPA, 745 F.2d 1092, 1099 (7th Cir. 1984) (establishing that the EPA is authorized to inspect and copy any business records of any person, including corporations under § 7602(e), subject to any provision of the CAA, even when the EPA has not required them to maintain any records). But see In re Investigation Pursuant to Clean Air Act, 42 U.S.C. §§ 7401 et seq., 728 F. Supp. 626, 628 (D. Idaho 1990) (limiting the EPA’s authorization to inspection and copying of records required to be maintained by the CAA or federal regulations, or other records “directly related to the purpose of the inspection”).

186. See United States v. Stauffer Chem. Co., 684 F.2d 1174, 1181–93 (6th Cir. 1982), aff’d on other grounds, 464 U.S. 165 (1984) (discussing in dicta conflicting case precedent, statutory interpretation, and legislative history; but concluding that private contractors are not representatives under Section 7414(a)(2)). Compare Bunker Hill Co. Lead & Zinc Smelter v. EPA, 658 F.2d 1280 (9th Cir. 1981) (holding that employee of private contractor qualifies as an authorized representative under Section 7414(a)(2), for the purposes of an ex parte inspection warrant), with Stauffer Chem. Co. v. EPA, 647 F.2d 1075, 1079 (10th Cir. 1981) (“employees of an independent contractor . . . are not authorized representatives of the EPA Administrator for the purposes of Section 7414(a)(2) . . . .”).

187. Although businesses are generally protected by the Fourth Amendment prohibition against unreasonable searches, Marshall v. Barlow’s, Inc., 436 U.S. 307, 312 (1978), statutorily authorized administrative searches, particularly in the case of “closely regulated industries,” id., have been held to reduced warrant requirements compared with standard criminal searches. See see v. City of Seattle, 387 U.S. 541, 545 (1967) (requiring warrants for administrative searches, but noting that “the agency’s particular demand for access will of course be measured . . . against a flexible standard of reasonableness that takes into account the public need for effective enforcement of the particular regulation involved”); Camara v. Municipal Court, 387 U.S. 523, 538 (1967) (holding that substantial government interest in issuing a warrant will affect the standard of reasonableness required in individual cases); Eisenberg v. Wall, 607 F. Supp. 2d 248, 254 (D. Mass. 2009) (determining that administrative searches relating to health and safety standards are subject to “a less stringent probable cause standard than criminal searches”); Dow Chem. Co. v. United States, 476 U.S. 227, 252 n.14 (1986) (Powell, J., concurring in part and dissenting in part) (“an administrative agency need not demonstrate [p]robable cause in the criminal law sense' to obtain a warrant to inspect property for compliance with a regulatory scheme”) (quoting Barlow’s, Inc., 436 U.S. at 320); cf. Dow Chem. Co., 476 U.S. at 237–39 (majority opinion) (holding that the EPA was authorized to take aerial photographs of chemical plant without a warrant in order to investigate emissions under the CAA, even though this was not precisely spelled out in the statute).
only demonstrate that Congress authorized the investigation and that the documents sought are relevant to the investigation, as well as adequately described.\textsuperscript{188}

Failure to comply with CAA requirements may result in administrative, civil, and criminal sanctions.\textsuperscript{189} The government has discretion to decide whether to proceed criminally or civilly under the CAA.\textsuperscript{190}

\textsuperscript{188} United States v. Tivian Labs., Inc., 589 F.2d 49, 54 (1st Cir. 1978) (holding that the EPA did not violate Fourth Amendment by requiring owner of an emission or point source to provide the EPA with such information as is reasonably required to carry out its responsibilities under the CAA); see also Pub. Serv. Co. of Ind. v. EPA, 509 F. Supp. 720, 723 (S.D. Ind. 1981) (upholding administrative warrants under the CAA § 308 where the EPA's affidavits set forth agency's broad investigatory powers and outlined bases for the EPA's belief that the CAA violations were occurring). Under section 308 of the CAA, the EPA may request information without obtaining a warrant or prior court permission in a procedure similar to a subpoena duces tecum. See Tivian Labs., 589 F.2d at 53 ("Subpoenas duces tecum, used by agencies to obtain evidence relevant not only if illegal entry tainted the warrant.")

\textsuperscript{189} 42 U.S.C. § 7413 (2012) invalidated by Tenn. Valley Auth. v. Whitman, 336 F.3d 1236, 1239-40 (11th Cir. 2003) (holding that § 7413(b), (c)(1), and (d) are unconstitutional to the extent that "severe civil and criminal penalties" can be imposed for noncompliance with administrative compliance orders, which are not final agency actions); see also Alaska Dep't of Envtl. Conservation v. EPA, 540 U.S. 461, 483, 493 (2004) (noting that the EPA could pursue criminal sanctions for violations of Prevention of Significant Deterioration permits). See generally Lisa M. Schenck, Let's Clear the Air: Enforcing Civil Penalties Against Federal Violators of the Clean Air Act, 6 ENVTL. L. W 839 (2000) (examining the feasibility of suing federal agencies and their employees for civil damages under the CAA).

\textsuperscript{190} See Cooney, supra note 42, at 10,463 (stating "Justice and EPA have enormous latitude in deciding which cases to prosecute criminally," and describing factors used to decide). The government uses two principal criteria in deciding which cases warrant criminal prosecution: significant environmental harm and culpable conduct. See id. at 10,468 (describing factors as outlined in memorandum by the EPA head of criminal investigations). Significant environmental harm includes actual or threatened harm to human health or the environment, and a trend or common attitude in a regulated industry. Id. Culpable conduct can be inferred from several factors, including a history of violations, tampering with monitoring equipment, or concealment of misconduct. See generally id. (discussing the factors influencing the government's decision to prosecute criminally); David A. Barker, Environmental Crimes, Prosecutorial Discretion, and the Civil/Criminal Line, 88 VA. L. REV. 1387 (2002) (arguing in favor of the "broad prosecutorial discretion" provided by the overlay of criminal sanctions on a framework of similar civil sanctions); David M. Uhlmann, Environmental Crime Comes of Age: The Evolution of Criminal Enforcement in the Environmental Regulatory Scheme, 2009 UTAH L. REV. 1223 (reviewing the development of criminal prosecution of environmental crimes).
2. Intent

A criminal violation results if a source knowingly violates any provision of the CAA. Courts interpret "knowingly" to refer to knowledge of facts. The government, therefore, need only prove that the defendant was aware of the facts leading to a CAA violation and not that the defendant was actually aware that his conduct violated the CAA. The statute also criminalizes negligent and knowing endangerment. A person who negligently or knowingly places another in danger of death or serious bodily injury by releasing hazardous air pollutants can be imprisoned, fined, or both.

191. The CAA does not define the term "knowingly." See infra notes 192–94 (discussing the manner in which courts define "knowingly").

192. 42 U.S.C. § 7413(c) (outlining criminal violations of the CAA); see also United States v. Alghazouli, 517 F.3d 1179, 1188 (9th Cir. 2008) ("Criminal enforcement . . . is explicitly granted in . . . the CAA, 42 U.S.C. § 7413(c)(1), which provides . . . 'imprisonment for not to exceed 5 years . . . for [a]ny person who knowingly violates . . . title VI' (relating to stratospheric ozone control) . . ."); United States v. Fern, 155 F.3d 1318, 1325 (11th Cir. 1998) (determining knowledge but not willfulness is an essential element of a criminal offense under the CAA). See Section III.B.1.a of this Article, discussing emissions standards.

193. See Alghazouli, 517 F.3d at 1193 (upholding conviction for illegal importation and selling of R-12 freon under 42 U.S.C. § 7413(c)(1) even though defendant did not know his actions violated the statute). In Alghazouli, the Ninth Circuit noted that the Second, Fifth, and Sixth Circuits had come to similar conclusions regarding the CAA knowing requirement. Id. at 1192. The court distinguished the requirement under the CAA from a recent Supreme Court decision holding a witness-tampering statute required knowledge of the facts as well as the law on the basis that "the CAA is a public welfare statute dealing with harmful substances." Id. at 1194. See also Arthur Andersen LLP v. United States, 544 U.S. 696 (2005); United States v. Ho, 311 F.3d 589, 605 (5th Cir. 2002) (holding that defendant who knows of presence of asbestos may be convicted of knowingly failing to comply with Clean Air Act notice requirements, even if he is unaware of such requirements; the term "knowingly" refers to "factual knowledge as distinguished from knowledge of the law"); United States v. Weintraub, 273 F.3d 139, 147 (2d Cir. 2001) (the phrase "knowingly violates" in § 7413(c)(1) "requires knowledge of facts and attendant circumstances that comprise a violation of the statute, not specific knowledge that one's conduct is illegal"); United States v. Buckley, 934 F.2d 84, 88 (6th Cir. 1991) (the prohibition in the version of § 7413(c)(1) preceding the 1990 CAA Amendments "requires knowledge only of emissions themselves, not knowledge of the statute or of the hazards that emissions pose").

194. For a detailed discussion of the "knowing" requirement in the context of the CAA, see generally Uhlmann, supra note 190, at 1235–39, Brad A. Gordon, Criminal Knowledge and the New Clean Air Act: Potential Judicial Constructions, 25 Ariz. St. L.J. 427 (1993), and supra note 33 and accompanying text (discussing "knowing" as used in environmental statutes).


196. Maximum sentences for first offenses are one year and a possible fine under Title 18 for negligent endangerment, and fifteen years plus a fine of not more than one million dollars for each offense for knowing endangerment. 42 U.S.C. § 7413(c)(4)–(5) (2012). The government only needs to show that the defendant's actions created a risk of harm, not that the actions created actual harm. For a discussion on the subject, see Cooney, supra note 42, at 10,472.
C. Defenses

The only criminal violations of the CAA with specific statutory defenses are those violations involving knowing endangerment. 197 “All general defenses, affirmative defenses, and bars to prosecution applicable to other federal crimes apply” to the CAA crimes involving knowing endangerment. 198 In addition, if one freely consents to the dangers posed by hazardous air pollutant emissions and those emissions are reasonably foreseeable hazards of certain professions, medical treatment, or scientific experimentation, such consent is an affirmative defense to knowing endangerment. 199

Courts have differed as to whether claims of technological or economic infeasibility are valid defenses to criminal enforcement under the CAA. 200 Technological and economic infeasibility, as well as good faith compliance efforts, however, must be considered by courts in assessing penalties, even when the court is unwilling to consider infeasibility as a defense. 201 Governmental delay in bringing an action is not a defense, but actions are generally subject to a five-year statute of limitations that begins on the last day of a violation. 202

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198. Id.
199. Id. § 7413(c)(5)(C). The violator must prove consent by a “preponderance of the evidence.” Id.
200. Compare Sierra Club v. EPA, 294 F.3d 155, 161 (D.C. Cir. 2002) (stating that attainment deadlines set forth in the CAA are “central to the regulatory scheme” and may not be extended merely because states are unable to meet them, even if their inability is due to “technological or economic infeasibility”), and Durfee v. Ocean State Steel Inc., 636 A.2d 698, 706 (R.I. 1994) (“[E]conomic infeasibility is not a proper basis for staying compliance with the Clean Air Act.”) (quoting United States v. Wheeling-Pittsburgh Steel Corp., 818 F.2d 1077, 1087 (3d Cir. 1987)), with Bethlehem Steel Corp. v. EPA, 638 F.2d 994, 1005 (7th Cir. 1980) (finding that a source may raise an infeasibility defense in the course of enforcement proceedings even though the EPA may not disapprove a SIP because of technological infeasibility), and Ind. & Mich. Elec. Co. v. EPA, 509 F.2d 839, 845 (7th Cir. 1975) (allowing defenses of technological and economic infeasibility in NAAQS enforcement proceedings for individual sources, but not in connection with approval of an SIP). But see Whitman v. Am. Trucking Ass’n, 531 U.S. 457, 491–92 (2001) (stating that the CAA is “expressly designed to force regulated sources to develop pollution control devices that might the time appear to be economically or technologically infeasible.”) (quoting Union Elec. Co. v. EPA, 427 U.S. 246, 266 (1976)) (emphasis added by Whitman court); S. REP. NO. 101-228, at 5 (1989) (stating that the 1990 amendments to the Act require ambient air quality standards to be set at “the level that ‘protects the public health’ . . . without regard to the economic or technical feasibility of attainment”).
201. 42 U.S.C. § 7413(e)(1) (2012). This rule has been used in civil actions brought by the government. See, e.g., United States v. Hoechst Celanese Corp., 128 F.3d 216, 229 (4th Cir. 1997) (holding plant owner’s good faith efforts to meet benzene regulations, although unrelated to liability, would influence penalty assessment); United States v. Ford Motor Co., 814 F.2d 1099, 1104 (6th Cir. 1987) (“[T]echnical infeasibility coupled with good faith efforts can be considered by the district court as a factor mitigating against the imposition of monetary penalties in the enforcement action.”); cf. Pound v. Airosol Co., 498 F.3d 1089, 1098 (10th Cir. 2007) (reversing and remanding citizen suit to district court because court failed to consider factors of 42 U.S.C. § 7413(e)(1), including “full compliance history and good faith efforts to comply”).
Unsuccessful defenses include claims that there was a pending NAAQS variance application\textsuperscript{203} and that the violator has initiated insolvency proceedings.\textsuperscript{204} Constitutional defenses of double jeopardy based on prosecution under the CAA and other statutes for the same conduct have failed as well.\textsuperscript{205} Both state agencies and the EPA, as separate sovereigns, may pursue claims against a violator for the same conduct.\textsuperscript{206} In addition, criminal prosecutions against an employer do not relieve an employee of liability by way of double jeopardy, even in closely held S-corporations.\textsuperscript{207} Self-incrimination challenges to the CAA’s disclosure requirements have also historically failed.\textsuperscript{208}

\textsuperscript{203} See Wheeling-Pittsburgh Steel Corp., 818 F.2d at 1084 (holding steel company’s pending “bubble” application did not relieve company of compliance schedule mandated); see also Train v. NRDC, 421 U.S. 60, 92 (1975) (subjecting polluter to existing requirements until such time as a variance is obtained and stating a variance is not available until approved by both state and the EPA); cf. Illinois v. Commonwealth Edison Co., 490 F. Supp. 1145, 1154 (N.D. Ill. 1980) (“[U]ntil a variance is sanctioned by the Administrator, any source operating in contravention of a federally approved implementation plan under the Clean Air Act is subject to an enforcement proceeding.”) (citing NRDC v. EPA, 478 F.2d 875, 886–88 (1st Cir. 1973)).

\textsuperscript{204} See Wheeling-Pittsburgh Steel Corp., 818 F.2d at 1088 (3d Cir. 1987) (holding company’s pending Chapter 11 petition did not relieve company of regulated compliance schedule).

\textsuperscript{205} See United States v. Louisville Edible Oil Prods., Inc., 926 F.2d 584, 588 (6th Cir. 1991) (upholding criminal indictment containing counts under both the CAA and CERCLA for emitting asbestos because each offense requires proof of an element that the other does not); Cooney, supra note 42, at 10,460 (noting environmental crimes frequently charged along with other crimes such as conspiracy, aiding and abetting, and obstruction of justice).

\textsuperscript{206} See U.S. v. Price, 314 F.3d 417, 421–22 (9th Cir. 2002) (finding that separate sovereign doctrine applies under the CAA, allowing the EPA and state or local government both to bring actions for the same violation without invoking double jeopardy); Louisville Edible Oil Prods., Inc., 926 F.2d at 587 (stating that Double Jeopardy Clause does not apply to suits by separate sovereigns, even if both are criminal suits for same offense) (internal quotation marks omitted); supra notes 69–72 and accompanying text (discussing environmental criminal provisions and the Double Jeopardy Clause); see also United States v. Murphy Oil USA, Inc., 143 F. Supp. 2d 1054, 1087–92 (W.D. Wis. 2001) (finding that the EPA is not barred from pursuing a CAA violation when state or local government has reached settlement with violator); United States v. LTV Steel Co., 118 F. Supp. 2d 827, 832 (N.D. Ohio 2000) (same); see generally The Federal-State Relationship in Environmental Enforcement: Recent Legal Developments 28 A.L.I.-A.B.A. COURSE OF STUDY 115 (2006) (providing overview of conflicts in Federal-State environmental enforcement).

\textsuperscript{207} E.g., Louisville Edible Oil Prods., 926 F.2d at 586 (holding that even though employees in S-corporation are paid through share in profits, it did not violate Double Jeopardy Clause to prosecute employees for NESHAP violations after imposing criminal fines upon corporation).

\textsuperscript{208} See United States v. Tivian Labs., Inc., 589 F.2d 49, 54 (1st Cir. 1978) (reasoning that the EPA’s taking of required records does not violate Fifth Amendment as deprivation of property without due process because the EPA had to institute suit to obtain enforcement of its request and Tivian received ample opportunity to contest request). Further, a defendant corporation may not invoke the Fifth Amendment privilege against self-incrimination to prevent filing the required reports under the CAA. See generally Cooney, supra note 42, at 10,470 (discussing constitutionality of required environmental reporting); supra notes 53–62 and accompanying text (discussing due process challenges to criminal provisions of environmental statutes).
D. Penalties

Willful violations under the CAA for failure to comply with emission standards, pay assessed fines, or adequately report and monitor are punishable by criminal fines under Title 18, up to five years in prison, or both.209 Furthermore, a criminal fine under Title 18, up to two years in prison, or both, may be assessed for the following “knowingly” committed acts: (i) falsifying, concealing, or altering material information in required CAA reports or other documents; (ii) failing to report or notify, as required by the CAA; or (iii) falsifying, tampering with, rendering inaccurate, or failing to install any monitoring device or method required under the CAA.210 A knowing failure to pay a fee required under the CAA is punishable by a Title 18 fine, up to one year in prison, or both.211

Additional criminal sanctions apply to NESHAP violations.212 A negligent release of hazardous air pollutants can result in a criminal fine under Title 18, up to one year in prison, or both.213 A knowing release of hazardous air pollutants in violation of NESHAP carries different penalties for individual violators and

209. 42 U.S.C. § 7413(c)(1) (2012). For subsequent violations, both the maximum fine and imprisonment penalties are doubled. Id. The Guidelines prescribe a base offense level of six or eight depending on the nature of the substance involved, resulting in fines ranging from $500–$5000 or $1000–$10,000, respectively. See U.S.S.G. MANUAL §§ 2Q1.2, 2Q1.3, 5E1. However, offense level calculations can vary greatly depending on the specifics of the case. For example, if the offense resulted in a substantial likelihood of death or serious bodily injury, the prescribed increase is nine (for § 2Q1.2) or eleven (for § 2Q1.3) levels, leading to a fine ranging from $5000–$50,000. See id.

210. 42 U.S.C. § 7413(c)(2). For subsequent violations, both the maximum fines and imprisonment penalties are doubled. Id. Fine amounts are identical to the amounts applicable to a knowing violation of emissions standards, and are identified under the Guidelines as record keeping, tampering, and falsification. See U.S.S.G. MANUAL §§ 2Q1.2, cmt. 1, 2Q1.3, cmt. 1 (holding broad construction of the term “record keeping offense” to include failure to report where required, giving of false information, failure to file required reports or provide necessary information, and failure to prepare, maintain, or provide records as prescribed).

Persons who make false statements capable of influencing governmental function can also be prosecuted under 18 U.S.C. § 1001 (2012). See United States v. Shaw, 150 F. App‘x 863, 872–74 (10th Cir. 2005) (holding that government may prosecute individual under § 1001 even though § 7413(c)(2)(A) of CAA might also apply); United States v. Olin Corp., 465 F. Supp. 1120, 1129–32 (W.D.N.Y. 1979) (prosecuting corporation under § 1001 for supplying false information on water pollution report even though water pollution laws contained penalty for making false reports). Criminal liability for knowingly making a false statement can be imposed upon the individual making the statement and upon the individual’s employer under the doctrine of respondeat superior. See United States v. Little Rock Sewer Comm., 460 F. Supp. 6, 9 (E.D. Ark. 1978) (holding an individual and his employer criminally liable when individual knowingly filed false reports under water pollution laws).


212. 42 U.S.C. § 7413(c)(4).

213. Id. See U.S.S.G. MANUAL §§ 2Q1.2, 2Q1.3, 5E1.2 to calculate the Title 18 fine.
violating organizations. An individual violator is subject to a Title 18 criminal fine, up to fifteen years in prison, or both. Organizations that violate NESHAP are subject to up to a one million dollar fine for each violation.

IV. CLEAN WATER ACT

Part A of this Section discusses the legislative rationale for the Clean Water Act ("CWA"). Part B examines CWA violations. Part C discusses defenses to CWA violations. Lastly, Part D outlines the CWA's penalty provisions.

A. Purpose

The CWA was enacted in 1977 to "restore and maintain the chemical, physical, and biological integrity of the Nation’s waters" by minimizing the effects of water pollution. To achieve its purpose, the CWA seeks to eliminate the discharge of pollutants, prohibit the discharge of toxic pollutants, provide federal assistance to publicly-owned wastewater treatment facilities, develop area-wide treatment management planning processes to ensure adequate control of pollutant sources, conduct major research to develop technology to eliminate the discharge of pollutants into national waters, and implement programs to control nonpoint sources of pollution.

214. 42 U.S.C. § 7413(c)(5)(A). A defendant is responsible only for his own knowledge; the knowledge possessed by another person cannot be attributed to the defendant. Id. § 7413(c)(5)(B). However, the government can use circumstantial evidence to show that the defendant "took affirmative steps to be shielded from relevant information." Id.

215. Id. § 7413(c)(5)(A). The base offense level for knowing endangerment is twenty-four, which corresponds to a fine of $10,000 to $100,000. U.S.S.G. MANUAL § 2Q1.1. Where death or serious bodily injury resulted, "an upward departure may be warranted." Id. § 2Q1.1, cmt. 1.


217. 33 U.S.C. §§ 1251–1387 (2012). The CWA is also referred to as the Federal Water Pollution Control Act ("FWPCA").


219. 33 U.S.C. § 1251(a). Non-point sources of pollution do not emit pollutants from a single source such as a pipe, but rather introduce natural and human-made pollutants as runoff from diffuse sources. See What Is Nonpoint Source (NPS) Pollution: Questions and Answers, EPA, http://water.epa.gov/polwaste/nps/whatis.cfm (last updated Aug. 27, 2012). This runoff is caused by heavy rain or snowfall that carries away pollutants into lakes, rivers, wetlands, coastal waters, and even underground sources of drinking water. Id. Nonpoint source pollution can originate from agricultural land, urban areas, energy production, construction sites, or abandoned mining facilities. Id. The EPA runs a grant program that provides financial incentives to states and regions that adopt nonpoint source pollution prevention and reduction regulations. 33 U.S.C. § 1329(d) (2012).
B. Elements of a CWA Offense

Criminal penalties may be assessed against any "person" who fails to comply with the statutory requirements of the CWA. Falsifying or misrepresenting material information and tampering with monitoring equipment required by the CWA are also criminal violations.

220. For enforcement purposes person includes any responsible corporate officer, 33 U.S.C. § 1319(c)(6) (2012), in addition to the definition provided in 33 U.S.C. § 1362(5) (2012), generally applicable to the CWA, which includes inter alia individuals, corporations, partnerships, associations, and States; see also 40 C.F.R. § 122.22(a) (2012) (defining the responsible individuals in relation to various entities, such as corporations, partnerships, municipalities and States, under National Pollutant Discharge Elimination System ("NPDES") section 402 permit programs). The prosecution is not required to show that the defendant is a formally designated officer of the violating corporation. See United States v. Hong, 242 F. 3d 528, 531–32 (7th Cir. 2001) (upholding conviction where defendant, although intentionally avoiding formal association with corporation, was involved in purchase of inadequate filtration system, informally controlled finances of corporation, and was present at plant when open violations occurred); United States v. Paynard, 403 F. App’x 17, 22 (6th Cir. 2010) (holding that defendant company’s Environmental Coordinator was acting as the company’s authorized representative when he signed an NPDES permit application, regardless of whether the company specifically authorized him to sign, or whether he was acting on behalf of the CEO).

Under the CWA an authorized representative may be held criminally liable despite their lack of individual wrongdoing. See United States v. Iverson, 162 F. 3d 1015, 1025 (9th Cir. 1998) (holding responsible corporate officer with “authority to exercise control over” a corporation’s discharge activity liable regardless of whether he exercised that authority); United States v. Curtis, 988 F.2d 946, 949 (9th Cir. 1993) (“[I]ndividual federal employees acting within the course and scope of their employment are subject to criminal prosecution for violation of the Clean Water Act.”). See generally Nancy Mullikin, Holding the “Responsible Corporate Officer” Responsible: Addressing the Need for Expansion of Criminal Liability for Corporate Environmental Violators, 3 Golden Gate U. Envtl. L.J. 419–21 (2001) (discussing the expansion of the responsible corporate officer doctrine in environmental crimes prosecutions). But see York Ctr. Park Dist. v. Krilich, 40 F.3d 205, 208 (7th Cir. 1994) (holding a corporate officer is not automatically liable for transgressions of corporation).

221. 33 U.S.C. § 1319(c) (2012). Specifically, a negligent or knowing failure to comply with any of the following provisions of the CWA can lead to a criminal conviction: (1) federal effluent limitation standards (§ 1311); (2) water quality related effluent limitations (§ 1312); (3) national standards of performance (§ 1316); (4) toxic pollutant and pretreatment effluent standards (§ 1317); (5) reporting and monitoring requirements (§ 1318); (6) oil and hazardous substance discharge and associated reporting requirement (§ 1321); (7) aquaculture permits (§ 1328); (8) NPDES permit conditions, under Federal or State authority, implementing any of the preceding sections or imposed in a pretreatment program (§ 1342); (9) Army Corps of Engineers dredge and fill permit program (§ 1344); (10) sewage sludge disposal permit program (§ 1345). Additionally, the introduction of a pollutant or hazardous substance into a sewer system or publicly owned treatment site that the person "knew or reasonably should have known could cause personal injury or property damage," or that causes such a treatment works to violate its NPDES permit, is a criminal violation of the CWA. Id. §§ 1319(c)(1)(B), (c)(2)(B).

