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Plain Meaning, Precedent, and Metaphysics: Interpreting the "Pollutant" Element of the Federal Water Pollution Offense

Jeffrey G. Miller
Elisabeth Haub School of Law at Pace University

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Jeffrey G. Miller is Professor of Law Emeritus at Pace Law School.

Summary

This Article, the second in a series of five, examines the meaning of "pollutant" under the Clean Water Act. Congress and EPA have defined "pollutant" to mean a list of specific substances and broad categories of materials and wastes discharged into water, e.g., "biological materials" and "chemical wastes." The definition is broad enough to encompass virtually all substances associated with human activity that are discharged to water, regardless of whether the substances cause pollution or are produced through human endeavor. Therefore, "pollutant" is rarely a limiting element. Instead, the issues with the definition of "pollutant" primarily address whether it includes material used in common and productive activities, such as adding hatchery-raised fish ("biological material") to trout streams or spraying pesticides to suppress disease-bearing mosquitoes ("biological material" or "chemical wastes"). EPA can easily fix these and other problems by a better regulatory definition.

I. Introduction

The Clean Water Act (CWA)[1] prohibits "the discharge of any pollutant by any person," unless in compliance with several listed sections in §301(a).[2] The listed sections authorize the issuance of two types of CWA permits and specify their substantive requirements.[3] In §502(12) the statute defines "discharge of a pollutant" to mean "any addition of any pollutant to navigable waters from any point source."[4] In sum, the subsection prohibits (1) any addition (2) of any pollutant (3) to navigable waters (4) from any point source (5) by any person, except in compliance with a CWA permit. U.S. Supreme Court Justice Ruth Bader Ginsburg has called this the "core command" of the CWA.[5] This is the second in a series of five articles examining how the U.S. Environmental Protection Agency (EPA) and the courts have interpreted the initial four jurisdictional elements of the federal water pollution control offense from 1972 to 2012.[6] The first four articles in the series examine each of the first four elements, and a fifth article explores differences in the techniques courts have used to interpret them. Disputes over the interpretations of these elements have produced a steady stream of reported decisions since the initial implementation of the statute. Even after four decades, many of the issues are unresolved and new issues continue to surface.

These articles have two purposes. The first is to provide definitive analyses of the initial four elements. Because many of the most difficult issues under several of the elements arise from the same fact patterns, one hypothesis is that examining these elements in depth in the same project will make it easier to resolve the common issues. Because many EPA and judicial interpretations obscure elements by conflating them with other elements, another hypothesis is that examining each element alone and in depth will illuminate its singular meaning and its relations with other elements. The second purpose is to explore the methods

1. Clean Water Act, 33 U.S.C. §§1251-1387, ELR Stat. FWPCA §§101-607.
2. 33 U.S.C. §1311(a).
3. The U.S. Environmental Protection Agency (EPA) issues permits under CWA §402, 33 U.S.C. §1242, to regulate water pollution, and the U.S. Army Corps of Engineers (the Corps) issues permits under CWA §404, 33 U.S.C. §1344, to regulate the filling of wetlands and other navigable waters.
4. 33 U.S.C. §1362(12).
5. Coeur Alaska, Inc. v. Southeast Alaska Conservation Council, 557 U.S. 261, 298 (2009). The author has elsewhere called the subsection "the basic prohibition" of the CWA. *See* Jeffrey G. Miller et al., Introduction to Environmental Law: Cases and Materials on Water Pollution Control 141 (2008).
6. The other elements of the offense are similarly deserving of individual analysis, but space constraints preclude their discussion in this Article. The author's analysis of the "addition" element of the offense was published in an earlier issue of *ELR News & Analysis*. *See* Jeffrey G. Miller, *Plain Meaning, Precedent, and Metaphysics: Interpreting the "Addition" Element of the Clean Water Act Offense*, 44 ELR 10770 (Sept. 2014).

that EPA and the courts have used to interpret the elements. One hypothesis is that the very different natures of the four elements will result in different frequencies of judicial challenges, different ratios of expansive to narrow interpretations, and different interpretive devices used by the courts. Another hypothesis is that statutory interpretation is dynamic: both the interpretations of the elements and the methods used to interpret them evolve over time, reflecting the maturation of the statute and developments in jurisprudence.

The CWA defines pollutant to mean a list of 18 specific substances and categories of substances "discharged into water," with two specific exclusions in §502(6). The categories include biological and radioactive materials, and solid, chemical, industrial, municipal, and agricultural wastes. While many substances may not initially fall into one of these categories, once such materials are discharged into water, most become waste and then fall within one of the waste categories. As a consequence, it is difficult to imagine a substance discharged into water that is not included in one of the categories. The definition of pollutant is qualitatively different in this regard from the definitions of two other elements defined in the CWA, "point source" and "navigable water."[7] Both of them have statutorily enunciated opposites. "Point sources" are confined, discrete conveyances, but the CWA recognizes their opposites: nonpoint sources such as surface runoff. "Navigable waters" may be a broad term, but the CWA recognizes their opposites: non-navigable waters such as groundwater. And, of course, water has its opposite: dry land. But what is the opposite of a "pollutant"? A substance that does not pollute? We will see that the U.S. Congress divorced the meanings of pollutant and pollution. Or is the opposite of a pollutant a substance that is not listed or not part of a listed category? Name a substance that does not fall into a listed category when it is discharged into water.

The definition of pollutant is extremely broad. As a consequence, almost all decisions considering whether a particular substance is a pollutant should be answered positively. Because it is fairly clear that most substances are pollutants, fewer decisions should consider whether the pollutant element of the offense is met than whether other elements of the offense are met. Finally, most courts should use the plain meaning of the definition to determine whether a substance is a pollutant. Once courts have held that a variety of substances are pollutants, precedent also should become a frequently used shortcut interpretive device. Courts should not often engage in extensive interpretations of pollutant. The interesting pollutant decisions, therefore, will be those holding substances not to be pollutants and decisions using multiple interpretive devices. These decisions should point to the fault lines between pollutants and their opposites, whatever they are. Or as Supreme Court Justice Sonia Sotomayor has commented, they are the "muddy, unclear and gray cases."[8]

The Article begins by examining congressional actions illuminating the meaning of pollutant. It parses the statutory definitions of pollutant and related terms; identifies the contexts in which Congress used the term in the statute and how the term relates to other defined terms in the statute; and reviews relevant legislative history. Next, the Article catalogues the substances that courts have held are, or are not, pollutants; and analyzes EPA and judicial interpretations of pollutant. Finally, the Article identifies and discusses prominent or difficult issues that EPA and the courts have resolved in their interpretations.

II. Legislative and Administrative Definitions of Pollutant and Related Terms

A. *Statutory Definitions*

1. Pollutant

Although "pollutant" has a familiar common meaning as something that pollutes, §502(6) defines it to mean a list of 18 specific substances or categories of substances[9] "discharged into water," with two exclusions.[10] EPA's regulatory definition is virtually identical.[11] Because the definition states that pollutant means a list of specific substances or categories of substances, the list is an exclusive one and nothing else can be a pollutant.[12] The exclusive nature of this list is emphasized

7. CWA §502(7) & (14), 33 U.S.C. §1362(7) & (14).

8. Remarks by Supreme Court Justice Sonia Sotomayor at Pace Law School (Nov. 12, 2012) (commenting on cases that comprise the Supreme Court's docket).

9. CWA §502(6), 33 U.S.C. §1362(6). Dredged spoil, incinerator residue, sewage sludge, munitions, wrecked or discarded equipment, rock, sand and cellar dirt (specific substances); solid waste, sewage, garbage, chemical wastes, biological materials, radioactive materials, industrial, municipal, and agriculture waste (categories of substances). Heat, which is included in the list, is not a substance or material, although it could be a waste. Some of the substances on the list could be considered either a material or a category of material, e.g., dredged spoil or sewage.

10. *Id.* The exclusions are: (1) sewage from vessels regulated by CWA §312, 33 U.S.C. §1322; and (2) water, gas, or other material pumped into wells to facilitate production of petroleum products or pumped onto wells for disposal of wastes pursuant to state permits.

11. It adds "filter backwash" to and drops "cellar dirt" from the list, qualifies "radioactive materials" as those not regulated under the Atomic Energy Act, 42 U.S.C. §§2011 et seq., and restates the two exceptions in minor ways.

12. An exclusive definition, using "means," is confined to the specifics of the definition, while an inclusive definition, using "includes," is not. *See* Sierra Club, Lone Star Chapter v. Cedar Point Oil Co., Inc., 73 F.3d 546, 565, 26

by its contrast with the only other statutory definition of an element containing a list, the definition of "point source," which "includes" a nonexclusive list of examples. Although the definition of pollutant is an exclusive one, meaning only the specific substances or categories of substances listed, the categories are broad enough to cover virtually all substances and wastes generated by human activity.[13] Because of the specificity of the listed substances and the breadth of the listed categories, courts should interpret the definition by using plain meaning more often than using other devices for statutory construction.[14] For the same reasons, courts should hold most substances to be pollutants, except under unusual circumstances. As discussed below, one such circumstance is when another statute regulates the substance or the activity producing it, potentially creating a conflict between application of the two statutes.

2. Toxic Pollutant

The CWA also defines "toxic pollutant" in §502(13).[15] It might be assumed that the CWA regulates only substances that have some toxic effect. This is not the case, however, because substances Congress listed as pollutants include nontoxic substances, e.g., rock and sand. Indeed, by defining and using the phrase "toxic pollutant," Congress identified a subset of pollutants subject to advanced pollution control. While §301(a) declared it illegal to discharge *any* pollutant except in compliance with a permit, and §301(b)(a) established treatment requirements for the discharge of *all* pollutants, §§301(b)(2)(A) and 307(a) established more stringent pollution control for the discharge of *toxic* pollutants. A substance may be a pollutant without being a toxic pollutant, although a substance may not be a toxic pollutant without being a pollutant.[16]

3. Pollution

The absence of any reference to pollution in the definition of "pollutant" has occasionally confused lawyers and judges because the common understanding of pollutant is a substance that causes pollution. The plain meaning of pollutant, however, is not relevant to interpreting the term as it is used in the CWA, because the statute specifically states that "[e]xcept as otherwise specifically provided, when used in this [statute] . . . [t]he term 'pollutant' means . . ." the definition discussed above. Other parts of the statute support the inapplicability of the plain meaning of pollutant in the CWA. The list of materials or categories of materials that are pollutants includes substances that in the common understanding do not pollute, for example, rock, sand, and some biological material such as indigenous live fish. Few would argue that their favorite waterway is free of pollutants or pollution only when it is without native fish swimming in it or a sand or rock bottom. Congress was aware of the concept of pollution when it drafted the CWA; indeed, Congress defined pollution and used it in the title[17] and throughout the statute.[18] The CWA defined pollution as the "man-induced alteration of the chemical, physical, biological, and radiological integrity of water,"[19] without mentioning pollutant. Thus, Congress decoupled "pollutant" and "pollution" by defining each without reference to the other. A "pollutant" is a substance falling within a statutory list of substances or categories of substances, without regard to whether it causes pollution. "Pollution" is a negative effect on the integrity of water caused by human activity, without regard to whether it is caused by a pollutant. It is worth noting that plain meaning is useful in interpreting the words used in the statutory definition of pollutant, although it is not useful in interpreting the word pollutant as it is used in the statute.

B. Legislative History

The legislative history of the CWA indicates that Congress intended its definition of pollutant to be expansive, leaving EPA with the authority to define what the term means under particular circumstances. Section 502(6) incorporated the definition of pollutant from the U.S. Senate bill, S. 2770, with a few changes.[20] The Senate

ELR 20522 (5th Cir. 1996). The difference is emphasized for the definition of pollutant because it contained an inclusive list in its U.S. Senate version, but was changed to contain an exclusive list in the Conference Committee. *See* Antonin Scalia & Bryan A. Garner, Reading Law: The Interpretation of Legal Texts 132-33 (2012).

13. The breadth of the categories included in the list "tends to eviscerate any restrictive effect" of the definition. *See Cedar Point*, 73 F.3d at 565; *see also* National Wildlife Fed'n v. Gorsuch, 693 F.2d 156, 172, 13 ELR 20015 (D.C. Cir. 1982).
14. The author's research has found that courts used plain meaning in 55 of the 68 decisions interpreting "pollutant."
15. The term "means those pollutants or combinations of pollutants . . . which . . . cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions . . . or physical deformations, in such organisms or their offspring."
16. Dague v. City of Burlington, 732 F. Supp. 458, 469-70, 20 ELR 21001 (D. Vt. 1989), *aff'd*, 935 F.2d 1343, 21 ELR 21133 (2d Cir. 1991), *rev'd on other grounds*, 505 U.S. 557, 22 ELR 21099 (1992). In *Headwaters, Inc. v. Talent Irrigation Dist.*, 243 F.3d 526, 532-33, 31 ELR 20535 (9th Cir. 2001), the U.S. Court of Appeals for the Ninth Circuit commented regarding a pesticide that "it would be absurd to conclude that a toxic chemical directly poured into water is not a pollutant."
17. The original Federal Water Pollution Control Act was enacted on June 30, 1948, c. 758, 62 Stat. 1155, and was amended several times before the Federal Water Pollution Control Amendments of 1972, Oct. 18, 1972, Pub. L. No. 92-500, cast the statute substantially in its present form. The Clean Water Act Amendments of 1977, Dec. 27, 1977, Pub. L. No. 95-217, made some mid-course corrections to the 1972 legislation. The statute has commonly been referred to thereafter as the Clean Water Act.
18. For instance, the first section used "pollution" six times, CWA §101, 33 U.S.C. §1251, and the penultimate section used it four times, CWA §60, 33 U.S.C. §1386.
19. CWA §502(19).
20. The enacted statutory definition eliminated from the Senate's version "but not limited to" after "means," and "other waste" after "agricultural waste." S. Rep. No. 1236 (Conf. Rep.), at 143-44 (1972), 1 Legis. Hist. 281, 326-27. The U.S. Court of Appeals for the Fifth Circuit commented that "while . . . the elimination of [these phrases] may be interpreted as an attempt to limit the scope of the definition . . . we think that the retention of such broad terms in the definitions suggests that the conference committee may have determined that the eliminated phrases were simply redundant," in view of the broad coverage of "'solid waste,' . . . 'chemical wastes,' 'biological materials,' . . . and 'industrial, municipal, and agricultural waste. . . .'" Sierra Club, Lone Star Chapter v. Cedar Point Oil Co., Inc., 73 F.3d 546, 566, 26 ELR

Committee Report accompanying S. 2770 indicated that the Senate bill defined pollutant to avoid litigation over whether particular materials were subject to CWA jurisdiction, suggesting a broad interpretation of the term. That suggestion is supported by the Committee's explicit adoption of "the basic formula [from the Refuse Act, but adding] . . . municipal discharges to it, so [that] before *any* material can be added to navigable waters authorization must first be granted by the Administrator."[21] The Refuse Act of 1899[22] was indeed broad, prohibiting the discharge of "*any* refuse matter of *any* kind or description *whatever*" to navigable water or its tributaries without a permit, with the exception of liquid waste from streets or sewers.[23] Adding discharges from streets and sewers to the Refuse Act's already expansive concept of regulated substances provided the CWA with an even broader reach of "pollutant."