222. Id. § 1319(c)(4); see United States v. Hagerman, 555 F.3d 553, 556 (7th Cir. 2009) (upholding conviction of corporation and its president for making materially false statements in reports filed under CWA); United States v. Sinskey, 119 F.3d 712, 714, 719–20 (8th Cir. 1997) (convicting a plant manager and engineer for knowingly tampering with monitoring required under the CWA). Circumstantial evidence is often sufficient to show a violation of § 1319(c)(4) because of the lower mens rea threshold for proving “knowledge,” in contrast to “willfulness.” See United States v. Hopkins, 53 F.3d 533, 536–41 (2d Cir. 1995) (holding that prosecution was required to prove that defendant knew the nature of his acts and performed them intentionally, but not that he knew those acts violated the CWA); DMRs and laboratory reports submitted by environmental groups can establish liability for permit violations. See Pub. Interest Research Grp. of N.J., Inc. v. NJ. Expressway Auth., 822 F. Supp. 174, 185 (D.N.J. 1992) (granting summary judgment to plaintiffs based on defendant’s discharge monitoring reports and laboratory reports).
1. Violation

The CWA establishes programs to regulate the discharge of pollutants into the navigable waters of the United States.\footnote{See 33 U.S.C. §§ 1311-1313, 1316-1317, 1321, 1328, 1342, 1344-1345 (2012).} In the past, courts have broadly construed the term "navigable waters" to include all bodies of water that Congress could regulate under the Commerce Clause.\footnote{See, e.g., United States v. Riverside Bayview Homes, Inc., 474 U.S. 121, (1985) (providing broad deference to Army Corps of Engineers' definition of navigable waters as including wetlands "adjacent to" otherwise navigable waters); Headwaters, Inc. v. Talent Irrigation Dist., 243 F.3d 526, 533-34 (9th Cir. 2001) (ruling irrigation canals that can intermittently flow into navigable water are "waters of the United States" and thus subject to CWA); Driscoll v. Adams, 181 F.3d 1285, 1291 (11th Cir. 1999) (indicating stream bed that only flows intermittently is navigable water covered by CWA); Hoffman Homes, Inc. v. EPA, 999 F.2d 256, 261 (7th Cir. 1993) (upholding the Army Corps of Engineers' interpretation that isolated waters can be "navigable waters" under the CWA; supported solely by the presence of migratory birds), overruled by Solid Waste Agency of N. Cook Cnty. v. U.S. Army Corps of Eng'rs (SWANCC), 531 U.S. 159, 173-74 (2001); cf. United States v. Dierckman, 201 F.3d 915, 922 (7th Cir. 2000) (agreeing any potential target of CWA regulations must have some connection to interstate commerce).} However, in a 2006 plurality opinion, the Supreme Court constructed two tests that limited the jurisdiction of the CWA.\footnote{See Rapanos v. United States, 547 U.S. 715, 719-87 (2006), Justices Kennedy (concouring) and Scalia (plurality) created the two tests, each to limit the definition of "navigable waters."} It is unclear which test is the standard lower courts must follow.\footnote{226. The circuit courts seem to have adopted Justice Kennedy's "significant nexus" test more readily. See N. Cal. River Watch v. City of Healdsburg, 496 F.3d 993, 998-1001 (9th Cir. 2007) (noting that Justice Kennedy's opinion in Rapanos was controlling, and finding the Bayview Homes "adjacency" test had been superseded by the "significant nexus" test); United States v. Robison, 505 F.3d 1208, 1222 (11th Cir. 2007) (adopting Justice Kennedy's significant nexus test as governing under Rapanos because it was the concurrence, even though it may not be the narrowest test in all factual situations); United States v. Gerke Excavating, Inc., 464 F.3d 723, 725 (7th Cir. 2006) (holding that Justice Kennedy's is the appropriate test under Rapanos, because it will control in most factual situations); cf. Taylor Romigh, Comment, The Bright Line of Rapanos: Analyzing the Plurality's Two-Part Test, 75 FORDHAM L. REV. 3295, 3305-06, 3335 (2007) (stating courts should continue to use Justice Kennedy's test while urging further bright-line standards from Congress or the Corps). Courts in the Fifth and Sixth Circuits have found that tests were met in specific cases. See United States v. Cundiff, 555 F.3d 200, 210 (6th Cir. 2009) (finding that jurisdiction is proper under both Justice Kennedy's and the plurality's tests); United States v. Lucas, 516 F.3d 316, 327 (5th Cir. 2008) (upholding jury's finding that all of the Rapanos standards had been met); see also United States v. Moses, 496 F.3d 984, 990-91 (9th Cir. 2007) (holding that plurality, concurring, and even dissenting tests in Rapanos extended federal jurisdiction over Teton Creek because the Court "unanimously agreed that intermittent streams (at least those that are seasonal) can be waters of the United States"). The First and Eighth Circuits have held that jurisdiction is proper if either test is met. See United States v. Bailey, 571 F.3d 791, 799 (8th Cir. 2009) ("We find ... Johnson to be persuasive, and thus we join the First Circuit in holding that the Corps has jurisdiction over wetlands that satisfy either the plurality or Justice Kennedy's test.") (citing United States v. Johnson, 467 F.3d 56, 60 (1st Cir. 2006)).} Following Rapanos, the EPA and the Corps jointly issued new guidance statements regarding jurisdiction. See EPA & Army Corps of Eng'rs, Clean Water Act Jurisdiction: Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States (Dec. 2, 2008), http://water.epa.gov/lawsregs/guidance/wetlands/upload/2008_12_3_wetlands_CWA_Jurisdiction_Following_Rapanos2008.pdf; 33 C.F.R. § 328.3(a) (2012), invalidated by Rapanos, 574 U.S. 715. The EPA and the Corps have recently proposed a clarifying rule, and the public comment period will close October 20, 2014. See Clean Water Act Definition of "Waters of the United States," EPA, http://water.epa.gov/lawsregs/guidance/wetlands/CWAwaters.cfm (last updated June 10, 2014). Additionally, in 2012, the Senate introduced a proposal that would have broadened the statutory definition of waters of the United States. The Clean Water Restoration Act (CWRA), however, never made it out of
These tests limited the definition of "navigable waters" either by requiring waters to possess "a significant nexus to waters that are navigable in fact or that could reasonably be so made" or by excluding waters that are either not "relatively permanent" or wetlands that have no "continuous surface connection to bodies that are 'waters of the United States.'" In response to this confusion and inconsistency among the circuits, the EPA recently proposed, in conjunction with the U.S. Army Corps of Engineers, a new rule that would clarify which waters and wetlands fall under the jurisdiction of the Clean Water Act.

Traditionally, the CWA's effluent limitations standards have been applied only to discharges from point sources. Environmental advocates have pressed for a


227. Rapanos, 547 U.S. at 717 (internal quotation marks omitted), “[W]etlands possess the requisite nexus . . . if the wetlands, either alone or in combination with similarly situated lands in the region, significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as ‘navigable.’” Id. at 780 (Kennedy, J., concurring).

228. The Supreme Court explained the "relatively permanent" test by stating that the CWA excludes those "channels containing merely intermittent or ephemeral flow." Rapanos, 547 U.S. at 733–34. However, waters that dry up either seasonally or during periods of extraordinary dryness are “not necessarily exclude[d].” Id. at 732 n.5 (“[W]e have no occasion in this litigation to decide exactly when the drying-up of a streambed is continuous and frequent enough to disqualify the channel as a ‘water[] of the United States.’”). The several opinions written by the Justices did not draw a bright line regarding where wetlands and other waters are subject to federal jurisdiction. Therefore, Rapanos has resulted in case-by-case wetland determinations and continuing litigation.

229. Rapanos, 547 U.S. at 741–43 (holding that wetlands with only an “intermittent, physically remote hydrological connection to ‘waters of the United States’” are excluded); see also Solid Waste Agency of N. Cook Cnty. v. U.S. Army Corps of Eng’rs (SWANCC), 531 U.S. 159, 171 (2001) (excluding those waters that are neither navigable nor “actually abut[] on a navigable waterway” from the definition of navigable waters). In SWANCC, the Court distinguished United States v. Riverside Bayview Homes, Inc., 474 U.S. 121, 133, 135 (1985), which extended the CWA to wetlands that “actually abut[] on a navigable waterway”; the Court also acknowledged that Riverside Bayview Homes extended the term “navigable” beyond its “classical understanding.” SWANCC, 531 U.S. at 167.


231. The CWA defines “point sources” as “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, or vessel or other floating craft, from which pollutants are or may be discharged.” 33 U.S.C. § 1362(14) (2012); see United States v. W. Indies Transp., Inc., 127 F.3d 299, 308 (3d Cir. 1997) (indicating CWA generally targets industrial and municipal sources of pollution); see also Waterkeeper Alliance, Inc. v. EPA, 399 F.3d 486, 510–11 (2d Cir. 2005) (holding that any discharge from a land controlled by a concentrated animal feeding operation is a point-source discharge, even if it does not come from the land application area). "The 'definition of a point-source is to be broadly interpreted and embrace[es] the broadest possible definition of any identifiable conveyance from which pollutants might enter waters of the United States.'" Peconic Baykeeper, Inc. v. Suffolk Cnty., 600 F.3d 180, 188 (2d Cir. 2010) (holding that trucks and helicopters discharging pesticides were point sources under CWA because they can be considered "contain[ers]" or a "discernable, confined, and discrete conveyance" from which pollutants were discharged) (citing Cordiano v. Metacomet Gun Club, Inc., 575 F.3d 199, 219 (2d Cir. 2009)).

broaden its scope, arguing that effluent limitation standards should apply to non-point sources. To date, no court has adopted this broader interpretation. However, in 2011, the Ninth Circuit held that run-off from logging roads in Oregon were point sources, upsetting the EPA's longstanding silvicultural rule under which such sources had been treated as non-point sources and therefore unregulated. The Supreme Court reversed the Ninth Circuit's decision in March 2013.


233. See supra note 219 for definition of non-point sources.

The CWA establishes a national policy and program for the control of non-point sources of pollution, which provides funding for implementation of non-point source management programs, including groundwater protection activities. 33 U.S.C. § 1329 (2012). The CWA, however, does not provide for criminal penalties associated with this section. Id. § 1319(c). Due to the voluntary nature of the grant program, states have been slow to regulate non-point pollution sources. William L. Andreen, Success and Backlash: The Remarkable (Continuing) Story of the Clean Water Act, 4 Geo. Wash. J. of Energy & Envtl. L. 27 (Spring 2013). As a result, non-point source pollution has become the greatest source of water pollution in the nation. Linda A. Malone, The Myths and Truths That Ended the 2000 TMDL Program, 20 Pace Envtl. L. Rev. 63, 76 (2002). Non-point sources can be reached under the Refuse Act and other laws, which do not distinguish between discharges by point and non-point sources. See 33 U.S.C § 407 (2012) (The Refuse Act).

234. See Ctr. for Native Ecosystems v. Cables, 509 F.3d 1310, 1331–33 (10th Cir. 2007) (ruling that the forest service's failed Best Management Practices regarding non-point sources did not violate the CWA because the CWA does not mandate the regulation of non-point sources); Defenders of Wildlife v. EPA, 415 F.3d 1121, 1124–25 (10th Cir. 2005) (holding that "the CWA does not require states to take regulatory action to limit the amount of non-point water pollution introduced into its waterways"); Pronsolino v. Nasti, 291 F.3d 1123, 1140 (9th Cir. 2002) (holding the EPA can regulate non-point source pollution using total maximum daily loads (TMDLs) but implementation remains state's responsibility); Am. Wildlands v. Browner, 94 F. Supp. 2d 1150, 1161 (D. Colo. 2000), aff'd, 260 F.3d 1192 (10th Cir. 2001) (holding states retain option, but are not required, to regulate non-point sources because Congress recognizes difficulty in isolating responsible polluters).


236. See Mark F. Cecchini-Beaver, Note and Comment, "Tough Law" Getting Tougher: A Proposal for Permitting Idaho's Logging Road Stormwater Point Sources After Northwest Environmental Defense Center v. Brown, 48 Idaho L. Rev. 467 (2012). The silvicultural rule exempts "non-point source silvicultural activities such as . . . surface drainage, or road construction and maintenance from which there is natural runoff" from regulation. 40 C.F.R. § 122.27(b)(1) (2012). Interestingly, the EPA initially attempted to achieve the same exemption more directly under the justification that it would be too difficult to regulate such pollution sources (similar drainage ditches are the prevalent method of managing stormwater runoff in logging operations), but was overruled on judicial review until reclassifying such systems as non-point sources. See 40 Fed. Reg. 56,932 (Dec. 5, 1975); Cecchini-Beaver supra at 483. The silvicultural rule, however, has not been called into question until the Brown decision last year. Cecchini-Beaver, supra at 483.

237. Decker v. Nw. Envtl. Def. Ctr., 133 S. Ct. 1326 (2013) (holding that only the four types of activity explicitly defined as point sources by the EPA's silvicultural rule—rock crushing, gravel washing, log sorting, and log storage facilities—could be directly regulated by the federal agency).
The core sections of the CWA’s enforcement scheme establish effluent limitations and water quality standards. In addition, it authorizes: (i) permit programs which prohibit impermissible disposal or use of sewage sludge and regulate discharges of pollutants, (ii) discharge reporting and monitoring requirements, and (iii) oil and hazardous substances liability and cleanup mandates.

The failure to comply with any of these sections may lead to criminal penalties. Violations generally involve a failure to comply with regulations that prohibit or regulate the discharge of pollutants, failure to obtain a permit or abide by the terms and conditions of a permit, or failure to adhere to statutory notification, record keeping, or monitoring requirements.

a. Effluent Limitations and Water Quality Standards; National Pollutant Discharge Elimination System ("NPDES") Permit Program

The CWA establishes a comprehensive regime of effluent limitation and water quality standards that prohibits the “discharge of any pollutant” by any


239. 33 U.S.C. §§ 1312–1313 (2012). Water quality-based standards impose limitations on a point source based on the water quality in the specific portion of the navigable waters into which that point source discharges. See id. § 1312(a). These limitations supplement the technology-based federal effluent limitations and protect specific bodies of water. See generally id. § 1312.

240. Id. § 1345.

241. Id. §§ 1342, 1344 (authorizing EPA or State, acting with permission of EPA, to establish permit requirements for discharge of pollutants or for dredged material).

242. Id. § 1318 (authorizing EPA or State, acting with permission of EPA, to establish reporting and monitoring requirements for owners or operators of point sources to measure compliance with requirements established under CWA).

243. Id. § 1321. The Oil Pollution Act of 1990 also governs cleanup of and establishes liability for oil spills. Id. §§ 2701–2761. See infra note 276 for a discussion of this statute.

244. Id. § 1319 (providing criminal, as well as and civil penalties, for CWA violations).

245. See, e.g., United States v. Ortiz, 427 F.3d 1278, 1279 (10th Cir. 2005) (upholding conviction of defendant for discharging pollutant into navigable surface waters of United States); United States v. Curtis, 988 F.2d 946, 947 (9th Cir. 1993) (same).

246. See, e.g., United States v. Agosto-Vega, 617 F.3d 541, 548 (1st Cir. 2010) (holding that the discharge of any pollutant without a permit is an unlawful act under § 1311(a)); United States v. Cooper, 482 F.3d 658, 663–64 (4th Cir. 2007) (upholding conviction of defendant who violated his permit); United States v. Sinskey, 119 F.3d 712, 714 (8th Cir. 1997) (upholding conviction for violation of restrictions of NPDES permit).

247. See United States v. Hagerman, 555 F.3d 553 (7th Cir. 2009) (upholding conviction of corporation and its president for making materially false statements in reports required to be filed under CWA); United States v. Hartsell, 127 F.3d 343, 354 (4th Cir. 1997) (upholding conviction of wastewater treatment corporation for avoiding EPA monitoring devices by discharging pollutants directly into sewer line); United States v. Hopkins, 53 F.3d 533, 534 (2d Cir. 1995) (upholding conviction for falsifying, tampering with, or rendering monitoring device inaccurate).


249. Id. § 1311(a). “Discharge of a pollutant” is defined as “any addition of any pollutant... from any point source.” Id. § 1362(12). This definition “includes within its reach point sources that do not themselves generate
person" into navigable waters of the United States, unless authorized by an NPDES permit. The CWA penalties apply only to discharges from "point pollutants," but merely transport them. See 40 C.F.R. § 122.2 (2012) (further defining "discharge"); see also Sierra Club v. El Paso Gold Mines, Inc., 421 F.3d 1133, 1145-46 (10th Cir. 2005) (holding that current owner of property could be held liable for discharge from abandoned mine shaft that owner never operated); United States v. Deaton, 209 F.3d 331, 335 (4th Cir. 2000) (holding sidescasting, the deposit of dredged or excavated material from a wetland back into that same wetland, is additional discharge of pollutant under CWA); Orgulf Transp. Co. v. United States, (4th Cir. 2000) (holding sidecasting, the deposit of dredged or excavated material from a wetland back into that same wetland, is additional discharge of pollutant under CWA); Orgulf Transp. Co. v. United States, 711 F. Supp. 344, 350 (W.D. Ky. 1989) (reasoning "discharge" contemplates even "de minimis" spills). But see S.D. Warren Co. v. Maine Bd. of Envtl. Prot., 547 U.S. 370 (2006) (distinguishing Miccosoukee as implicating only § 402 of the CWA, not § 401); Friends of the Everglades v. S. Fla. Water Mgmt. Dist., 570 F.3d 1210 (11th Cir. 2009) (upholding a new regulation at 40 C.F.R. § 122.3 (2012) that exempts point sources that transfer water and neither subject it to certain uses nor add new pollutants during transfer); Fairhurst v. Hagener, 422 F.3d 1146, 1150-52 (9th Cir. 2005) (holding that a pesticide purposely applied to a stream, in accordance with a Federal Insecticide, Fungicide, and Rodenticide Act label, with "no residue or unintended effect" is not a "pollutant" under CWA and not subject to CWA's permit requirements); Am. Mining Cong. v. U.S. Army Corps of Eng'rs, 120 F. Supp. 2d 23 (D.D.C. 2000) (upholding rule recognizing that "discharge" of dredged material does not include incidental fallback); 33 C.F.R. § 323.2 (2012); 40 C.F.R. § 232.2 (2012) (defining "discharge of dredged material" to not include "incidental fallback" and establishing rebuttable presumption of discharge from any mechanized activity). The current C.F.R. does not define "incidental fallback," pursuant to a decision invalidating the prior definition because it lacked a temporal element. Nat'l Ass'n of Home Builders v. U.S. Army Corps of Eng'rs, CV.A.01 0274 JR, 2007 WL 259944 (D.D.C. Jan. 30, 2007).

Although the CWA focuses principally on the control of pollutant discharges, it does not preclude states from exercising broader means of controlling water quality. See 33 U.S.C. § 1370 (2012) (stating nothing in the CWA shall preclude any state from adopting pollution control standards more stringent than federal standards); S.D. Warren Co., 547 U.S. at 384-87 (holding that a state can require the operator of a hydroelectric dam to obtain a permit, even when the dam's discharge adds no pollutants to the water, because the dam causes detrimental effects to the water); PUD No. 1 of Jefferson Cnty. v. Wash. Dep't of Ecology, 511 U.S. 700 (2000) (holding state may regulate stream flow rates related to hydroelectric plant construction; state water quality limitations may focus on water quantity and need not be specifically tied to "discharge"); Great Basin Mine Watch v. Hankins, 456 F.3d 955 (9th Cir. 2006) (holding states may set minimum flow standards but are not required to do so).

250. 33 U.S.C. § 1311(a) (2012). "Person" is defined as "an individual, corporation, partnership, association, State, municipality, commission, or political subdivision of a state, or any interstate body." Id. § 1362(5) (2012). Criminally, "individual federal employees acting within the course and scope of their employment are [persons] subject to criminal prosecution for violation of the Clean Water Act." United States v. Curtis, 988 F.2d 946, 949 (9th Cir. 1993). Civilly, however, the United States is not strictly included within this definition of "person," and the Supreme Court has limited federal civil liability under the CWA to the limited purpose of inducing federal agencies to comply with court ordered injunctions or other judicial orders to remedy CWA violations. See U.S. Dep't of Energy v. Ohio, 503 U.S. 607, 617-18, (1992) (interpreting 33 U.S.C. § 1323(a) (2006 & Supp. 2010)); id. at 621-23 (noting express waiver of sovereign immunity for civil, but not punitive penalties); see also City of Jacksonville v. U.S. Dep't of the Navy, 348 F.3d 1307, 1314-17 (11th Cir. 2003) (discussing U.S. Dep't of Energy v. Ohio and holding that a waiver of sovereign immunity for punitive, as opposed to coercive, fines must be "unequivocally expressed in the statutory text," but even after Congress has had the opportunity to amend CWA and CAA, no such unequivocal expression has been added).

251. "Navigable waters" is defined as "the waters of the United States, including the territorial seas." 33 U.S.C. § 1362(7). But see supra notes 223-30 and accompanying text for a discussion of the judicial construction of " navigable waters," which have created uncertainty. A person can be criminally liable for negligent discharge of a pollutant into a water of the United States even if he or she did not know that the pollutant would ultimately flow into a protected water. See United States v. Ortiz, 427 F.3d 1278, 1283 (10th Cir. 2005) (holding defendant liable for negligent discharge of wastewater into production facility's toilet).

252. See 33 U.S.C. § 1342(a)(1) (authorizing EPA Administrator to issue NPDES "permit for the discharge of any pollutant, or combination of pollutants, notwithstanding section 1311(a)").
sources.”

NPDES permits set source-specific effluent limitations. Both the EPA and the states can issue NPDES permits. With the exception of discharges of toxic pollutants injurious to human health, compliance with an NPDES permit

253. Id. § 1362(14); see supra notes 231–37 and accompanying text. Courts interpret “point source” broadly. See cases cited supra notes 224, 226; see also Froebel v. Meyer, 217 F.3d 928, 938 (7th Cir. 2000) (acknowledging dams can act as point sources if artificial mechanism introduces pollutant); Driscoll v. Adams, 181 F.3d 1285, 1290–91 (11th Cir. 1999) (arguing defendant formed point source by collecting or channeling storm water by pipes and other means); Concerned Area Residents for the Env’t v. Southview Farm, 34 F.3d 114, 118 (2d Cir. 1994) (finding swale in field, where liquid manure from large dairy farm collected before flowing into stream, is point source). But see Or. Natural Desert Ass’n v. Dombeck, 172 F.3d 1092, 1095–96 (9th Cir. 1998) (holding that CWA does not include animals in its definition of point sources); United States v. Plaza Health Labs., Inc., 3 F.3d 643, 648 (2d Cir. 1993) (finding human being is not a point source within meaning of CWA because ambiguity in statutory language triggered rule of lenity in criminal defendant’s favor).

EPA’s authority to define and regulate point sources is broad. See Citizens Coal Council v. EPA, 447 F.3d 879, 893 (6th Cir. 2006) (declaring that the EPA holds broad discretion to establish national standards related to point source categorization); see also Pub. Serv. Co. of Colo. v. EPA, 949 F.2d 1063, 1065 (10th Cir. 1991) (per curiam) (holding EPA has authority to place effluent limitations on internal waste streams of facilities if monitoring of effluent at point of discharge is impracticable or infeasible); cf. United States v. Sinclair Oil Co., 767 F. Supp. 200, 203 (D. Mont. 1990) (“Congress delegated broad regulatory authority [to EPA] . . . under the Clean Water Act. Because of this broad delegation of power to the agenc[y], courts have uniformly shown great deference to agency interpretations . . . .”) (citations omitted). See supra notes 223–37 for further discussion on point and non-point sources.

254. 33 U.S.C. § 1311 (2012). Effluent limitations set forth in NPDES permits are derived primarily from state water quality and federal effluent limitation standards applicable to specific industries. See Legal Envl. Assistance Found., Inc. v. Pegues, 717 F. Supp 784, 787 (M.D. Ala. 1989) (“Under 33 U.S.C. § 1314(b)(1)(B) . . . industry-specific factors must be considered in promulgating discharge standards for point-source categories.”). Ordinarily, provision terms include limitations on the amount, rate, or concentration of a specific pollutant. 33 U.S.C. §§ 1314(b), 1318, 1342(a)(2). Permit limitations will usually require the use of the best available control technology. See, e.g., id. § 1316(a)(1). The Ninth Circuit, however, has held that the EPA may issue NPDES permits that do not specify numeric discharge limitations. See Defenders of Wildlife v. Browner, 191 F.3d 1159, 1166–67 (9th Cir. 1999) (holding EPA was within its discretion to issue NPDES permits that did not set numerical discharge limits).

255. 33 U.S.C. § 1342(a)–(b). Currently, only the District of Columbia, Idaho, Massachusetts, New Hampshire, and New Mexico do not have their own EPA-approved NPDES permitting program. See National Pollutant Discharge Elimination System (NPDES) State Program Stats, EPA, http://cfpub.epa.gov/npdes/statestats.cfm (last updated April 14, 2003). States are allowed to impose stricter standards for discharge of pollutants than those mandated by the federal government. See Int’t Paper Co. v. Ouellette, 479 U.S. 481, 488–90 (1987) (indicating that source states may set stricter standards than are required under federal law); Parker v. Scrap Metal Processors, Inc., 386 F.3d 993, 1008 (11th Cir. 2004) (“[CWA] expressly contemplates stricter state effluent and other limitations deemed necessary by the state to restore the integrity of the waters within the state, allows states to incorporate those limitations into a state-issued permit, and authorizes a citizen suit to enforce those limitations.”) (citation omitted); 40 C.F.R. § 122.1(a) (2012); see also City of Albuquerque v. Browner, 97 F.3d 415, 418 (10th Cir. 1996) (holding Indian tribe recognized as state under CWA can impose more stringent requirements than federal standards because such power is inherent in tribal sovereignty). Transfer of the permit system to the states still requires EPA oversight and approval. See 33 U.S.C. § 1342(b); Nat’l Ass’n of Home Builders v. Defenders of Wildlife, 551 U.S. 644, 671–73 (2007) (holding that the EPA shall approve a state NPDES program if it finds that specific non-discretionary, statutory requirements are met).

256. “Pollution” is defined as “the man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water.” 33 U.S.C. § 1362(19). “Man-induced” refers to the effect of a discharge on receiving water, even where the discharge is not altered. N. Plains Res. Council v. Fld. Exploration & Dev. Co., 325 F.3d 1155 (9th Cir. 2003). “Pollutant” is broadly defined to include “dredged soil, solid waste, incinerator
constitutes compliance with the CWA.\textsuperscript{257}

The CWA also requires pretreatment of toxic pollutants\textsuperscript{258} introduced into Publicly Owned Treatment Works ("POTWs").\textsuperscript{259} In addition, the CWA requires the EPA to develop and promulgate industry-wide federal effluent limitation standards, which limit the discharge of pollutants into POTWs.\textsuperscript{260}

Residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water.” \textsuperscript{3} 33 U.S.C. § 1362(6). The CWA also bans discharges of certain pollutants, specifically radiological, chemical, or biological warfare agents, high-level radioactive wastes, and medical wastes. \textit{Id.} § 1311(f) (2012). These substances may be covered in part by 33 U.S.C. § 1317 (2012) (governing toxic pollutants) and by other statutes.

Statutory exceptions to this definition include sewage from vessels and materials injected into a well to facilitate the production of oil or gas. \textit{Id.} § 1362(6). An exception also exists for pesticides applied in compliance with the Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA"). \textit{See} 40 C.F.R. § 122.3(h) (2012); \textit{see also} Peconic Baykeeper, Inc. v. Suffolk Cnty., 600 F.3d 180, 187–88 (2d Cir. 2010) (holding that town did not require NPDES permit to spray pesticides over or near the waters and wetlands of the town where spraying was in compliance with FIFRA). Pesticides not applied in accordance with FIFRA are "chemical waste." \textit{Nat'l Cotton Council of Am. v. EPA, 553 F.3d 927} (6th Cir. 2009). One judicial exception speaks to special nuclear materials covered by the Atomic Energy Act of 1954. \textit{See} Train v. Colo. Pub. Interest Research Grp., Inc., 426 U.S. 1, 8–9 (1976) (holding legislative history shows congressional intent to exempt some radioactive materials). Another judicial exception covers polluted waters that pass through a dam. \textit{See} \textit{Nat'l Wildlife Fed'n} v. Consumers Power Co., 862 F.2d 580, 581 (6th Cir. 1988) (holding party must add pollutant to water to be culpable under CWA). \textit{But see} Catskill Mountains Chapter of Trout Unlimited, Inc. v. City of New York, 451 F.3d 77, 81 (2d Cir. 2006) (holding reliance on "dams cases," including \textit{Nat'l Wildlife Fed'n}, is misplaced because although "water taken from a water source and then released back into that same source was not an "addition" to navigable waters under the CWA," here the source discharges water into the creek from a \textit{distinct} water source, which does constitute an "addition" under CWA) (emphasis added) (citations omitted).

\textsuperscript{257} 33 U.S.C. § 1342(k).

\textsuperscript{258} Toxic pollutants are "those pollutants . . . which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism . . . will . . . cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions . . . or physical deformations, in such organisms or their offspring." \textit{Id.} § 1362(13). The EPA Administrator must promulgate a list of toxic pollutants. \textit{See} \textit{id.} 1317(a)(1)–(2) (2012); \textit{see also} Natural Res. Def. Council v. EPA, 822 F.2d 104, 117–21 (D.C. Cir. 1987) (upholding promulgation of regulations requiring permit applicants to report all toxic pollutants currently used or manufactured); 40 C.F.R. § 129.4 (2012) (providing list of toxic pollutants).