On the Senate floor, Sen. Ted Stevens (R-Alaska) asked Sen. Edmund Muskie (D-Me.), the author and chief sponsor of the CWA in the Senate, whether "pollutant" included fish parts discharged in various marine environments. Senator Muskie replied: "I do not get into the business of defining or applying these definitions to particular kinds of pollutants. That is an administrative decision to be made by the Administrator [of EPA]."[24] Courts have generally recognized the authority of EPA to define "pollutant" and other jurisdictional terms of §301(a),[25] based on this and similar evidence.[26] In *National Wildlife Federation v. Gorsuch*, the U.S. Court of Appeals for the District of Columbia (D.C.) Circuit stated: "Strong signals in the Congressional history [indicate] that [Congress] entrusted EPA with at least some discretion which 'pollutants' and sources of pollutants were to be regulated under the NPDES program."[27]

20522 (5th Cir. 1996). *See also* National Wildlife Fed'n v. Gorsuch, 693 F.2d 156, 173, 13 ELR 20015 (D.C. Cir. 1982).

21. S. Rep. No. 92-414, 1972 U.S.C.C.A.N. 3742 (emphasis added). *See* United States v. Hamel, 551 F.2d 107, 110-11, 7 ELR 20253 (6th Cir. 1977).
22. 33 U.S.C. §407 (emphasis added). The Refuse Act provided the model for the permit program established in CWA §402.
23. *See* United States v. Pennsylvania Indus. Chem. Corp., 411 U.S. 655, 663-66, 3 ELR 20401 (1973) (tracing the evolution of the Refuse Act and its broad coverage).
24. 117 Cong. Rec. 38838 (daily ed. Nov. 2, 1971).
25. *See Gorsuch*, 693 F.2d at 167, 173-74. Based on a similar congressional colloquy, the district court in *Natural Res. Defense Council v. Train*, 396 F. Supp. 1393, 1396, 1401, 5 ELR 20401 (D.D.C. 1975), held that the CWA gave EPA discretion to define the meaning of "point source." The D.C. Circuit agreed. *See* Natural Res. Defense Council, Inc. v. Costle, 568 F.2d 1369, 1382, 8 ELR 20028 (D.C. Cir. 1977).
26. Some courts have articulated their authority to make such determinations in the absence of an EPA determination. *See, e.g.*, Sierra Club, Lone Star Chapter v. Cedar Point Oil Co., Inc., 73 F.3d 546, 26 ELR 20522 (5th Cir. 1996); U.S. PIRG v. Atlantic Salmon of Maine, LLC, 215 F. Supp. 2d 239, 246, 32 ELR 20535 (D. Me. 2002).
27. *See Gorsuch*, 693 F.2d at 173.

III. Judicial Interpretations of Pollutant

A. *Substances Held to Be a Pollutant or Not to Be a Pollutant*

1. Held to Be a Pollutant

Courts have held the following substances to be a "pollutant": acid mine drainage[28]; blood[29]; bombs, ordnance, and spent shot[30]; cement and shotcrete[31]; changes in water conditions[32]; chemical waste, including chlorine residue and alum sludge[33]; demolition debris[34]; dredged and fill material[35]; fecal coliform[36]; live and dead fish, fish parts and feces, and shellfish feces[37]; listed toxic pollutants[38]; animal manure[39]; municipal solid waste[40]; pesticides, pesticide

28. Committee to Save Mokelumne River v. East Bay Mun. Util. Dist., 13 F.3d 305, 24 ELR 20225 (9th Cir. 1993); Beartooth Alliance v. Crown Butte Mines, 904 F. Supp. 1168, 26 ELR 20639 (D. Mont. 1995).
29. United States v. Plaza Health Laboratories, 3 F.3d 643, 23 ELR 21526 (2d Cir. 1993).
30. Weinberger v. Barcelo-Romero, 456 U.S. 305, 309, 12 ELR 20538 (1982) (bombs); Long Island Soundkeeper Fund, Inc. v. New York Athletic Club, 1996 WL 131863 (S.D.N.Y. 1996) (spent shot and target fragments).
31. United States v. Pozsgai, 999 F.2d 719, 23 ELR 21012 (3d Cir. 1993) (concrete rubble and cement blocks); United States v. Schalloom, 998 F.2d 196 (4th Cir. 1993).
32. National Wildlife Fed'n v. Gorsuch, 530 F. Supp. 1291, 12 ELR 20268 (D.D.C. 1982), *rev'd,* 693 F.2d 156, 13 ELR 20015 (D.C. Cir. 1982); South Carolina Wildlife Fed'n v. Alexander, 457 F. Supp. 118, 8 ELR 20757 (D.S.C. 1978).
33. U.S. Steel Corp. v. Train, 556 F.2d 822, 7 ELR 20419 (7th Cir. 1977); Hudson River Fishermen's Ass'n v. City of New York, 751 F. Supp. 1088, 21 ELR 20647 (S.D.N.Y. 1990).
34. United States v. Bradshaw, 541 F. Supp. 880, 12 ELR 20629 (D. Md. 1981).
35. Coeur Alaska, Inc. v. Southeast Alaska Conservation Council, 557 U.S. 261, 302-03 (2009); Rapanos v. United States, 547 U.S. 715, 723, 745, 36 ELR 20116 (2006); Leslie Salt Co. v. United States, 55 F.3d 1388, 1391, 25 ELR 21046 (9th Cir. 1995); Town of Norfolk v. U.S. Army Corps of Eng'rs, 968 F.2d 1438, 1445, 22 ELR 21337 (1st Cir. 1992); Bersani v. EPA, 850 F.2d 36, 39, 18 ELR 20874 (2d Cir. 1988); United States v. Brink, 795 F. Supp. 2d 565, 575 (S.D. Tex. 2011); Gouger v. U.S. Army Corps of Eng'rs, 779 F. Supp. 2d 588, 603 (S.D. Tex. 2011); Alabama Rivers Alliance v. U.S. Army Corps of Eng'rs, 697 F. Supp. 2d 1251, 1258 (N.D. Ala. 2009); D'Olive Bay Restoration and Pres. Comm., Inc. v. U.S. Army Corps of Eng'rs, 513 F. Supp. 2d 1261, 1268 (S.D. Ala. 2007); Florida Wildlife Fed'n v. U.S. Army Corps of Eng'rs, 401 F. Supp. 2d 1298, 1308 (S.D. Fla. 2005); City of Shoreacres v. Waterworth, 332 F. Supp. 2d 992, 1015 (S.D. Tex. 2004); National Wildlife Fed'n v. Norton, 332 F. Supp. 2d 170, 185 (D.D.C. 2004); Kentuckians for Commonwealth, Inc. v. Rivenburgh, 204 F. Supp. 2d 927, 932, n.5 (S.D. W. Va. 2002), *rev'd on other grounds*, 317 F.3d 425 (4th Cir. 2003).
36. North Carolina Shellfish Growers Ass'n v. Holly Ridge Assocs., LLC, 278 F. Supp. 2d 654 (E.D.N.C. 2003) (soil and vegetation).
37. National Wildlife Fed'n v. Consumers Power Co., 657 F. Supp. 989, 17 ELR 20801 (W.D. Mich. 1987) (live fish, dead fish, and fish parts), *rev'd on other grounds*, 862 F.2d 580, 19 ELR 20235 (6th Cir. 1988); U.S. PIRG v. Atlantic Salmon of Maine, LLC, 215 F. Supp. 2d 239, 32 ELR 20535 (D. Me. 2002) (non-native live fish, fish feces); *contra* Association to Protect Hammersley, Eld, and Totten Inlets v. Taylor Res., Inc., 299 F.3d 1007 (9th Cir. 2002) (shellfish feces).
38. Dague v. City of Burlington, 732 F. Supp. 458, 469-70, 20 ELR 21001 (D. Vt. 1989).
39. Concerned Area Residents for the Environment v. Southview Farm, 34 F.3d 114, 24 ELR 21480 (2d Cir. 1994) (cow manure); Higbee v. Starr, 598 F. Supp. 323 (W.D. Ark. 1984) (hog manure); United States v. Frezzo Bros., 461 F. Supp. 266, 9 ELR 20139 (E.D. Pa. 1978), *aff'd*, 602 F.2d 1123, 9 ELR 20556 (3d Cir. 1979) (composted horse manure).
40. Resource Invs., Inc. v. U.S. Army Corps of Eng'rs, 151 F.3d 1162, 28 ELR 21407 (9th Cir. 1998).

waste, and pesticide residue[41]; petroleum products[42]; produced water[43]; rock, rubble, bricks, and sand[44]; sediment[45]; sewage[46]; soil and vegetation[47]; and stormwater.[48]

2. Held Not to Be a Pollutant

Courts have held the following substances not to be a "pollutant": air pollutants[49]; changes in water condition[50]; clear water[51]; pesticides, pesticide wastes and pesticide residue[52]; radioactive materials[53]; rock and sediment in stormwater[54]; and shellfish parts and feces.[55] For four of these seven substances there are contrary decisions. Ten of the 13 narrow interpretations were rendered in citizen suits[56] and nine of the 13 were decided during or after 1996.[57] Most of the negative decisions were grounded on avoiding interference with pervasive regulation by another statute of the substance at issue or the activity producing it.

B. Listed Substances Versus Listed Categories of Substances

Some decisions held a substance to be a pollutant because it is specifically listed in the definition of pollutant.[58] But most decisions held a substance to be a pollutant because it fell within a category of substance listed in the definition,[59] frequently biological material,[60] or chemical,[61] agricultural,[62] solid,[63] or industrial waste.[64] "Biological

41. National Cotton Council of Am. v. U.S. EPA, 553 F.3d 927, 39 ELR 20006 (6th Cir. 2009) (sprayed pesticide residue and waste); Headwaters, Inc. v. Talent Irrigation Dist., 243 F.3d 526, 31 ELR 20535 (9th Cir. 2001).
42. United States v. Eidson, 108 F.3d 1336, 27 ELR 20853 (11th Cir. 1997); United States v. Hamel, 551 F.2d 107, 7 ELR 20253 (6th Cir. 1977).
43. Produced water is pumped from groundwater or accompanies other products produced by drilling (e.g., oil and gas). Northern Plains Resource Council v. Fidelity Exploration and Dev. Co. 325 F.3d 1155 (9th Cir. 2003) (unaltered groundwater); Sierra Club, Lone Star Chapter v. Cedar Point Oil Co., Inc., 73 F.3d 546, 26 ELR 20522 (5th Cir. 1996) (produced water or its constituents).
44. Coeur Alaska, Inc. v. Southeast Alaska Conservation Council, 557 U.S. 261, 268 (2009) (crushed rock); United States v. Pozsgai, 999 F.2d 719, 23 ELR 21012 (3d Cir. 1993) (concrete rubble, cement blocks); Minnehana Creek Watershed Dist. v. Hoffman, 597 F.2d 617, 9 ELR 20334 (8th Cir. 1979) (rock and sand used in constructing dam and rip rap); Kentuckians for Commonwealth, Inc. v. Rivenburgh, 204 F. Supp. 2d 927, 932, n.5 (S.D. W. Va. 2002) (mining overburden agreed by parties to be a pollutant), *rev'd on other grounds*, 317 F.3d 425 (4th Cir. 2003); Hanson v. United States, 710 F. Supp. 1105, 19 ELR 21074 (E.D. Tex. 1989) (dirt, rock, bricks); United States v. Bradshaw, 541 F. Supp. 880, 12 ELR 20629 (D. Md. 1981 (demolition debris and sand).
45. Borden Ranch P'ship v. U.S. Army Corps of Eng'rs, 261 F.3d 810, 32 ELR 20011 (9th Cir. 2001) (soil and vegetation); United States v. Deaton, 209 F.3d 331, 30 ELR 20508 (4th Cir. 2000) (soil); Driscoll v. Adams, 181 F.3d 1285, 29 ELR 21387 (11th Cir. 1999) (sand and silt were the two primary constituents of sediment); United States v. Wilson, 133 F.3d 251, 28 ELR 20299 (4th Cir. 1997) (native soil); Rybachek v. EPA, 904 F.2d 1276, 20 ELR 20973 (9th Cir. 1990) (dirt and gravel); United States v. M.C.C. of Florida, Inc., 772 F.2d 1501, 15 ELR 21091 (11th Cir. 1985) (vegetation and sediment); Hughey v. JMS Dev. Corp, 78 F.3d 1523, 26 ELR 20924 (11th Cir. 1996) (sediment in rainwater flowing from construction site); *Minnehaha Creek Watershed Dist.*, 597 F.2d 617 (rock and sand); Tungett v. Papierski, 2006 WL 51148 (E.D. Tenn. 2006) (sediment, soil, dirt); North Carolina Shellfish Growers Ass'n v. Holly Ridge Assocs., LLC, 278 F. Supp. 2d 654 (E.D.N.C. 2003) (soil, sand, and dirt); Pronsolino v. Marcus, 91 F. Supp. 2d 1337, 30 ELR 20460 (N.D. Cal. 2000); *Bradshaw*, 541 F. Supp. 880 (demolition debris and sand).
46. United States v. Gulf Park Water Co. 972 F. Supp. 1056 (S.D. Miss. 1997).
47. *Borden Ranch*, 261 F.3d 810 (vegetation); *M.C.C. of Florida*, 772 F.2d 1501 (sea grass); *Tungett*, 2006 WL 51148 (trees, organic debris).
48. *Driscoll*, 181 F.3d 1285; *Hughey*, 78 F.3d 1523 (construction site runoff); United States v. Frezzo Bros., 461 F. Supp. 266, 9 ELR 20139 (E.D. Pa. 1978) (mushroom growing waste runoff), *aff'd*, 602 F.2d 1123, 9 ELR 20556 (3d Cir. 1979).
49. U.S. EPA ex rel. McKeown v. Port Auth. of New York and New Jersey, 162 F. Supp. 2d 173 (S.D.N.Y. 2001). *See also* Chemical Weapons Working Grp. v. Dep't of Army, 111 F.3d 1485, 27 ELR 21130 (10th Cir. 1997).
50. National Wildlife Fed'n v. Gorsuch, 693 F.2d 156, 13 ELR 20015 (D.C. Cir. 1982); *contra* South Carolina Wildlife Fed'n v. Alexander, 457 F. Supp. 118, 8 ELR 20757 (D.S.C. 1978).
51. Orleans Audubon Soc'y v. Lee, 742 F.2d 901, 15 ELR 20030 (5th Cir. 1984).
52. Fairhurst v. Hagener, 422 F.3d 1146 (9th Cir. 2005); Peconic Baykeeper, Inc. v. Suffolk Cnty., 585 F. Supp. 2d 377 (E.D.N.Y. 2008), *rev'd in part*, 600 F.3d 180 (2d Cir. 2010); Altman v. Town of Amherst, New York, 190 F. Supp. 2d 467 (W.D.N.Y. 2001), *rev'd*, 47 Fed. Appx. 62 (2d Cir. 2002).
53. Train v. Colorado PIRG, 426 U.S. 1, 6 ELR 20549 (1976); Waste Action Project v. Dawn Mining Corp., 137 F.3d 1426, 28 ELR 21035 (9th Cir. 1998).
54. Kentuckians for Commonwealth, Inc. v. Rivenburgh, 317 F.3d 425 (4th Cir. 2003); Town of Norfolk v. U.S. Army Corps of Eng'rs, 968 F.2d 1438, 22 ELR 21337 (1st Cir. 1992); United States v. United Homes, Inc., 1999 WL 117701 (N.D. Ind. 1999). The court did not address whether contaminated river water was a pollutant in *Hudson River Fishermen's Ass'n v. City of New York*, 751 F. Supp. 1088, 1102, 21 ELR 20647 (S.D.N.Y. 1990), *aff'd without opinion*, 940 F.2d 649, 21 ELR 21226 (2d Cir. 1991).
55. Association to Protect Hammersley, Eld, and Totten Inlets v. Taylor Res., Inc., 299 F.3d 1007 (9th Cir. 2002); *contra* National Wildlife Fed'n v. Consumers Power Co., 862 F.2d 580, 19 ELR 20235 (W.D. Mich. 1987); U.S. PIRG v. Atlantic Salmon of Maine, LLC, 215 F. Supp. 2d 239, 32 ELR 20535 (D. Me. 2002).
56. The author's research has found that, by contrast, 34 of the 68 decisions interpreting pollutant were citizen suit cases.
57. By contrast, the author's research has found that 37 of the 68 decisions were during or after 1996.
58. *See, e.g.*, Weinberger v. Barcelo-Romero, 456 U.S. 305, 309, 12 ELR 20538 (1982).
59. Congress' use of "broad generic terms" indicated legislative intent to capture as pollutants more than the substances specifically listed. *See* United States v. Hamel, 551 F.2d 107, 7 ELR 20253 (6th Cir. 1977); *Hudson River Fishermen's Ass'n*, 751 F. Supp. at 1101.
60. National Cotton Council of Am. v. U.S. EPA, 553 F.3d 927, 39 ELR 20006 (6th Cir. 2009) (biologically based pesticides); *Consumers Power*, 862 F.2d 580 (live fish, dead fish, and fish parts); North Carolina Shellfish Growers Ass'n v. Holly Ridge Assocs., LLC, 278 F. Supp. 2d 654 (E.D.N.C. 2003) (fecal coliform); *Atlantic Salmon of Maine*, 215 F. Supp. 2d 239 (fish feces); National Wildlife Fed'n v. Consumers Power Co., 657 F. Supp. 989, 17 ELR 20801 (W.D. Mich. 1987) (live fish, dead fish, and fish parts); United States v. Frezzo Bros., 461 F. Supp. 266, 9 ELR 20139 (E.D. Pa. 1978) (composted horse manure). In the district court decision upheld in *Hamel*, 551 F.2d at 110, "the government contended successfully . . . that gasoline could be subsumed under 'biological materials,'" although the appeals court upheld the decision on a different basis.
61. *National Cotton Council*, 553 F.3d 927 (chemical pesticide residue); Headwaters, Inc. v. Talent Irrigation Dist., 243 F.3d 526, 31 ELR 20535 (9th Cir. 2001) (chemical pesticide residue); Sierra Club, Lone Star Chapter v. Cedar Point Oil Co., Inc., 73 F.3d 546, 26 ELR 20522 (5th Cir. 1996) (produced water); U.S. Steel Corp. v. Train, 556 F.2d 822, 7 ELR 20419 (7th Cir. 1977) (steel-making waste); *North Carolina Shellfish Growers*, 278 F. Supp. 2d 654; Dague v. City of Burlington, 732 F. Supp. 458, 20 ELR 21001 (D. Vt. 1989), *aff'd*, 935 F.2d 1343, 21 ELR 21133 (2d Cir. 1991), *rev'd on other grounds*, 505 U.S. 557, 22 ELR 21099 (1992) (leachate from landfill).
62. Concerned Area Residents for the Environment v. Southview Farm, 34 F.3d 114, 24 ELR 21480 (2d Cir. 1994) (cow manure); *Atlantic Salmon of Maine*, 215 F. Supp. 2d at 246 (waste from fish farm); Higbee v. Starr, 598 F. Supp. 323 (W.D. Ark. 1984).
63. United States v. Schallom, 998 F.2d 196 (4th Cir. 1993) (sand and cement); *Higbee*, 598 F. Supp. 223.
64. Northern Plains Resource Council v. Fidelity Exploration and Dev. Co., 325 F.3d 1155 (9th Cir. 2003) (produced water from gas extraction); United States v. Eidson, 108 F.3d 1336, 27 ELR 20853 (11th Cir. 1997) (tank bottoms pumped from gas station); *Cedar Point*, 73 F.3d 546 (produced water from oil drilling).