\textsuperscript{259} 33 U.S.C. §§ 1292, 1317(b)(1); \textit{see also} United States v. Van Loben Sels, 198 F.3d 1161, 1162 (9th Cir. 1999) (finding that defendant violated local pretreatment standards by negligently discharging oily wastewater contaminated with hazardous levels of benzene into a Los Angeles POTW).

\textsuperscript{260} 33 U.S.C. §§ 1311, 1317; \textit{see also} E.I. du Pont de Nemours & Co. v. Train, 430 U.S. 112, 136 (1997) (sustaining authority of EPA Administrator to establish industry-wide effluent limitation regulations); Atl. States Legal Found., Inc. v. Eastman Kodak Co., 12 F.3d 353, 357 (2d Cir. 1993) (declaring that discharge of unlisted pollutants by NPDES permit holder is not prohibited unless discharge exceeds existing and defined effluent limitation standards). \textit{But see} Nw. Envl't Advocates v. City of Portland, 56 F.3d 979, 985–90 (9th Cir. 1995) (holding CWA allowed a citizen suit to enforce water quality standards that had not been translated into numerical effluent limitations on a permit). Moreover, at least one district court has concluded that when a state incorporates its own standards into the federal limitations standards, this also creates an effluent limitation standard under the CWA. Swartz v. Beach, 229 F. Supp. 2d 1239, 1271 (D. Wyo. 2002) ("[W]hen state standards are incorporated into a NPDES permit . . . those standards are enforceable in a citizen suit under the CWA."); \textit{cf.} Home Builders Ass'n of Greater Chi. v. U.S. Army Corps of Eng'rs, 335 F.3d 607, 617 (7th Cir. 2003) (holding that CWA explicitly contemplates more stringent regulation of discharge of effluents by states than that required by federal government).

The lack of a published effluent limitation standard for a particular type of pollutant does not preclude finding
The EPA applies stringent national standards of performance to “new sources” of water pollution. To maintain the integrity of a body of water and ensure that water quality standards are achieved, the EPA may modify national effluent limitations applicable to a specific portion of a navigable water.

b. Monitoring, Reporting, and Regulatory Searches

Owners and operators of point sources must measure their pollutant discharges and submit “Discharge Monitoring Reports” (“DMRs”). The EPA can require owners and operators to establish extensive monitoring and reporting discharge procedures. To enforce these provisions, EPA officials can conduct warrantless searches of any premises where an effluent source is located in order to gain access that a party has violated the CWA if that party is not operating under, or has not applied for, an NPDES permit. See Menzel v. Cty. Utils. Corp., 712 F.2d 91, 94 (4th Cir. 1983) (“[T]here is no shield from the requirement that all discharges . . . must be [made] pursuant to an NPDES permit.”); United States v. Frezzo Bros., Inc., 602 F.2d 1123, 1127 (3d Cir. 1979) (holding owners of compost manufacturing business liable under CWA even though EPA had not yet promulgated regulations governing compost manufacturing business); cf. Sierra Club v. Cedar Point Oil Co., 73 F.3d 546, 561–62 (5th Cir. 1996) (holding that where EPA has not yet promulgated regulations concerning a specific effluent, it does not bar a citizen suit brought under the CWA for alleged illegal discharge of that effluent).

261. 33 U.S.C. § 1316(b). New sources are those sources whose construction commences after proposed regulations, prescribing a standard of performance, are published. Id. § 1316(a)(2).

Compliance requires the application of the “best available demonstrated control technology, processes [or] operating methods” to the source of discharge. Id. § 1316(a)(1). The EPA Administrator has the authority to mandate the use of technology and methods with respect to new sources that will result in the “greatest degree of effluent reduction . . . including, where practicable, a standard permitting no discharge of pollutants.” Id. This contrasts with the more lenient requirements for existing sources, which were initially based on the application of the “best practicable control technology” (by 1977) or the “best available technology economically achievable” (by 1987). Compare id. § 1316 (new sources), with id. § 1311 (existing sources). Unlike the existing source standards, which allowed variances, the standards for new sources represent absolute prohibitions without variances for individual plants. See E.I. du Pont de Nemours & Co. v. Train, 430 U.S. at 138 (indicating although variances were contemplated for existing facilities, Congress intended to ensure uniform standard for new sources); S. Holland Metal Finishing Co. v. Browner, 97 F.3d 932, 934 (7th Cir. 1996) (explaining new sources must satisfy more stringent regulations because of comparative feasibility of incorporating standards at design stage as opposed to difficulty of upgrading already-existing equipment); see also Walter G. Wright, Jr. & Albert J. Thomas III, The Federal/Arkansas Water Pollution Control Programs: Past, Present, and Future, 23 U. Ark. LITTLE ROCK L. REV. 541, 609–11 (2001) (outlining the legislative rationale for distinction in CWA between new and existing point sources).


263. Id. § 1313(a).

264. Id. § 1318. NPDES permits determine the frequency of DMRs, and they differ depending on the situation. E.g., Ackels v. EPA, 7 F.3d 862, 866–67 (9th Cir. 1993) (describing daily reporting requirement); Friends of the Earth v. Eastman Kodak Co., 834 F.2d 295, 296 (2d Cir. 1987) (detailing monthly DMR requirement); United States v. Hagerman, 525 F. Supp. 2d 1058, 1060–61 (S.D. Ind. 2007) (outlining DMR and other reporting requirements under CWA, as well as penalties for violations in making such reports). DMR showing discharge in excess of NPDES limits is conclusive evidence of a violation. Idaho Conservation League v. Atlanta Gold Corp., 844 F. Supp. 2d 1116, 1130 (D. Idaho 2012); United States v. Aluminum Co. of Am., 824 F. Supp. 640 (E.D. Tex. 1993). But see United States v. Allegheny Ludlum Corp., 366 F.3d 164, 174–75 (3d Cir. 2004) (holding that while DMR showing excessive discharge is evidence of violation, company may assert “laboratory error defense” if discharges were in fact within permit limits, but over-reported due to laboratory error).

to or copy any required records, inspect required monitoring equipment and methods, or take samples of any effluents that the owner or operator is required to test.\textsuperscript{266}

c. Discharge of Oil and Hazardous Substances

The CWA prohibits the unauthorized discharge of oil\textsuperscript{267} or hazardous substances\textsuperscript{268} in "harmful" quantities\textsuperscript{269} into or onto the waters of the United States.\textsuperscript{270} In addition, any "person in charge\textsuperscript{271}" of a vessel or onshore or offshore facility\textsuperscript{272} involved in a discharge of oil or other hazardous substance must report the

\textsuperscript{266} Id. § 1318(a).
\textsuperscript{267} "Oil" is defined as "oil of any kind or in any form." Id. § 1321(a)(1).
\textsuperscript{268} "Hazardous substances" include only designated substances found by EPA to "present an imminent and substantial danger to the public health or welfare." Id. § 1321(b)(2)(A); see also United States v. Ohio Barge Lines, 410 F. Supp. 625 (W.D. La. 1975), aff'd, 531 F.2d 574 (5th Cir. 1976).
\textsuperscript{269} "Harmful" quantities of oil include discharges that "(a) violate applicable water quality standards; or (b) cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines." 40 C.F.R. § 110.3(a)-(b) (2012); see Chevron, U.S.A., Inc. v. Yost, 919 F.2d 27, 30–31 (5th Cir. 1990) (citing with approval Orgulf Transp. Co. v. United States, 711 F. Supp. 344, 347–48 (W.D. Ky. 1989) (finding even de minimis oil spills are prohibited by CWA and upholding assessment of fine for five gallon oil spill in river, and approving the EPA's sheen test to regulate "small spills").
\textsuperscript{270} 33 U.S.C. § 1321(a)(1).
\textsuperscript{271} "Person in charge" includes any employee in a position to know about the discharge, as well as the corporation itself. See United States v. Carr, 880 F.2d 1550, 1554 (2d Cir. 1989) (reasoning "persons in charge" includes persons of relatively low rank who, nevertheless, were in a position to detect, prevent, or abate release of hazardous substances); Sierra Club Inc. v. Tyson Foods, Inc., 299 F. Supp. 2d 693, 719, 722 (W.D. Ky. 2003) (same); see also Apex Oil Co. v. United States, 530 F.2d 1291, 1294–95 (8th Cir. 1976) (imputing knowledge by corporate employee of unreported oil spill to corporation and asserting that both are included within the meaning of "person in charge"); cf. Quaker State Corp. v. U.S. Coast Guard, 681 F. Supp. 280, 285 (W.D. Pa. 1988) (determining owner or operator by date when oil discharge discovered). "Person in charge" does not include persons with only a temporary connection to the facility and not in its employ. See United States v. Mackin Constr. Co., 388 F. Supp. 478, 480 (D. Mass. 1975) (determining "in charge" is broad enough to cover party in charge of facility even if he had nothing to do with spill, but narrow enough that it does not include everyone who participated in discharge). See also In re Oil Spill by the Oil Rig DEEPWATER HORIZON in Gulf of Mexico on April 20, 2010, 844 F. Supp. 2d 746 (E.D. La. 2012) (finding that co-lessees of the area in which offshore facility was located were liable as "responsible parties" under the Oil Pollution Act, entitling the government to declaratory judgment on that issue).
\textsuperscript{272} An "onshore facility" is defined as: "(A)Any facility (including, but not limited to, motor vehicles and rolling stock) of any kind located in, on, or under any land within the United States other than submerged land." 33 U.S.C. § 1321(a)(10). Courts have broadly construed this definition of an "onshore facility" in order to best effectuate the policy embodied in the Act, namely, to ensure the prompt commencement of cleanup operations. See Union Petroleum Corp. v. United States., 228 Ct. Cl. 54, 68–69 (1981) (holding that for purposes of the Clean Water Act, tank cars parked outside of an oil company's property were part of that company's "facility," since the company controlled the location and movement of the cars).

An "offshore facility" is defined as "any facility of any kind located in, on, or under any of the navigable waters of the United States, . . . other than a vessel or public vessel." 33 U.S.C. § 2701(22). The term "facility" for the purposes of both onshore and offshore is defined as "any structure, group of structures, equipment, or device (other than a vessel), which is used for one or more of the following purposes: exploring for, drilling for, producing, storing, handling, transferring, processing, or transporting oil . . . ." 33 U.S.C. § 2701(9).
discharge immediately to the appropriate government agency. Failure to do so immediately upon discovery of the discharge is a criminal violation. In 1990, the criminal provisions of the CWA were amended, making the unauthorized discharge of oil a felony rather than a misdemeanor. The oil spill in the Gulf of Mexico in 2010 was the worst environmental disaster in the history of the United States. The subsequent criminal prosecution of British Petroleum (BP), Transocean, and Halliburton under the Clean Water Act resulted in one of the largest criminal settlements ever in U.S. courts. Charges were brought against BP because individual officers and employees failed to alert appropriate government agencies of a known oil discharge. Additionally, it was charged that the

273. 33 U.S.C. § 1321(b)(5). “Appropriate” agency may be any federal agency concerned with environmental pollution or navigable waters. See United States v. Kennecott Copper Corp., 523 F.2d 821, 824 (9th Cir. 1975).


275. 33 U.S.C. § 1321(b)(5). Additionally, as a matter of practice, the EPA generally foregoes or reduces the severity of criminal actions against parties that voluntarily disclose. See Christopher A. Wray & Robert K. Hur, Corporate Criminal Prosecution in a Post-Enron World: The Thompson Memo in Theory and Practice, 43 AM. CRIM. L. REV. 1095, 1119–22 (2006). The information obtained from this disclosure may not be used in criminal actions against the disclosing party, 33 U.S.C. § 1161(b)(4). The circuits are somewhat divided on the question of whether disclosure by an employee of a company grants immunity to the entire corporation or just to the individual who volunteered the information to an appropriate agency. See United States v. Republic Steel Corp., 491 F.2d 315 (6th Cir. 1974) (holding that statutory language under the CWA prohibiting the use of disclosed information given by “persons” in the prosecution of that person also applied to the prosecution of corporations).

276. The Oil Pollution Act of 1990 (“OPA”), enacted after the Exxon Valdez spill in Prince William Sound, amended the criminal provisions of the CWA. Pub. L. No. 101-380, 104 Stat. 484 (1990), amending 33 U.S.C. §§ 2701–2761. The Amendment made the unauthorized discharge of oil in violation of 33 U.S.C. § 1321(b)(3) a felony instead of a misdemeanor offense. 33 U.S.C. § 1319. The OPA also significantly increased civil penalties for owners and operators of oil facilities responsible for oil spill damages and cleanup. The statutory limits on liability for each incident for single-hulled vessels are $22 million per vessel for tank vessels over 3000 gross tons or $6 million for tank vessels under 3000 gross tons, or $3000 per gross ton, whichever is greater. For a double-hulled vessel, the limits are $16 million for vessels over 3000 gross tons or $4 million for vessels under 3000 gross tons, or $1900 per gross ton, whichever is greater. 33 U.S.C. § 2704(a)(1). There is a fine of $75 million plus the total cost of oil removal for owners of offshore facilities and $350 million for owners of onshore facilities and deepwater ports. Id. § 2704(a)(1)(A)–(B). If a spill is caused by the owner or operator’s “gross negligence or willful misconduct” or “the violation of an applicable Federal safety, construction, or operating regulation,” civil liability is unlimited. Id. § 2704(c)(1)(A)–(B).


279. Id.
same individuals failed to take appropriate steps to prevent the spill despite the awareness that significant dangers were posed by the condition of the oil well.\textsuperscript{280}

\textit{d. Prohibition on Dredge and Fill Activities}

The United States Army Corps of Engineers administers a permit program controlling the discharge of dredged or fill material into the navigable waters of the United States.\textsuperscript{281} The most controversial impact of this section has been the inclusion of “wetlands” within the definition of “waters of the United States.” In \textit{Rapanos v. United States}, the Supreme Court significantly limited those wetlands to which the CWA applies. Under the majority rule in \textit{Rapanos}, the CWA applies to those wetlands that are both “adjacent to ‘waters of the United States’ in their own right” and have “a continuous surface connection to that water, making it difficult to determine where the ‘water’ ends and the ‘wetland’ begins.”\textsuperscript{282}

\textbf{2. Intent}

The CWA establishes three levels of criminal culpability: (i) negligence, (ii) knowing violation, and (iii) knowing endangerment.\textsuperscript{283} Negligent conduct may

\begin{itemize}
\item \textsuperscript{281} 33 U.S.C. § 1344(d) (2012) (authorizing Chief of Engineers to act on behalf of Secretary of Army, and in coordination with Administrator of EPA, in selecting disposal sites and granting permits for discharge of dredged material and fill material); see Coeur Alaska, Inc. v. Se. Alaska Conservation Council, 557 U.S. 261, 272–74 (2009) (holding that 33 U.S.C § 1342 forbids EPA from exercising permit authority granted to Army Corp of Engineers under 33 U.S.C. § 1344); see also United States v. Hubenka, 438 F.3d 1026, 1035 (10th Cir. 2006) (upholding conviction for making a dike of river bottom materials without a permit).
\item \textsuperscript{282} Rapanos v. United States, 547 U.S. 715, 742 (2006); see also United States v. Riverside Bayview Homes, Inc., 474 U.S. 121, 129 (1985) (upholding 33 C.F.R. § 328.3(8)’s extension of CWA to wetlands adjacent to navigable waters and employment of a vegetation-based test for determining which areas are wetlands). However, the Court had previously curtailed further administrative expansion of “waters,” as defined by the Army Corps of Engineers in 33 C.F.R. § 328.3(a)(3), by requiring a significant nexus between wetlands and navigable water, a precedent that was extended in \textit{Rapanos}. In \textit{SWANCC}, the Court ruled that Congress’s failure to respond to 33 C.F.R. § 328.3(a)(3) could not be construed as acquiescence, and, furthermore, the Court did not reach the Commerce Clause problem. Solid Waste Agency of N. Cook County v. U.S. Army Corps of Eng’rs, 531 U.S. 159, 171–72 (2001).
\item Although under 33 U.S.C. § 1344(f)(1), there is a “farmer’s exemption” from the permit requirement if certain specifications are met, this exception is limited by the use of the “recapture provision,” which mandates that “any discharge . . . incidental to any activity having as its purpose bringing an area of the navigable waters into a use to which it was not previously subject” is subject to the permit requirement. 33 U.S.C. § 1344(f)(2). Courts have broadly construed the recapture position, and, thus, have severely limited the use of the farmer’s exemption. See, e.g., United States v. Cundiff, 555 F.3d 200, 215 (6th Cir. 2009) (holding that farmer violated recapture provision because drained wetland had not been used as a farm for many decades and extensive work was required to use the land as farmland); United States v. Brace, 41 F.3d 117, 129 (3d Cir. 1994) (holding that a farmer who converted a wetland into a non-wetland for farming violated the recapture provision). \textit{But see In re Carsten}, 211 B.R. 719, 736–37 (Bankr. D. Mont. 1997) (holding rancher’s attempt to create new farm pond by dredging slough of old watering hole fell within “farmer’s exemption” but not “recapture” provision in Chapter 12 bankruptcy action).
\item \textsuperscript{283} 33 U.S.C. § 1319(c)(1)-(3).
render a defendant criminally culpable even if he did not realize that the action might lead to a CWA violation.\textsuperscript{284}

Generally, circuits addressing the “knowing” mens rea requirement for CWA offenses\textsuperscript{285} have rejected arguments that the government must prove a defendant knew that the CWA was being violated.\textsuperscript{286} Knowledge of a violation may be inferred on the basis of circumstantial evidence,\textsuperscript{287} but the proof of the defendant’s knowledge of the violation must be established for each element of the offense.\textsuperscript{288}

\textsuperscript{284} Id. § 1319(c)(1) (establishing criminal penalties for negligent violations of permit conditions or introduction of pollutant or hazardous substance into public sewer system). Acts of negligence are criminalized if they violate permit conditions, id. § 1319(c)(1)(A); if they “introduce[] into a sewer system or into a publicly owned treatment works any pollutant or hazardous substance which such person knew or reasonably should have known could cause personal injury or property damage,” id. § 1319(c)(1)(B); if they result in a failure to make a timely application for a permit, see id. § 1319(c)(1)(A)–(B); or if they manipulate a monitoring or reporting system, see id. § 1319(c)(4). See United States v. Ortiz, 427 F.3d 1278, 1283 (10th Cir. 2005) (upholding conviction for negligent discharge of a pollutant by pouring it into a toilet because defendant failed to exercise adequate care, even though he claimed he did not know it would ultimately flow into the Colorado River); United States v. Hanousek, 176 F.3d 1116, 1126 (9th Cir. 1999) (affirming conviction for negligent discharge of oil based on ordinary negligence standard in a vicarious liability situation, and rejecting use of Model Penal Code standard); United States v. Alley, 755 F. Supp. 771, 771–74 (N.D. Ill. 1990) (sustaining indictment of defendants for negligent violation of waste water regulations).

\textsuperscript{285} 33 U.S.C. § 1319(c)(2) (making it a felony to “knowingly” violate permit provisions of CWA).

\textsuperscript{286} See United States v. Cooper, 482 F.3d 658, 668 (4th Cir. 2007) (holding that government does not have to prove that defendant knew creek was within the jurisdiction of the CWA); United States v. Snook, 366 F.3d 439, 443 (7th Cir. 2004) (“To convict . . . for conspiring to violate [CWA] . . . the government needed to prove only that [defendant] had knowledge of the underlying facts and not that he knew the conduct was illegal.”) (citations omitted); United States v. Wilson, 133 F.3d 251, 262 (4th Cir. 1997) (holding that government does not have to prove direct knowledge of illegality); United States v. Sinskey, 119 F.3d 712, 716–17 (8th Cir. 1997) (holding defendants’ knowledge that they were rendering monitoring methods inaccurate was sufficient for conviction even without knowledge of illegality); United States v. Hopkins, 53 F.3d 533, 541 (2d Cir. 1995) (finding “knowing” violation where defendant’s acts were proscribed even if defendant was not aware of proscriptions); United States v. Weizhenhoff, 35 F.3d 1275, 1283–84 (9th Cir. 1994) (holding “knowingly” refers to those who knowingly engage in conduct that results in a CWA or permit violation, and does not require knowledge that conduct would violate CWA or permit, or that violator be cognizant of existence of permit).

\textsuperscript{287} The evidentiary requirements for inferring knowledge in environmental crimes are not stringent. The government generally has to show only that pollution or some other statutory violation occurred and that the alleged violator was in a position to know of the violation. See United States v. Cooper, 173 F.3d 1192, 1201 (9th Cir. 1999) (holding that there was sufficient evidence that defendant, who transported sewer sludge for thirty years, could “hardly be ignorant” of municipal NPDES permit that proscribed his conduct); United States v. Boldt, 929 F.2d 35, 39 (1st Cir. 1991) (holding that evidence that manufacturing plant manager ordered subordinate to dump copper wastewater into city sewer system, and could have avoided violations by shutting down plant was sufficient to support conviction); United States v. Frezzo Bros., Inc., 602 F.2d 1123, 1129 (3d Cir. 1979) (allowing jury to infer knowledge of discharge from circumstantial evidence indicating existence of no other feasible explanation for pollution except willful discharge); United States v. Kennecott Copper Corp., 523 F.2d 821, 823–24 (9th Cir. 1975) (finding evidence of broken pipe and loss of 173,800 gallons of oil sufficient to impute knowledge of discharge even in the absence of oil sheen in water).

\textsuperscript{288} Wilson, 133 F.3d at 263 (“Congress [intended] . . . to incorporate the mens rea requirement against each of the substantive requirements found in the incorporated sections of the Clean Water Act without also intending to create a defense of ignorance of the law.”); United States v. Ahmad, 101 F.3d 386, 390 (5th Cir. 1996) (“[T]he phrase ‘knowingly violates’ in § 1319(c)(2)(A) . . . should uniformly require knowledge as to each of the[e] elements rather than only one or two.”).
Requiring knowledge for each essential element of an offense preserves the mistake-of-fact defense.\textsuperscript{289}

A person who commits a violation knowing that such violation places another person in imminent danger\textsuperscript{290} of death or serious bodily injury\textsuperscript{291} commits a crime of knowing endangerment.\textsuperscript{292} A person must have actual belief or awareness that the action placed another individual in imminent danger of death or serious bodily injury; knowledge possessed by one person may not be attributed to another.\textsuperscript{293} Circumstantial evidence may be used to assess actual knowledge or belief, including affirmative actions taken to protect oneself from information pertaining to a violation.\textsuperscript{294}

\section*{C. Defenses}

The CWA sets forth several complete and partial defenses.\textsuperscript{295} Consent of the person endangered is an affirmative defense for the charge of knowing endangerment if the danger and conduct were reasonably foreseeable hazards of an

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\item \textsuperscript{289} Wilson, 133 F.3d at 264 (requiring for conviction that “defendant correctly identified the substance he was discharging, not mistaking it for a different, unprohibited substance”); Ahmad, 101 F.3d at 391 (overturning conviction because the jury instruction did not lead the jury to believe that it had to find that defendant knew he was discharging gasoline and not water from his tanks); \textit{see also} Sinskey, 119 F.3d at 717 (distinguishing Ahmad because it involved a “mistake-of-fact defense” and was inapplicable to a “mistake-of-law” case).
\item \textsuperscript{290} See United States v. Villegas, 784 F. Supp. 6, 11–13 (E.D.N.Y. 1991) (defining “imminent danger” as more than the potential for death or serious bodily injury, as danger must be at least a “highly probable consequence” of defendant’s discharge actions), \textit{rev’d on other grounds sub nom.} United States v. Plaza Health Labs., Inc., 3 F.3d 643 (2d Cir. 1993).
\item \textsuperscript{291} Serious bodily injury is defined as “bodily injury which involves a substantial risk of death, unconsciousness, extreme physical pain, protracted and obvious disfigurement, or protracted loss or impairment of the function of a bodily member, organ, or mental faculty.” 33 U.S.C. § 1319(c)(3)(B)(iv).
\item \textsuperscript{292} \textit{See id.} § 1319(c)(3). Violation of §§ 1311, 1312, 1316, 1317, 1318, 1321(b)(3), 1328, 1342, 1344, 1345, or of state water quality standards, § 1313, with the requisite level of intent, constitutes knowing endangerment. \textit{Id.} Also, not only must there be a causal relationship between imminent danger and a CWA violation, but prosecution for knowing endangerment requires that a CWA violation precede the danger of harm. See United States v. Borowski, 977 F.2d 27, 32 (1st Cir. 1992) (finding that employer did not commit knowing endangerment where employees were exposed to hazardous chemicals while disposing of them in violation of the CWA, because “knowing endangerment prosecution cannot be premised upon danger that occurs before the [CWA violation is committed]”). For a comparison of the knowing endangerment provisions in the CWA, CAA, and RCRA, \textit{see generally} Lynn K. Rhinehart, \textit{Would Workers Be Better Protected If They Were Declared an Endangered Species? A Comparison of Criminal Enforcement Under the Federal Workplace Safety and Environmental Protection Laws}, 31 Am. CRIM. L. REV. 351 (1994).
\item \textsuperscript{293} 33 U.S.C. § 1319(c)(3)(B)(ii)(I). A responsible corporate officer or other supervisor cannot be held liable for the actions of a subordinate unless that officer had actual knowledge of the actions in question. \textit{See United States v. MacDonald & Watson Waste Oil Co.}, 933 F.2d 35, 51–52 (1st Cir. 1991) (“[J]ury instructions improperly allowed the jury to find [the defendant] guilty without finding he had actual knowledge of the alleged transportation of hazardous waste.”). \textit{But see} United States v. Self, 2 F.3d 1071, 1087–88 (10th Cir. 1993) (upholding conviction where jury could infer from defendant’s position and oversight that he knew hazardous waste was being stored in warehouse in violation of permit).
\item \textsuperscript{294} 33 U.S.C. § 1319(c)(3)(B)(ii); \textit{see Self}, 2 F.3d at 1087–88.
\item \textsuperscript{295} See 33 U.S.C. § 1319(c)(3)(B)(ii).
occupation, medical treatment, or scientific experiment.\textsuperscript{296}

The CWA’s oil and hazardous waste discharge notification requirement\textsuperscript{297} provides limited use immunity, preventing use of such notification information in criminal proceedings.\textsuperscript{298} This immunity extends from the CWA to other environmental statutes.\textsuperscript{299} However, failure to make a timely notification of the discharge may estop an immunity claim.\textsuperscript{300}

A common defense strategy is to demonstrate compliance with one’s NPDES permit because “compliance with a permit is generally deemed to constitute compliance with [CWA’s] requirements.”\textsuperscript{301} A violator charged with a non-permitted discharge may argue that the government affirmatively misled him into

\textsuperscript{296} Id.; see also Borowski, 977 F.2d at 32 (holding defense of assumption of risk applies to employees of POTWs who have been informed of illegal discharge).


\textsuperscript{298} Specifically, “[n]otification received pursuant to this paragraph shall not be used against any such natural person in any criminal case, except a prosecution for perjury or for giving a false statement.” Id. This “use” immunity does not extend to information obtained independently of the notification. See United States v. Republic Steel Corp., 491 F.2d 315, 318 (6th Cir. 1974) (per curiam) (“All that is required by . . . the statute is that such prosecution be based on evidence other than notification or information obtained by exploitation of such notification.”); United States v. Gen. Am. Transp. Corp., 367 F. Supp. 1284, 1290 (D.N.J. 1973) (granting “use” immunity only). Some courts have held that corporate owners may claim immunity when owner reports discharges. See, e.g., Apex Oil Co. v. United States, 530 F.2d 1291, 1293 (8th Cir. 1976) (granting immunity to corporation that owned plant which discharged oil into navigable waterway where prosecution was based solely on information supplied by corporation); United States v. Mobil Oil Corp., 464 F.2d 1124, 1128 (5th Cir. 1972) (same).