material" covers all living or formerly living carbonaceous matter, including substances in fossilized form such as a fossil fuel. "Solid waste," "chemical waste," "industrial, municipal, and agricultural waste," however, describe the byproducts or leftover results of human activity. Indeed, they cover most conceivable byproducts and residuals of human activity. Moreover, once most non-waste materials are discharged to water, they become waste. For instance, commercially valuable petroleum products become waste when they are spilled from a vessel at sea. Although not noted in the decisions, a substance could fall into more than one listed category. Leftover tar from road paving, for instance, could be biological material, chemical waste, solid waste, municipal waste, and industrial waste. In the few decisions holding a substance not to be a pollutant, the substance at issue might have fit within a listed category, but the court nevertheless held it not to be a pollutant for other reasons.[65]

1. Waste Categories Versus Material Categories

Most of the broad categories of pollutants are designated "waste(s)" or "materials."[66] Although the CWA does not define either term, material is a broader category than waste.[67] Material describes the substance before, during, and after human use and even a substance that is not associated with human use.[68] Waste, on the other hand, describes material that remains after human use or after abandonment without use, such as oil spilled from a vessel at sea.[69] One court, however, has held that both waste and material must be associated with human or industrial activity to be a pollutant, using the *ejusdem generis*[70] canon of construction and noting that the substances listed in the definition of pollutant were associated with human or industrial activity.[71] That analysis, however, is flawed, as discussed below.[72]

Why does the definition of pollutant include all material of a biological nature, but only waste material of a solid, chemical, industrial, municipal, or agricultural nature? When do the latter materials become waste? Although the case law does not directly address these questions under the CWA, a few decisions examine whether particular substances are solid waste under the Resource Conservation and Recovery Act (RCRA),[73] the statute primarily designed to regulate the management and disposal of solid and hazardous waste. Whether a substance is a solid waste under RCRA has proven to be one of the most difficult legal questions under that statute,[74] suggesting the question could be a difficult one under the CWA.

a. Biological Materials

The term "biological material" raises dilemmas that courts have addressed directly or indirectly. The U.S. Court of Appeals for the Sixth Circuit used plain meaning to hold that fish parts and whole fish, dead or alive, were biological material and therefore pollutants in *National Wildlife Federation v. Consumers Power Co.*[75] There, an electric-generation facility withdrew water with live whole fish from a lake, ran the water through a turbine to produce electricity, and discharged the water back into the lake with a puree of dead fish parts, dead fish, and some live fish. A district court followed the Sixth Circuit's lead, holding that a salmon farm discharged pollutants, including live fish.[76] Finally, in *Asso-*

65. For instance, in *Association to Protect Hammersley, Eld and Totten Inlets v. Taylor Res., Inc.*, 299 F.3d 1007 (9th Cir. 2002), the Ninth Circuit held that feces and shells from mussel-growing and harvesting facilities were not pollutants, although they were biological material. The court was largely motivated by the incongruity of holding the byproducts of shellfish propagation to be pollutants, when the goal of the CWA is to protect and promote the propagation of fish and shellfish. The Supreme Court in *Train v. Colorado PIRG*, 426 U.S. 1, 6 ELR 20549 (1976), and the Ninth Circuit in *Waste Action Project v. Dawn Mining Corp.*, 137 F.3d 1426, 28 ELR 21035 (9th Cir. 1998), held radioactive source, byproduct and special nuclear materials not to be pollutants, despite the specific listing of "radioactive materials" in the CWA definition of "pollutant," because those radioactive materials were already regulated by the Atomic Energy Act, which Congress intended to be the sole regulator of such materials.
66. "Materials" are listed in the plural. "Chemical wastes" is in the plural, but the other categories of waste are in the singular. There is no apparent reason why some of the categories are singular and others plural. None of the courts interpreting pollutant found this difference to be significant nor do any of them note that a party to the cases argued the difference was meaningful. This may not be surprising because in the absence of a contrary indication in the statute, the singular includes the plural and the plural includes the singular. *See* Scalia & Garner, *supra* note 12, at 129-31, where the authors trace this canon back to Blackstone and Bentham and a 1278 English case. *See also* 1 U.S.C. §1, which provides that unless otherwise provided, singular nouns in the *United States Code* include the plural and vice versa.
67. For instance, hazardous materials regulated by the Hazardous Materials Transportation Act, 49 U.S.C. §§5101 et seq., are more extensive, see §5102(2) and §5103(a), than hazardous wastes regulated by RCRA, 42 U.S.C. §6903(5).
68. "Material" means "(1) the elements, constituents, or substances of which something is composed or can be made (2) matter that has qualities which give it individuality and by which it may be categorized." Merriam-Webster's Collegiate Dictionary 715 (10th ed.).
69. "Waste" means "damaged, defective, or superfluous material produced by a manufacturing process: as . . . (3) an unwanted by-product of a manufacturing process, chemical laboratory or nuclear reactor . . . refuse from places of human or animal habitation . . . Garbage: Rubbish (2) Excrement . . . Sewage." *Id.* at 1329. *See Northern Plains Research Council*, 325 F.3d at 1161.
70. The *ejusdem generis* canon has been defined in a treatise as "[i]nterpret[ing] a general term to reflect the class of objects reflected in the more specific terms accompanying it." *See* William N. Eskridge Jr., Dynamic Statutory Interpretation 323 (1987).
71. Association to Protect Hammersley, Eld, and Totten Inlets v. Taylor Res., Inc., 299 F.3d 1007 (9th Cir. 2002).
72. For instance, while some sand and rock, listed as pollutants, may be associated with human activity, most are not.
73. Resource Conservation and Recovery Act (RCRA), 42 U.S.C. §§6901-6992k, ELR Stat. RCRA §§1001-11011.
74. RCRA defines "solid waste" in 42 U.S.C. §6904; EPA elaborates the definition in 40 C.F.R. §261.2. Under RCRA, hazardous waste is a subset of solid waste. Determining whether material is a solid waste is often the most difficult legal issue under RCRA, primarily because one person's waste is often another person's raw material. *See* Jeffrey G. Miller & Craig N. Johnston, The Law of Hazardous Waste Disposal and Remediation 149-71 (2d ed.). RCRA also regulates the disposal of nonhazardous solid waste, but not as comprehensively as hazardous waste.
75. National Wildlife Fed'n v. Consumers Power Co., 862 F.2d 580, 583, 19 ELR 20235 (6th Cir. 1988). The Sixth Circuit had earlier held oil to be a pollutant, although by a more circuitous route because oil is a biological material, perhaps hoping to avoid the question of whether fish and people are pollutants under the CWA. United States v. Hamel, 551 F.2d 107, 7 ELR 20253 (6th Cir. 1977).
76. U.S. PIRG v. Atlantic Salmon of Maine, LLC, 215 F. Supp. 2d 239, 246-48, 32 ELR 20535 (D. Me. 2002).

ciation to Protect Hammersley, Eld, and Totten Inlets v. Taylor Resources, Inc.,[77] the U.S. Court of Appeals for the Ninth Circuit found "biological material" to be ambiguous, possibly meaning all biological material or just biological waste resulting from human or industrial activity. It held that mussel shells and feces from a mussel-harvesting operation were not pollutants because one purpose of the CWA was the propagation of shellfish.[78] Although the reasoning of *Hammersley* is flawed, as discussed immediately below, the three decisions can perhaps be reconciled if the lake fish in *Consumers Power* were indigenous, the salmon in *Atlantic Salmon* were not indigenous, and the origin of the mussels in *Hammersley* was ambiguous. Such a reconciliation of the decisions would serve the statutory purpose of providing a "balanced, *indigenous* population of fish, shellfish and wildlife,"[79] although none of the courts made this distinction or suggested any other reconciliation. Giving meaning to the distinction between indigenous and non-indigenous species, however, would raise the subsidiary question of how long species must be in place to be indigenous.

In *Hammersley* the court held mussel shells and feces from a mussel-harvesting operation were not pollutants, even though they were biological material, because to be a pollutant, a substance must be a waste from a human or industrial activity. It came to that conclusion using two interpretive devices: *ejusdem generis* and avoiding absurd results.[80] *Ejusdem generis* posits that if a statute lists examples of regulated substances, other substances must be of the same nature as the listed substances to be regulated by the statute. The court observed that the examples listed in the definition of "pollutant" were all wastes from human or industrial activity and that the mussel shells and feces were not, hence the shells and feces could not be "pollutants."

The court was wrong on several counts. First, the statutory definition listed "biological material," not "biological waste." As discussed above, "material," of course, is different from and extends beyond "waste." Congress' use of both material and waste in its list of substance categories that are pollutants suggests that it knew the difference between the words and intended different results by using them. Second, all of the other substances listed are not waste from human activity. Rock and sand are listed, and while they may be waste from human activity, most often they are not. In any event, the relation to human activity need not be reflected in the nature of a pollutant, because it is already captured in the clause "by any person" in §301(a). Third, although mussel shells and feces are not man-made, their presence in large quantities at the harvesting operation was man-induced. Indeed, the term used by the court for the defendant's activity, "harvesting operation," is significant, for the mussels did not grow of their own accord on the operation's equipment, instead the defendant planted their seeds there; the operation included both production and harvesting.[81] Finally, Congress made it clear in §318[82] that discharges from aquacultural activities are subject to control by §402 permits, just as are discharges from concentrated animal feeding operations (CAFOs).[83] Both of those operations are very similar to growing and harvesting mussels in a confined area. Because the CWA does not define "aquaculture," a defendant might argue that it means only raising fish, not shellfish. But the dictionary definition of the word is the "culture of sea, lake and river foodstuffs, as fish, oysters, seaweed, etc."[84] Moreover, the CWA considers protection of fish and shellfish in the same phrases.[85]

The Ninth Circuit's "absurd results" reasoning in *Hammersley* may appear to be more difficult to dismiss. The court noted that the purpose of the CWA is to "provide for the . . . propagation of fish, shellfish, and wildlife."[86] The defendant's activity included propagation of shellfish, a goal that the CWA specifically espouses rather than an activity that the CWA specifically prohibits or regulates. But the CWA translates the goal elsewhere as "the propagation of a balanced, *indigenous* population of shellfish, fish and wildlife."[87] Under the facts of the case, the mussels probably are not indigenous and the defendant's activities, therefore, may interfere with a balanced population of shellfish and fish.[88] The distinction is not necessary, however, because Congress made it clear in §318 that aquacultural activities are subject to regulation by §402 permits, overcoming any contrary inferences from the goals of the statute. The applicable canon of interpretation is that the specific (§318's specification that aquacultural activities must have §402 permits) governs over the general (§101(a)'s policy of providing for the propagation of fish and shellfish).