This limited grant of immunity extends only to discharges involving oil or hazardous substances. See United States v. Ohio Barge Lines, 410 F. Supp. 625, 628 (W.D. La. 1975) (finding no immunity because alcohol was not listed as hazardous substance), aff’d, 531 F.2d 574 (5th Cir. 1976).


\textsuperscript{300} See, e.g., United States v. Kennecott Copper Corp., 523 F.2d 821, 824 (9th Cir. 1975) (holding notification three days after spill was too late to support immunity claim); United States v. Ashland Oil & Transp. Co., 504 F.2d 1317, 1329-30 (6th Cir. 1974) (holding notification fifteen hours after spill was too late to support immunity claim because 33 U.S.C. § 1321(b)(5) requires notice of oil discharge to be given “immediately”); United States v. Fredericks, 38 F. Supp. 2d 396, 400 (D.V.I. 1999) (holding that immunity provisions of 1321(b)(5) do not apply to captain who informed Coast Guard of spill only after being caught).

\textsuperscript{301} Natural Res. Def. Council, Inc. v. EPA, 822 F.2d 104, 111 (D.C. Cir. 1987) (citing 33 U.S.C. § 1342(k) (2012)); see also Atl. States Legal Found. v. Eastman Kodak Co., 12 F.3d 353, 358 (2d Cir. 1993). However, the mere submission of an application for a permit, or for a modification of an existing permit, is not sufficient to illustrate compliance. See, e.g., Conn. Fund for the Env’t v. Upjohn Co., 660 F. Supp. 1397, 1413 (D. Conn. 1987) (holding defendant liable for violation of conditions of its NPDES permit during pendency of application for modification, even though discharge did not exceed limitations of proposed modification). If a business wishes to minimize its potential liability, a request for the establishment of interim operating conditions should accompany the NPDES permit application. See, e.g., United States v. Frezzo Bros., Inc., 602 F.2d 1123, 1127-28 (3d Cir. 1979) (holding that EPA Administrator was authorized to establish interim operating conditions pending approval of permits and shield applicant from liability for discharges). Moreover, coming into compliance with a NPDES permit does not make a subsequent citizen suit moot. See Friends of the Earth, Inc. v. Laidlaw Envtl. Servs. (TOC), Inc., 528 U.S. 167, 189-90 (2000) (reasoning that substantially complying with a permit or closing a facility indicates mootness only if the compliance or closing made it absolutely clear that the violations could not be reasonably expected to recur).
beliving a permit was not required.\textsuperscript{302} Additionally, although laboratory error in effluent monitoring has been a successful defense to charges of NPDES permit violations, this defense may result in liability for laboratory monitoring violations.\textsuperscript{303}

Generally, there is no de minimis violation defense, as the CWA applies to any discharge regardless of the amount,\textsuperscript{304} and regardless of the presence of harm.\textsuperscript{305} If a single operational upset—such as a storm causing unauthorized discharge from a plant—is the cause of simultaneous violations of multiple pollutant parameters, the government must treat these violations as a single violation.\textsuperscript{306} Intent and good faith are also irrelevant in determining liability.\textsuperscript{307} Acting in good faith does not

\textsuperscript{302} See United States v. Pa. Indus. Chem. Corp., 461 F.2d 468, 477–79 (3d Cir. 1972) (finding that when discussing reliance of defendant on Corps of Engineers publications, “an individual or corporation should not be held criminally responsible for activities which could not reasonably have been anticipated to be illegal based on [seventy] years of consistent government interpretation and subsequent behavior”), modified on other grounds, 411 U.S. 655 (1973). But see United States v. W. Indies Transp., Inc., 127 F.3d 299, 314 (3d Cir. 1997) (holding that entrapment by estoppel did not apply where defendant relied on a Coast Guard placard that “makes no representations about the legality of defendants’ conduct . . . .”).


\textsuperscript{304} See Chevron, U.S.A., Inc. v. Yost, 919 F.2d 27, 30 (5th Cir. 1990); Gill v. LDI, 19 F. Supp. 2d 1188, 1195 (W.D. Wash. 1998) (“[L]iability for violation of the CWA is strict—there is no de minimis defense.”); Int’l Union, United Auto., Aerospace & Agric. Implement Workers of Am. v. Amerace Corp., 740 F. Supp. 1072, 1083 (D.N.J. 1990) (finding neither de minimis nor good faith defense for violations of categorical standards and reporting requirements). However, the CWA contemplates a de minimis defense for the discharge of dredged material resulting from ditching and other excavation. 33 C.F.R. § 323.2(d)(1)(iii), (d)(2) (2012) (excluding “incidental fallback” from the definition of “dredged material”); id. § 323.2(d)(5) (“[A]n activity associated with a discharge of dredged material degrades an area of waters . . . if it has more than a de minimis effect on the area . . . .”); see United States v. Cundiff, 555 F.3d 200, 214 (6th Cir. 2009) (holding defendant liable because quantity of pollutant that defendant discharged was greater than what could be considered “de minimis”).

\textsuperscript{305} See United States v. Habenka, 438 F.3d 1026, 1035 (10th Cir. 2006) (“There is no need to prove a defendant’s discharge of pollutants into a tributary caused any deleterious effect on the navigable waters downstream.”); Chevron, 919 F.2d at 30 (stating actual harm from oil discharge is irrelevant in context of violation of 33 U.S.C. § 1321); see also Water Pollution: Pharmaceutical Maker to Pay $3.6 Million for Falsifying Pollutant Discharge Reports, DAILY ENV’T REP. (BNA), No. 183, at D18 (Sept. 22, 1997) (fining pharmaceutical manufacturer $3 million in criminal penalties and $670,000 in civil penalties for falsifying pollutant discharge reports despite prosecution’s concession that there was no evidence of environmental harm).

\textsuperscript{306} 33 U.S.C. § 1319(c)(5) (applying to negligent violations, knowing violations, and knowing endangerment); see Pub. Interest Research Grp. of N.J., Inc. v. Powell Duffryn Terminals, Inc., 913 F.2d 64, 76–77 (3d Cir. 1990) (defining upset as an “unusual or extraordinary” occurrence, and describing that “the single operational upset . . . defense is not a defense to liability, but relates only to the amount of penalties [a court] may impose”).

absolve a violator from liability, although it may mitigate the penalties assessed. 308 Business necessity is also unavailable as a defense. 309 Finally, attempts to challenge regulatory definitions or interpretations of provisions are generally unsuccessful due to courts' deference to agency interpretations. 310

The CWA has withstood a wide variety of constitutional challenges. 311 The EPA has broad discretion to decide whether to pursue enforcement against a violator and, if so, whether through criminal or civil proceedings. 312 There is no require-

308. See United States v. City of Toledo, 867 F. Supp. 603, 608 (N.D. Ohio 1994) (finding that defendant's good faith reliance on state administrative order and its reasonable belief that it was complying with the law were not defenses to CWA violations, but would "weigh heavily" in defendant's favor regarding a penalty); Haw. Thousand Friends v. City of Honolulu, 821 F. Supp. 1368, 1392 (D. Haw. 1993) (requiring city to pay $250,000 as civil penalty for 9870 violations of CWA instead of $25,000 per violation statutory maximum).

309. See, e.g., United States v. Boldt, 929 F.2d 35, 41 (1st Cir. 1991) (finding defendant liable for discharge when defendant refused to shut down plant to avoid discharge, because shutting down plant would have unreasonably harmed business or put employees out of work).

310. See United States v. Riverside Bayview Homes, Inc., 474 U.S. 121, 134 (1985) (deferring to Corps of Engineers' ecological judgment about relationship between waters and adjacent wetlands); E.I. du Pont de Nemours & Co. v. Train, 430 U.S. 112, 134–35, 135 n.25 (1977) (deferring to EPA's judicial interpretations of CWA's provision because of complexity and technical nature of CWA, obscurity of its language, and EPA's experience in subject area); see also Nw. Envtl. Def. Ctr. v. Brown, 640 F.3d 1063, 1069 (9th Cir. 2011) cert. granted, 11-338, 2012 WL 2368685 (U.S. June 25, 2012) and cert. granted, 11-347, 2012 WL 2368868 (U.S. June 25, 2012) (deferring to EPA's interpretation if interpretation is "plainly erroneous, inconsistent with the regulation, or based on an impermissible construction of the governing statute"); ConocoPhillips Co. v. EPA, 612 F.3d 822, 840–41 (5th Cir. 2010) (granting a "highly deferential" standard of review to EPA because "[w]hen reviewing an agency's scientific determinations in an area within the agency's technical expertise, a reviewing court must be at its most deferential") (citations omitted). However, occasionally defendants have successfully challenged EPA determinations. See United States v. Appel, No. 98-55772, D.C. No. CV-94-7824-LGB (9th Cir. Jan. 11, 2000) (reversing and remanding conviction under CWA because defendant offered evidence calling into doubt whether "the method [EPA] used was an appropriate method prescribed by the regulation"); see also Safe Air for Everyone v. EPA, 488 F.3d 1088, 1099 (9th Cir. 2007) (declining to give deference to EPA where agency adopted two interpretations, for the first time, post hoc of the lower court litigation); United States v. Plaza Health Labs., Inc., 3 F.3d 643, 646–47, 650 (2d Cir. 1993) (holding that a defendant who dumped vials of contaminated blood into the ocean did not violate the CWA because human beings were not "point sources").

311. Individual provisions of the CWA have survived challenges against being unconstitutionally vague. See, e.g., United States v. Lucas, 516 F.3d 316, 327–28 (5th Cir. 2008) (holding that jurisdiction of CWA, as applied to "wetlands," is not unconstitutionally vague); United States v. Cooper, 173 F.3d 1192, 1202 (9th Cir. 1999) (finding federal regulations encouraging land application of sewage sludge does not create vague statutory ambiguity in CWA's defining "sewage sludge" as "pollutant"); EPA v. City of Green Forest, 921 F.2d 1394, 1405–06 (8th Cir. 1990) (determining prohibition of "interference" with, or "pass through" of, public treatment works is not unconstitutionally vague); see also United States v. Phillips, 87 F. App'x 650, 652–53 (9th Cir. 2004) (holding that CWA did not violate due process rights because reasonable person would have realized that defendant's conduct might be illegal under the CWA). CWA provisions have also survived claims of being unconstitutional delegations of power. See Mills v. United States, 36 F.3d 1052, 1056 (11th Cir. 1994) (per curiam) (deciding delegation of authority to Army Corps of Engineers to define wetlands is not unconstitutional). Additionally, EPA's delegation of authority to a state of a permitting program does not trigger "consultation" under the Endangered Species Act. See Nat'l Ass'n of Home Builders v. Defenders of Wildlife, 551 U.S. 644, 673 (2007) (holding that the ESA must yield to CWA's permitting authority). For a general discussion of constitutional challenges to environmental statutes, see supra Part II.C.1.

312. E.g., K.W. Thompson Tool Co. v. United States, 836 F.2d 721, 728–29 (1st Cir. 1988) (holding Administrator of EPA has option of proceeding either criminally or civilly against CWA violator, and civil action need not precede criminal one).
ment that a violator be given notice of alleged violations prior to the initiation of proceedings.\textsuperscript{313}

\textbf{D. Penalties}

1. Penalties Under the CWA

The CWA establishes four levels of criminal penalties based on whether a violation was negligent, knowing, involved knowing endangerment, or involved knowing falsification of information or tampering with monitoring equipment.\textsuperscript{314} These four penalty levels correlate with the three types of intent discussed above, with an additional level added for knowingly falsifying information or tampering with results. Each level establishes two penalty ranges, one for first-time violators and a second, higher level, for persons previously convicted of a CWA violation.\textsuperscript{315} The alternative fine statute, which can apply to any provision of the CWA, authorizes a fine “for each day of violation.”\textsuperscript{316} Additionally, any person convicted of a criminal offense under the CWA may not enter into any contract with a federal agency.\textsuperscript{317}

\textit{a. Negligent Violations}

Criminal fines for first time negligent violations range from $2500 to $25,000 per day, per violation.\textsuperscript{318} Alternatively, or in addition to a fine, a violator may be imprisoned for up to one year.\textsuperscript{319} Subsequent offenses double the maximum penalty.\textsuperscript{320} Fines and punishments for negligence have not been considered excessive or disproportionate.\textsuperscript{321}

\textsuperscript{313} See Lucas, 516 F.3d at 328 (holding that even in the absence of agency warnings, defendants should have been aware that portions of their wetlands were protected by the CWA, and they can be prosecuted for violations); United States v. Frezzo Bros., Inc., 602 F.2d 1123, 1125–27 (3d Cir. 1979) (deciding notice of alleged violations not required prior to initiation of criminal proceedings); see also United States v. S. Union Co., 643 F. Supp. 2d 201, 217 (D.R.I. 2009) (finding no due process violation for lack of notice where EPA published rule in Federal Register); United States v. Phelps Dodge Corp., 391 F. Supp. 1181, 1184 (D. Ariz. 1975) (declining to require EPA Administrator to issue abatement order prior to initiating criminal proceedings).

\textsuperscript{314} 33 U.S.C. § 1319(c)(1)–(4) (2012).

\textsuperscript{315} Id.

\textsuperscript{316} United States v. Ming Hong, 242 F.3d 528, 532–34 (4th Cir. 2001) (interpreting “the statute” in U.S.S.G. MANUAL § 5E1.2(e)(4)(B) to include not only the statute of conviction, 33 U.S.C. § 1319(c)(1), but also the alternative fine statute, 18 U.S.C. § 3571, enabling the court to fine the defendant the alternative fine statute’s Class A misdemeanor maximum fine of $100,000 per violation instead of 1319(c)(1)’s maximum of $25,000).

\textsuperscript{317} 33 U.S.C. § 1368(a) (2012).

\textsuperscript{318} Id. § 1319(c)(1).

\textsuperscript{319} Id.; see United States v. Hanousek, 176 F.3d 1116, 1120, 1125–26 (9th Cir. 1999) (affirming sentence of six months in prison, six months in halfway house, six months supervised release, and $5000 fine for defendant convicted under respondeat superior theory for negligent violations of CWA due to release of oil into river when backhoe punctured pipeline).

\textsuperscript{320} 33 U.S.C. § 1319(c)(1).

\textsuperscript{321} See Ming Hong, 242 F.3d at 532 (arguing in dicta that defendant’s three successive one-year sentences would not violate the Eighth Amendment’s prohibition against “cruel and unusual punishments” because defendant’s sentence was not disproportional to his many violations of pretreatment requirements).
b. Knowing Violations

The CWA provides for a higher level of penalties for knowing violations. Fines fall between $5000 and $50,000 per day of violation, and a prison term of up to three years may be imposed.\textsuperscript{322} Subsequent offenses double the maximum penalty.\textsuperscript{323}

c. Knowing Endangerment

An individual convicted of "knowing endangerment" is subject to a fine of up to $250,000, fifteen years imprisonment, or both.\textsuperscript{324} An "organization"\textsuperscript{325} may be assessed a fine of up to $1,000,000.\textsuperscript{326} If a person is convicted under this section after a previous conviction under the same section, the maximum statutory punishment for fines and imprisonment shall be doubled.\textsuperscript{327}

d. False Statements, Representations, and Tampering

A maximum fine of $10,000, imprisonment for not more than two years, or both may be imposed for knowingly making false statements, representations, certifications, or tampering with monitoring equipment required by the CWA.\textsuperscript{328} Second convictions are subject to double maximum penalties.\textsuperscript{329} Failure to notify an appropriate federal agency of a discharge of oil or hazardous substance may result in a $10,000 fine, a five-year prison term, or both.\textsuperscript{330}

\textsuperscript{322} 33 U.S.C. § 1319(c)(2); see also United States v. Hartsell, 127 F.3d 343, 347, 354 (4th Cir. 1997) (affirming a sentence of fifty-one months for knowing violations of several CWA provisions, including tampering with a monitoring device and violating pretreatment standards).
\textsuperscript{323} 33 U.S.C. § 1319(c)(2).
\textsuperscript{324} Id. § 1319(c)(3)(A). The knowing endangerment standard does not appear to be used very often, perhaps because courts will stringently apply the requirement that there be evidence that the accused violator had an "actual belief" that his discharge would place another person in imminent danger. See United States v. Villegas, 784 F. Supp. 6, 11–12 (E.D.N.Y. 1991) (overturning two counts of a conviction based on the knowing endangerment standard because the government had not shown that defendant had actual belief that another person was in imminent danger), rev'd on other grounds sub nom. United States v. Plaza Health Labs., Inc., 3 F.3d 643 (2d Cir. 2001); see also United States v. Borowski, 977 F.2d 27, 32 (1st Cir. 1992) (holding that a knowing endangerment prosecution cannot be based on danger that occurs prior to alleged CWA violation).
\textsuperscript{325} "[T]he term 'organization' means a legal entity, other than a government, established or organized for any purpose, and such term includes a corporation, company, association, firm, partnership, joint stock company, foundation, institution, trust, society, union, or any other association of persons." 33 U.S.C. § 1319(c)(3)(B)(iii).
\textsuperscript{326} Id. § 1319(c)(3)(A).
\textsuperscript{327} Id.
\textsuperscript{328} Id. § 1319(c)(4); see also United States v. Hartsell, 127 F.3d 343, 347, 354 (4th Cir. 1997) (affirming sentence of fifty-one months for knowing violations of several CWA provisions including tampering with a monitoring device and violating pretreatment standards).
\textsuperscript{329} 33 U.S.C. § 1319(c)(4).
2. Penalties Under the Sentencing Guidelines

Penalties for violations of the CWA fall within section 2Q1 of the Guidelines.\(^{331}\) Penalties for the discharge of hazardous or toxic substances and recordkeeping violations involving those substances have a base offense level of eight.\(^{332}\) The offense level may be increased by six levels for “an ongoing, continuous, or repetitive discharge, release, or emission of a hazardous or toxic substance or pesticide into the environment . . . .”\(^{333}\) If the offense involves a “discharge, release, or emission of a hazardous or toxic substance or pesticide,” the offense level may be increased by four levels.\(^{334}\) If the offense results in a “substantial likelihood of death or serious bodily injury,” the offense level may be increased by nine levels.\(^{335}\)

Penalties for knowing endangerment have a base offense level of twenty-four.\(^{336}\) “If the offense result[s] in disruption of public utilities or evacuation of a community, or if cleanup require[s] a substantial expenditure,” the offense level may be increased by four levels.\(^{337}\) “If the offense involve[s] transportation, treatment, storage, or disposal without a permit or in violation of a permit,” the offense level may be increased by four levels.\(^{338}\)

If a recordkeeping offense indicates an effort to hide a substantive environmental offense, the offense level for the substantive offense should be used.\(^{339}\) If there

\(^{331}\) U.S.S.G. MANUAL §§ 2Q1.1–1.4 (2012).

\(^{332}\) Id. § 2Q1.2(a); see United States v. Hagerman, 525 F. Supp. 2d 1058, 1061–62 (S.D. Ind. 2007) (stating that the applicable U.S.S.G. provision for falsification of documents required by the CWA was U.S.S.G. § 2Q1.2 and involved a base offense level of eight), aff’d, 555 F.3d 553 (7th Cir. 2009); see also United States v. Kelley Technical Coatings, Inc., 157 F.3d 432, 443 (6th Cir. 1998) (“Section 2Q1.2 prescribes a base offense level of eight because of the inherently dangerous nature of hazardous and toxic substances . . . .”).

\(^{333}\) U.S.S.G. MANUAL § 2Q1.2(b)(1)(A). The court has discretion to adjust a sentence by two levels, up or down, depending upon “the harm resulting from the emission, release or discharge, the quantity and nature of the substance or pollutant, the duration of the offense and the risk associated with the violation.” Id. at cmt. n.5; see also United States v. Van Loben Sels, 198 F.3d 1161, 1165 (9th Cir. 1999) (finding that because it was reasonable to infer from the evidence that defendant’s illegal acts resulted in contamination, § 2Q1.2(b)(1)(A) applied); United States v. Cooper, 173 F.3d 1192, 1205 (9th Cir. 1999) (finding that § 2Q1.3 paralleled § 2Q1.2 enhancements, and only required actual contamination, and not actual harm, to the environment).

\(^{334}\) U.S.S.G. MANUAL § 2Q1.2(b)(1)(B). Depending upon certain factors, the court can depart by up to two levels, up or down, from the enhancement. Id. at cmt. n.5.

\(^{335}\) Id. § 2Q1.2(b)(2). Depending on the nature of the risk created and the amount of individuals placed at risk, the court can depart by up to three levels, up or down, from the enhancement. Id. at cmt. n.6.

\(^{336}\) Id. § 2Q1.1; see also 33 U.S.C. § 1319(c)(3)(A) (2012) (stating maximum monetary and imprisonment penalties for knowing endangerment violations).

\(^{337}\) U.S.S.G. MANUAL § 2Q1.2(b)(3); see also United States v. Rutana, 18 F.3d 363, 363–66 (6th Cir. 1994) (holding that where defendant’s discharges disabled the water treatment process and burned two employees at a water treatment plant, § 2Q1.2(b)(3) applied and required a four-level increase of the base offense level). Depending on the nature of the contamination, the court can depart by up to three levels, up or down, from the enhancement. U.S.S.G. MANUAL § 2Q1.2 cmt. n.7.

\(^{338}\) U.S.S.G. MANUAL § 2Q1.2(b)(4). “Depending upon the nature and quantity of the substance involved and the risk associated with the offense,” the Guidelines allow a departure of up to two levels, up or down, from the enhancement. Id. at cmt. n.8.

\(^{339}\) Id. § 2Q1.2(b)(5); see id. at cmt. n.1 (describing broad definition of "recordkeeping offense").
is a simple recordkeeping or reporting violation, the offense level is to be decreased by two levels.\textsuperscript{340} For discharges of other pollutants, the offense level begins at six, with adjustments similar to those applied to hazardous or toxic substances.\textsuperscript{341} For tampering with a public water system, the base offense level is twenty-six.\textsuperscript{342}

V. THE RIVERS AND HARBORS ACT OF 1899

Part A of this Section explains the purpose of the Rivers and Harbors Act of 1899 ("RHA").\textsuperscript{343} Part B examines the elements of the RHA. Part C highlights the defenses to a charge. Finally, Part D addresses the penalties under the RHA.

A. Purpose

The purpose of the RHA is to preserve the integrity of navigable waters,\textsuperscript{344} protect the viability of commercial shipping activity,\textsuperscript{345} and prevent the obstruction of navigable waters\textsuperscript{346} by regulating deposits of refuse matter.\textsuperscript{347}

B. Elements of an RHA Offense

1. Violation

The RHA makes it unlawful to throw, discharge, or deposit refuse matter of any kind into the navigable waters of the United States\textsuperscript{348} without a permit from the

\textsuperscript{340} Id. § 2Q1.2(b)(6). A "simple recordkeeping or reporting violation" is a recordkeeping offense where the defendant did not know, and did not have reason to believe, that the recordkeeping offense would "significantly increase the likelihood of any substantive environmental harm." Id. at cmt. n.2.

\textsuperscript{341} See id. § 2Q1.3. However, for other pollutants there is an eleven-level increase where the discharge resulted in a substantial likelihood of death or serious bodily injury. Id. § 2Q1.3(b)(2). Where the discharge was without a permit or in violation of a permit, the penalty is increased by four levels. Id. § 2Q1.3(b)(4); see United States v. Perez, 366 F.3d 1178, 1183–86 (11th Cir. 2004) (finding that the violation of a discharge without a permit allows a four level increase in offense level).

\textsuperscript{342} U.S.S.G. MANUAL § 2Q1.4. Also, adjustments are made given the nature of the disruption. Id.


\textsuperscript{344} Courts have construed the term "navigable waters" broadly and have adopted a test asking whether a waterway could be used for commerce. See United States v. Appalachian Elec. Power Co., 311 U.S. 377, 407–27 (1940) (discussing reach of "navigable waters" and extending the RHA to waterways that could reasonably be made navigable); see also supra notes 223–30 and accompanying text (defining "navigable waters" under CWA and discussing potential limitations as applied to wetlands).

\textsuperscript{345} See Borough of Carlstadt v. U.S. Army Corps of Eng'rs, No. 05-2771 (JAP), 2006 U.S. Dist. LEXIS 4789, at *27–28 (D.N.J. Feb. 7, 2006) (indicating intent purpose of § 10 of the RHA is to prohibit obstructions to commerce and protect navigation).

\textsuperscript{346} 33 U.S.C. § 403; see United States v. Members of the Estate of Boothby, 16 F.3d 19, 21–22 (1st Cir. 1994) (holding a houseboat in violation of RHA because it obstructed navigation).


\textsuperscript{348} 33 U.S.C. § 407. This section of the RHA is commonly referred to as the "Refuse Act." See id. Excluded from regulation under § 407 is any refuse matter that flows in a liquid state from the streets and sewers into navigable waters. Id.
EPA. It also bans the deposit of refuse on the banks of any tributary where it is likely that the refuse will wash into any navigable water. The RHA, however, also regulates nonpoint sources. Each act of depositing refuse is punishable, regardless of type or amount. The refuse need not be an obstruction to navigation. Creating an unauthorized obstruction is separately punishable.

2. Intent

Some courts have imposed strict liability for the criminal provisions of the RHA, while other courts have required general intent or negligence.

349. 33 U.S.C. §§ 1342(a)(4)-(5), 1345. The statute places the Secretary of the Army in charge of regulating the issuance of permits to discharge pollutants into navigable waters. Id. § 1342(a)(6). Section 10 of the Rivers and Harbors Act of 1899 authorizes the Chief of the U.S. Army Corps of Engineers and the Secretary of the Army to permit refuse deposits into navigable waters. Id. § 407. Until 1972, the Secretary of the Army issued discharge permits separately under 33 U.S.C. § 407. Id. § 1342(a)(5). The EPA Administrator and Secretary of the Army now share responsibilities for issuing discharge permits under 33 U.S.C. § 1342. The waterways within the Corps’s jurisdiction are limited to those affected by tidal flows or which are used, or are susceptible to be used, for the transport of interstate or foreign commerce. This permitting scheme protects the government’s interest in the navigability of waterways. Daniel Riesel, ENVIRONMENTAL ENFORCEMENT: CIVIL AND CRIMINAL § 9.07 n.2 (2007). This permitting scheme protects the government’s interest in the navigability of waterways. Id.; see also 33 C.F.R. § 329.4 (2012) (codifying a definition of “navigable waters”). The waterways within the Corps’s jurisdiction are limited to those affected by tidal flows or which are used, or are susceptible to be used, for the transport of interstate or foreign commerce. 33 C.F.R. § 329.4.

350. 33 U.S.C. § 407; see also United States v. Am. Cyanamid Co., 480 F.2d 1132, 1135 (2d Cir. 1973) (holding discharge of chemicals and dissolved solids into small, non-navigable brook violated RHA because waste was “liable to be washed” into navigable waters); United States v. Mackin Constr. Co., 388 F. Supp. 478, 480 (D. Mass. 1975) (holding that a river, although not itself navigable, was a tributary of a navigable river, and that spilled oil was likely to be carried into navigable water).

351. 33 U.S.C. §§ 1251-1387. For a discussion of the CWA, see supra Section IV.

352. Id. §§ 1342, 1344 (discussing permit systems under CWA); id. § 407 (concerning deposit of refuse into navigable waters under RHA).

353. Id. § 407 (indicating that RHA covers materials washing into navigable waters from streets by “tides, or by storms or floods, or otherwise”). For a discussion of point source and non-point source discharges under the RHA and the CWA, see United States v. Plaza Health Labs., Inc., 3 F.3d 643, 645–49 (2d Cir. 1993) (holding that a person is not a point source within the meaning of the CWA).


356. See United States v. Members of the Estate of Boothby, 16 F.3d 19, 21–22 (1st Cir. 1994) (holding an unauthorized, permanently moored houseboat is an “obstruction” that violates the RHA); see also United States v. San Juan Bay Marina, 239 F.3d 400, 404–06 (1st Cir. 2001) (finding the construction of piers are “obstructions” that violate the RHA if unauthorized); United States v. Oak Beach Inn Corp., 744 F. Supp. 439, 443–47 (S.D.N.Y. 1990) (discussing factors courts will consider when government seeks to enjoin unauthorized structures).

357. See Plaza Health Labs., Inc., 3 F.3d at 648 (indicating courts have generally applied strict liability standard to RHA offenses); United States v. Ashland Oil, Inc., 705 F. Supp. 270, 276 (W.D. Pa. 1989) (finding
Supreme Court has reserved the question of whether a specific mens rea is required.\(^3\) Because the statute is directed at "public welfare offenses," most courts interpret the RHA broadly.\(^3\)

C. Defenses

Courts have entertained defenses such as sabotage, theft, and accidental causes.\(^3\) Defendants have avoided conviction by showing that a third party was responsible.\(^3\) Defendants may also argue that they were "affirmatively misled" by administrative agencies,\(^3\) or that estoppel applies.\(^3\)

Compliance with water quality standards does not protect defendants from strict liability applicable to nature of offense); see also United States v. Baycon Indus., Inc., 744 F.2d 1505, 1507 (11th Cir. 1984) (stating government must allege causal, volitional act on part of defendant to trigger strict liability, though government need not demonstrate specific intent); United States v. Ohio Barge Lines, Inc., 607 F.2d 624, 628 (3d Cir. 1979) (rejecting the government's strict liability argument under § 10 and § 15 of the RHA); United States v. Commodore Club, Inc., 418 F. Supp. 311, 320 (E.D. Mich. 1976) (requiring general intent to violate §§ 403 and 406 of RHA because of imposition of relatively stringent criminal penalties, serious consequences of criminal conviction, and vagaries of jurisdiction under the Act).

358. See Standard Oil Co., 384 U.S. at 230 (indicating the Court was only examining the question of the "quality of the pollutant," not the "quantity of proof necessary to support a conviction nor...what scienter requirement the [RHA] imposes").

359. See United States v. White Fuel Corp., 498 F.2d 619, 622 (1st Cir. 1974) (finding public welfare offense is, by definition, one where standard imposed is reasonable and adherence is properly required).

360. See id. at 624 ("One is not expected to take all conceivable measures to erect a fail-safe system which would be impregnable to sabotage, thievery, accidental intrusions, the negligence of third parties, and extreme natural disasters.").

361. See id. (stating that third-party defense may apply, for example, in situations where oil percolated through soil from supply of adjacent landowner or spills resulting from act of God).

362. See United States v. Pa. Indus. Chem. Corp., 411 U.S. 655, 675 (1973) (finding defendant's reliance on Army Corps of Engineers's licensing procedures to be possible affirmative defense); see also United States v. U.S. Steel Corp., 482 F.2d 439, 453 (7th Cir. 1973) (finding chronology alone was enough to defeat the defendant's claim of reliance where its acts took place in 1967 and the agency notice was in 1969); United States v. Tobin Packing Co., 362 F. Supp. 1127, 1131 (N.D.N.Y. 1973) (stating that for defendant to establish it was "affirmatively misled," it "must show that there was reliance on its part, that the reliance was reasonable under the circumstances, and that this justified belief in the lawfulness of its actions").

363. To assert a defense of entrapment by estoppel:

The defendant [must establish] by a preponderance of the evidence that (i) a government official (ii) told the defendant that certain criminal conduct was legal, (iii) the defendant actually relied on the government official's statements, (iv) and the defendant's reliance was in good faith and reasonable in light of the identity of the government official, the point of law represented, and the substance of the official's statement.

United States v. W. Indies Trans., Inc., 127 F.3d 299, 313 (3d Cir. 1997); see United States v. S. Inv. Co., 876 F.2d 606, 614 (Rth Cir. 1989) (holding in order to raise affirmative defense of estoppel, government must have taken affirmative bad faith steps to mislead defendant); Stagle v. United States, 809 F. Supp. 704, 710 (D. Minn. 1992) ("To prevail on an estoppel claim...[defendant] must prove that (1) there was affirmative misconduct by an agent of the United States (2) upon which he reasonably relied and (3) to his detriment."). But see United States v. Commodore Club, Inc., 418 F. Supp. 311, 316–17 (E.D. Mich. 1976) (holding defense of estoppel based on alleged issuance of draft permit was not available to defendants under RHA).
prosecution under the RHA, even in the absence of an explicit permit program.\textsuperscript{364} There is also no “generalized due care” defense,\textsuperscript{365} therefore it is not enough that the defendant behaved consistently with the industry practice or commonly accepted standards.\textsuperscript{366} Courts have allowed limited use immunity for defendants who report violations of hazardous waste discharges under the CWA.\textsuperscript{367}

\textbf{D. Penalties}

A criminal conviction under the RHA is a misdemeanor and can result in a fine of at least $500 but not more than $25,000, imprisonment of thirty days to one year, or both.\textsuperscript{368} Penalties for violation of the RHA are governed by section 2Q of the Guidelines.\textsuperscript{369} For hazardous or toxic pollutants, the base offense level is eight.\textsuperscript{370} The offense level can be adjusted upward by six points for ongoing, continuous, and repetitive discharges, releases, or emissions of a hazardous or toxic substance or pesticide into the environment.\textsuperscript{371} For other pollutants, the offense level begins at six with similar adjustments as applied to hazardous or toxic substances.\textsuperscript{372} Because the penalties applicable under the RHA are less

\begin{footnotes}
364. \textit{See, e.g., Pa. Indus. Chem. Corp.}, 411 U.S. at 668–70 (stating absence of permit program does not sanction dumping in violation of the RHA); \textit{U.S. Steel Corp.}, 482 F.2d at 449–50 (finding that RHA proscribes refuse discharges generally unless official discretion is exercised to permit).

365. \textit{White Fuel Corp.}, 498 F.2d at 623 (“[W]e reject the existence of any generalized ‘due care’ defense that would allow a polluter to avoid conviction on the ground that he took precautions conforming to industry-wide or commonly accepted standards.”). The purpose of the RHA is to require diligence to keep refuse out of the water; therefore, the court is “disinclined to invent defenses beyond those necessary to ensure a defendant constitutional due process.” \textit{Id.}

366. \textit{Id.}

367. \textit{See United States v. Mobil Oil Corp.}, 464 F.2d 1124, 1127–29 (5th Cir. 1972) (holding that “person in charge” who reported violation and was entitled to immunity under CWA was also entitled to immunity from prosecution for violation of RHA); \textit{United States v. Atl. Richfield Co.}, 429 F. Supp. 830, 833 (E.D. Pa. 1977) (extending immunity from CWA to RHA), \textit{aff’d sub nom. United States v. Gulf Oil Corp.}, 573 F.2d 1303 (3d Cir. 1978) (unreported table decision).

368. 33 U.S.C. § 406 (2012) (establishing range for fines between $500 and $2500, and imprisonment up to one year with no minimum; applying to violations of 33 U.S.C. §§ 401, 403, 404); \textit{id.} § 411 (2012) (establishing fines up to $25,000 per day and imprisonment between thirty days and one year; applying to violations of 33 U.S.C. §§ 407, 408, 409, 414, 415); see also \textit{United States v. Marine Shale Processors}, 81 F.3d 1329, 1351 (5th Cir. 1996) (affirming district court’s $1,000,000 fine on hazardous waste handling firm that pleaded guilty to one count of violating Resource Conservation and Recovery Act and two misdemeanor counts under RHA); \textit{United States v. DeJohn}, 18 Env’t Rep. (BNA) 1328 (E.D. Mo. Sept. 4, 1987) (sentencing officer of company to three years’ probation, two-hundred hours of community service, and fining court costs of fifty dollars after officer pled guilty to criminal violations of CWA and RHA; company ordered to pay $125,000 plus interest).


370. \textit{Id.} § 2Q1.2(a) (noting downward adjustments for negligent as opposed to knowing conduct may be warranted).

371. \textit{Id.} § 2Q1.2(b)(1)(A).

372. \textit{Id.} § 2Q1.3; see also \textit{United States v. W. Indies Transp., Inc.}, 127 F.3d 299, 315 (3d Cir. 1997) (declaring that untreated human sewage fell within the meaning of “pollutant” under \textit{§ 2Q1.3(b)(1)(A)} and therefore would permit a six-level enhancement from a base level of six).
\end{footnotes}
severe than those applicable under the CWA, defendants often plead guilty to RHA violations in plea negotiations to avoid CWA convictions.

VI. SAFE DRINKING WATER ACT

Part A of this Section explains the purpose of the Safe Drinking Water Act ("SDWA"). Part B presents programs under the SDWA, including the elements of specific offenses and the penalties for violations.

A. Purpose

Congress passed the SDWA in 1974 (and amended it in 1986 and 1996) to regulate harmful contaminants in public water systems and the injection of contaminants into underground sources of public drinking water. SDWA authorizes the EPA to implement national health-based drinking water standards. The House of Representatives stated that the "purpose of the legislation is to assure that water supply systems serving the public meet minimum national standards for protection of public health."

B. Elements of SDWA Offenses

Under the SDWA, the EPA is required to establish national primary drinking water regulations ("NPDWR"), and dischargers must obtain permits for underground injections of contaminants ("UIC"). The SDWA also regulates the amount of lead in drinking water coolers and prohibits tampering with public water systems. Additionally, the SDWA requires lead-free pipe and plumbing

373. For a discussion of the penalties for violations of the CWA, see supra Section IV.D.
374. See, e.g., S. Dredging Co. v. United States, No. 93-2384, 1994 WL 496703, at *1–2 (4th Cir. Sept. 13, 1994) (finding the defendant company pleaded guilty to an RHA offense to avoid losing its ability to contract with the government under the CWA).
378. Id.
380. 42 U.S.C. §§ 300g-1 to g-6. NPDWRs prescribe maximum contaminant levels for water delivered to public water systems. Id. § 300f(1)(C).
381. Id. §§ 300h to h-7. An "underground injection" is "the subsurface emplacement of fluids by well injection" but excludes both "the underground injection of natural gas for storage and the underground injection of fluids or propping agents (other than diesel fuels) pursuant to hydraulic fracturing operations related to oil, gas, or geothermal production activities." Id. § 300h(4)(1).
382. Id. §§ 300j-21 to j-26. A "drinking water cooler" means any mechanical device affixed to drinking water supply plumbing which actively cools water for human consumption." Id. § 300j-21(1).
383. Id. § 300i-1.
fixtures in facilities that provide drinking water.\textsuperscript{384} Elements of and applicable penalties for each of the primary SDWA violations (UIC, regulation of drinking water coolers, and the ban on tampering with public water systems) are described separately in this Section.

1. \textit{Underground Injection of Contaminants}

The SDWA requires the EPA to establish minimum standards for UIC programs.\textsuperscript{385} In addition to violating the SDWA, the presence of a contaminant may also indicate a failure to comply with NPDWRs.\textsuperscript{386} A state may secure primary enforcement authority for the regulation of underground water sources if the EPA approves the state's UIC program.\textsuperscript{387}

\textit{a. Elements of the Offense}

Willful violators\textsuperscript{388} may be subject to criminal penalties.\textsuperscript{389} Criminal punishment is also appropriate for knowingly making false statements regarding UICs.\textsuperscript{390}

\textit{b. Penalties}

Willful violations carry a prison term of up to three years, a criminal fine under Title 18 of the United States Code, or both.\textsuperscript{391} The Guidelines prescribe a base

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\item[384.] Id. § 300g-6(a)(1)(A).
\item[385.] Id. § 300h. Underground storage of high-level radioactive waste, even in solid form, constitutes an underground injection under the SDWA, as "underground injection" should be defined broadly. See Natural Res. Def. Council, Inc. v. EPA, 824 F.2d 1258, 1271 (1st Cir. 1987) (discussing the standards associated with high-level radioactive waste injection).
\item[386.] 42 U.S.C. § 300h(d)(2).
\item[387.] Id. § 300h-1(b)(3); see also id. § 300h-1(b)(1)(A) (setting forth requirements for state's assumption of primary enforcement responsibility). If a state does not have a program or the state program is not approved, the EPA is required to prescribe federal UIC requirements. Id. § 300h-1(c). Indian tribes may also assume primary responsibility for underground injection control. Id. § 300h-1(e).
\item[388.] See United States v. Overholt, 307 F.3d 1231, 1246 (10th Cir. 2002) (explaining that a conviction under the SDWA requires a willful violation but not knowledge of the law).
\item[389.] 42 U.S.C. § 300h-2(b)(2). Willfulness does not require proof of knowledge of the regulation allegedly violated. Overholt, 307 F.3d at 1246.
\item[390.] See United States v. White, 270 F.3d 356, 362-64 (6th Cir. 2001) (upholding conviction of operators of a public community water system for willfully making false statements to the EPA in reference to turbidity tests); see also United States v. Jay Woods Oil Co., 18 ENV'T REP. (BNA) 502 (E.D. Mich. June 5, 1987) (fining oil company $4000 and sentencing its vice president to three months in federal prison and nine months on probation for concealing information from EPA by injecting salt water to bring underground oil to surface and tampering with wells to conceal fact that they would not pass EPA's tests).
\item[391.] 42 U.S.C. § 300h-2(b)(2). Generally, defendants are also charged with violating 18 U.S.C. § 1001 (2012), which makes it a crime to knowingly and willfully falsify, conceal, or cover up fictitious or fraudulent statements. The defendants can be fined under § 1001, imprisoned for not more than five years, or both. See United States v. Wright, 988 F.2d 1036, 1039 (10th Cir. 1993) (convicting defendant under § 1001 for submitting false data that was required by EPA pursuant to SDWA). Violators of the SDWA's UIC provisions may also be assessed a civil penalty of up to $25,000 for each day of violation. 42 U.S.C. § 300h-2(b)(1); see also United States v. Jolly, No. 99-5700, 2000 WL 1785533, at *3 (6th Cir. Nov. 20, 2000) (applying abuse of discretion standard when
\end{itemize}
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offense level of six or eight, depending on the substances involved, which correspond to fines of $500 to $5000 and $1000 to $10,000, respectively. Offense levels may be increased or decreased depending on the circumstances of the case.

2. Regulation of Drinking Water Coolers

Congress amended the SDWA in 1988 to address problems caused by lead pollution of drinking water coolers. EPA was directed to identify and publish a list of brands and models of water coolers that were not lead-free, including those with lead-lined tanks.

a. Elements of the Offense

The SDWA prohibits the interstate sale or manufacture of coolers which are not "lead free." A violator who acts knowingly may be subject to criminal penalties.

b. Penalties

The SDWA provides for up to five years' imprisonment and criminal fines in accordance with Title 18 of the United States Code for any person engaging in a knowing violation of drinking water cooler provisions.
3. Enforcement of Ban on Tampering

The SDWA prohibits tampering with public water systems.\textsuperscript{399} "Tampering" is defined as introducing a contaminant into a public water system or otherwise interfering with the operation of a public water system with the intent to harm persons.\textsuperscript{400}

\textit{a. Elements of the Offense}

A tampering violation consists of either the act of tampering or an attempt or threat to tamper with a public water system\textsuperscript{401} with intent to cause harm to persons.\textsuperscript{402} Proof of knowledge of the law is not required.\textsuperscript{403}

\textit{b. Penalties}

A conviction for tampering with a public water system is punishable by up to twenty years in prison, a criminal fine under Title 18 of the United States Code, or both.\textsuperscript{404} A conviction for attempting or threatening to tamper can result in a penalty of up to ten years in prison, a criminal fine under Title 18, or both.\textsuperscript{405}

VII. COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT

Part A of this Section discusses the purpose and scope of the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA" or "Superfund").\textsuperscript{406} Part B considers the elements of a CERCLA offense and Part C outlines possible defenses. Lastly, Part D explains the penalties under the Act.

\textsuperscript{399} Id. § 300i-1.
\textsuperscript{400} Id. § 300i-1(d).
\textsuperscript{401} Id. § 300i-1(a)-(b).
\textsuperscript{402} Id. § 300i-1(d).
\textsuperscript{403} See United States v. Overholt, 307 F.3d 1231, 1245 (10th Cir. 2002) (asserting that government does not have to prove that defendant knew specifics of SDWA regulations).
\textsuperscript{404} 42 U.S.C. § 300i-1(a). Title 18 fines associated with actual tampering are given a base offense level of twenty-six, which corresponds to fines in the amount of $12,500 to $125,000. U.S.S.G. MANUAL §§ 2Q1.4, 5E1.2. Specific offense characteristics can raise the offense level depending on the existence of risk of death or serious bodily harm, disruption of the public water system, duration of the effects of tampering, and motivation to extort or otherwise influence government action. Id.
\textsuperscript{405} 42 U.S.C. § 300i-1(b). Title 18 fines associated with attempted tampering are given a base offense level of twenty-two, which corresponds to fines in the amount of $7500 to $75,000. U.S.S.G. MANUAL §§ 2Q1.4, 5E1.2. If the purpose was to influence government action or to extort money, the Guidelines provide that fines should be imposed based on § 2B3.2 (dealing with extortion by force or threat of injury or serious damage). Id. § 2Q1.4(c)(3). For a general discussion of the Guidelines, see the Sentencing note in this issue. See also supra Sections II.D and II.E of this Article (discussing sentencing for environmental offenses).
A. Purpose

Congress enacted CERCLA in 1980 to "initiate and establish a comprehensive response and financing mechanism to abate and control the vast problems associated with abandoned and inactive hazardous waste disposal sites." CERCLA was an attempt to create "a comprehensive and uniform system of notification, emergency governmental response, enforcement, and liability." Under the statute, the EPA is authorized to undertake response actions. Any remedial action must be "protective of human health and the environment," "cost effective," and must "utilize[] permanent solutions . . . to the maximum extent practicable." CERCLA enabled the revision of the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP"), providing guidelines for responses to the release or threatened release of hazardous substances and creating a National Priorities List ("NPL") identifying sites that may require remedial action.

As an environmental statute, the principal focus of CERCLA is remedial and corrective rather than regulatory. The Act does not set standards for compliance but rather is a tort-like, backward-looking statute. The creation and central role of the Superfund itself underscores the remedial nature of CERCLA. Under CERCLA, parties are normally held strictly, jointly and


408. United States v. Carr, 880 F.2d 1550, 1552 (2d Cir. 1989).


410. Id. § 9621(b).


412. See Atl. Richfield Co. v. Am. Airlines Inc., 98 F.3d 564, 570 (10th Cir. 1996) (noting that because CERCLA is remedial legislation it should be construed liberally to carry out its purpose); see also United States v. Lowe, 118 F.3d 399, 401 (5th Cir. 1997) (noting that because CERCLA is remedial legislation its damages should be construed broadly in the nature of restitution); United States v. Alcan Aluminum Corp., 964 F.2d 252, 263 n.19 (3d Cir. 1992) (noting that CERCLA is remedial while the Research Conservation and Recovery Act is regulatory); New York v. Shore Realty Corp., 759 F.2d 1032, 1041 (2d Cir. 1985) (noting that "CERCLA is not a regulatory standard-setting statute such as the Clean Air Act").

413. See United States v. Mex. Feed & Seed Co., 980 F.2d 478, 484 (8th Cir. 1992) ("CERCLA is a remedial strict liability statute. As such, its focus is on responsibility, not culpability.").

414. See United States v. Ne. Pharm. & Chem. Co., 810 F.2d 726, 733 (8th Cir. 1986) (citing the backward-looking nature of CERCLA as the chief reason for characterizing the statute as overwhelmingly remedial).

severally liable for the damage they caused. CERCLA was amended by the Small Business Liability Relief and Brownfields Revitalization Act of 2002, which clarified liability protection. Although CERCLA is primarily a remedial statute, it provides for criminal sanctions in certain instances. Congress supplemented the provisions of CERCLA with the adoption of the Superfund Amendments and Reauthorization Act of 1986 ("SARA"). Section 109 of SARA increases criminal penalties for certain Superfund violations.

416. In 2009, the Supreme Court held that apportionment of liability is proper when there is a reasonable basis for determining each party’s contribution to the total harm. CERCLA defendants seeking apportionment bear the burden of proving that a reasonable basis for apportionment exists. See Burlington Northern, 556 U.S. at 614 (citing RESTATEMENT (SECOND) OF TORTS §§ 443A, 881, 875 (1976)); see also United States v. Chem-Dyne Corp., 572 F. Supp. 802, 807 (S.D. Ohio 1983) (holding that CERCLA imposes a strict liability standard, but does not mandate joint and several liability in every case). It is unclear, however, how much this affects the imposition of joint and several liability under CERCLA. See United States v. NCR Corp., 688 F.3d 833, 842 (7th Cir. 2012) (declining to extend Burlington Northern where the contributions of individual contributors are independently sufficient to require remedial action and holding that apportionment is inappropriate in such cases based on tort causation principles).


418. CERCLA authorizes the EPA to identify, analyze, and remedy any releases of hazardous substances into the environment. 42 U.S.C. § 9604(a)(1) (2012). Monetary awards under the statute are considered civil penalties or cost recovery damages, not criminal penalties, based on CERCLA’s purpose of reimbursing parties for remedial actions. See United States v. Davis, 261 F.3d 1, 53 (1st Cir. 2001) (citing CERCLA’s “broad remedial purpose”); Horsehead Indus., Inc. v. Paramount Comm., Inc., 258 F.3d 132, 135 (3d Cir. 2001) (assuring current and future costs associated with hazardous waste facilities, including post-closure costs, will be adequately financed and, to the greatest extent possible, borne by owners and operators of such facilities). Judicial review is precluded until an action for cost recovery, removal, remedial action, or enforcement of an order is initiated. 42 U.S.C. § 9613(h). The costs of identifying, analyzing, and remedying releases of hazardous substances and the costs of the government’s efforts to recoup those expenditures are paid for by money from the Superfund. Id. § 9611(a).

419. See infra Section VII.D (discussing criminal penalties under CERCLA).


421. 42 U.S.C. § 9603; see also United States v. Buckley, 934 F.2d 84, 87–89 (6th Cir. 1991) (upholding sentence of three years’ probation, 300 hours of community service, and $5000 fine for release of asbestos); United States v. Bogas, 920 F.2d 363, 367–94 (6th Cir. 1990) (stating sentence of four years’ probation, six months in home detention program, and one thousand hours of community service for “not reporting the release of ignitable hazardous wastes into the environment and . . . making a false statement about the release” should have been subject to enhancement provisions of the Guidelines).
B. Elements of a CERCLA Offense

CERCLA provides criminal sanctions for: (i) failure to immediately report the release\(^{422}\) of a hazardous substance\(^{423}\) to the appropriate federal agency\(^{424}\) or providing false or misleading information;\(^{425}\) (ii) failure to notify EPA of the existence of an un-permitted site where hazardous substances are treated, disposed of, or stored;\(^{426}\) (iii) knowing destruction or falsification of records;\(^{427}\) and (iv) submission of false claims for reimbursement from the Superfund.\(^{428}\) Additionally, criminal sanctions are mandated for the disclosure of confidential information obtained in a response action.\(^{429}\)

CERCLA specifies four categories of responsible persons that may be held liable under its civil provisions for the costs of removals or remedial actions: (i) the owner or operator of a facility;\(^{430}\) (ii) the owner or operator of the facility at the time of disposal of any hazardous substance;\(^{431}\) (iii) the person who arranged for disposal, treatment, or transport of hazardous substances;\(^{432}\) and (iv) the person

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\(^{422}\) A "release" is "any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment." 42 U.S.C. § 9601(22); see also United States v. Dico, Inc., 266 F.3d 864, 874 (8th Cir. 2001) (finding "release" occurred in four separate ways where TCE-laden material (a) leaked from a degreasing vat, (b) was dumped on defendant's property, (c) leaked during filling of storage drums, and (d) dripped from railroad cars). However, only an actual release, not just a threatened release, triggers the notification requirement. See Fertilizer Inst. v. EPA, 935 F.2d 1303, 1310 (D.C. Cir. 1991) (holding EPA cannot define "release" as simply exposing a substance to the environment).

\(^{423}\) CERCLA defines "hazardous substance" very broadly; it explicitly excludes only petroleum and natural gas products. 42 U.S.C. § 9601(14); see A & W Smelter & Refiners, Inc. v. Clinton, 146 F.3d 1107, 1110 (9th Cir. 1998) (agreeing with EPA that "CERCLA seems to give the agency carte blanche to hold liable anyone who disposes of just about anything"); United States v. Cantrell, 92 F. Supp. 2d 704, 713 (S.D. Ohio 2000) (ruling that evidence showing even "minimal" amounts of a particular substance present in defendant's waste was enough to make out EPA's prima facie case of liability). But see Acushnet Co. v. Mohasco Corp., 191 F.3d 69, 77 (1st Cir. 1999) (holding defendant may avoid liability if able to prove that substance constitutes only background amounts and cannot form with other substances to produce higher amounts).


\(^{425}\) See 42 U.S.C. § 9603(b)(3) (2012) (defining penalties for failure to notify or false notification); see also United States v. Catucci, 55 F.3d 15, 17, 19 (1st Cir. 1995) (holding defendant responsible because he failed to notify agency of hazardous substance release immediately); Valerie Wagner Long, The Complexity and Lack of Incentives in the Release Reporting Requirements of CERCLA Section 103, 18 VA. ENVTL. L.J. 245, 252 (1999) (arguing that the complexities of several of the elements in § 9603 and the broad definition of many terms make it difficult to determine whether to report a release).

\(^{426}\) 42 U.S.C. § 9603(c).

\(^{427}\) Id. § 9603(d)(2).

\(^{428}\) Id. § 9612(b)(1).

\(^{429}\) Id. § 9604(e)(7)(B).

\(^{430}\) Id. § 9607(a)(1).

\(^{431}\) Id. § 9607(a)(2).

\(^{432}\) Id. § 9607(a)(3); see Burlington N. & Santa Fe Ry. Co. v. United States, 556 U.S. 599, 607 (2009) (holding an entity qualifies as an arranger when it takes intentional steps to dispose of a hazardous substance).
who transported the hazardous substances. Often, civil cases provide the most extensive interpretations of CERCLA and can be useful in the criminal context. Violators of the criminal provisions of CERCLA can be divided into two groups. First, an owner or person in charge of a facility involved in a CERCLA offense may be a defendant. Second, prior owners or operators of a facility where hazardous substances are stored, disposed of, or treated may be a defendant if they owned or operated the facility at the time of disposal of any hazardous substance.

To establish criminal liability for failure to report the release of a hazardous substance, the government must prove: (i) that the substance at issue was "hazardous"; (ii) that it was in an amount greater than or equal to the reportable


434. Because the civil and criminal provisions of CERCLA are similar, certain definitions under criminal sections could follow judicial interpretations of the civil cases. For example, under civil law, a parent corporation can be derivatively liable for the polluting offenses of its subsidiary in two circumstances: (i) the parent can be liable directly as an 'operator' if the parent corporation itself managed, directed, or controlled operations of the subsidiary facility that were specifically related to pollution, such as those concerning waste management or compliance with environmental regulations; (ii) the parent can be liable indirectly, based on the subsidiary's status as a CERCLA 'owner' or 'operator,' only if the corporate veil may be pierced between parent and subsidiary under traditional corporate law principles. See United States v. Bestfoods, 524 U.S. 51, 63–64 (1998). Similarly, a parent corporation could also be responsible for its subsidiary under criminal law. See id. at 62 (finding corporate veil may be pierced when corporate form would be used to accomplish wrongful purposes); see also United States v. Gurley, 235 F. Supp. 2d 797, 805 (W.D. Tenn. 2002) (emphasizing that a parent corporation is liable under CERCLA as an operator of a facility and would not be liable for mere ownership). But see New York v. Nat'l Servs. Inc., 460 F.3d 201, 208–09 (2d Cir. 2006) (declining to apply uniform federal common law of veil piercing when state law and federal policy were not in conflict).