Under the Sixth Circuit's reasoning in *Consumers Power*, a state fish hatchery would need a §402 permit to stock the state's streams with native trout. Surely, Congress did not intend that result. Perhaps, this is a perfect dilemma for EPA to resolve by amending its definition of pollutant to exclude indigenous live fish or by issuing a general permit authorizing federal and state fish and game authorities to add hatchery-raised indigenous fish stock to navigable water. While the Agency is rulemaking on fish and shell-

77. 299 F.3d 1007 (9th Cir. 2002).
78. *Id.* at 1015-17.
79. CWA §316(a), 33 U.S.C. §1326(a) (emphasis added).
80. *Hammersley*, 299 F.3d at 1016.
81. The operation was conducted from a raft and consisted of planting mussel seeds on ropes hung from the bottom of the raft and anchored on the bottom. Mussels grew on the ropes, which were hoisted on board the raft at intervals for harvesting. *Hammersley*, 299 F.3d at 1016.
82. 33 U.S.C. §1328. *See* 40 C.F.R. §122.24(a). EPA may designate aquaculture operations as point sources requiring permits.
83. Section 502(6) includes CAFOs within the list of example point sources.
84. *See* Webster's New Int'l Dictionary of the English Language 135 (1958). "The science, art and business of cultivating marine or freshwater foodfish or shellfish, such as oysters, clams, salmon and trout, under controlled conditions." *See* American Heritage Dictionary of the English Language 89 (4th ed.).
85. CWA §§101(a) & 316(a), 33 U.S.C. §§1251(a) & 1326(a).
86. CWA §101(a)(2), 33 U.S.C. §1251(a)(2).
87. CWA §316(a), 33 U.S.C. §1326(a) (emphasis added). Although this language is specified for the control of thermal discharges, it is an apt amplification of the statutory goal and there is no reason to believe Congress' concern for indigenous fish was confined to their survival from changes in heat.
88. Association to Protect Hammersley, Eld, and Totten Inlets v. Taylor Res., Inc., 299 F.3d 1007, 1010 n.1 (9th Cir. 2002).

fish, it might as well include people so that water theme parks do not need §402 permits for waterslides into lakes and rivers. EPA already has promulgated a permit by rule for burial at sea under the Ocean Dumping Act, demonstrating that it is possible to acknowledge that human bodies are pollutants, but allowing a desirable body-disposal activity to continue under conditions that will ensure that it is not harmful to human health or the environment.[89] If EPA can do so for human bodies under the Ocean Dumping Act, surely it can do so for live fish and human swimmers under the CWA. EPA might be tempted instead to promulgate an exclusion from requiring a permit in 40 C.F.R. §122.3 for the same activity. This is not as wise a course as the other options, however, because, as discussed below, courts have repeatedly held that EPA does not have the power to exempt from the permit program any discharges that the statute requires to have a permit.

b. Consumer Products

One of the most frequently litigated issues in the interpretation of pollutant is whether a consumer product becomes a waste when it is used for its intended purpose.[90] The question arises because a product's intended use may bring it to rest in navigable water without further human intervention. Most products become waste when we throw them away after use (for example, when we throw paper into the waste basket or leave our garbage cans on the street for municipal collection), or abandon them after use or even before use (for example, when we spill unused oil from a vessel at sea). But some products, such as bullets or pesticides, come to rest in navigable water because we use them for their intended purposes. Does firing a bullet at a duck flying over water constitute the addition of a solid or chemical waste to that water when we do not hit the bird? How can firing a bullet at a bird, the intended use of the bullet, constitute disposal of a waste or addition of a waste to water? Courts have held that substances can be pollutants no matter how useful they are,[91] and that the purpose of a substance is irrelevant to whether it is a pollutant.[92]

The Supreme Court addressed a similar question under the Refuse Act, holding in *United States v. Standard Oil Co.* that commercially valuable aviation fuel became refuse,[93] indeed became a pollutant,[94] once it was spilled into water. Oil and hazardous substance spill cases under the CWA generally involve this same principle because commercially valuable oil or chemicals are abandoned when they are spilled and are no longer useful products.[95] Once a bullet misses the waterfowl it was aimed at and falls into the water, it too becomes refuse. Neither the owner of the spilled oil nor of the errant bullet intended to throw it away or intended it to enter water. But by the very act of spilling the substance in water or firing it over water, the substance lost its value, and the owner abandoned it to fall into water.[96]

i. Munitions

The Supreme Court acknowledged that a bomb dropped into ocean water when it missed its target on a practice range was a pollutant because the definition of pollutant includes "munitions," and bombs are "munitions."[97] The first cases in the civilian arena in which this issue surfaced were suits by environmental groups under the CWA and RCRA against gun ranges for discharging spent lead shot and skeet target fragments into Long Island Sound and other water bodies.[98] The plaintiffs challenged these operations, in part, on the ground that the defendants were point sources adding pollutants to navigable water without a CWA permit. The amounts of lead some gun ranges added to the environment were enormous.[99]

Courts had no trouble finding that the spent shot "which lands in navigable waters constitutes a pollutant within the meaning of the CWA,"[100] effectively meaning that it fell within the chemical or solid waste categories in the CWA's definition of pollutant. Courts had considerably more trouble determining whether the spent shot was a solid waste under RCRA,[101] an elaborately defined term under

89. Marine Protection, Research, and Sanctuaries Act, 33 U.S.C. §§1401 et seq. For Ocean Dumping Act, see §1412. EPA's regulations, 40 C.F.R. §229.1, authorize burial at sea of bodies, cremated ashes, and accompanying flowers and decomposable wreathes, subject to conditions on location.
90. The same issue arises under RCRA.
91. *See, e.g.*, Hudson River Fishermen's Ass'n v. City of New York, 751 F. Supp. 1088, 1101, 21 ELR 20467 (S.D.N.Y. 1990).
92. *See, e.g.*, Minnehaha Creek Watershed Dist. v. Hoffman, 597 F.2d 617, 626-27, 9 ELR 20334 (8th Cir. 1979).
93. "There is nothing more deserving of the label 'refuse' than oil spilled into a river." United States v. Standard Oil Co., 384 U.S. 224, 229-30 (1966).
94. "The word 'refuse' includes all . . . pollutants apart from those flowing from streets and sewers and passing there-from in a liquid state." *Id.* at 230.
95. *See, e.g.*, United States v. Hamel, 551 F.2d 107, 7 ELR 20253 (6th Cir. 1977).
96. The analogy is not exact, however, for the spilled oil was never used for its intended purpose, while the bullet may have been used for its intended purpose, if the intended purpose was to be fired at a bird and to hit a bird over or near water.
97. Weinberger v. Barcelo-Romero, 456 U.S. 305, 308-09, 12 ELR 20538 (1982). The Court describes the district court's holding that bombs are pollutants because bombs are munitions, and munitions are included on the exclusive list of pollutants in CWA §502(6). The Court did not question that holding.
98. Connecticut Coastal Fishermen's Ass'n v. Remington Arms Co., 989 F.2d 1305, 1313, 23 ELR 20699 (2d Cir. 1993); Long Island Soundkeeper Fund, Inc. v. New York Athletic Club, 1996 WL 131863 (S.D.N.Y. 1996).
99. For instance, at one gun range, 2,400 tons (nearly five million pounds) of lead shot had been discharged on surrounding land and water. *Connecticut Coastal Fishermen's Ass'n*, 989 F.2d at 1308.
100. *Long Island Soundkeeper Fund*, 1996 WL 131863 at *15.
101. RCRA defines "hazardous waste" as a subset of "solid waste," 42 U.S.C. §6903(5). It then defines "solid waste" as "discarded material," 42 U.S.C. §6903(27), but it also charges EPA with the responsibility to define hazardous waste, which carries with it the responsibility to define solid waste, 42 U.S.C. §6921. EPA's regulatory definitions of solid and hazardous waste are narrower than the statutory definitions. In *Connecticut Coastal Fishermen's Ass'n*, 989 F.2d 1305, the U.S. Court of Appeals for the Second Circuit held that lead shot fired at a rifle range met RCRA's congressional definition of solid waste, leaving open the question of whether it met EPA's regulatory definition. The significance between the different statutory and regulatory definitions is that material must meet the statutory rather than the narrower regulatory definition of solid waste to provide courts with jurisdiction for citizen suits seeking to remediate imminent and substantial endangerment of health or the environment from solid or hazardous waste under 42

that statute. Neither RCRA's statutory definition nor EPA's regulatory definition of solid waste under RCRA specifically addressed whether lead shot fired at a rifle range was or became a solid waste. But EPA consistently interpreted its RCRA regulatory definition of solid waste to exclude consumer products when used for their intended purposes and particularly to exclude spent ammunition.[102] Indeed, it promulgated a RCRA rule to define when spent military munitions are and are not solid waste, specifying that they are not solid waste when they are "used for their intended purpose."[103] It could be argued that because the RCRA regulation addresses only military munitions and not civilian munitions, spent civilian munitions are still pollutants. The logic of the regulation, however, applies equally to military and civilian spent munitions.[104] Should solid waste be defined identically under RCRA and the CWA? Because their goals are both to protect public health and the environment, arguably they should be, but that would require EPA rulemaking under the CWA.

ii. Pesticides

The issue of whether consumer products used for their intended purposes are wastes when discharged into water arises in other contexts, particularly with regard to the application of pesticides in or near an aquatic environment. Decisions involving such releases are complicated by the relevance of another statute administered by EPA, the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA),[105] governing the registration and use of pesticides (insecticides, fungicides, or rodenticides). To register a pesticide, EPA must approve uses that can be made of the pesticide and directions for applying the pesticide; thereafter, both are required to be printed on the label.[106] In deciding whether to register a pesticide, what uses to allow for it, and what methods of application to require for it, EPA is to "prevent unreasonable adverse effects on the environment," including water.[107] FIFRA prohibits the distribution, sale, or use of an unregistered pesticide or the use of a registered pesticide unless in compliance with EPA-approved uses and directions for its application.

When public health officials in and around New York City discovered in 2000 that mosquitoes carried the newly arrived and deadly West Nile virus, they ordered the spraying of pesticides to eradicate mosquitoes. Because mosquitoes breed in water, the resulting campaign sprayed pesticides over and near open water and wetlands. In *No Spray Coalition v. City of New York*,[108] environmental groups brought a CWA citizen suit to enjoin the spraying, arguing that it would damage the environmental and public health, but would be ineffective in suppressing West Nile virus. The district court, apparently irked by the plaintiff's attempt to interfere with the implementation of public health protection measures,[109] refused to issue an injunction, in part because Congress did not intend plaintiffs to use the CWA citizen suit provision to enforce prohibitions of FIFRA, which had no such provision. Although the court did not address whether pesticides, when properly applied to water according to the approved uses and labels, were pollutants, it held that because the pesticides were sprayed into the air rather than into the water, they were not added to navigable water.[110]

Shortly thereafter, citizens filed similar suits against nearby spraying. In *Altman v. City of Amherst*,[111] the district court dismissed the complaint, holding that "pesticides, when used for their intended purpose, do not constitute a 'pollutant' . . . and are more appropriately regulated under FIFRA."[112] The court was persuaded that because FIFRA had no citizen suit provision, Congress did not intend that CWA citizen suits be brought against the spraying of pesticides in accordance with label instructions approved by EPA under FIFRA. In *Peconic Baykeepers, Inc. v. Suffolk County*,[113] another New York federal district court conflated "addition" and "pollutant," stating that: "Atmospheric emission of aerial adulticides are not defined as pollutants[;] at no time was the spray made directly to navigable water." It held that FIFRA rather than the CWA governed and deferred to EPA's Interpretive Statement (discussed below) that no CWA permit was required.

The U.S. Court of Appeals for the Second Circuit reversed *No Spray*, holding that CWA §505 authorized plaintiffs to maintain a CWA citizen suit if they alleged a violation of the CWA.[114] The Second Circuit also reversed *Altman*, because the record was incomplete and because the plaintiff had not been able to conduct discovery to make its case that properly applied pesticides were pollutants. The Second Circuit stated that the ques-

U.S.C. §6972(a)(1)(B), but must meet the narrower regulatory definition of solid waste to provide courts with jurisdiction for citizen suits against disposal of hazardous waste without or in violation of a RCRA permit under 42 U.S.C. §6972(a)(1)(A). The court later decided in *Cordiano v. Metacom Gun Club, Inc.*, 575 F.3d 199 (2d Cir. 2009), that such lead shot was not a RCRA solid waste within EPA's regulatory definition. The end result is that plaintiffs may bring citizen suits against gun clubs for causing an imminent and substantial endangerment of health or the environment, regardless of whether they are violating RCRA, but not against the gun clubs for operating without or in violation of a RCRA permit.

102. *Cordiano*, 575 F.3d at 207-09.

103. 40 C.F.R. §266.202.

104. Why did EPA not cover both military and civilian munition in the same rule? Could it be that the U.S. Department of Defense's lobbying carries greater weight than the NRA's lobbying?

105. Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), 7 U.S.C. §§136-136y, ELR Stat. FIFRA §§2-35.

106. FIFRA §3(c)(1)(C), 7 U.S.C. §136a(c)(C).

107. FIFRA §§2(j) & 3(a), 7 U.S.C. §§136(j) & 136a(a).

108. No Spray Coalition v. City of New York, 2000 WL 1401458 (S.D.N.Y. 2000), *rev'd*, 252 F.3d 148, 31 ELR 20707 (2d Cir. 2001).

109. The district court noted that the citizens filed suit "despite the unusual unanimity of governmental agency opinion that this spraying is in the best interests of preserving public health" and that "[f]ortunately for the community, that question is decided by public health and environmental officials," not by the courts. 2000 WL 1401458 at *1.

110. *Id.* at *3.

111. Altman v. City of Amherst, 190 F. Supp. 2d 467 (S.D.N.Y. 2001), *rev'd*, 47 Fed. Appx. 52 (2d Cir. 2002).

112. *Altman*, 190 F. Supp. 2d at 471.

113. 585 F. Supp. 2d 377 (E.D.N.Y. 2008), *rev'd in part*, 600 F.3d 180 (2d Cir. 2010).

114. *No Spray Coalition*, 252 F.3d 148.

tion of whether properly applied pesticides could be pollutants under the CWA would remain open unless and until EPA articulated an interpretation of the CWA on the issue.[115] Finally, the Second Circuit in part reversed *Peconic Baykeepers*,[116] noting that the Sixth Circuit had subsequently overturned EPA's CWA pesticide exemption rule in *National Cotton Council*,[117] discussed below, but that the Sixth Circuit had stayed its mandate. Because, on the facts found by the district court, some of the defendant's spraying was not in conformity with the pesticide's FIFRA-approved label, the Second Circuit reversed the lower court's decision to that extent.

In the meantime, two decisions of the Ninth Circuit addressed the relationship between the CWA and FIFRA in regulating the application of pesticides to navigable water in accordance with their EPA-approved labels. In *Headwaters*,[118] decided in 2001, an irrigation district added a chemically derived herbicide to irrigation canals (considered navigable waters for the purposes of the case) to kill aquatic weeds choking the canals. EPA had registered the herbicide under FIFRA for that purpose, and the defendant applied the herbicide in accordance with the instructions on its EPA-approved label. When the defendant added the herbicide to the stream, the active ingredient in the herbicide remained in the water after it had served its intended purpose. The court held that the remaining pesticide was either excess pesticide or pesticide residue, in either case a "chemical waste," and therefore a "pollutant," the discharge of which required a §402 permit.

In a later Ninth Circuit decision, *Fairhurst v. Hagener*,[119] the Montana Department of Fish, Wildlife, and Parks had added a pesticide to streams to kill invasive non-indigenous fish for the purpose of restoring the population of indigenous fish. EPA had registered the chemically derived pesticide under FIFRA for that purpose, and Montana applied the pesticide in accordance with the EPA-approved label. As unlikely as it may seem, the uncontested facts established that no excess chemical pesticide was discharged to the water and that once the pesticide performed its intended purpose, there was no residue chemical pesticide and hence no chemical waste. At the time that the Ninth Circuit considered the issue, EPA had issued an Interpretive Statement and Notice of Proposed Rulemaking on the Application of Pesticides to Waters of the United States in Compliance With FIFRA.[120] Under EPA's interpretation, pesticides applied for their intended purposes, in accordance with their EPA-approved labels, and leaving no excess or residue pesticide in the water, were not pollutants under the CWA. This was consistent with the *Headwaters* ruling, and the Ninth Circuit deferred to EPA's interpretation. EPA's interpretation conceded that excess pesticides or residual pesticides are pollutants, but concluded they are not added to navigable waters by aerial spraying point sources because the point sources spray them into the air, not into the water. The Ninth Circuit did not address this spraying scenario, however, because it was beyond the facts of the case.

EPA ultimately promulgated a CWA rule incorporating the substance and reasoning of its Interpretive Statement.[121] The rule exempted from the CWA §402 permit program pesticides applied directly to, over, or near water in full compliance with FIFRA.[122] The Sixth Circuit resolved challenges to the rule in the most detailed decision considering the legality of discharging pesticides into water without a CWA permit in *National Cotton*.[123] EPA began its argument before the court, as it had in the preamble to its rule, by stating that pesticides are either biological or chemical in composition and can be pollutants only if they are "biological material" or "chemical wastes." It then argued that when chemically derived pesticides are applied for an EPA-approved use, they are not chemical wastes. EPA conceded that excess pesticides and pesticide residue are pollutants because they are biological material or chemical wastes. Finally, it argued that biologically derived pesticides applied for their EPA-approved use cannot be biological material, because it would be absurd for biological pesticides applied for their approved use to be treated differently than chemical pesticides applied for their approved use.[124]

The Sixth Circuit considered three different dictionary definitions of waste, and concluded that under any of the definitions, chemical pesticides are not chemical waste, but that excess pesticides and pesticide residue "are wastes of the pesticide application."[125] Thus far, it agreed with EPA. But then EPA argued that the point sources only sprayed pesticides into the air for their intended uses; the point source did not spray excess pesticides or pesticide residues. At the "time of discharge, the pesticide is a non-pollutant and the excess pesticide or pesticide residues are not created until later, presumably after they are already in the water."[126] Therefore, EPA argued that by spraying pesticides, the point source did not spray (add) excess pesticides and pesticide residues into water, and thus did not require a CWA §402 permit. The court rejected EPA's assertion that "a pesticide must be 'excess' or 'residue' at the *time of discharge* if it is to be considered as discharged *from a point*

115. Altman v. City of Amherst, 47 Fed. Appx. 52 (2d Cir. 2002).
116. Peconic Baykeepers, Inc. v. Suffolk Cnty., 600 F.3d 180 (2d Cir. 2010).
117. 553 F.3d 927, 39 ELR 20006 (6th Cir. 2009).
118. 243 F.3d 526, 31 ELR 20535 (9th Cir. 2001).
119. 422 F.3d 1146 (9th Cir. 2005).
120. *Id.* at 1149-50. Indeed, before the district court issued its opinion, EPA had issued an Interim Interpretive Statement. The Interim Interpretive Statement and the Interpretive Statement were similar in reasoning and conclusion. Both are addressed below.
121. 71 Fed. Reg. 68483 (Nov. 27, 2006), codified at 40 C.F.R. §122.3(h).
122. *Id.* at 68486-87. The rule was consistent with *Fairhurst*, in which the Ninth Circuit had held that a chemical pesticide applied to water was not a pollutant when no excess or residual pesticide remained in the water. The rule is not convincingly consistent with *Headwaters*, however, because that decision commented that chemical pesticide excess or residue in water would be a pollutant without considering EPA's argument that the defendant did not add the pollutant from a point source.
123. National Cotton Council of America v. U.S. EPA, 553 F.3d 927, 39 ELR 20006 (6th Cir. 2009).
124. *Id.* at 934-35.
125. *Id.* at 936, quoting from the preamble of EPA's rule, 71 Fed. Reg. at 68487.
126. *Id.* at 939.

source."[127] The court found that requiring a temporal connection in "the discharge of a pollutant" was "unsupported by the Act . . . [and] contrary to the purpose of the permitting program, which is 'to prevent harmful discharges.'"[128] The court noted that the purpose of the statute was to prevent the discharge of pollutants that would harm water quality, whether the harm occurred immediately upon discharge or later.[129]

As to biologically based pesticides, the court could find no rationale for holding them not to be "biological materials" rather than falling into a more limited hypothetical category such as "biological waste." Congress specifically used the broader "material" category for biological substances. Treating biological pesticides as pollutants is also consistent with the §502(19) definition of pollution, which includes the "biological . . . integrity of water," for "[a]dding biological pesticides to water undeniably alters its biological integrity."[130] Since Congress decoupled "pollutant" from "pollution," however, this is not overwhelmingly persuasive support for the court. Alternatively, it could have argued the broader interpretation of biological material promotes the objective of the CWA as stated in §101(a) "to restore and maintain the . . . biological integrity of the Nation's waters." The court also noted that other courts had construed "biological material" broadly to include live fish, dead fish, fish parts, and fish feces and urine.[131] In the end, the court held that pesticide residue or excess was unambiguously chemical waste and biological material.[132]

iii. Water Supply Treatment Residue

Lead shot and pesticides are not the only consumer products that may become pollutants after use for their intended purposes. In *Hudson River Fishermen's Association v. City of New York*,[133] the city augmented its water supply in times of water shortage by pumping water from the Hudson River into an aqueduct, which ultimately discharged the water into a reservoir that was part of the city's water supply system. The city conceded that the reservoir was navigable water. Because the river water was not clean enough to serve as drinking water without treatment, the city added alum and chlorine at the pumping station to precipitate out solids and to kill pathogens as the water made its way to the reservoir through the aqueduct. By the time the aqueduct discharged the river water to the reservoir, the chemicals had performed their intended purposes and the aqueduct discharged alum floc (the solids precipitated by the alum) and chlorine residual (the chlorine remaining after killing the pathogens) to the reservoir, along with the treated water. The environmental group sued the city for discharging alum floc and chlorine residue to the reservoir without a permit.

The city argued it was adding useful chemicals at the pumping station to perform a public health benefit, as the defendants had argued in the pesticide application cases. The district court found that the city's actions were no different than those of other water treatment plants, which commonly added alum to precipitate out solids, which they then "filtered out, backwashed from the filter, and disposed of as waste."[134] Indeed, water treatment plants routinely have CWA §402 permits limiting their discharges of solids and alum.[135] Chlorine is used to treat publicly owned treatment works (POTWs) effluent for pathogens, and chlorine residual is routinely regulated in CWA §402 permits for POTWs.[136]

The city's argument focused on the wrong substances and the wrong receiving water. The city added alum and chlorine to the water in the aqueduct at the pumping station, at which point they were useful products rather than chemical wastes or residues. Moreover, no one contended that the water in the aqueduct was navigable. But that was not what the plaintiff environmental group challenged; instead, it challenged the subsequent discharge of the alum sludge and chlorine residual into the reservoir. At that point, the reservoir was concededly navigable water and the chemicals had served their useful purposes and were either excess or residue—chemical wastes in either case. The court commented that it "is indisputable that a pollutant is a pollutant no matter how useful it may earlier have been."[137]

iv. Consumer Products as Pollution

Some may wonder why EPA would abandon the environmental high road by not regulating the discharges of spent lead shot and spent or excess pesticides into water. Cynics might conclude that EPA did not want to confront the National Rifle Association and the agricultural lobby. There is undoubtedly some truth in that. On the other hand, it is not clear that Congress intended the CWA to regulate additions to water of consumer products whose intended use involves addition to water. This ambiguity

127. *Id.*
128. *National Cotton Council*, 553 F.3d at 939, *quoting* National Ass'n of Home Builders v. Defenders of Wildlife, 127 S. Ct. 2518, 2525 (2007).
129. A similar attempt to require a temporal connection between "addition" and polluting activities was rejected in *American Mining Cong. v. U.S. EPA*, 965 F.2d 759, 764, 22 ELR 21135 (9th Cir. 1992).
130. *National Cotton Council*, 553 F.3d at 938.
131. *Citing* National Wildlife Fed'n v. Consumers Power Co., 862 F.2d 580, 17 ELR 20801 (W.D. Mich. 1987); U.S. PIRG v. Atlantic Salmon of Maine, LLC, 215 F. Supp. 2d 239, 246, 32 ELR 20535 (D. Me. 2002). The Sixth Circuit distinguished *Hammersley*, holding mussel feces and shells not to be biological material because that decision dealt with the "result of natural biological processes, not the result of a transforming human process. *See National Cotton Council*, 553 F.3d at 938 n.6.
132. *National Cotton Council*, 553 F.3d at 940.
133. 751 F. Supp. 1088, 21 ELR 20647 (S.D.N.Y. 1990), *aff'd without opinion*, 940 F.2d 649, 21 ELR 21226 (2d Cir. 1991).
134. *Id.* at 1102.
135. *Id.* at 1097-98.
136. Interestingly, residual chlorine is limited in terms of both maximum levels and minimum levels in POTW effluent. *See Russian River Watershed Prot. Comm. v. City of Santa Rosa*, 142 F.3d 1136, 1139, 28 ELR 21265 (9th Cir. 1998). The maximum level, of course, protects life in the receiving water. The minimum level ensures that the POTW is adding enough chlorine to do its job.
137. Hudson River Fishermen's Ass'n v. City of New York, 751 F. Supp. 1088, 21 ELR 20647 (S.D.N.Y. 1990).

also troubles the analyses of the discharges under other elements of the CWA offense.[138]

The meaning of waste is inherently uncertain for two primary reasons. First, what may be waste to a person who is disposing of a substance may be a useful substance for another person,[139] an issue that has not yet arisen in the decisions defining pollutant in the CWA, but underlies the issue of defining solid waste in RCRA. Second, the intended use of a consumer product may result in the product coming to rest in water, for example, spent bullets fired at birds over water but missing their targets. These and similar cases can be expected to recur in other contexts. Under these circumstances, it is curious why EPA has not promulgated a rule defining pollutant or waste to exclude consumer products, particularly regulated consumer products that are used for their intended purposes, or fashioned a general permit or permit by rule to authorize such discharges, as it has done for military munitions under RCRA[140] or burial at sea of human bodies under another statute, as discussed above. Of course, the Agency attempted to promulgate a rule exempting pesticide applications from requiring §402 permits. But early in the CWA's implementation, courts held that EPA could not exempt any category of discharges of pollutants from point sources to navigable waters from the requirement of securing a CWA permit.[141] It is no surprise that EPA lost its bid to promulgate a similar rule exempting discharges of pesticides from the requirement of securing CWA permits.[142] EPA might be more successful using a different regulatory strategy, as suggested above.

C. *Discharged Into Water*

Under §502(6), the listed substances and listed categories of substances are pollutants only if they are "discharged into water." But the §301(a) prohibition, elaborated by §502(12), already specifies that only the addition of a pollutant from a point source into navigable *water* is a violation. The "discharged into water" phrase in §502(6) appears to be redundant with the "into . . . water" already in §502(12), making the offense: the addition of a pollutant *into water* from a point source *into* navigable *water*. This makes no sense. "Water" in "discharged into water" is not modified by "navigable," making "water" a more expansive term, perhaps including groundwater. Accordingly, the offense would read as follows: the addition of a pollutant into water, including groundwater, from a point source into navigable water. That makes no sense either. Section 502(16) defines the freestanding "discharge" to include "discharge of a pollutant," which is already defined as addition of a pollutant into navigable water from a point source in §502(12). That interpretation would make the offense even more circular and nonsensical. Statutes are to be interpreted to give every word a meaning[143] and to avoid redundancies.[144] Avoiding the redundancy of "discharge" and "water" in §502(6), however, results in circularity, absurdity, and nonsense, which are to be avoided even more than redundancy.

The analysis is complicated by the fact that Congress included a similar redundancy in its definition of "point source" to mean exclusively a "discernible, confined and discrete conveyance . . . from which pollutants are or may be discharged," with an inclusive list of examples, including a pipe, §502(14). This, together with the "discharged into water" phrase in §502(6) makes the offense read: the addition of any listed substance into water from a pipe from which listed substances are added into navigable waters. This suggests the offense is a two-staged activity: the addition of a substance into water, and the subsequent addition of their mixture by a conveyance into navigable water. While that describes many industrial and municipal effluents, nothing else in the statute suggests the prohibition excludes addition of pollutants directly into navigable water without first being mixed with water.

Perhaps, the drafters of these definitions did not want to slander the substances listed as pollutants unless they were actually added to navigable water. We do not want children to recoil from eating broccoli because it is a "pollutant" (a "biological material"), regardless of whether it is discharged into water. Similarly, perhaps the drafters did not want to imply that all point sources were illegal unless they actually added pollutants to navigable water. Such caution was unnecessary, however, because all four elements of the offense must be met before a discharge violates the CWA unless it is in compliance with a permit. Although when interpreting a statute we are supposed to avoid redundancy and to give meaning to every word, a few

138. For instance, what are the point sources: the rifle ranges or the rifle barrels? If the latter, is EPA to issue permits to all hunters or rifle owners for them to fire over water? That would be a thankless and probably impossible task. The analytical problem may be analogous to issues that arise under the "addition" element of the offense, where, with respect to aerial spraying of pesticides, the addition seems to be to the air rather than to the water. *See* Miller, *supra* note 6. In *U.S. EPA ex rel. McKeown v. Port Authority of New York and New Jersey*, 162 F. Supp. 2d 173 (S.D.N.Y. 2001), the plaintiff sued to abate pollution from tunnel toll booths. The court commented that the pollutants at issue emanated from countless vehicle exhausts rather than from the toll booths.

139. When you leave an unwanted chair at the curbside in front of your house and it is taken by someone else for use, it was waste for a moment, but not for long. One of RCRA's objectives is to minimize the disposal of waste by encouraging "recycling and reuse." *See* 42 U.S.C. §6902(a)(6). Material destined for recycling is waste to the disposer, but a useful material to the recycler.

140. 40 C.F.R. §266.202, a rule that has survived judicial review. *See* Military Toxics Project v. EPA, 146 F.3d 948, 28 ELR 21350 (D.C. Cir. 1998).

141. *See* National Cotton Council of Am. v. U.S. EPA, 553 F.3d 927, 39 ELR 20006 (6th Cir. 2009); Northwest Envtl. Advocates v. U.S. EPA, 537 F.3d 1006, 1021-22 (9th Cir. 2008); Northern Plains Resource Council v. Fidelity Exploration and Dev. Co., 325 F.3d 1155, 1164 (9th Cir. 2003); NRDC v. Costle, 568 F.2d 1369, 8 ELR 20028 (D.C. Cir. 1977); Catskill Mountains Chapter of Trout Unlimited v. U.S. EPA, Nos. 08-CV-5606, -8430, 2014 WL 1284544 (S.D.N.Y. Mar. 28, 2014).

142. *National Cotton Council*, 553 F.3d 927.

143. Senne v. Village of Palentine, Ill., 695 F.3d 617, 621 (7th Cir. 2012). *See* Scalia & Garner, *supra* note 12, at 174-79.

144. Mackey v. Lanier Collection Agency & Serv., Inc., 486 U.S. 825, 837 (1988). Eskridge, *supra* note 70, at 324, *citing* Kungys v. United States, 485 U.S. 759, 778 (1988); South Carolina v. Catawba Indian Tribe, Inc., 476 U.S. 498, 510 n.22 (1986).

redundancies, meaningless words, and scrivener's errors[145] may be inevitable in a 200-page statute. These redundancies are two of them.

Only two decisions have identified this issue. In the first, *United States v. Pozsgai*,[146] the defendants in an enforcement action for filling a wetland without a §404 permit argued that they had not discharged substances into water and, therefore, the substances were not pollutants. They argued that the "into navigable waters" phrase in §502(12) defined the geographic jurisdictional reach of the statute, and the "into water" phrase in §502(6) limited the definition of "pollutant." Though it seemed to be a clever argument, the U.S. Court of Appeals for the Third Circuit rejected it in favor of reading "navigable waters" in §502(12) to modify "water" in §502(6), an interpretation it found more consistent with the legislative history.[147] The court's interpretation, however, is circular and ignores the recurrence of similar redundancies in these definitional phrases.[148] The second decision, *Pronsolino*,[149] was a dispute over whether §§303(d) and 319 require total maximum daily loads (TMDLs) for water polluted only by nonpoint sources. While the California federal district court recognized the issue posed by "into water" in the definition of pollutant in §502(6), it did not need to address that issue to resolve the TMDL dispute before it.

As much as courts abhor redundancy in statutes, there is no apparent way around the redundancy between "into navigable water" in §502(12), the primary definition of the offense, and "into water" in §502(62), defining an element in §502(12).