435. Persons in charge include those, even of relatively low supervisory rank, who were in a position to detect, prevent, and abate the release of hazardous substance. United States v. Carr, 880 F.2d 1550, 1554 (2d Cir. 1989); see United States v. Hansen, 262 F.3d 1217, 1253–54 (11th Cir. 2001) (holding district court's jury instruction regarding "in charge" element of CERCLA offense—"it is only necessary that the individual have or share such control of the facility where the release occurred"—adequate); United States v. Twp. of Brighton, 153 F.3d 307, 314–15 (6th Cir. 1998) (holding an operator must have "actual control" and must have performed "affirmative acts," although the operator is still responsible for those hazardous conditions caused by neglect and omission); see also Long, supra note 425, at 252–55 (arguing lack of statutory definition for "in charge" creates confusion about whether release must be reported).

436. See Foster v. United States, 130 F. Supp. 2d 68, 75–76 (D.D.C. 2001) (finding company to be a prior "operator" under CERCLA because at time of contamination it (a) conducted day-to-day management of facility in question and (b) made all primary decisions regarding waste disposal at the site). Judicial interpretation of "past and current owners" in civil cases may shed light in this area. See N. Shore Gas Co. v. Salomon, Inc., 152 F.3d 642, 658 (7th Cir. 1998) (holding a successor corporation of a former owner potentially liable for clean-up costs because of "CERCLA's clear policy that once direct liability attaches, it cannot be cast off through the mere transfer of property"), overruled on other grounds by Envision Healthcare, Inc. v. Preferredone Ins. Co., 604 F.3d 983 (7th Cir. 2010); United States v. Saporito, 684 F. Supp. 2d 1043 (N.D. Ill. 2010) (finding defendant strictly liable as "owner" under CERCLA as owner of equipment used in plating facility's operation); cf. Nat'l Servs. Inc., 460 F.3d at 214–15 (holding that state common law standard requires evidence of continuity of ownership to find existence of a de facto merger, and therefore successor liability).

437. See supra note 425 for a discussion of "hazardous substances."
quantity; \(^{438}\) (iii) that it was released from a facility \(^{439}\) into the environment; \(^{440}\) (iv) that the release was not a federally permitted release; \(^{441}\) (v) that the defendant had knowledge of the release; \(^{442}\) (vi) that the defendant was a person “in charge” of the facility; \(^{443}\) and (vii) that the defendant failed to give immediate notice to the

438. As a default rule under CERCLA, a “reportable quantity” is one pound of a hazardous substance unless superseded by any regulations promulgated pursuant to 42 U.S.C. § 9602(a). 42 U.S.C. § 9602(b) (2012); see Hansen, 262 F.3d at 1253 (affirming district court’s instructions requiring prosecution to prove at least one pound of mercury-laden wastewater and at least ten pounds of chlorine were released into environment during 24-hour period to meet elements of separate CERCLA charges associated with each chemical); cf United States v. Macdonald & Watson Waste Oil Co., 933 F.2d 35, 56–57 (1st Cir. 1991) (highlighting Agency rule that when an unknown concentration of a hazardous substance is mixed with a non-hazardous substance, the “mixture rule” demanding that notification requirements be triggered by reportable quantities does not apply).

439. “Facility” is defined as:

(A) any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft, or (B) any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located; but does not include any consumer product in consumer use or any vessel.

42 U.S.C. § 9601(9); see United States v. Vertac Chem. Corp., 364 F. Supp. 2d 941, 958–60 (E.D. Ark. 2005), aff’d, 453 F.3d 1031 (8th Cir. 2006) (holding that facility applies to any “area” in which hazardous substances have come to be located); see also William B. Johnson, Annotation, *What Constitutes “Facility” Within the Meaning of Section 101(9) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)* (42 U.S.C. § 9601(9)), 147 A.L.R. Fed. 469 § 2(a) (1998 & Supp. 2009) (“It does not appear that any court has ever held that one or more of the defining terms in [42 U.S.C. § 9601(9)] was inapplicable in a particular case.”).

440. Under CERCLA, the “environment” is broadly defined and includes navigable waters, ocean waters, surface or ground water, drinking water supply, land surface, or ambient air. 42 U.S.C. § 9601(8). See Tosco Corp. v. Koch Indus., Inc., 216 F.3d 886, 892–93, 893 n.2 (10th Cir. 2000) (finding defendant’s inability to account for seven percent of its daily throughput, including hydrocarbons containing hazardous constituents, was adequate evidence of an actual release into the environment); Foster, 130 F. Supp. 2d at 76 (ruling an “actual release” occurred where defendant oversaw filling of its canal with waste materials containing lead and mercury). A “release” is distinguished from a “disposal” under CERCLA. 42 U.S.C. § 9601(22), (29). “Disposals” require “active human conduct,” and occur before hazardous materials are introduced to the environment. Bob’s Beverage, Inc. v. Aemec, Inc., 264 F.3d 692, 697 (6th Cir. 2001) (explaining “disposal” did not occur because contamination was caused by passive migration of hazardous materials present in environment before defendant took any action). See generally Carson Harbor Vill., Ltd. v. Unocal Corp., 270 F.3d 863, 875–77 (9th Cir. 2001) (describing the release-disposal distinction as a spectrum and discussing different approaches). But see Crofton Ventures Ltd. P’ship v. G & H P’ship, 258 F.3d 292, 299–300 (4th Cir. 2001) (finding that applying a narrow interpretation of “disposal”—to require proof that defendants actively dumped hazardous materials on their property—overlooks the character of CERCLA as strict liability legislation).

441. 42 U.S.C. § 9601(10); see United States v. Freter, 31 F.3d 783, 788 (9th Cir. 1994) (concluding that exception for federally permitted release is an affirmative defense; the government is not required to prove that a release was not federally permitted as an element of the offense).

442: See United States v. Catucci, 55 F.3d 15, 17–18 (1st Cir. 1995) (finding that defendant knew that the individuals retained to remove PCBs would dump the material unlawfully and did not provide timely notice); United States v. Laughlin, 10 F.3d 961, 966–67 (2d Cir. 1993) (holding that the government need only prove that the defendant was aware of his acts and need not prove that the defendant had knowledge of specific regulatory requirements of CERCLA).

443. United States v. Hansen, 262 F.3d 1217, 1254 (11th Cir. 2001) (articulating that operator of facility is person “in charge”).
EPA after learning of that release.444 Criminal liability for failure to notify the EPA of a release may extend to officials who are apprised of, but not directly responsible for, the dumping of hazardous substances.445

With respect to criminal liability for failure to notify the EPA of the existence of a hazardous waste treatment, storage, or disposal facility, statutory language446 suggests that the government must prove the defendant owned or operated447 such a facility and knowingly failed to provide notice of its existence to the Administrator of the EPA.

Similar to the notice-of-existence provision, the provision establishing criminal liability for the knowing destruction or falsification of records has received limited judicial interpretation.448 Nonetheless, the statute suggests the government must prove the defendant was required to provide notification under § 9603, the defendant knowingly destroyed records,449 and the EPA identified the records as subject to the reporting requirements.450

The provision establishing criminal liability for submitting fraudulent claims for reimbursement451 suggests that the government must prove the defendant knowingly gave false information in a reimbursement claim.452

444. The Eleventh Circuit has approved a list of four elements for a criminal conviction: (i) the defendant was, in fact, in charge of the facility; (ii) an amount equal to or greater than reportable quantity was released; (iii) the defendant knew of such release; (iv) after learning of the release, the defendant failed to immediately notify the EPA. United States v. Greer, 850 F.2d 1447, 1453 (11th Cir. 1988) (upholding conviction of a defendant who knew CERCLA prohibited dumping of a particular substance but allowed the dumping to occur); see also Freter, 31 F.3d at 786–89 (holding failure to report a release to the National Response Center was not excused by the belief that no release had occurred).

445. See United States v. Bogas, 920 F.2d 363, 368–69 (6th Cir. 1990) (charging a commissioner of an airport with failure to report the burial of waste materials even though he had not ordered their dumping).

446. 42 U.S.C. § 9603(c) states, in relevant part:

   [A]ny person who owns or operates or who at the time of disposal owned or operated, or who accepted hazardous substances for transport and selected a facility at which hazardous substances . . . are or have been stored, treated or disposed of shall . . . notify the Administrator of [EPA] of the existence of such facility, specifying the amount and type of any hazardous substance to be found there, and any known, suspected, or likely releases of such substances from such facility.


447. For a discussion of who constitutes an owner or operator for the purposes of CERCLA, see supra notes 430–36 and accompanying text.

448. 42 U.S.C. § 9603(d).

449. Id. § 9603(d)(2).

450. Id. § 9603(d)(1). This authorizes EPA to promulgate rules and regulations specifying the records to be kept by any person who must provide notice of the existence of a facility under § 9603. The reporting requirements include: “the location, title, or condition of a facility; and the identity, characteristics, quantity, origin, or condition (including containerization and previous treatment) of any hazardous substances contained or deposited in a facility.” Id.


452. “Any person who knowingly gives or causes to be given any false information as a part of [a reimbursement from the Superfund] may be held criminally liable.” Id. § 9612(b)(1).
C. Defenses

Congress provided four affirmative defenses in the CERCLA statute that allow a defendant who is otherwise liable for a CERCLA violation to escape liability.\(^{453}\) The defendant must show by a preponderance of the evidence that the release or threat of release of a hazardous substance and the resultant damages were caused solely by: (i) an act of God;\(^{454}\) (ii) an act of war;\(^{455}\) (iii) an act, or a failure to act, by a third party, with whom the defendant has no employment, agency, or contractual relationship;\(^{456}\) provided the defendant exercised due care and took appropriate precautions against foreseeable acts or omissions by the third party; or (iv) any combination of the foregoing defenses.\(^{457}\) CERCLA's limited affirmative defenses have been narrowly construed by courts because of the broad remedial purposes of CERCLA.\(^{458}\)

In addition to those defenses delineated above, courts have held that CERCLA's exemption from liability for "federally permitted releases" provides an affirmative defense.\(^{459}\) Under this formulation, if the defendant is able to demonstrate that the release was federally permitted, the burden shifts to the government to prove inapplicability beyond a reasonable doubt.\(^{460}\) Finally, a defendant may raise an "innocent owner" defense,\(^{461}\) which exempts from liability defendants who have

\(^{453}\) Id. § 9607(b).

\(^{454}\) Id. § 9607(b)(1). Section 9601(1) defines "act of God" as an "unanticipated grave natural disaster or other natural phenomenon of an exceptional, inevitable, and irresistible character, the effects of which could not have been prevented or avoided by the exercise of due care or foresight." Id. § 9601(1); see United States v. W.R. Grace & Co., 280 F. Supp. 2d 1149, 1174 (D. Mont. 2003) (holding "Act of God" defense inapplicable because presence of asbestos in town near abandoned asbestos mine was "not a natural phenomenon of an exceptional, inevitable, and irresistible character"); United States v. M/V Santa Clara I, 887 F. Supp. 825, 843 (D.S.C. 1995) (rejecting "act of God defense" when National Weather Service predicted inclement weather that caused release). An "act of God" defense also requires a clear causal link between the disaster and the release. See United States v. Poly-Carb, Inc., 951 F. Supp. 1518, 1530 (D. Nev. 1996) (rejecting "Act of God" defense for lack of evidence where items spilled in windstorm contained hazardous substance at issue).

\(^{455}\) 42 U.S.C. § 9607(b)(2). The "Act of War" defense has only been invoked once, and unsuccessfully. See United States v. Shell Oil Co., 294 F.3d 1045, 1061–62 (9th Cir. 2002) (finding "act of war" defense inapplicable because the dumping of aviation fuel was not due solely to an "act of war" but was a contractual arrangement with the government over a significant number of years).

\(^{456}\) "Contractual relationship" for the purpose of this defense is defined in 42 U.S.C. § 9601(35). The "third party" defense is available when the act or omission giving rise to liability is unrelated to a contract. See Westwood Pharm. v. Nat'l Fuel Gas Dist., 964 F.2d 85, 89 (2d Cir. 1992) (finding the sales contract between parties did not bar a "third party" defense where the sale bore no relation to the act giving rise to the release of hazardous materials).

\(^{457}\) See 42 U.S.C. § 9607(b)(3)–(4).


\(^{459}\) See United States v. Freter, 31 F.3d 783, 788 (9th Cir. 1994) (concluding that the exception for federally permitted release states an affirmative defense).

\(^{460}\) See id.; see also United States v. W.R. Grace 455 F. Supp. 2d 1133, 1139 (D. Mont. 2006) (holding that this defense may not be raised before trial).

unknowingly acquired contaminated property.\textsuperscript{462} Courts have recognized this exemption as consistent with CERCLA's mens rea standard of "knowledge," as well as with the purposes of CERCLA, because its goal of forcing polluters to pay for the costs associated with \textit{their} pollution is not implicated in the case of an innocent landowner.\textsuperscript{463}

\textbf{D. Penalties}

Penalties for violating CERCLA are specific to each provision. Failure to immediately notify an appropriate agency of a release of a hazardous substance or submission of a notification that includes false or misleading information warrants a fine in accordance with Title 18 of the United States Code, imprisonment for up to three years, or both.\textsuperscript{464} Failure to notify the EPA of the existence of a non-permitted hazardous waste disposal site results in a fine of not more than $10,000, up to one year of imprisonment, or both.\textsuperscript{465} A person convicted of the knowing destruction or falsification of records provision will be fined in accordance with Title 18, imprisoned for up to three years, or both.\textsuperscript{466} Additionally, persons who disclose confidential information entitled to protection in accordance with § 1905 of Title 18\textsuperscript{467} may be subject to a fine of up to $5000, imprisoned for not more than one year, or both.\textsuperscript{468} There are also criminal penalties for submitting false claims in connection with the Superfund; any person who knowingly provides false information as part of a claim may be fined in accordance with provisions of Title 18, imprisoned for up to three years, or both.\textsuperscript{469} A person can

\textsuperscript{462} See United States v. CDMG Realty Co., 96 F.3d 706, 716 (3d Cir. 1996) ("To establish the innocent owner defense the defendant must show that 'the real property on which the facility is located was acquired by the defendant after the disposal or placement of the hazardous substance on, in, or at the facility' and that 'at the time the defendant acquired the facility the defendant did not know and had no reason to know that any hazardous substance which is the subject of the release or threatened release was disposed of on, in, or at the facility.'").

\textsuperscript{463} See CDMG Realty, 96 F.3d at 717 (finding that this exemption does not undermine CERCLA because those "who owned previously contaminated property where waste spread without their aid cannot reasonably be characterized as 'polluters,'" and the exemption does not free actual polluters from liability); see also ABB Indus. Sys. v. Prime Tech., 120 F.3d 351, 359 (2d Cir. 1997) (noting that a person who merely controls property where hazardous waste has passively migrated is not a polluter and is not one upon whom CERCLA aims to impose liability).

\textsuperscript{464} 42 U.S.C. § 9603(b). Imprisonment shall not be more than five years in the case of a second or subsequent conviction. \textit{Id.} Any person found to be "in charge" can be found guilty of failing to report. \textit{See United States v. Goodner Bros. Aircraft Inc.}, 966 F.2d 380, 382-83, 385-87 (8th Cir. 1992) (imposing $7500 fine and fifteen-month prison sentence on guilty aircraft company owner for illegally disposing and failing to notify authorities of release of methylene chloride and phenol).

\textsuperscript{465} 42 U.S.C. § 9603(c).

\textsuperscript{466} \textit{Id.} § 9603(d)(2). Imprisonment shall not be more than five years in the case of a second or subsequent conviction. \textit{Id.}


\textsuperscript{468} 42 U.S.C. § 9604(e)(7)(B) (2012).

\textsuperscript{469} \textit{Id.} § 9612(b)(1). Imprisonment shall not be more than five years in the case of a second or subsequent conviction. \textit{Id.; see Baranowski v. EPA}, 699 F. Supp. 1119, 1120 (E.D. Pa. 1988) (indicting defendants for seven counts based on false claims in connection with the Superfund).
potentially mitigate criminal and civil liability under these provisions by participating in the EPA voluntary disclosure program.\(^{470}\)

Under the Citizen Awards provision of SARA,\(^7\) the EPA may "pay up to $10,000 from the Superfund to any individual who provides information leading to the arrest and conviction of any person for a violation subject to criminal penalty under CERCLA."\(^7\) Criminal violations contained within this provision include the failure to report the release of a hazardous substance under 42 U.S.C. § 9603(a) and the destruction or concealment of records under § 9603(d).\(^7\) Receipt of the award depends, in part, on the severity of the reported violation\(^7\) and the overall value of the claimant's report.\(^7\)

Penalties for criminal violations of CERCLA fall within section 2Q of the Guidelines.\(^4\) The general base offense level for a CERCLA offense is eight.\(^4\) If destruction or concealment of records resulted in a substantial likelihood of death or serious bodily injury, the offense level is increased by nine levels.\(^4\) If the record-keeping offense reflected an effort to conceal a substantive environmental offense, the offense level for the substantive offense is used.\(^4\) In contrast, if the offense involved only a simple recordkeeping or recording violation,\(^4\) the offense level is decreased by two.\(^4\)

\section*{VIII. Resource Conservation and Recovery Act}

Part A of this Section discusses the purposes of the Resource Conservation and Recovery Act ("RCRA").\(^4\) Part B addresses the elements of RCRA offenses. Part C discusses the possible defenses to a charged RCRA violation. Lastly, Part D


\(^{471}\) 40 C.F.R. § 303.10 (2013) (citing 42 U.S.C. § 9609(d)).

\(^{472}\) Id.

\(^{473}\) Id. § 303.12(a)–(b).

\(^{474}\) Id. § 303.30(c).

\(^{475}\) Id. § 303.30(f).

\(^{476}\) U.S.S.G. Manual § 2Q1.2.

\(^{477}\) Id. § 2Q1.2(a).

\(^{478}\) Id. § 2Q1.2(b)(2).

\(^{479}\) Id. § 2Q1.2(b)(5).

\(^{480}\) "Simple recordkeeping or reporting violation" is "a recordkeeping or reporting offense in a situation where the defendant neither knew nor had reason to believe that the recordkeeping offense would significantly increase the likelihood of any substantive environmental harm." Id. § 2Q1.2 n.2.

\(^{481}\) U.S.S.G. Manual § 2Q1.2(b)(6).

sets out the criminal penalties that result from a RCRA violation and reviews enforcement of RCRA.

A. Purpose

RCRA, enacted in 1976,\(^{483}\) establishes a comprehensive scheme for the federal regulation of solid and hazardous wastes\(^{484}\) in order to reduce the generation of such waste so as to protect human health and the environment.\(^{485}\) The statute sets standards governing waste generation, treatment, storage, transportation, and disposal.\(^{486}\) RCRA was amended several times, adding an exemption for mining waste,\(^{487}\) an exemption for waste that was already treated and no longer exhibits a hazardous characteristic,\(^{488}\) regulations for underground storage tanks,\(^{489}\) and prohibitions on the disposal of liquids in landfills.\(^{490}\) A waiver of sovereign immunity by the Federal Government was also added and federal employees were given immunity from civil, though not criminal, liability.\(^{491}\)

B. Elements of a RCRA Offense

1. Violation

RCRA includes requirements for state or regional solid waste plans, federal responsibilities, and research and development plans.\(^{492}\) The statute’s Subtitle III provisions address the obligations of hazardous waste generators and handlers through permit and notification requirements, violation of which may result in criminal charges and sanctions.\(^{493}\)

Designation of material as “hazardous waste” triggers regulatory action under

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\(^{483}\) RCRA was originally enacted as amendments to the Solid Waste Disposal Act (“SWDA”). See generally ZYGMUNT J.B. FLATER ET AL., ENVIRONMENTAL LAW AND POLICY: NATURE, LAW, AND SOCIETY 765 (1998) (discussing historical development of SWDA and RCRA).

\(^{484}\) 42 U.S.C. § 6902(b) (2012); see 40 C.F.R. § 261 (2013) (detailing handling and disposal of wastes).

\(^{485}\) See, e.g., Meghrig v. KFC W., Inc., 516 U.S. 479, 483 (1996) (observing that unlike CERCLA, RCRA authorizes regulation of hazardous waste “so as to minimize the present and future threat to human health and the environment” (citing 42 U.S.C. § 6902(b))).

\(^{486}\) 42 U.S.C. § 6902(b).


\(^{488}\) 42 U.S.C. § 6924(g)(7).

\(^{489}\) Id. § 6991 et. seq. (2012) (regulating storage tanks under 40 C.F.R. § 261).

\(^{490}\) Id. § 6924(c)–(e) (prohibiting the disposal of liquids in landfills as defined in the Hazardous and Solid Waste Amendments (“HSWA”) of 1984).

\(^{491}\) Id. § 6961(a).

\(^{492}\) Id. §§ 6901–6992k.

\(^{493}\) Id. § 6928.
Subtitle III.494 Hazardous waste must be classified as a “solid waste,”495 which is “any garbage, refuse, sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities.”496 “Discarded material” is defined as any material that is “abandoned,” “recycled,” or “inherently waste-like.”497 The delineation between abandoned waste and materials set for reuse within the production process is a common subject of litigation. Courts maintain a plain-meaning interpretation of “discarded,” excluding materials intended for direct reuse from RCRA regulation.498

Solid hazardous wastes are further classified into two categories: “listed” wastes

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The term “hazardous waste” means a solid waste or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may (A) cause, or significantly contribute to an increase in mortality or an increase in serious . . . illness; or (B) pose a substantial . . . hazard to human health or the environment when improperly . . . managed.

495. See United States v. ILCO, Inc., 996 F.2d 1126, 1130 (11th Cir. 1993) (holding before material can be designated and regulated as “hazardous waste” it must first be determined to be “solid waste”); see also Barry Needleman, Hazardous Waste Recycling Under the Resource Conservation and Recovery Act: Problems and Potential Solutions, 24 Env'tl. L. 971, 972 (1994) (arguing that determining whether material is solid waste is far more complicated than determining whether solid waste is hazardous); cf. Cordiano v. Metacon Gun Club Inc., 575 F.3d 199, 211 (2d Cir. 2009) (finding that spent lead ammunition at firing range did not constitute “solid or hazardous waste” under an “immediate and substantial endangerment standard” by looking to evidence of likelihood and severity of the future harm).

496. 42 U.S.C. § 6903(27).


498. See Ass’n of Battery Recyclers v. EPA, 208 F.3d 1047, 1050–56 (D.C. Cir. 2000) (setting aside EPA’s new definition of “discarded” and “recycled” materials as any secondary material not continuously re-circulated into the production process); Am. Mining Cong. v. EPA, 824 F.2d 1177, 1185–86 (D.C. Cir. 1987) [hereinafter AMC I] (holding that, to the extent the 1985 definition regulated industrial process residuals destined for reuse, the definition exceeded Congressional intent to regulate only discarded materials); see also Am. Mining Cong. v. EPA, 907 F.2d 1179, 1186–87 (D.C. Cir. 1990) [hereinafter AMC II] (holding EPA can regulate wastewater treatment sludge from primary metal smelters as hazardous despite the fact that they were frequently re-smelted to obtain additional metals). First, in Association of Battery Recyclers, the court rejected the EPA’s narrow interpretation of AMC I and its progeny. 208 F.3d at 1052. Second, the court upheld the plain-meaning interpretation of “discarded” from AMC I. Id. Third, the court reconciled AMC I and AMC II by showing how AMC II only concerned regulating the speculative accumulation of secondary materials for reuse whereas AMC I specifically excluded materials destined for immediate reuse from being classified as solid waste. Id. at 1055–56. Fourth, the court read AMC II to mean that once a substance qualifies as “solid waste,” any by-product is solid waste, even if it may be reclaimed or reused at some point in the future. Id. at 1056; see also ILCO, 996 F.2d at 1132 (construing “discarded” to mean discarded once, not necessarily finally and forever discarded; although such waste may be recycled at some point, it remains solid waste until then). Moreover, the EPA can regulate against “sham recycling” by excluding secondary materials from regulatory exemption if they contain extra hazardous materials that were added to the secondary material in order to avoid proper waste disposal under RCRA. Am. Petroleum Inst. v. EPA, 216 F.3d 50, 58–59 (D.C. Cir. 2000) (upholding EPA’s classifying petrochemical-recovered oil as waste if it did not meet conditions designed to disqualify oil that contained non-refinable hazardous material).
and "characteristic" wastes.499 Enumerated "listed" wastes number in the several hundreds.500 "Characteristic" hazardous waste exhibits certain properties501 such as ignitability, corrosivity, reactivity, and toxicity.502 Although specific applications of these definitions have been challenged successfully on narrow factual grounds, the EPA's hazardous waste definition power is broad.503

2. Intent

RCRA contains two separate criminal provisions. The first imposes liability on individuals who "knowingly violate" RCRA.504 The second imposes criminal penalties for "knowing endangerment."505

a. Knowing Violation

RCRA sets criminal penalties for persons506 who knowingly commit any of the following acts: (a) transport hazardous waste to a facility that does not have a permit for hazardous waste; (b) treat, store, or dispose of hazardous waste without or in violation of a permit;507 (c) make fraudulent statements, omit information, or destroy or alter compliance documentation;508 (d) transport hazardous waste without documentation, export hazardous waste, or handle used oil.509 These provisions constitute separate offenses, which means individuals may be punished for multiple aspects because of the separate dangers each one poses.510 The knowledge requirement511 gives rise to much of the criminal litigation under RCRA. Although RCRA provisions assert that only "knowing" violations can be punished criminally, in effect this limitation affords only nominal protection. As with certain "public welfare" laws, courts may construe the knowledge or intent

499. 40 C.F.R. § 261.3(a).
500. See id. § 302.4 (listing hazardous wastes).
501. Id. §§ 261.3(a)(2)(i), 261.20.
502. Id. § 261; id. § 261.21 (defining "ignitability"); id. § 261.22 (defining "corrosivity"); id. § 261.23 (defining "reactivity"); id. § 261.24 (defining "toxicity").
503. See Waldschmidt v. Amoco Oil Co., 924 F. Supp. 88, 90 (C.D. Ill. 1996) (finding petroleum that leaked into soil or groundwater to be useless, abandoned, and fitting within the definition of solid waste); Craig Lyle Ltd. v. Land O'Lakes, Inc., 877 F. Supp. 476, 482 (D. Minn. 1995) (holding petroleum spilled or leaked from underground storage tank used in commercial operations is "solid waste" within meaning of RCRA). But see Williams Pipe Line Co. v. Bayer Corp., 964 F. Supp. 1300, 1328–29 (S.D. Iowa 1997) (excluding petroleum leaks and spills from RCRA's definition of solid waste where pipeline's facility was subject to NPDES permit under CWA).
504. 42 U.S.C. § 6928(d).
505. Id. § 6928(e).
506. Corporations are included in the definition of "persons." Id. § 6903(15).
507. Id. § 6928(d)(1)–(2).
508. Id. § 6928(d)(3).
509. Id. § 6928(d)(4).
510. United States v. Wasserson, 418 F.3d 225, 233 (3d Cir. 2005) ("Congress intended to punish each act separately because of the separate dangers each pose.").
511. 42 U.S.C. § 6928(d), (e).
requirement broadly in order to advance the public welfare goal. Thus, an individual who does not know what material he or she is handling runs the risk that the material will be revealed as hazardous waste, which can trigger liability based on ignorance.

The two most common RCRA violations require different levels of knowledge. First, for cases involving illegal transportation of hazardous waste to a facility lacking a permit, the government must prove that: (i) the defendant knew the material was waste; (ii) the defendant knew the material had a generally hazardous character; and (iii) the facility lacked a permit. The government, meanwhile, need not prove that the defendant knew what the waste was, that the material was listed as “hazardous” under RCRA, that the facility was required to have a permit, or that his actions were unlawful.