D. Must a Pollutant Cause Pollution?

As discussed above, Congress decoupled "pollutant" and "pollution" by defining each without reference or regard to the other. The §502(6) definition of pollutant does not hint that a pollutant is something causing pollution; the §502(19) definition of pollution does not hint that pollution is a condition caused by a pollutant. Most courts agree.[150] Indeed, in an important early decision, *National Wildlife Federation v. Gorsuch*,[151] the D.C. Circuit deferred to EPA's argument that low dissolved oxygen, cold, and oxygen supersaturation resulting from water flowing over dams were not pollutants, but instead were "water conditions," e.g., "pollution," and therefore the dams from which these conditions followed did not require §402 permits.

Despite the decoupling of pollutant and pollution, some courts have determined particular substances to be pollutants or not to be pollutants in part on the basis of their negative impact or lack of negative impact on water quality.[152] Because the overall purpose of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters"[153] and the CWA's definition of pollution is the "man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water," the very purpose of the CWA, not surprisingly, is to reduce pollution. The frequently used canon of construction to interpret a remedial statute to effectuate its purpose,[154] therefore, suggests that "pollutant" be interpreted to accomplish "pollution" control, even though the two words are decoupled by their statutory definitions. On the other hand, the definition of pollutant is so broad that use of this additional canon should not be necessary to hold that a substance is a pollutant. Moreover, while the fact that a substance causes pollution might suggest that the substance is a statutory pollutant,[155] the reverse is not true. After all, Congress defined pollutant to include substances not causing pollution, such as rock and sand.

One problem with using the concept of pollution as a driver for interpreting pollutant is that the meaning of pollution is not altogether clear. While the statutory definition of pollution as the "chemical, physical, biological and radiological integrity of water" appears meaningful, what does it in fact mean? What is water integrity?[156] Surely, it cannot mean pure water, which scarcely if ever occurs in a state of nature and would not nourish fish and shellfish if it did. Is water with integrity water as it existed at a particular time and place? Before the industrial revolution? Before the arrival of European colonists in North America? Before the arrival of the original colonists in the western hemisphere?[157] Or does it relate to "the protection

145. *See* Scalia & Garner, *supra* note 12, at 234-39.
146. 999 F.2d 719, 23 ELR 21012 (3d Cir. 1993).
147. *Id.* at 726-27.
148. Section 502(12) similarly defines the "discharge of a pollutant" to mean addition of a pollutant from a "point source," which it defines in §502(14) as a conveyance from which a pollutant may be "discharged."
149. 91 F. Supp. 2d 1337, 30 ELR 20460 (N.D. Cal. 2000).
150. Demonstration of a negative impact on water quality is not necessary for a substance to be a pollutant. *See, e.g.*, Northern Plains Res. Council v. Fidelity Exploration and Dev. Co., 35 F.3d 1155, 1161 (9th Cir. 2003); Committee to Save Mokelumne River v. East Bay Mun. Util. Dist., 13 F.3d 305, 309, 24 ELR 20225 (9th Cir. 1993); Minnehaha Creek Watershed Dist. v. Hoffman, 597 F.2d 617, 626-27, 9 ELR 20334 (8th Cir. 1979); U.S. PIRG v. Atlantic Salmon of Maine, LLC, 215 F. Supp. 2d 239, 247 n.3, 32 ELR 20535 (D. Me. 2002); Long Island Soundkeeper Fund, Inc. v. New York Athletic Club, 1996 WL 131863 (S.D.N.Y. 1996).
151. 693 F.2d 156, 13 ELR 20015 (D.C. Cir. 1982).
152. For decisions where a substance was deemed a pollutant because of negative impact on water quality, see *Borden Ranch Partnership v. U.S. Army Corps of Engineers*, 261 F.3d 810, 814-15, 32 ELR 20011 (9th Cir. 2001); and *United States v. Deaton*, 209 F.3d 331, 336, 30 ELR 20508 (4th Cir. 2000). In *Hammersley*, the Ninth Circuit held that a substance was not a pollutant because of its neutral or positive impact on water quality. *See* Association to Protect Hammersley, Eld, and Totten Inlets v. Taylor Resources, Inc., 299 F.3d 1007, 1016 (9th Cir. 2002).
153. CWA §101(a).
154. Eskridge, *supra* note 70, at 327, *citing* Reves v. Ernst & Young, 494 U.S. 56 (1990).
155. *See* National Cotton Council of Am. v. U.S. EPA, 553 F.3d 927, 938, 39 ELR 20006 (6th Cir. 2009).
156. The dictionary definition of "integrity" is "unimpaired or unmarred state . . . soundness, purity." Webster's New Dictionary of the English Language 1290 (1958). Use of the word in the CWA "is intended to convey a concept that refers to a condition in which the natural structure and function of ecosystems is maintained." H. Rep. No. 92-911, at 76-77 (1972), *reprinted in* 3 Legis. History 753, 763-64. Query how much help that is. Which ecosystem are we protecting? The one that existed before the advent of the industrial revolution, or before the introduction of trans-Atlantic human immigrants, or before the introduction of Native American immigrants, or before the last Ice Age? Ecosystems are constantly evolving even without human intervention.
157. One case from the U.S. Court of Appeals for the Eighth Circuit suggests that water with integrity means pre-industrial revolution or even pre-human

and propagation of fish, shellfish, and wildlife and . . . for recreation in and on the water," a goal of the CWA?[158] If so, which fish and shellfish?[159] Indigenous or introduced? If indigenous, at what time and for how long?

The concepts of water integrity and water pollution are relative, difficult to define, and involve both science and policy. Take, for example, nutrients. Nutrients support biological growth; without nutrients, there would be no fish in the streams, lakes, or oceans. But a superabundance of nutrients causes algae blooms, which in turn die and exert oxygen demand in water to decompose, and if the oxygen demand from the algae decomposition is sufficient, there will be no oxygen left for fish to survive. There is a dead zone in the Gulf of Mexico caused by nutrients flushed down the Mississippi River from farmland, cities, and factories throughout the Midwest.[160] No nutrients equates to no fish; but too many nutrients also equates to no fish. Whether a substance causes pollution is often a situational issue and is always a scientific question. To be sure, there are some substances that cause harm to health or the environment under any circumstances and therefore are pollutants under any circumstances. Examples include PCBs or dioxin.

Congress dealt with the ambiguity of water integrity by establishing the water quality standards regimen, in which states designate the uses they desire to be made of particular water bodies (a policy determination), and states together with EPA establish the maximum levels or criteria for various pollutants allowed in each water body to achieve the designated use (a scientific determination).[161] Congress provided in the CWA that point sources cannot discharge pollutants into a water body that will interfere with the designated use of the water by causing an exceedance of the criteria for pollutants in the water body.[162]

Congress' decoupling of "pollutant" and "pollution" in the definitions of the two words reflects its recognition that whether the discharge of a pollutant causes pollution depends in part on a political judgment as to what use should be made of a particular water body, and in part on a scientific expert judgment as to the extent to which discharges of pollutants must be curtailed to achieve that use. These are the very determinations required to establish water quality standards and effluent limitations based on them. This was the pre-1972 strategy of federal water pollution control. But Congress found the water quality approach was cumbersome, resource-intensive for regulators, and slow. Congress therefore enacted the CWA in 1972 to simplify and expedite regulation of pollution through point sources by the initial substitution, in most cases, of technology-based standard regulation for water quality-based standard regulation.[163] Congress hoped that application of the best available water pollution control technology to point sources would achieve water quality standards in most waterways. But it required permit writers to establish effluent limitations requiring further treatment where necessary to achieve water quality standards. Thus, for courts to ask whether a substance causes environmental harm before holding that it is a pollutant arrogates to courts a task that Congress delegated to EPA and the states,[164] pushing judicial authority beyond its separation-of-powers limits.

Why do some courts nevertheless continue to examine whether substances cause pollution before finding they are pollutants? Perhaps, because some judges think it unfair to enmesh defendants in the pollution-control regulatory system unless their discharges are actually harmful. If so, these judges misperceive both the statutory process and their role in it. Holding that a substance is a pollutant does not enmesh the substance in the pollution-control system. That occurs only if all of the other elements of §301(a) are met. Moreover, holding that a substance is a pollutant does not mean that it will be subject to pollution control even if the other elements are met. Water quality standards do not require treatment of harmless substances for which no criteria exist. And the technology-based standards are established, in part, based on a cost-benefit analysis or at least a consideration of cost.[165] If a substance does not cause harm, the costs of treatment for its removal may not be justified.[166] To be sure, someone must determine whether the substance causes sufficient environmental harm to warrant treatment costs. But that is a role that Congress assigned to EPA and its counterpart state agencies, not to the courts.[167]

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water. *See* Minnehaha Creek Watershed Dist.v. Hoffman, 597 F.2d 617, 625, 9 ELR 20334 (8th Cir. 1979). Self-evidently, the physical, chemical, and biological composition of a pre-human river may be purely speculative.

158. CWA §101(a)(2).

159. Section 316(a), 33 U.S.C. §1326(a), may provide some help here by specifying that thermal discharges shall be limited to protect a "balanced, indigenous population of fish, shellfish and wildlife." To be sure, indigenous populations change over time.

160. Friends of the Everglades v. South Florida Water Mgmt. Dist., 570 F.3d 1210, 1227 (11th Cir. 2009).

161. For a discussion of water quality standards and how they are implemented, see Miller et al., *supra* note 5, at Chap. V.

162. Of course, limiting the pollution levels of point sources may not achieve the criteria. In that situation, states may limit nonpoint source discharges to achieve the criteria. If states refuse to do so, however, the CWA has reached the limits of its effectiveness, for it authorizes no federal controls on nonpoint sources and no mechanisms to force states to act on them. For a discussion of the CWA's limited nonpoint source program, see Miller et al., *supra* note 5, at Chap. XIII.

163. CWA §301(b). For a quick review of the events leading up to the enactment of the CWA, see *Environmental Prot. Agency v. California ex rel. State Water Resources Control Bd.*, 426 U.S. 200, 203-06, 6 ELR 20563 (1976).

164. As the Eighth Circuit said in *Minnehaha Creek Watershed Dist.v. Hoffman*, 597 F.2d 617, 627, 9 ELR 20334 (8th Cir. 1979):

> Congress has, by the inclusion of certain substances in the definition of "pollutant" . . . determined that the discharge of those substances in navigable waters is subject to the Act's control requirements. The Act contains no provision that the listed substances are to be classified as pollutants and, thus subject to the Act's control requirements, only upon a further administrative or judicial finding that their addition to navigable waters results in a significant decrease in water quality. Nor does the fact that the listed substances may not in themselves be commonly considered "toxic" or "contaminating" change this result.

165. CWA §304(b)(1)(B), (b)(2)(B), & (b)(3)(B), 33 U.S.C. §1314(b)(1)(B), (b)(2)(B), & (b)(3)(B).

166. *See* Miller et al., *supra* note 5, at 278-305.

167. An exception exists in judicial review of EPA's promulgation of technology-based standards, approval of state water quality standards, or issuance of a permit, where courts give substantial deference to EPA's determinations.

In conclusion, the plain meaning of the definition of pollutant includes almost all substances that may be added to water, making other interpretive devices unnecessary in almost all cases. For the few substances for which the outcome is ambiguous, the broad general purpose of the CWA to attain and maintain water integrity may be a useful supplemental interpretive device in determining whether an environmentally harmful material is a pollutant. If a material does not cause pollution or interfere with water integrity, however, it is still a pollutant if it fits within the statutory definition.

E. Must Pollutants Be of Human Origin?

The Ninth Circuit's *Hammersley* decision held that pollutants must be wastes of human or industrial processes. The notion that a pollutant must be a waste was discussed, and dispelled, above. The notion that a pollutant must be the product of human or industrial processes is similarly wrong. The definition of pollutant contains no qualification that a substance be the product of human or industrial activity. While the definition of "pollution" is limited to "man-made or man-induced alteration" of water quality,[168] pollution is not a jurisdictional limitation, and Congress decoupled the definitions of pollutant and pollution. The definitional list of pollutants includes substances that are not man-made (for example, rock and sand), although those substances may be added to navigable water as a result of human activity. But it is not necessary to contort the definition of pollutant to limit the CWA prohibition to the results of human activity, because the offense already includes "by any person" as a separate element. Insisting that pollutant in §502(6) requires human activity merely creates an unnecessary redundancy with the phrase "by any person" in §301(a).

F. Potential Conflicts With Other CWA Sections

The CWA authorizes regulatory programs other than the §402 permit program. The §404 permit program for dredged and fill material has already been mentioned and is discussed immediately below in greater detail. Section 311[169] provides a comprehensive program to prevent spills of oil and hazardous materials, to remediate them when they occur, and to recover the government's spill cleanup costs. The Oil Pollution Act,[170] passed in the wake of the *Exxon Valdez* oil spill, has largely supplanted §311. Section 312 authorizes the U.S. Coast Guard to regulate the disposal of untreated or inadequately treated sewage from vessels into navigable waters. Nonpoint pollution sources are regulated, if at all, by states, under their own authorities, as encouraged by §319. For the most part, these other programs do not conflict with §402 or raise particular issues with regard to the definition of pollutant.

1. Section 311

In *United States v. Hamel*,[171] the defendant appealed from a criminal conviction for spilling gasoline into Lake St. Claire in violation of §301(a), arguing that gasoline was not a pollutant under §502(6) because that statutory section did not list petroleum products. He further argued, applying the canon that a specific provision of a statute governs over a general provision of the same statute,[172] that because §311 regulated oil spills and even defined "oil" in §311(a)(1), oil was not a pollutant under §502(6) and oil spills were not included as violations of §301(a). The government argued, and the district court held, that oil and gasoline fell within the category of "biological material" listed as a pollutant in §502(6).[173] The Sixth Circuit could easily have upheld the conviction on that basis. Instead, it undertook a longer but more specific analysis, finding that when Congress enacted the CWA, it intended to include within the §402 permit program all discharges covered by the Refuse Act plus liquid waste from streets and sewers,[174] and that the Supreme Court had held earlier, in *United States v. Standard Oil Co.*,[175] that oil spills were discharges of refuse under the Refuse Act. Although those findings answered both of the defendant's arguments, the court proceeded to demonstrate that there was no conflict between §§402 and 311 in this regard, because they served different purposes. The purpose of the §402 permit program is to require pollution reduction from ongoing discharges of pollutants, while the purpose of §311 is to prevent spills of pollutants and to remediate them when they occur.[176] The court could have performed the same analysis, with the same result, if §311 had been a different statute (for example, the OPA) rather than a different section in the same statute.[177]

2. Section 404: Dredged and Fill Material

Section 301(a) prohibits the discharge of a pollutant, except in compliance with a §402 or §404 permit. Section 402 authorizes EPA to issue permits for the discharge of a pollutant, and §404 authorizes the U.S. Army Corps of

168. CWA §502(19).
169. 33 U.S.C. §1321.
170. Oil Pollution Act (OPA), 33 U.S.C. §§2701-2761, ELR Stat. OPA §§1001-7001.
171. 551 F.2d 107, 7 ELR 20253 (6th Cir. 1977).
172. *See* Eskridge, *supra* note 70, at 324, *citing* Green v. Bock Laundry Mach. Co., 490 U.S. 504, 524-25 (1989); Scalia & Garner, *supra* note 12, at 183-89.
173. *Hamel*, 551 F.2d at 110.
174. *Id.* at 110-11.
175. 384 U.S. 492 (1966).
176. *Hamel*, 551 F.2d 111-13.
177. Why would the court have taken such a round-about path to its conclusion, when it would have been far easier to hold that oil is a biological material, a listed category of pollutant? It might be explained by the fact that the decision was written during the heyday of using legislative history as an interpretive device. Eskridge, *supra* note 70, at 207-38; Scalia & Garner, *supra* note 12, at 369-90. *See, e.g.*, Train v. Colorado PIRG, 426 U.S. 1, 6 ELR 20549 (1976). The court may also have been hesitant to start down the biological material path, knowing full well that live fish and perhaps people lay ahead as pollutants.

Engineers (the Corps) to issue permits for the discharge of "dredged or fill material." Many, if not most, courts conclude from this that dredged or fill material is a pollutant, in conclusory formulations such as that §301(a) "prohibits the discharge of any pollutant, including dredged or fill material."[178] A few courts mention §502(6) in support of the conclusion. These decisions, however, are in part either wrong or misleading. Section 301(a) does not define pollutant, much less define it to include dredged or fill material. Section 502(6) defines pollutant to include "dredged spoil"; it does not define pollutant to include either "dredged or fill material" or "fill material." The unstated reasoning of these decisions may be that because §301(a) prohibits the discharge of pollutants except in compliance with permits issued under §402 or §404, and because §404 authorizes the Corps to issue permits for the discharge of dredged or fill material, then dredged or fill material must be a pollutant. This is circular reasoning. There would be no reason for dischargers of dredged or fill materials to apply for §404 permits unless dredged or fill materials are pollutants, because their discharges without permit are not otherwise illegal under §301(a), §404, or any other provision of the CWA. But for the absence of dredged or fill material from the definition of pollutant in §502(6), the courts' logic might be persuasive. But because the definition in §502(6) is exclusive, its failure to explicitly include "dredged or fill material" means that such material is not a pollutant unless it or its constituents are listed in the definition or fall within a category of materials listed in the definition.

Fortunately, the §502(6) definition of pollutant includes "dredged spoil," a term practically synonymous with "dredged material."[179] Although there is no hint of "fill material" in the §502(6) definition, most fill material consists at least in part of one of the specific substances included in that definition (rock and sand), or a substance that is within one of the categories included in that definition (demolition debris that falls within the solid, industrial or municipal waste categories).[180] Assuming that fill material is composed at least in part of pollutants, which agency should issue a permit for the discharge: EPA for the discharge of the included pollutants or the Corps for the discharge of the fill material?[181] The interpretive canon that the specific statutory provision governs over the general provision[182] suggests that when a broadly defined pollutant is also a narrowly defined "fill material," then the more specific §404 governs, authorizing the Corps to issue a permit for the discharge of the fill material, rather than authorizing EPA to issue a permit for the discharge of a pollutant included in the fill material. Section 402(a) confirms this by granting EPA authority to issue permits for the discharge of pollutants, "[e]xcept as provided in" §404. This leaves the Corps as the agency issuing permits for the discharge of dredged and fill material, and EPA as the Agency issuing permits for the discharge of all other pollutants.

That was the conclusion reached by courts considering the matter, including the Supreme Court in *Coeur Alaska, Inc. v. Southeast Alaska Conservation Council*.[183] In *Coeur Alaska*, environmental petitioners sought judicial review of a §404 permit authorizing the discharge of a slurry of 30% crushed rock and 70% water from a gold-mining operation[184] into a 23-acre lake that all parties agreed was navigable water. The operation would allow the solids to separate from the slurry by settling to the bottom of the lake, eventually filling all of the natural lake and more than doubling its surface. The operation would build a dam across the outlet from the lake, preventing the slurry water from flowing downstream without treatment. EPA issued a §402 permit imposing effluent limitations requiring the treatment of water flowing downstream from the dam. The Corps issued a §404 permit to fill the lake. Environmental petitioners contended that discharging pollutants into the lake required a §402 permit, not a §404 permit. The Ninth Circuit agreed, but the Supreme Court reversed.

Section 402 permits issued by EPA or states with approved programs, and §404 permits issued by the Corps or states with approved programs, are subject to very different conditions and limitations. Section 402 permits impose limitations on the discharge of pollutants requiring pollution reduction reflecting the application of the best available treatment technology and meeting state-developed water quality standards. Section 404 permits do not require pollution reduction, but may impose conditions on authorized projects to protect the environment. The Corps may also condition or deny permits when a public interest review determines that their negative environmental impacts outweigh any social or economic benefit. Thus, whether particular pollutants are "dredged or fill material"

178. Bersani v. EPA, 850 F.2d 36, 39, 18 ELR 20874 (2d Cir. 1988). *See also* Leslie Salt Co. v. United States, 55 F.3d 1388, 1391, 25 ELR 21046 (9th Cir. 1995); Town of Norfolk v. Corps of Eng'rs, 968 F.2d 1438, 1445, 22 ELR 21337 (1st Cir. 1992) (citing §502(6)); United States v. Brink, 795 F. Supp. 2d 565, 575 (S.D. Tex. 2011); Gouger v. Corps of Eng'rs, 779 F. Supp. 2d 588, 603 (S.D. Tex. 2011); Alabama Rivers Alliance, Inc. v. Corps of Eng'rs, 697 F. Supp. 2d 1251, 1258 (N.D. Ala. 2009); D'Olive Bay Restoration and Preservation Committee, Inc. v. Corps of Eng'rs, 513 F. Supp. 2d 1261, 1268 (S.D. Ala. 2007); Florida Wildlife Fed'n v. U.S. Army Corps of Eng'rs, 401 F. Supp. 2d 1298, 1308 (S.D. Fla. 2005) (under §502(6) "dredged or fill materials are pollutants"); City of Shoreacres v. Waterworth, 332 F. Supp. 2d 992, 1015 (S.D. Tex. 2004); National Wildlife Federation v. Norton, 332 F. Supp. 2d 170, 185 (D.D.C. 2004). *Contra*, *see* Kentuckians for Commonwealth, Inc. v. Rivenburgh, 204 F. Supp. 2d 927, 932, n.5 (S.D. W. Va. 2002), labeling this as circular reasoning, *rev'd on other grounds*, 317 F.3d 425 (4th Cir. 2003).

179. In *United States v. Wilson*, 133 F.3d 251, 259, 28 ELR 20299 (4th Cir. 1997), the court commented that while "the statutory term 'dredged spoil' carries with it a more pejorative connotation than does the term the court used [in its jury instructions], 'dredged material,' the two are not sufficiently different to constitute error."

180. United States v. Pozsgai, 999 F.2d 719, 23 ELR 21012 (3d Cir. 1993).

181. Justice Stephen Breyer explores this issue in his concurring opinion in *Coeur Alaska, Inc. v. Southeast Alaska Conservation Council*, 557 U.S. 261, 292-93 (2009) (Breyer, J., concurring).

182. Eskridge, *supra* note 70, at 324, *citing* Green v. Bock Laundry Mach. Co., 490 U.S. 504, 524-25 (1989); Crawford Fitting Co. v. J.T. Gibbons, Inc., 482 U.S. 437 (1987); Scalia & Garner, *supra* note 12, at 183-89.

183. 557 U.S. 261 (2009). *See also* Resource Invs., Inc. v. U.S. Army Corps of Eng'rs, 151 F.3d 1162, 28 ELR 21407 (9th Cir. 1998); Greenfield Mills, Inc. v. Macklin, 361 F.3d 934, 946 (7th Cir. 2004); United States v. United Homes, Inc., 1999 WL 117701 (N.D. Ill. 1999).

184. The operation re-refined previously processed ore by crushing it and treating it with a chemical bath to float and recover remaining gold.

makes a tremendous difference in the viability of the operation producing the pollutants and the environmental protection afforded the receiving water. Covering streams and filling valleys with mining overburden may be authorized by a Corps §404 permit if the overburden is "fill material." But the same operation would probably be stymied if the pollutants discharged to the streams first had to meet technology-based and water quality standards under an EPA-issued §402 permit.[185] In *Coeur Alaska*, for instance, if a §402 permit was required, the particular mining operation would have been subject to a new source performance standard of zero discharge of pollutants.[186] Under the circumstances, however, the tailings pond technology on which the standard was justified would have resulted in a greater loss of wetlands and natural habitat.[187]

The CWA does not define dredged material. Although CWA §502(6) defines pollutant to include dredged spoil, the statute does not define dredged spoil. EPA and the Corps both define dredged material to mean "material that is excavated or dredged from the waters of the United States."[188] As the concept of navigable waters expands to include wetlands, the question arises whether digging in a wetland requires a §404 permit. Because §404 requires a permit for discharging dredged material into a wetland, not for removing it from a wetland,[189] however, those issues revolve around whether particular movements of soil and vegetation in wetlands during landclearing operations constitute addition.[190]

The CWA does not define fill material. EPA and the Corps both define the term to mean "material placed in the waters of the United States where the material has the effect of: (i) Replacing any portion of a water body with dry land; or (ii) Changing the bottom elevation of any portion of the water of the United States."[191] The definitions give inclusive examples of "rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mining or other excavation activities, and materials used to create any structure or infrastructure in the waters of the United States." Both definitions specifically exclude "trash or garbage," which neither EPA nor the Corps defines. The Corps earlier defined fill material to mean "any material used for the primary purpose of replacing an aquatic area with dry land of or changing the bottom elevation of a [ ] water body." That definition excluded pollutants discharged "primarily to dispose of waste" (not just trash and garbage), an activity it acknowledged was regulated under CWA §402.[192] The newer rule has the virtue of being objective rather than depending on the discharger's state of mind. However, the newer definition creates a giant loophole allowing all sorts of waste (excepting only trash and garbage) disposal into water under the guise of filling the water or changing its bottom elevation.[193]

While typical municipal and industrial wastewaters are primarily liquid, they also have solid components that can settle out on the bottom of the receiving water and change its elevation, although that is more likely to occur in quiescent rather than in turbulent water. Indeed, in *Rapanos v. United States*, the Supreme Court toyed with the idea that *liquid* effluents are pollutants subject to §402 permits, while *solids* are fill material subject to §404 permits.[194] The Court stated that "'dredged or fill material' . . . unlike traditional water pollution, are solids that do not readily wash downstream."[195] The plaintiffs in *Coeur Alaska* argued that this created a huge loophole in the CWA, and the Supreme Court dissent agreed.[196] Any industrial wastewater with solids in it could be classified as "fill material" if the solids can accumulate on and eventually raise the level of the water bottom. That could effectively remove large segments of industry from the water pollution abatement requirements of the CWA §402 program.[197] The argument was weakened in *Coeur Alaska*, however, because EPA and the Corps agreed that the fill project at issue was governed by §404, and their regulations provided that mining overburden was fill material. Moreover, EPA and the Corps treated the altered lake as a treatment facility by requiring a §402 permit at the outlet of the lake into a navigable river. The Court majority acknowledged the potential loophole, but left the question for another day, if and when EPA and the Corps agreed that other, more obnoxious industrial waste was fill material.[198] In any event, the Court pointed out that EPA could veto Corps permits under §404(c).

185. *See Coeur Alaska*, 557 U.S. 261; Kentuckians for Commonwealth, Inc. v. Rivenburgh, 317 F.3d 425 (4th Cir. 2003).
186. *Coeur Alaska*, 557 U.S. at 266.
187. *Id.* at 269-70.
188. 33 C.F.R. §323.2(c) and 40 C.F.R. §232.2.
189. Save Our Community v. U.S. EPA, 971 F.2d 1995 (5th Cir. 2002); Orleans Audubon Society v. Lee, 742 F.2d 901, 15 ELR 20030 (5th Cir. 1984).
190. For a discussion of the "addition" element, see Miller, *supra* note 6.
191. 33 C.F.R. §323.2(e) and 40 C.F.R. §232.2.
192. 42 Fed. Reg. 37122, 37145 (July 19, 1977); 33 C.F.R. §323.2(m) (1978).
193. Neither the older nor the newer version of the definition deals comfortably with the construction in a wetland of a sanitary landfill for the disposal of municipal solid waste. Under either definition, the placement of trash and garbage is excluded from fill material, so that a §402 permit rather than a §404 permit would be required for the operation of the facility. But the construction of the bottom liners and leachate collection systems of the landfill would seem to fit within the definition of fill material, requiring a §404 permit for its construction. Because construction of municipal landfilling wetlands is directly regulated by Subtitle D of RCRA, however, the Ninth Circuit has ruled that it is not regulated by CWA §404. *See* Resource Invs., Inc. v. U.S. Army Corps of Eng'rs, 151 F.3d 1162, 28 ELR 21407 (9th Cir. 1998).
194. "[T]he deposit of *mobile* pollutants into upstream ephemeral channels is naturally described as an 'addition . . . to navigable waters,' 33 U.S.C. §1362(12), while the deposit of *stationary* fill material generally is not." Rapanos v. United States, 547 U.S. 715, 745 n.11, 36 ELR 20116 (2006).
195. *Id.* at 723.
196. Coeur Alaska, Inc. v. Southeast Alaska Conservation Council, 557 U.S. 261, 302-03 (2009).
197. EPA commonly regulates total suspended solids. *See, e.g.*, best practicable treatment technology for the Rayon Fibers Subcategory of the Organic Chemicals, Plastics and Synthetic Fibers Effluent Guidelines, 40 C.F.R. §414.21.
198. *Coeur Alaska*, 557 U.S. at 275-76. The mining company in that case proposed to treat mining waste by turning a wilderness lake into a settling basin. It applied to the Corps for a §404 permit to fill the lake and to EPA for a §402 permit to discharge water from the lake to the stream originally draining the lake. At the termination of mining activity, the company would restore the lake. The alternative was to build a settlement basin of considerable height and extent that would not have to be deconstructed at the termination of operations. EPA, the Corps, and the Supreme Court majority seemed to think the proposal was the better alternative. *Id.* at 269-70.

The distinction between whether material discharged to water is subject to a §402 or a §404 permit is easy in most cases. The discharge of effluent containing pollutants, such as PCBs, is regulated under §402 because the main impact of the discharge is on public health and water quality. The discharge of soil to extend a building lot into a river is regulated under §404 because its impact is on the navigability of the river. However, if the PCBs are attached to solids in a liquid effluent, under the current regulatory definition, the discharge is arguably regulated under §404, because if the solids accumulate, they can change the bottom elevation of the receiving water. Treating toxic solids as fill material subject to a §404 permit, however, ignores the differences between the purposes and operations of the two sections. The confusion may be the inevitable consequence of mixing water pollution control regulation with water projects regulation, but EPA and the Corps could eliminate confusion and ambiguity by a more careful phrasing of their regulations. Indeed, EPA and the Corps should return to their earlier regulatory definitions of fill material, because those earlier definitions better track differences between the intended purposes of §402 and §404.

G. Potential Conflicts With Other Statutes

Special care is needed to interpret a statute in cases where another statute may apply to the same fact pattern, especially if an interpretation of one statute may interfere with achieving the purposes of the other statute. In these cases, common wisdom cautions to read the statutes harmoniously with each other, and certainly canons of statutory construction require a harmonious reading.[199] Pollution control statutes create this type of problem because they normally protect a single environmental medium (air, land, or water) from contamination, whereas pollutants tend to migrate between environmental media. For instance, a power plant's air pollution, which is regulated by the Clean Air Act (CAA),[200] not only fouls the air, but may also be redeposited by gravity or precipitation onto land or water. Indeed, air emissions from coal-burning power plants have long been known as the primary sources of acid deposition in the northeastern United States and neighboring Canada, causing both acid rain and acid runoff into lakes and other surface water.[201] Air pollution from such sources could theoretically be regulated by land and water pollution statutes as well as by an air pollution statute. Pollution control statutes that regulate particular substances (for example, PCBs) create the same sorts of problems.[202] Such substances are ubiquitous in the environment and potentially fall within the purview of the multiple environmental media-oriented statutes. Because EPA administers most of these statutes, it can often implement or interpret them to avoid significant conflicts. Conflicts between EPA-administered statutes may reach the courts when environmental advocates either challenge an EPA regulation attempting to resolve an interstatute conflict or sue a violator of one environmental statute who defends by alleging that another environmental statute authorized its actions.[203] Statutes administered by other agencies lead to the same types of conflict, with less opportunity or incentive for EPA to avoid the conflict.