512. “Where . . . dangerous or deleterious devices or products or obnoxious waste materials are involved, the probability of regulation is so great that anyone who is aware that he is in possession of them or dealing with them must be presumed to be aware of the regulation.” United States v. Hoflin, 880 F.2d 1033, 1038 (9th Cir. 1989) (quoting United States v. Int’l Minerals & Chem. Corp., 402 U.S. 558, 565 (1971)); see also Note, Fiduciary Duties: Expanding the Use of the RCO Doctrine to Statutes with a Scienter Requirement, 9 U. MIAMI BUS. L. REV. 235, 243-47 (2001) (arguing that since the “knowing” requirement is at least arguably ambiguous under RCRA, the circuits have split as to whether there has to be actual knowledge or whether knowledge can be inferred from circumstances).

513. Courts have interpreted the CWA, RCRA, and other statutes as being within the realm of the public welfare doctrine. See, e.g., United States v. Kelley Technical Coatings, Inc., 157 F.3d 432, 438-39 (6th Cir. 1998) (analyzing the doctrine’s origins and status among the circuits).


516. E.g., United States v. Fiorillo, 186 F.3d 1136, 1156 (9th Cir. 1999) (requiring government to prove that defendants knew hazardous material they were transporting was waste).

517. See United States v. Goldsmith, 978 F.2d 643, 645 (11th Cir. 1992) (requiring government to prove only that defendant knew material was hazardous, not that defendant knew the material was an identified hazardous material under RCRA).

518. See United States v. Overholt, 307 F.3d 1231, 1250-51 (10th Cir. 2002) (assuming but not deciding that the government must show that the defendant knew the facility did not have a hazardous waste permit in accordance with other circuit courts); Fiorillo, 186 F.3d at 1156 (requiring government to prove that defendant knew that the facility where the waste was transported to lacked a permit); United States v. Kelly, 167 F.3d 1176, 1180 (7th Cir. 1999) (finding government had to prove beyond reasonable doubt defendants knew whether facility lacked permit).

519. “[T]he government need only prove that a defendant had knowledge of the general hazardous character of the chemical’ and knew ‘that the chemicals have the potential to be harmful to others or to the environment.’” United States v. Hansen, 262 F.3d 1217, 1243 (11th Cir. 2001) (quoting Goldsmith, 978 F.2d at 645-46).

520. See Goldsmith, 978 F.2d at 645 (stating defendant need not know that EPA had defined waste as “hazardous” to be convicted).

521. E.g., United States v. Wagner, 29 F.3d 264, 267 (7th Cir. 1994) (stating it would not be a defense for a defendant to claim ignorance of the permit requirement).

522. E.g., Fiorillo, 186 F.3d at 1156 (upholding jury instructions not requiring government to prove defendants knew defendants’ actions were unlawful under RCRA).
Second, in cases involving the illegal storage, treatment, or disposal of hazardous waste without a permit, the government must prove the defendant knew the material was “waste” and knew of the material’s general hazardous character. Most circuits that have addressed this provision have held that the government is not required to prove the defendant had knowledge of the lack of a permit, or knowledge that a permit was required. Whether the defendant must prove he had knowledge of the identity of the waste remains an open question.

b. Knowing Endangerment

Individuals or corporations engage in knowing endangerment when: (i) they violate RCRA requirements concerning the transport, treatment, storage, disposal, or export of hazardous wastes; and (ii) they knowingly place someone in imminent danger.

524. See United States v. Evertson, 320 F. App’x 509, 511 (9th Cir 2009) (approving jury instructions requiring defendant to know material stored was waste); United States v. Kelley Technical Coatings, Inc., 157 F.3d 432, 436 (6th Cir. 1998) (requiring government to prove that defendant knew the material was waste); United States v. Sellers, 926 F.2d 410, 416 (5th Cir. 1991) (implicitly requiring proof of knowledge that material was waste by further requirement that government prove defendant knew the nature of the waste).

525. See Evertson, 320 F. App’x. at 511 (approving jury instructions requiring defendant to know materials were hazardous); Kelley Technical Coatings, 157 F.3d at 436 (requiring government to prove only knowledge of the material’s potential for harm to others or to the environment); Goldsmith, 978 F.2d at 645 (requiring government to prove only defendant’s knowledge of material’s “general hazardous character”).

526. See Kelley Technical Coatings, 157 F.3d at 436 (rejecting defendant’s argument that knowledge of existing regulations was required); United States v. Laughlin, 10 F.3d 961, 965 (2d Cir. 1993) (rejecting requirement that government prove defendant knew the materials were listed or identified under RCRA since it is only required that “a defendant have a general awareness that he is performing acts proscribed by the statute”); United States v. Self, 2 F.3d 1071, 1091 (10th Cir. 1993) (denying that RCRA offense requires knowledge of the regulatory status of materials); Goldsmith, 978 F.2d at 646 (approving jury instruction requiring defendant to know only generally hazardous character and not that EPA had defined as “hazardous waste”).

527. See, e.g., Laughlin, 10 F.3d at 966 (holding proof that defendant was aware of lack of permit was not required); United States v. Hoflin, 880 F.2d 1033, 1038–39 (9th Cir. 1989) (holding “knowledge of the absence of a permit is not an element of the offense” under § 6928(d)(2)). But see United States v. Johnson & Towers, Inc., 741 F.2d 662, 668 (3d Cir. 1984) (arguing defendant must have been aware of the lack of a permit in order to be convicted because, as a matter of statutory construction, “knowingly” modifies all elements of the statutory offense).

528. See Kelley Technical Coatings, 157 F.3d at 436 (rejecting defendant’s argument that knowledge of permit requirement was necessary for conviction); United States v. Wagner, 29 F.3d 264, 265 (7th Cir. 1994) (holding RCRA does not require proof that defendants had knowledge of permit requirement); United States v. Dean, 969 F.2d 187, 191 (6th Cir. 1992) (holding “[RCRA] does not require that the person charged have known that a permit was required” under § 6928(d)(2)). But see Johnson & Towers, 741 F.2d at 668 (holding knowledge of the permit requirement is needed for conviction).

529. Compare Sellers, 926 F.2d at 416 (approving jury instruction requiring proof that defendant knew what waste was), with Goldsmith, 978 F.2d at 646 (refusing defendant’s request to hold charge insufficient where there was no evidence that the defendant knew which substance was in which drum, but knew of general hazardous nature of the substances).
danger of death or serious bodily injury. The defendant must be "aware of the nature of his conduct" or "believe that [the offensive] conduct is substantially certain to cause danger of death or serious bodily injury." Circumstantial evidence may be used to prove that the defendant was actually aware or believed his conduct placed another person in imminent danger of serious bodily injury. In interpreting the statutes, courts have held that "[t]he government need only prove that a defendant had knowledge of the general hazardous character of the chemical [and knew] that the chemicals have the potential to be harmful to others or to the environment."

C. Defenses

In general, defenses based on the theory of mistake of fact have been successful. For example, courts have recognized a good-faith belief that waste was not "hazardous" as a defense to a charge of illegal transportation. In addition, a good faith belief that the hazardous waste was being recycled has been a successful defense to a charge of unlawful transportation of hazardous waste. In defining


532. Id. § 6928(f)(1)(C). "Serious bodily injury" is defined as: "(a) bodily injury which involves a substantial risk of death; (b) unconsciousness; (c) extreme physical pain; (d) protracted and obvious disfigurement; or (e) protracted loss or impairment of the function of a bodily member, organ, or mental faculty." Id. § 6928(f)(6).

533. Id. § 6928(f)(2). Circumstantial evidence, including "evidence that the defendant took affirmative steps to shield himself from relevant information," may be used in proving the defendant's actual awareness. Id.; see United States v. Self, 2 F.3d 1071, 1088 (10th Cir. 1993) ("While knowledge of prior illegal activity is not conclusive as to whether a defendant possessed the requisite knowledge of later illegal activity, it most certainly provides circumstantial evidence of the defendant’s later knowledge from which the jury may draw the necessary inference.").

534. See, e.g., United States v. Hansen, 262 F.3d 1217, 1243 (11th Cir. 2001) (quoting United States v. Goldsmith, 978 F.2d 643, 645–46 (11th Cir. 1992)); Vidrine v. United States, 846 F. Supp. 2d 550, 561 (W.D. La. 2011) (quoting United States v. Bayank, 934 F.2d 599, 611-613 (5th Cir. 1991) ("A mistake of fact is a defense to the knowledge aspect of this crime."). In Hansen, based upon extensive documentary and oral evidence demonstrating culpable mental states, the court upheld three corporate officers' convictions for knowing endangerment because they "knew that the plant's violations ... were inevitable, that the plant was incapable of complying with environmental standards, and that the employees were endangered while working within this environment without consenting to the risk." Id. at 1246.

535. E.g., United States v. Int'l Mineral & Chem. Corp., 402 U.S. 558, 563–64 (1971) ("A person thinking in good faith that he was shipping distilled water when in fact he was shipping some dangerous acid would not be covered."); United States v. Kelly, 167 F.3d 1176, 1180 (11th Cir. 1999) (recognizing the mistake of fact defense while upholding jury's rejection of the defense in the present case).

536. See United States v. Hayes Int'l Corp., 786 F.2d 1499, 1506 (11th Cir. 1986) (recognizing the mistake of fact defense while upholding jury's rejection of the defense in that case). Additionally, a "good faith belief that a permit allows a particular manner of treatment, storage or disposal of hazardous waste... is a defense to a
elements of the violations, the EPA's administrative definition of certain wastes has been held "arbitrary and capricious."^537

Unsuccessful defenses to RCRA violations include: ignorance of the regulations,^538 claims of the government's failure to report test results performed on soil samples taken at a corporate defendant's facility,^539 compliance with a state-court-ordered closure plan and timely filings with the EPA,^540 inability to satisfy the financial responsibility requirements of the RCRA,^541 inability to stop operations or allocate necessary funds for RCRA compliance because of bankruptcy proceedings,^542 and assertions of non-responsibility for the creation of the waste.^543

All defenses that are applicable generally to federal criminal offenses also apply to the knowing endangerment provisions,^544 and any affirmative defense may be established by a preponderance of the evidence. ^545 Yet, because some courts consider RCRA a "public welfare statute,"^546 they are likely to reject defendants'
arguments that the ambiguity of the knowledge requirement or other aspects of the law require a more lenient interpretation.\textsuperscript{547}

\section*{D. Penalties}

The extensive reporting, testing, and permit requirements imposed on the generation, transportation, and disposal of hazardous wastes are enforced through broad criminal penalties.\textsuperscript{548} For knowingly transporting hazardous waste to an improper facility or knowingly treating, storing, or disposing of hazardous waste without a permit or in violation of a permit, 42 U.S.C. § 6928(d) imposes penalties of up to five years in prison, fines of up to $50,000 for each day of violation, or both.\textsuperscript{549}

More severe criminal penalties for RCRA offenses result if violators are concurrently convicted of a knowing violation and knowing endangerment.\textsuperscript{550} In these cases, individuals may be fined up to $250,000, imprisoned for up to fifteen years, or both. Organizations may face fines of up to $1,000,000.\textsuperscript{551}

Measured by the criminal penalties assessed, the EPA's policy of pursuing criminal convictions under RCRA has seen varying degrees of success.\textsuperscript{552} The EPA has, however, become more successful in its pursuit of corporate officers under the responsible corporate officer doctrine.\textsuperscript{553} RCRA's minimal knowledge requirements impose near-strict liability on corporate officers.\textsuperscript{554} Thus, it is

\textsuperscript{547} For example, one district court held that:

\begin{quote}
[U]nder the reasoning of International Minerals, it was within Congress' power in enacting section 6928(d)(2)(A) to not require as elements of the offense either knowledge that the absence of a permit violates the law or knowledge that a permit had not been acquired. This court's construction of the statute therefore presents no due process concerns and is also consistent with the principle that public welfare statutes are not to be interpreted narrowly but rather should be interpreted to accomplish the regulatory purpose.
\end{quote}

United States v. Laughlin, 768 F. Supp. 957, 965 (N.D.N.Y. 1991). In International Minerals, the Supreme Court held that where dangerous waste materials are involved, "probability of regulation is so great that anyone who is aware that he is in possession of them or dealing with them must be presumed to be aware of the regulation." 402 U.S. 558, 565 (1971).

\textsuperscript{548} 42 U.S.C. § 6928(d) (2012). For a second conviction, the maximum punishment may be doubled. \textit{Id.}

\textsuperscript{549} \textit{Id.} Criminal penalties (fines up to $50,000 per day and up to two years of imprisonment, or both) may be imposed for the knowing omission of material information, the knowing destruction, alteration, concealment, or failure to file any document necessary for compliance, the knowing transportation of hazardous wastes and certain types of oil without proper manifests, and the knowing exportation of hazardous wastes without the consent of the receiving country or in violation of an existing international agreement. \textit{Id.} § 6928(d)(3)-(7); see also United States v. Fiorillo, 186 F.3d 1136, 1147 (9th Cir. 1999) (delineating criminal penalties).

\textsuperscript{550} 42 U.S.C. § 6928(e).

\textsuperscript{551} \textit{Id.}


\textsuperscript{553} See generally Okamoto, supra note 35. For a discussion and general description of the responsible corporate officer ("RCO") doctrine, see supra notes 43-52 and accompanying text.

\textsuperscript{554} See Okamoto, supra note 35, at 438 (arguing that, even though the knowledge requirement of RCRA prevents the application of the responsible corporate officer doctrine as a strict liability theory of vicarious
common for corporate officers to face criminal sanctions under RCRA,\textsuperscript{555} although the severity of penalties varies.\textsuperscript{556}

Penalties for criminal violations of RCRA fall within the criteria established in section 2Q of the Guidelines.\textsuperscript{557} Unlawfully transporting hazardous materials in commerce or knowingly mishandling hazardous or toxic substances under § 6928(d) has a base offense level of eight.\textsuperscript{558} If the offense involved transportation, treatment, storage, or disposal without a permit or in violation of a permit, the base offense level is increased four levels.\textsuperscript{559} If the offense resulted in a substantial likelihood of death or serious bodily injury, the level is increased by nine.\textsuperscript{560}

Knowing endangerment resulting from mishandling hazardous or toxic substances, pesticides, or other pollutants under § 6928(e) has a base offense level of twenty-four.\textsuperscript{561} If death or serious bodily injury resulted, an upward departure may be warranted.\textsuperscript{562}

\textbf{IX. Toxic Substances Control Act}

Part A of this Section discusses the purposes of the Toxic Substances Control Act ("TSCA").\textsuperscript{563} Part B addresses the elements of a TSCA offense. Part C

\textsuperscript{555} See Enforcement: Businessman Hit with 17-Year Sentence, $6 Million Penalty for Cyanide Tank Incident, Env't Rep. (BNA) No. 31, at 865 (May 2, 2000) (reporting that an owner of a fertilizer company in Idaho was convicted of knowingly endangering employee by ordering him to clean out storage tank contaminated with cyanide); Enforcement: President of Consulting Firm Sentenced to Prison for Waste Water Injection Scheme, Env't Rep. (BNA) No. 31, at 698 (Apr. 14, 2000) (reporting additional RCRA conviction and seven-year sentence of a trucking company owner where the trucking company had transported the waste water). 556. The Eleventh Circuit upheld sentences of: 108 months and $22,050, forty-six months and $21,700, and seventy-eight months and $1,000 for three corporate officers responsible for numerous counts under various statutes including eleven counts in violation of RCRA. United States v. Hansen, 262 F.3d 1217, 1232 (11th Cir. 2001). The Sixth Circuit upheld sentencing of an industrial paint manufacturing company to $225,000 in fines and a sentence for the responsible vice president of twenty-one months imprisonment and a $5,000 fine for storing between six hundred and one thousand drums of hazardous waste for more than ninety days without a permit. See United States v. Kelley Technical Coatings, Inc., 157 F.3d 432, 435 (6th Cir. 1998).


558. Id. § 2Q1.2(a).

559. Id. § 2Q1.2(b)(4).

560. Id. § 2Q1.2(b)(2).

561. Id. § 2Q1.1(a).


563. 15 U.S.C. §§ 2601–2629 (2012). There is proposed legislation (the Safe Chemicals Act of 2013) that would amend 15 U.S.C. § 2601 by: (i) allowing the EPA to require testing of any chemical substance; (ii) forcing the EPA to specify minimum amounts of data that manufacturers and processors must maintain in order to facilitate testing by the EPA; (iii) striking "willfully" language from the intent portion of the penalties section.
considers defenses. Lastly, Part D sets out the criminal penalties that result from a TSCA violation.

A. Purpose

Congress enacted TSCA in 1976 to regulate chemical substances and mixtures that present an "unreasonable risk of injury to health or the environment" and to take action against imminent chemical hazards.\(^{564}\) TSCA mandates that private manufacturers of chemical substances provide information regarding the effects of those substances on public health and the environment.\(^{565}\) Congress did not intend, however, for enforcement of TSCA to "impede unduly or create unnecessary economic barriers to technological innovation."\(^{566}\)

B. Elements of a TSCA Offense

1. Violation

Under TSCA, the EPA is authorized to regulate the testing, pre-manufacturing approval, manufacturing, distribution in commerce, use, and disposal of chemical substances.\(^{567}\) TSCA establishes criminal penalties that may be applied in addition to or in lieu of civil penalties for violations of prohibited acts and any regulations regarding lead-based paints and lead contamination.\(^{568}\)

a. Testing Requirements

The TSCA outlines three situations where the EPA may require testing. First, the EPA can require testing of any chemical or substance it finds "may present an unreasonable risk of injury to health or the environment."\(^{569}\) Second, TSCA calls for testing of new chemicals when there is insufficient data or experience to predict

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\(^{564}\) 15 U.S.C. § 2601(b)(2) (2012); \(\text{see Cent. & Sw. Servs., Inc. v. EPA, 220 F.3d 683, 685 (5th Cir. 2000)}\) ("Congress enacted TSCA 'to set in place a comprehensive national scheme to protect humans and the environment from the dangers of toxic substances.'" (quoting Rollins Envtl. Servs., Inc. v. Parish of St. James, 775 F.2d 627, 632 (5th Cir. 1985))).


\(^{566}\) Id. § 2601(b)(3).

\(^{567}\) Id. §§ 2603–2613 (2012).

\(^{568}\) \(\text{see id. § 2615(b) (2012). Section 2614 defines prohibited acts, while § 2689, which Congress added to the TSCA as the Residential Lead-Based Paint Hazard Reduction Act of 1992, covers regulations regarding lead-based paints and lead contamination.}\)

\(^{569}\) Id. § 2603(a)(1)(A)(i). Since 1996, voluntary consensus standards for testing have been specifically authorized by law. \(\text{See id. § 272 (allowing all federal regulatory agencies to use voluntary consensus standards where feasible); see also Ausimont U.S.A. Inc. v. EPA, 838 F.2d 93, 98 (3d Cir. 1988) (holding that a rule requiring chemical manufacturers to conduct testing of fluoroalkenes to determine their potential for producing adverse health effects fell within EPA's discretion under TSCA); cf. B. John Ovink, \text{Sustainable Development and the Use of Covenants in Environmental Legislation, 4 U. MIAMI Y.B. INT'L L. 207, 219–20 (1995)}\) (arguing negotiating testing processes furthers environmental goals and sustainable development).
their toxic effects. Third, the EPA may require testing of a substance if it “is or will be produced in substantial quantities” and there is a risk of either substantial human exposure or introduction into the environment. To ensure testing requirements do not “impede unduly, or create unnecessary economic barriers to technological innovation,” the EPA has established a voluntary, and therefore somewhat more flexible, testing program for high production volume chemicals.

b. Notice and Premanufacturing Approval

Manufacturers must receive prior approval from the EPA before manufacturing a chemical by demonstrating that the chemical does not present an unreasonable risk to the environment or public health. Prior to initiating a significant new use of an existing substance, the manufacturer must give the EPA ninety days’ notice. If § 2604 previously required testing of the substance in question, the manufacturer must include these test results in the notice. If the EPA does not require testing data of a substance, but notice of manufacturing or processing is still required under § 2604(a)(1), then the manufacturer must submit data to show why the manufacture, distribution, use, or disposal will not present an unreasonable risk of injury to the environment or human health. If the EPA Administrator finds that the substance presents an unreasonable risk or that existing data is

571. Id. § 2603(a)(1)(B)(i). EPA may also impose record-keeping and reporting requirements on manufacturers and processors of such chemicals. Id. § 2607.
572. High Production Volume Chemical Initiative, 64 Fed. Reg. 24151-01 (May 5, 1999). In 1998, former Vice President Al Gore and EPA Administrator Carol Browner announced the HPV Chemical Challenge Program, as part of the Chemical Right-to-Know Initiative. EPA, 745-F-09-002g, CHEMICAL RIGHT TO KNOW: HIGH PRODUCTION VOLUME CHEMICALS FREQUENTLY ASKED QUESTIONS 1 (1999), available at http://www.epa.gov/hpvpubs/general/hpvqa.pdf. HPV chemicals are those manufactured in or imported into the United States in amounts equal to or greater than one million pounds per year. Id. Data is collected for each HPV chemical and further testing is only required if existing data is not adequate. Id. With the cooperation of chemical companies and environmental groups, the basic toxicity of approximately 2800 chemicals is made available to the public. 64 Fed. Reg. 24151-01 (May 5, 1999). For a general overview of the HPV Chemical Challenge Program, see High Production Volume (HPV) Challenge Program, EPA, http://www.epa.gov/chemrtk (last updated Apr. 22, 2013).
575. Id. § 2604(b)(1). However, if the EPA determines a commercial activity will present an unreasonable risk of injury before a § 2605 rule can be promulgated, the EPA may either issue a proposed § 6 rule that will be effective immediately to restrict commercial activity or seek an injunction to prohibit such activity. Id. § 2604(f). A § 2605 rule is applied “if the [EPA] Administrator finds that there is a reasonable basis to conclude that the manufacture, processing, distribution in commerce, use, or disposal of a chemical substance or mixture . . . presents or will present an unreasonable risk of injury to health or the environment.” Id. § 2605(a) (2012).
576. Id. § 2604(b)(2).
insufficient to evaluate the risks posed by this substance, the EPA may issue an order restricting or prohibiting the use or manufacture of the substance.  

**c. Restrictions on Manufacturing, Processing, Distributing, Using, and Disposing**

Pursuant to § 2605, when the EPA finds a “reasonable basis to conclude” that a certain chemical substance “presents or will present an unreasonable risk of injury to health or the environment,” it may restrict the manufacture, processing, distribution in commerce, use, or disposal of such substance. These controls should restrict only “to the extent necessary to protect adequately against such risk using the least burdensome requirements.” Possible restrictions range from outright prohibitions on the production, processing, or distribution of certain chemicals to the regulation of toxic substance labeling.

**d. Prohibitions on Commercial Use**

TSCA prohibits the commercial use of substances that the user knew or had reason to know were manufactured, processed, or distributed in violation of any provision of TSCA, including orders issued regarding imminent hazards. In addition, the statute prohibits noncompliance with the reporting and inspection requirements set forth in TSCA.

2. **Intent**

Any knowing or willful act that violates TSCA is a criminal offense. The mens rea requirement for a TSCA offense also can be satisfied where a defendant demonstrates deliberate avoidance of knowledge about the commission of the

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577. Id. § 2604(e)(1).
578. Id. § 2605(a); see, e.g., Cent. & Sw. Servs., Inc. v. EPA, 220 F.3d 683, 685 (5th Cir. 2000) (outlining EPA’s ability to regulate PCB’s pursuant to § 2605).
579. 15 U.S.C. § 2605(a). The TSCA does not dictate “zero-risk” regulation of toxic substances; the EPA must take into account the economic burdens of its regulation under TSCA. Corrosion Proof Fittings v. EPA, 947 F.2d 1201, 1215–16 (5th Cir. 1991) (striking down an EPA decision to prohibit “future manufacture, importation, processing, and distribution of asbestos in almost all products” because it did not adequately fulfill its statutory burden to impose the “least burdensome” restriction).
580. 15 U.S.C. § 2605(a)–(b). Potential controls include: prohibiting or regulating production, distribution, or use; requiring substance to be marked with, or accompanied by warnings and instructions, requiring maintenance of manufacturer records to assure compliance, requiring notice of manufacturer risk of injury, or requiring quality control. Id.
581. Id. § 2643(b)–(i) (2012).
582. Id. § 2614(2) (2012).
583. Id. § 2614(3)–(4).
584. Id. § 2615(b) (stating that “any person who knowingly or willfully violates” the TSCA is subject to criminal penalties).
criminal act. To secure a deliberate avoidance jury instruction, the government must demonstrate beyond a reasonable doubt that the defendant "deliberately avoided learning the truth" about a substance so as to build a defense in the event of an arrest.

C. Defenses

The statute's single explicit affirmative defense waives compliance when the act in question is in the interest of national defense.

D. Penalties

In addition to administrative and civil penalties, TSCA provides for criminal sanctions against any person who knowingly or willfully violates any provision in §2614 or §2689. Under TSCA, violators are subject to a fine of not more than $25,000 per day of violation, imprisonment for up to one year, or both.

Penalties for criminal violations of TSCA fall within the criteria established in §2Q of the Guidelines. The general base offense level for such TSCA offenses

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585. See United States v. Catucci, 55 F.3d 15, 17–18 (1st Cir. 1995) (finding sufficient evidence to convict on TSCA violation where defendant allowed others to take PCB-laden transformers, knowing they would dump PCBs unlawfully, and then failing to provide timely notice to authorities).

586. United States v. Heredia, 483 F.3d 913, 917 (9th Cir. 2007) (explaining that a deliberate ignorance, or "Jewell" instruction is appropriate if the evidence supports an inference that the defendant deliberately avoided obtaining knowledge that renders his conduct illegal).


589. See, e.g., TSCA New Chemical Criminal Case Closed; Missouri Company Must Pay $350,000 Fine, Chem. Reg. Daily (BNA), Jan. 23, 1997, at D2 (reporting defendants were assessed both criminal and civil penalties). On its face, 15 U.S.C. § 2615 only permits the United States, through the EPA, to impose penalties and fines on TSCA violators; TSCA may not provide a private right of action. E.g., Sipes ex rel. Slaughter v. Russell, 89 F. Supp. 2d 1199, 1205 (D. Kan. 2000) (holding TSCA does not allow private citizens to enforce its penalty provisions as a method for recovering compensatory damages).


592. U.S.S.G. Manual § 2Q1.2 (2012); see supra Sections II.D and II.E of this Article (discussing sentencing for environmental offenses).
is eight.\textsuperscript{593} If the offense resulted in a "substantial likelihood of death or serious bodily injury," the offense level is increased by nine levels.\textsuperscript{594} If the offense resulted in an "ongoing, continuous, or repetitive discharge, release, or emission of a hazardous or toxic substance or pesticide into the environment," the base offense level is increased by six levels.\textsuperscript{595} If the offense otherwise involved a singular or isolated "discharge, release, or emission of a hazardous or toxic substance or pesticide," the base offense level is increased by four levels.\textsuperscript{596}

X. THE FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT

Part A of this Section discusses the purposes of the Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA").\textsuperscript{597} Part B addresses the scope of FIFRA, Part C considers defenses, and Part D sets out the criminal penalties that result from a FIFRA violation.

A. Purpose

Congress originally enacted FIFRA in 1947, but significantly amended it in 1972\textsuperscript{598} and 1988.\textsuperscript{599} The Food Quality Protection Act of 1996 also altered portions of FIFRA.\textsuperscript{600} The original purpose of FIFRA was to require accurate and informative product labeling.\textsuperscript{601} The 1972 amendment broadened FIFRA into a system of pesticide regulation to protect applicators, consumers, and the environ-

\textsuperscript{593} U.S.S.G. \textit{Manual} § 2Q1.2(a).
\textsuperscript{594} Id. § 2Q1.2(b)(2).
\textsuperscript{595} Id. § 2Q1.2(b)(1)(A).
\textsuperscript{596} Id. § 2Q1.2(b)(1)(B).


\textsuperscript{599} Act of October 25, 1988, Pub. L. No. 100-532, 102 Stat. 2654 (codified as amended in scattered sections of Title 7 of the United States Code). Perhaps most significantly, the 1988 amendments required manufacturers to conduct greater preliminary testing on the environmental effects of using the product. See Lolley, supra note 598, at 983 (discussing FIFRA amendments).


\textsuperscript{601} \textit{See H.R. Rep. No. 80-313, at 3 (1947), reprinted in 1947 U.S.C.C.A.N. 1200} (discussing FIFRA as it was originally enacted). Under FIFRA, pesticides must be registered with the EPA before distribution, sale, or use. 7 U.S.C. § 136a(a) (2012). The EPA is then required to register a pesticide if it determines that the pesticide’s labeling and other materials comply with FIFRA’s requirements; and that the pesticide, when used properly, will perform its intended purpose without unreasonable adverse effects on the environment. Id. § 136a(c)(5).
ment. 602 FIFRA operates as a “risk balancing” statute, requiring EPA to evaluate the costs versus the benefits of a product before permitting its registration. 603 Importantly, FIFRA does not exempt the EPA from complying with requirements of the Federal Food, Drug, and Cosmetic Act (“FFDCA”) 604 or the Endangered Species Act (“ESA”) 605 when registering pesticides.

B. Elements of a FIFRA Offense

1. Violation

To establish a criminal violation under FIFRA, the government must show impermissible use or advisement of a toxic substance. 606 Distribution or sale of any unregistered pesticide constitutes a FIFRA violation. 607 FIFRA also mandates criminal sanctions for use of any registered pesticide in a manner inconsistent with its labeling 608 or for the use or disclosure of registered pesticide formulas with an


603. S. Rep. No. 92-838 (1972), reprinted in 1972 U.S.C.C.A.N. 3996, 4032 (“The question [the Administrator] must decide is ‘Is it better for man and the environment to register this pesticide, or is it better that this pesticide be banned?’”); see ENVIRONMENTAL REGULATION: LAW, SCIENCE AND POLICY 434 (Robert V. Percival et al. eds., 2001) (explaining EPA must balance benefits and costs of a product before allowing it to be registered under FIFRA).

604. See Les v. Reilly, 968 F.2d 985, 990 (9th Cir. 1992) (holding that the EPA must adhere to the Delaney Clause of the FFDCA, which prohibits the usage of food additives that induce cancer, in regulating pesticide residues in foods even if the chemicals posed only a de minimis risk of cancer).

605. See Defenders of Wildlife v. EPA, 882 F.2d 1294, 1299 (8th Cir. 1989) (stating that a pesticide registration that does not follow the mandates of the ESA would likely adversely affect the environment).

606. 7 U.S.C. § 136(b)(1). With respect to civil penalties, however, FIFRA is a strict liability statute. See id. (assessing civil penalty for any “registrant, commercial applicator, wholesaler, dealer, retailer, or other distributor who violates any provision of this subchapter”).

607. S. Rep. No. 105-216, at 60 (1998). Pesticides are substances used to repel, destroy, prevent, or mitigate any pest, as well as substances used as plant defoliants, regulators, or desiccants. 7 U.S.C. § 136(u). For example, “pesticide” is defined so broadly as to include bear repellants. See Cindy Skrzyczki, Warning: Spray Will Not Work Against EPA, WASH. POST, Oct. 16, 1998, at F1 (explaining EPA categorizes such repellants as pesticides because bears are “pests”).

608. 7 U.S.C. § 136(a)(2)(G); see United States v. Tropical Fruit, 96 F. Supp. 2d 71, 76-79 (D.P.R. 2000) (convicting defendant of applying various pesticides to unauthorized crops in manner which caused off-site drift, a use inconsistent with pesticides’ labeling); United States v. Saul, 955 F. Supp. 1073, 1075 (E.D. Ark. 1996) (holding that a defendant criminally violates FIFRA by applying pesticide in manner not allowed under the pesticide’s labeling; the defendant applied pesticide to bait in order to kill birds); Chempaco Corp., Docket No. 5-FIFRA-96-017, (EPA Oct. 15, 1997) (holding defendant liable for ninety-nine violations of FIFRA). Civil penalties may also be imposed for this type of violation. 7 U.S.C. § 136. But see United States v. Wabash Valley Serv. Co., 426 F. Supp. 2d 835, 853 (S.D. Ill. 2006) (dismissing criminal charges and holding § 136(a)(2)(G) unconstitutional as applied for its incorporation of AAtrex and Bicep pesticide label provisions relating to product application and drift, because such provisions were too vague to apprise the applicator of what conduct would subject to the applicator to sanction, vacated, No. 05 CR 40029 JPG, 2006 WL 3526704 (S.D. Ill. June 8, 2006).
intent to defraud.

Although most FIFRA claims are civil, the statute authorizes criminal penalties for commercial and private applicators, registrants, applicants for registration, and producers who knowingly violate any provision of FIFRA. Individuals who advise others regarding the selection and application of pesticides may also be criminally liable for FIFRA violations. An advisor can be held criminally liable for an inconsistent use of a pesticide which he has advised another to use, depending on "the extent of the adviser's personal... knowledge of the facts surrounding that application." A private applicator may also be held criminally liable for continuing pesticide use after receiving a written warning or citation from the EPA.

FIFRA expressly prohibits states from imposing "any requirements for labeling or packaging in addition to or different from those required" under FIFRA.

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610. Suits are brought exclusively by the EPA, as FIFRA does not provide a private cause of action. See No Spray Coal., Inc. v. City of New York, 351 F.3d 602, 605 (2d Cir. 2003) ("[A] citizen suit may not be maintained to enforce obligations created by FIFRA."); Cottrell, Ltd. v. Biotrol Int'l, Inc., 191 F.3d 1248, 1255 (10th Cir. 1999) (accepting district court's proposition that FIFRA is exclusively enforced by the EPA); cf. Jeffers v. Wal-Mart Stores, Inc., 84 F. Supp. 2d 775, 780 (S.D. W.Va. 2000) (holding because FIFRA provides for no private cause of action, Congress could not have intended that it preempt common law claims stemming from accidental ingestion or contact with pesticides).

611. 7 U.S.C. § 136i. Generally, FIFRA also provides as unlawful a group of actions and exemptions. Id. § 136j. For example, under this section, it is unlawful to distribute or sell unregistered pesticides. Id. § 136(j)(1)(A).

612. Id. § 136l(2). Private applicators are individual persons certified to use or supervise the use of restricted pesticides for the production of any agricultural commodity on property owned or rented by that individual or the individual's employer, or on property of another person if applied without compensation. Id. § 136(e)(2).

613. Id. § 136l(1)(B). Commercial applicators are individuals who use or supervise the use of any restricted pesticide used for any purpose on any property other than as provided for private applicators. Id. § 136(e)(3).

614. Id. §136l(1)(A). "Registrants" are persons who have registered any pesticide pursuant to this statute. Id. § 136(y).

615. Id. § 136l(1)(A). "Producers" are persons who manufacture, prepare, propagate, compound, or process pesticides or active ingredients used in producing pesticides. Id. § 136(w).

616. 7 U.S.C. § 136l(1)-(2). Although § 136(w) of FIFRA delegates enforcement action to the EPA and to states that have entered into agreements with the EPA, the Attorney General also retains the power to bring criminal enforcement actions. See United States v. Hercules, Inc., 961 F.2d 796, 798-99 (8th Cir. 1992) (allowing Attorney General to enter settlement agreements and bring criminal actions).

617. See United States v. Corbin Farm Serv., 444 F. Supp. 510, 523-24 (E.D. Cal. 1978) ("One who is personally involved in recommending the use and supervising or overseeing the circumstances of the use of a pesticide cannot, as a matter of law, escape criminal liability for the use of a pesticide in a manner inconsistent with its label on the ground that he did not himself use the pesticide."). aff'd, 578 F.2d 259 (9th Cir. 1978). However, persons who sell a pesticide, without more, do not qualify as persons "using" the poison. See id. at 522 (holding seller of a pesticide does not "use" the pesticide when the buyer is guilty of inconsistent use). Defendants can also be convicted of aiding or abetting such a crime. 7 U.S.C. § 2(a) (2012).

618. Corbin Farm Serv., 444 F. Supp. at 524.


620. 7 U.S.C. § 136v(b) (2012). Courts have interpreted this prohibition as preempting state-law claims based on a pesticide's labeling, such as failure to warn and breaches of express warranty claims. See Lescs v. William R. Hughes, Inc., 168 F.3d 482 (4th Cir. 1999) (per curiam) (unpublished table decision) (holding FIFRA preempts
However, the Supreme Court limited this prohibition when it held that FIFRA does not preempt local government regulation of pesticide use.\footnote{621} Furthermore, complying with labeling regulations under FIFRA does not relieve the obligation to meet requirements of the Clean Water Act ("CWA") in order to obtain a permit when introducing an herbicide or pesticide into navigable waters.\footnote{622} 

\section*{2. Intent}

The government must prove that the defendant knew the substance was regulated. However, proof of a knowing violation does not require proof of specific intent.\footnote{623} Instead, a showing that the defendant was aware of the "registered" status of a particular pesticide at the time of its misuse may satisfy FIFRA's mens rea requirement.\footnote{624}

\subsection*{C. Defenses}

The statute provides no affirmative defenses against criminal liability.

\subsection*{D. Penalties}

Commercial applicators, wholesalers, dealers, retailers, or other distributors who violate FIFRA may receive a maximum fine of \$25,000 per violation,
imprisonment for up to one year, or both. Registrants or producers who violate FIFRA face stiffer penalties: a maximum fine of $50,000 per violation, imprisonment of up to one year, or both. FIFRA prescribes lesser penalties for private applicators: a fine of up to $1000 per violation, imprisonment for up to thirty days, or both. Persons who disclose information relative to formulas with intent to defraud may be fined up to $10,000, imprisoned for up to three years, or both.

Penalties for violations of FIFRA fall within § 2Q of the Guidelines. The general base offense level for FIFRA offenses is eight. If the offense resulted in a substantial likelihood of death or serious bodily injury, the offense level is increased by nine levels. If there was a recordkeeping that reflected an effort to conceal a substantive environmental offense, the offense level for the substantive offense is used. However, if the offense only involved a simple recordkeeping or recording violation, the offense level is decreased by two. In cases involving negligent rather than knowing conduct, other than the simple recordkeeping violation of § 2Q2(b)(6), a downward departure may be warranted.

625. 7 U.S.C. § 136(b)(1)(B) (2012); see Furniture Product Maker to Pay $445,000 in Largest Fine to be Collected Under FIFRA, Chem. Reg. Rep. (BNA) No. 22, Sept. 18, 1998, at 1001 (discussing a California furniture products manufacturer that was forced to pay $445,000 criminal fine for violating FIFRA numerous times over a two and one-half year period); Firm Sentenced to Probation, Fined for Illegal Sales of Products to Reservations, DAILY ENV'T REP. (BNA) No. 210, Nov. 1, 1999, at A5 (noting a federal judge sentenced the Texas firm Friendly Systems, Inc. to five years' probation and approximately $450,000 in criminal fines, after a jury found the firm guilty of violating FIFRA by illegally selling pesticides to two Head Start programs); FIFRA, False Statement Conviction, Sentence Upheld by 6th Cir., No. 22 ANDREWS TOXIC CHEMS. LMN. REP. 9, Apr. 19, 1999, at 16 (noting Ohio pesticide applicator was sentenced to thirty-seven months in prison for various violations of FIFRA, including use of methyl parathion as non-certified applicator, use in manner inconsistent with labeling, and distribution to non-certified applicators).


627. Id. § 136(b)(2). In July 1997, two unlicensed exterminators were sentenced to unusually long prison terms for contaminating homes and businesses in Mississippi with methyl parathion, a cotton-field pesticide. Prison for Pesticide Misuse, WASH. POST, July 9, 1997, at A2. One defendant received a six-and-one-half year prison term upon being convicted of forty-eight counts of various environmental crimes. Id. The contamination resulting from methyl parathion misuse has reached outside of Mississippi to Arkansas, Illinois, Louisiana, Michigan, Ohio, and Tennessee. See Joby Warrick, A Toxic Bargain’s Continuing Costs; U.S. Pays Millions for Cleanup from Amateur Exterminators, WASH. POST, Aug. 18, 1997, at A1 (documenting widespread contamination from methyl parathion).


629. U.S.S.G. MANUAL § 2Q1.2 (2012). For a general discussion of the Guidelines, see the Sentencing note in this issue and Sections II.D and II.E of this Article.

630. U.S.S.G. MANUAL § 2Q1.2(a).

631. Id. § 2Q1.2(b)(2).

632. Id. § 2Q1.2(b)(5).

633. Id. § 2Q1.2(b)(6).

634. See id. § 2Q1.2, cmt. 4.
XI. ENDANGERED SPECIES ACT

Part A of this Section discusses the purpose and scope of the Endangered Species Act (ESA). Part B addresses the elements of an ESA offense, and Part C discusses the possible defenses to a charged ESA violation. Part D sets out the criminal penalties that result from an ESA violation.

A. Purpose

Congress enacted the ESA in 1973 to protect fish, wildlife, and plants that are at risk of becoming extinct. The ESA seeks to fulfill this mandate by conserving endangered and threatened species as well as their habitats and ecosystems.

The ESA grants jurisdiction to two federal agencies: the Department of the Interior ("DOI") is responsible for terrestrial and freshwater species, and the Department of Commerce is responsible for marine species. The DOI has delegated its ESA authority to the Fish and Wildlife Service ("FWS"), and the Department of Commerce has delegated its authority to the National Oceanic and Atmospheric Administration's National Marine Fisheries Service ("NOAA Fisheries" or "NMFS"). The ESA further mandates that other federal agencies shall insure that any action authorized "is not likely to jeopardize the continued existence of any endangered or threatened species." However, this authority was limited by the Supreme Court when it held that the ESA covers only discretionary agency actions.

B. Elements of an ESA Offense

The Secretary of the Interior is authorized to promulgate any regulations "necessary and advisable" for the conservation of each species listed as endan-

637. Id. § 1531(b); see, e.g., Trout Unlimited v. Lohn, 559 F.3d 946, 948 (9th Cir. 2009) (explaining that the ESA's primary purpose is to "prevent animal and plant species endangerment and extinction caused by man's influence on ecosystems"); see also Fouke Co. v. Brown, 463 F. Supp. 1142, 1144 (E.D. Cal. 1979) (stating generally the purpose of the ESA).
638. 16 U.S.C. § 1533(a) (2012); Rio Grande Silvery Minnow v. Bureau of Reclamation, 601 F.3d 1096, 1105 (10th Cir. 2010); see generally Oliver A. Houck, The Endangered Species Act and Its Implementation by the U.S. Departments of Interior and Commerce, 64 U. Colo. L. Rev. 277 (1993) (explaining the division of responsibilities to the Departments of Interior and Commerce and arguing that this division has allowed for too much departmental discretion, weakening the force of the ESA in implementation).
639. See 50 C.F.R. § 424.01 (2013) (stating that the two agencies have jointly promulgated regulations implementing statutory provisions of the listing process).
641. See Nat'l Assoc. of Home Builders v. Defenders of Wildlife, 551 U.S. 644, 669 (2007) (holding that § 1536(a)(2) "covers only discretionary agency actions and does not attach to actions that an agency is required by statute to undertake once certain specified triggering events have occurred").
gered or threatened. The ESA prohibits several specific acts regarding species that are "endangered" or in danger of extinction. The Secretary may also prohibit the same acts regarding species that are "threatened," or species that are likely to become endangered. The Secretary must also develop and implement recovery plans for the conservation and survival of listed endangered and threatened species. In addition, the Secretary must give priority to those species most likely to benefit from such plans, especially those species whose survival conflicts with development projects and economic activity.

1. Violation

The ESA prohibits specified actions that may injure a species listed as endangered. These actions include: (i) importing or exporting the endangered species; (ii) taking the endangered species, whether in the United States or on the high seas; and (iii) selling, transporting, or receiving a protected animal in the process of interstate or foreign commerce. In addition, the ESA prohibits the violation of any regulations promulgated pursuant to the ESA.

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642. 16 U.S.C. § 1533(d) (2012); see also Louisiana ex rel. Guste v. Verity, 853 F.2d 322, 333 (5th Cir. 1988) (stating that to validate regulation under § 1533(d) there need only be a showing that the regulation does in fact prevent prohibited takings; showing regulation actually enhances species' chances for survival is not necessary); cf. Sierra Club v. Clark, 755 F.2d 608, 612–13 (8th Cir. 1985) (holding § 1533(d) limits DOI Secretary's discretion in allowing sport hunting of threatened species).

643. See infra Section XI.B.1 of this Article (laying out the prohibited acts).


645. The FWS and NMFS have promulgated regulations extending these prohibitions to threatened species. See 50 C.F.R. § 17.31 (2013) (stating the specified prohibitions of 50 C.F.R. § 17.21 extend to threatened species).


648. To "take" a species is defined as to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." 16 U.S.C. § 1532(19). "Harm" has been further defined to include "significantly impairing essential behavioral patterns, including breeding, feeding or sheltering." 50 C.F.R. § 17.3 (2013); see Babbitt v. Sweet Home Chapter of Cmty. for a Great Or., 515 U.S. 687, 696 n.9 (1995) (holding that "harm" in terms of the definition of "take" means an act which actually kills or injures wildlife and may include significant degradation of species' habitat); Forest Conservation Council v. Rosboro Lumber Co., 50 F.3d 781, 784 (9th Cir. 1995) (ruling defining "harm" as actually injuring wildlife does not preclude suit based on imminent harm; it is not necessary to show past or current injury to protected species); Sierra Club v. Clark, 755 F.2d 608, 614 (8th Cir. 1985) (stating § 1538(a)(1) forbids taking of endangered animal under any circumstances); see also Rancho Viejo, LLC v. Norton, 323 F.3d 1062 (D.C. Cir. 2003) (upholding Fish and Wildlife Biological Opinion that construction of housing development would constitute a taking as construction would jeopardize continued existence of endangered species); cf. Palila v. Haw. Dep't of Land & Natural Res., 639 F.2d 495, 497 (9th Cir. 1981) (holding the prohibition against maintenance of animals that posed a threat to critical habitat of an endangered species that could lead to the endangered species' extinction was within the definition of "harm," creating a "taking" under the ESA). "Harass" has been defined as an "intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns." 50 C.F.R. § 17.3 (2013).


651. Id. § 1539(a)(1)(G) (2012).
2. Intent

Courts have found that Congress did not intend for a violation of the ESA to be a specific intent crime that would require a defendant to have knowledge of the law for a violation to occur.563 The fundamental policy against requiring a specific intent is that such a requirement “would render the Act ineffective because it would be nearly impossible to show that an accused intended to violate the Act.”564 For example, the government need not prove the defendant knew the animal he shot was protected by the ESA.565 The government need only prove beyond a reasonable doubt that the defendant knowingly566 shot an animal that turned out to be protected by the statute.567

3. Exemptions

Through the issuing of a permit, the Secretary may authorize acts prohibited under the ESA if the act is “for scientific purposes or to enhance the propagation or survival of the affected species” or if the taking is “incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.”568 For any permit issued, the applicant must submit to the Secretary of Interior a conservation plan specifying: (i) the impact the taking will have on the species; (ii) the steps to be taken to mitigate that impact; (iii) alternatives considered and reasons why such alternatives were rejected; and (iv) any other measures required by the Secretary.569 The ESA also allows the Secretary to grant a hardship exception: if a person has entered into a contract affecting a species prior to its listing and the

563. See United States v. McKittrick, 142 F.3d 1170, 1177 (9th Cir. 1998) (noting that Congress had changed the wording of the ESA in 1978 to make it a general intent crime); United States v. Grigsby, 111 F.3d 806, 817 (11th Cir. 1997) (agreeing that the ESA is a crime of general intent in holding an analogous provision of the African Elephant Conservation Act requires only general intent); United States v. Ivey, 949 F.2d 759, 766 (5th Cir. 1991) (noting that, in rejecting defendants’ arguments that the ESA requires a specific intent crime, the words of section 1538(c), as well as its legislative history, indicate Congress did not intend for it to be a specific intent crime).

564. Ivey, 949 F.2d at 766.

565. See United States v. Nguyen, 916 F.2d 1016, 1019 n.1 (5th Cir. 1990) (“[T]he government does not have to prove that the defendant knew the threatened nature of the species.”).


567. See Babbitt, 515 U.S. at 697 n.9; see also United States v. St. Onge, 676 F. Supp. 1044, 1045 (D. Mont. 1988) (indicating the critical issue is whether defendant shot at animal knowingly, not whether defendant recognized the animal he was shooting).


569. 16 U.S.C. § 1539(a)(2)(A); see Friends of Endangered Species, Inc. v. Jantzen, 760 F.2d 976, 987 (9th Cir. 1985) (concluding FWS was justified in issuing a permit authorizing the taking of Mission Blue Butterflies from a proposed development site when it was shown that the taking would not reduce butterflies’ survival chances and measures were taken to mitigate the project’s impact on butterflies).
subsequent listing would cause "undue economic hardship" to the person, the person may apply for an exemption of up to one year.\textsuperscript{660}

The Secretary of the Interior will grant a permit or exemption upon a finding that: (i) the exception was applied for in good faith; (ii) if granted, the exception will not disadvantage the species affected; and (iii) the exception is consistent with the purposes of the ESA.\textsuperscript{661} In addition, the ESA contains an exemption for Native Alaskans for a taking conducted for subsistence purposes.\textsuperscript{662}

\textbf{C. Defenses}

Both the ESA's civil and criminal provisions allow a good faith defense if the individual acted in self-defense or in defense of another.\textsuperscript{663} Alternatively, if a defendant claims to have an exemption or permit under 16 U.S.C. § 1539, the defendant has the burden of proving the exemption or permit "is applicable, has been granted, and was valid and in force at the time of the alleged violation."\textsuperscript{664} The various provisions of the ESA that give rise to these violations have withstood numerous constitutional challenges.\textsuperscript{665}

\textbf{D. Penalties}

Both civil and criminal monetary sanctions, as well as injunctive relief, can be imposed for violations of the ESA. Criminal liability attaches to the knowing violation of one of the specific prohibitions listed in the statute,\textsuperscript{666} a regulation issued in order to implement those prohibitions, any provision of the ESA, or a permit or certificate issued pursuant to the ESA.\textsuperscript{667} Upon conviction, violators may

\textsuperscript{660} 16 U.S.C. § 1539(b)(1).
\textsuperscript{661} Id. § 1539(d).
\textsuperscript{662} Id. § 1539(e).
\textsuperscript{663} Id. § 1540(a)(3), (b)(3) (2012); see Shuler v. Babbitt, 49 F. Supp. 2d 1165, 1169 (D. Mont. 1998) (holding a person can take an endangered animal as long as he is under the good-faith belief that he is acting to protect himself from bodily harm).
\textsuperscript{664} 16 U.S.C. § 1539(g).
\textsuperscript{665} See, e.g., Rancho Viejo, LLC v. Norton, 323 F.3d 1062, 1080 (D.C. Cir. 2003) (holding the application of the ESA to a commercial housing development to protect an endangered toad was constitutional under the Commerce Clause); United States v. Kepler, 531 F.2d 796, 797 (6th Cir. 1976) (holding that regulations on transportation or sale of protected species do not constitute taking in violation of the Fifth Amendment because only sales in interstate or foreign commerce are prohibited); Delbay Pharm., Inc. v. Dept. of Commerce, 409 F. Supp. 637, 644 (D.D.C. 1976) (holding the ESA does not violate Due Process Clause of Fifth Amendment because the provisions of Act have rational basis); see also Tammy Hinshaw, Annotation, Criminal Prosecution Under Endangered Species Act of 1973 (16 U.S.C.A. §§ 1531–1543), 128 A.L.R. Fed. 271, §§ 4–5 (1995) (discussing many different attempts to challenge ESA on constitutional grounds).
\textsuperscript{666} See United States v. McKittrick, 142 F.3d 1170, 1176–77 (9th Cir. 1998) (holding the intent requirement of the ESA satisfied when defendant knew he shot the animal, and the animal turned out to be a protected gray wolf; knowledge that the animal was protected was not required); United States v. Nguyen, 916 F.2d 1016, 1018 (5th Cir. 1990) (limiting government's obligation to showing defendant knew he was in possession of a turtle; the government was not required to show the defendant knew the turtle was a threatened species nor that he knew it was illegal to transport or import the turtle).
\textsuperscript{667} 16 U.S.C. § 1539.
be fined up to $50,000 or imprisoned for up to a year, or both. 668 The ESA also authorizes fines up to $25,000 or imprisonment for up to six months, or both, for violations of any other regulation promulgated under the statute. 669 Additional penalties include revocation of federal leases, licenses, permits, forfeiture of illegally taken species, and forfeiture of equipment used to commit the violation. 670 The Attorney General may also seek an injunction against any person alleged to be in violation of the ESA. 671

Penalties for violations of the ESA fall within § 2Q of the Guidelines. 672 The general base offense level for offenses involving fish or wildlife is six. 673 If the offense was committed for a commercial purpose or for any pecuniary gain on the part of the defendant, the offense level may be increased by two levels. 674 If the market value of the fish, wildlife, or plants exceeded $2000 but did not exceed $5000, the offense level can be increased one level. 675 If the offense involves fish, wildlife, or plants that are listed as endangered or threatened, the penalty may be increased by four levels. 676

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668. Id. § 1540(b)(1) (2012).
669. Id.
670. Id. § 1540(b)(2); 50 C.F.R. § 12 (2013) (discussing seizure and forfeiture procedures and general permit procedures).
671. 16 U.S.C. § 1540(e)(6); see Strahan v. Holmes, 595 F. Supp. 2d 161, 165 (D. Mass. 2009) ("To justify the imposition of injunctive relief, the Court must find that: (a) the plaintiff prevailed on the merits; (b) there is the potential for irreparable harm if the injunction is denied; (c) the harm if no injunction issues outweighs the hardship to the defendant if enjoined; and (d) the public interest would not be adversely affected by the issuance of an injunction."); see also Greenpeace v. Nat’l Marine Fisheries Serv., 106 F. Supp. 2d 1066, 1072 (W.D. Wash. 2000) (granting injunctive relief because balance of hardships and public interest weigh heavily in favor of endangered species); Marbled Murrelet v. Pac. Lumber Co., 880 F. Supp. 1343, 1367 (N.D. Cal. 1995) (granting permanent injunction against lumber company’s implementation of harvesting plan, which would kill, injure, or impair behavior patterns of marbled murrelets through logging operations), aff’d, 83 F.3d 1060 (9th Cir. 1996). But see Am. Bald Eagle v. Bhatti, 9 F.3d 163, 166 (1st Cir. 1993) (declining to issue injunction against deer hunting on a reservation because there was no showing that endangered eagles on that specific reservation were harmed by the ingestion of lead left in unrecovered deer carcasses).
673. Id. § 2Q2.1(a); see United States v. Koczuk, 252 F.3d 91, 94–95 (2d Cir. 2001) (discussing lower court’s improper correction from base offense level of six for offenses involving endangered fish).
674. U.S.S.G. MANUAL § 2Q2.1(b). For reference to fraud or deceit levels, see the table in § 2B1.1.
675. Id. § 2Q2.1(b)(3)(A). If the market value exceeds $5000, the increase is determined by matching the value to the amount in the table in § 2B1.1. Id.
676. Id. § 2Q2.1(b)(3)(B).