1. Atomic Energy Act

The first such conflict under the definition of pollutant arose because Congress defined pollutant in CWA §502(6) to include "radioactive materials," while Congress had earlier established a "pervasive regulatory scheme"[204] for source, byproducts, and special nuclear materials under the Atomic Energy Act (AEA),[205] administered by the Atomic Energy Commission (AEC) or later the Nuclear Energy Regulatory Commission and the U.S. Department of Energy. If the CWA authorized EPA to regulate radioactive discharges from nuclear power plants, the AEC would have lost significant authority over the development of nuclear power for peaceful use. EPA defined pollutant to exclude material "regulated under the Atomic Energy Act of 1954."[206] An environmental group challenged this exclusion in *Colorado PIRG*.[207] The Supreme Court ruled that the CWA's legislative history made explicit that Congress did not intend EPA to regulate source, byproduct, and special nuclear

It goes without saying that the best environmental alternative would have been to have neither the settlement basin nor the flooded lake.

199. Statutes are to be interpreted *in pari materia* to avoid conflicts. *See* Eskridge, *supra* note 70, at 327, *citing* Morales v. TWA, Inc., 112 S. Ct. 2031 (1992); TWA, Inc. v. Independent Fed'n of Flight Attendants, 489 U.S. 426 (1989); Scalia & Garner, *supra* note 12, at 252-55.
200. Clean Air Act (CAA), 42 U.S.C. §§7401-7671q, ELR Stat. CAA §§101-618.
201. The problem led to the amendment of the CAA to include the Acid Deposition Program, creating a national cap-and-trade program for the reduction of sulfur oxide emissions from large sources. *See* CAA §§402-416, 42 U.S.C. §§7651a-7651o. Acid deposition is not the only such interstate transport problem. "Burning coal is the main source of mercury generation in our [Great Lakes] region and atmospheric deposition of mercury into the Great Lakes from coal accounts for seventy five percent of those highly toxic compounds." Kendra Fogarty et al., *Emerging Legal Issues in the Great Lakes Such as the Public Trust Doctrine, Subterranean Rights, and Municipal Regulatory Arrangements.*, 34 Can.-U.S. L.J. 279, 309 (2010).
202. Regulated by the Toxic Substances Control Act (TSCA), 15 U.S.C. §§2601-2692, ELR Stat. TSCA §§2-412. *See* 15 U.S.C. §2605(e).
203. Environmental plaintiffs have attempted to bring CWA citizen suits against air pollution sources when their air pollutants eventually enter water. The courts have summarily held that air pollution is regulated by the CAA, not by the CWA. *See, e.g.*, Chemical Weapons Working Grp. v. Dep't of Army, 111 F.3d 1485, 1490-91, 27 ELR 21130 (10th Cir. 1997); *see also* U.S. EPA ex rel. McKeown v. Port Authority of New York and New Jersey, 162 F. Supp. 2d 173, 189 (S.D.N.Y. 2001). Environmental plaintiffs also challenged EPA's attempts to reconcile the CWA with RCRA in *Chemical Waste Mgmt. v. U.S. EPA*, 976 F.2d 2, 23 ELR 20024 (D.C. Cir. 1992), and RCRA with the Safe Drinking Water Act, 42 U.S.C. §§300f to 300j-26, ELR Stat. SDWA §§1401-1465, in *NRDC v. U.S. EPA*, 907 F.2d 1146, 20 ELR 21274 (D.C. Cir. 1990).
204. Train v. Colorado PIRG, 426 U.S. 1, 24, 6 ELR 20549 (1976).
205. Atomic Energy Act (AEA) of 1954, 42 U.S.C. §§2114.
206. 40 C.F.R. §22.2.
207. 426 U.S. 1. The challenge took the form of a citizen suit against EPA for failing to carry out a mandatory duty. The challenge, however, should have been for judicial review of EPA's exclusionary regulation. EPA had performed its mandatory duty of promulgating regulations establishing the §402 regulations; the plaintiff objected to the terms of those regulations.

materials,[208] although this did not rule out EPA authority over other water pollutants discharged by nuclear power plants, such as heat. Another environmental group later filed suit against a mining company for its discharge of uranium mill tailings into navigable water, with the same outcome in the Ninth Circuit for the same reasoning.[209] These decisions both ignore the canon that the later statute governs over the earlier statute;[210] Congress enacted the CWA in 1972, 18 years after the 1954 enactment of the AEA.[211] The decisions could have relied on the canon that the specific governs over the general, for the AEA's jurisdiction over "source, by-product and special nuclear materials"[212] is more specific than the CWA's jurisdiction over pollutants or over radioactive materials generally. All of these canons, however, can be seen as shortcuts to determine legislative intent, and in this case, legislative intent on the issue was directly addressed by persuasive legislative history.[213] It is worth noting that the *Colorado PIRG* decision was written in the heyday of judicial use of legislative history as an interpretive method, a practice that has been much curtailed in more recent years[214] in favor of an emphasis on plain meaning.

2. FIFRA

The most widespread and considered cases of conflict between EPA-administered statutes are between the CWA and FIFRA. FIFRA pervasively regulates consumer products; pesticides cannot be manufactured, sold, or used until they are registered by EPA. Registration establishes the uses to which pesticides may be put and the means by which they can be applied for those uses. The uses allowed and the application directions are calculated to avoid danger to public health and unintended[215] danger to the environment. Thus, FIFRA registration establishes whether pesticides can be applied over or near water and, if so, the FIFRA-approved label establishes how they must be applied over or near water.

As discussed above, several CWA decisions concern the application of pesticides on, in, or near water. *Headwaters* was the first of the court of appeals decisions and the only one directly considering a potential conflict between FIFRA and the CWA and the consequent need to read the statutes harmoniously. *Headwaters* concluded that the statutes did not conflict because they served different purposes. The Ninth Circuit noted that FIFRA established a "nationally uniform labeling system to regulate pesticide use," based on a national cost/benefit analysis weighing the benefits of using the pesticide against the adverse environmental effects of doing so.[216] Congress made no effort in FIFRA to ensure that individual applications of pesticides were compatible with local conditions. On the other hand, CWA requires that §402 permits contain effluent limitations designed to achieve local water quality standards, preventing local environmental harm from individual dischargers, as well as to achieve national technology-based standards. The *Headwaters* court concluded that these were compatible goals and that FIFRA registration did not foreclose requiring a CWA permit for discharging chemical wastes.[217]

The issue of a conflict between FIFRA and the CWA did not arise in the Ninth Circuit's subsequent *Fairhurst* decision[218] because the pesticide applied in that case was a chemical leaving no waste or excess in the water, so there was no chemical waste and hence no pollutant. The court erroneously noted, however, that the necessity to read the CWA and FIFRA harmoniously was required by the Ninth Circuit's earlier holding in *Headwaters*. The Sixth Circuit did not reconsider the issue in *National Cotton Council*.[219]

3. Refuse Act

The CWA §402 permit program was based on the Refuse Act Permit Program, developed by EPA and the Corps under the Refuse Act.[220] Congress took care in the CWA to reconcile the two statutes. Sections 402(a)(4) and (5) provide that no Refuse Act permits for discharges of refuse into navigable waters can be issued after the enactment of the CWA, but that applications for Refuse Act permits filed before the date of that enactment were deemed to be applications for CWA §402 permits. Moreover, Refuse Act permits issued before that date were deemed to be CWA §402 permits, and CWA §402 permits were deemed to

208. *Colorado PIRG*, 426 U.S. at 10-23.
209. Waste Action Project v. Dawn Mining Corp., 137 F.3d 1426, 28 ELR 21035 (9th Cir. 1998). The Ninth Circuit also considered the applicability of the Uranium Mill Tailings Regulation Control Act.
210. Where a later statute conflicts with an earlier statute, it impliedly repeals the earlier statute to the extent of the conflict. *See, e.g.*, Dorsey v. United States, 132 S. Ct. 2321, 2332 (2012).
211. Oct. 18, 1972, Pub. L. No. 92-500 (CWA); Aug. 30, 1954, Pub. L. No. 85-256 (AEA).
212. The Court in *Colorado PIRG* reviews the legislative history, including explicit statements in the reports on the bill by both the responsible Senate and U.S. House of Representatives Committees, colloquies on the floors of both chambers, and the defeat in the House of an amendment to give states authority to regulate radioactive discharges. *See* 426 U.S. at 11-24. The Court found particularly persuasive an extensive dialogue on the Senate floor between Senator Muskie, chief sponsor and author of the CWA, and Sen. John Pastore (D-R.I.), Chair of the Joint Committee on Atomic Energy.
213. The Court held that the legislative history supported the "intent to preserve the pre-existing regulatory plan." 426 U.S. at 24. Textualists argue that interpretation is not directed at discerning legislative intent, but only at discerning what the statute means. *See* Scalia & Garner, *supra* note 12, at 391-96 (discovering legislative intent included as one of treatise's "Thirteen Falsities Exposed").
214. The author's research has found that legislative history was used in 42% of the decisions interpreting pollutant decided in 1982 or earlier, but in only 11% of such decisions decided after 1982. Much of the reason for the shift away from reliance on legislative history was the influence of the new textualists on the courts and in academia. One treatise traces the ebb and flow of the Supreme Court's use of legislative history to support or escape the plain meaning of a statute. *See* Eskridge, *supra* note 70, at 207-38.
215. It goes without saying that the very purpose of pesticides is to damage specific living parts of the environment.
216. Headwaters, Inc. v. Talent Irrigation Dist., 243 F.3d 526, 532, 31 ELR 20535 (9th Cir. 2001).
217. *Id.* at 531-32.
218. 422 F.3d 1146 (9th Cir. 2005).
219. National Cotton Council of Am. v. U.S. EPA, 553 F.3d 927, 39 ELR 20006 (6th Cir. 2009).
220. 33 U.S.C. §407.

be Refuse Act permits. Finally, CWA §402(k) provided a grace period until the earlier of: (1) the end of 1974 for a permit applicant filing a timely application under §402 or the Refuse Act; or (2) until a permit was issued or denied. Although these measures eliminated conflict between CWA §402 and the Refuse Act, defendants from time to time have attempted unsuccessfully to obfuscate the applicability of the CWA by invoking the Refuse Act.[221]

The Refuse Act is one section of the Rivers and Harbors Act of 1899, which includes §403[222] requiring a permit from the Corps to dredge in navigable waters. Dredging produces dredged material or dredged spoil that must be disposed. If dredged material was disposed elsewhere in navigable water prior to 1972, a Refuse Act permit was required. In 1972, CWA §404 authorized the Corps to issue permits for the discharge of dredged and fill material into navigable waters, a function it performed earlier under the Refuse Act. Oddly, §404 did not contain the same sort of provisions as §402 for meshing the new permitting authority with the earlier Refuse Act. CWA §511(a), however, provided generally that the CWA did not supersede the authority of the Corps "to maintain navigation" and specifically that a §404 permit "shall be conclusive as to the effect on water quality of any discharge resulting from any activity subject to section 403 (ocean discharge) of this title."

IV. Conclusion

"Pollutant" is not a limiting element of the water pollution offense. Congress intended the element to reach broadly, and it does; its statutory definition encompasses virtually all residuals and byproducts of human activity as well as biological materials. Courts have only held that seven substances discharged to water by human activity do not fall within the statutory definition of pollutant, and there are contrary opinions concerning four of those seven substances. Moreover, the rulings that most of the seven substances are not pollutants were predicated on the argument that their addition to water was governed by another statute rather than on the argument that they did not fit within the definition of pollutant.

Perhaps, because of the broad plain meaning of the statutory definition of pollutant, there were relatively few judicial challenges to the interpretation of the element. Courts resolved those challenges fairly easily by reference to the plain meaning of its statutory definition, or, after time, by reference to precedents based on the plain meaning of the definition of the element. The author's research has found that courts relied on other canons of statutory construction only to a minor extent to interpret pollutant. Indeed, courts have used only 10 canons beyond plain meaning and precedent to interpret "pollutant," and the courts cited plain meaning and precedent virtually as many times as they cited the remaining canons in the aggregate. Most courts recognized that Congress decoupled the meanings of pollutant and pollution in the CWA and that a pollutant under the statute does not have to cause pollution. Moreover, a substance does not have to result from human activity to be a pollutant.

The main problem with the definition of pollutant is that its plain meaning sometimes seems to reach too far. Most questionable results from that, however, are blunted because the finding that a substance is a pollutant has no legal effect unless all of the other elements of the water pollution offense are also found. Even so, there are a few specific areas in which congressional or EPA action is warranted. Most follow from the definition listing categories of substances denominated both "material" and "waste," with no apparent reason for the distinction. Why did Congress include all biological material, but only chemical, solid, industrial, and municipal waste? The inclusion of all biological material leads to the absurd result that propagating native fish in a hatchery and adding them to a fishing stream can violate the CWA without a permit. The same problem would occur for other biological material; for example, for planting wild rice or eel grass where they have been depleted by human activity. Congress could easily deal with this issue by a surgical amendment changing "biological material" in CWA §502(6) to "biological wastes." Alternatively, EPA could address the issue by defining "biological material" to exclude "indigenous fish or biota," or by issuing a general permit or a permit by regulation authorizing such discharges under appropriate conditions; for example, where the fish are native species rather than introduced species. Similar solutions are possible for analogous *reductio ad absurdum* situations; for example, people conveyed to navigable waters from diving boards or water slides.

More difficult are the statute's and EPA's failures to define waste, in particular the failure to address the issue of whether products designed for use on or in water become wastes when their useful life is spent. Positioning a shotgun to fire every half hour over (and therefore into) a body of water is a classical addition of pollutants into navigable water from a point source without a permit. However, if that shotgun is fired only for the purpose of killing ducks when they fly into its trajectory, it is not an addition of pollutants even when some or all of the shot misses the ducks and falls into the water. Variants of this fact pattern are limited only by the imagination: Examples include spraying pesticide on mosquito larvae in water or spraying paint on a bridge.[223] EPA's reaction when faced with such situations is to promulgate a rule exempting the discharges resulting from such activities from requiring §402 permits, a strategy that courts have rejected as contrary to the CWA. EPA might be more successful promulgating a

221. *See, e.g.*, United States v. Hamel, 551 F.2d 107, 112, 7 ELR 20253 (6th Cir. 1977).

222. 33 U.S.C. §403.

223. These two examples illustrate the difficulty in this task, because pesticides cannot be sprayed on aquatic pests without spraying waste or residue pesticides in the water, while properly placed plastic barriers can collect sprayed paint that misses the bridge and prevent it from entering the water.

regulatory definition of waste, as it has done under RCRA generally,[224] or for particular substances, such as military munitions.[225] Alternatively, it could issue a permit by rule or authorize states with approved programs to issue permits by rule for such categories of discharges.

The distinction between pollutants subject to §402 permits and dredged and fill material subject to §404 permits is also problematic because "fill material" does not appear in the statutory list of substances that are "pollutants," although most fill material does fall within one of the categories of substances that are listed in those statutory categories. EPA and the Corps have created a loophole in the §402 program for requiring pollution reduction by defining fill material as anything that can change the bottom elevation of a water body. Because toxic substances may be solids or be attached to suspended solids in liquid waste, such substances may be fill material regulated by §404 rather than by §402. The Supreme Court acknowledged this loophole in *Coeur Alaska*.[226] The agencies could easily deal with the loophole by reverting to an earlier version of their definitions.

Table A
Decisions Interpreting "Pollutant"

Supreme Court Decisions

Coeur Alaska, Inc. v. Southeast Alaska Conservation Council, 557 U.S. 261 (2009)
Weinberger v. Barcelo-Romero, 456 U.S. 305, 12 ELR 20538 (1982)
Train v. Colorado Public Interest Research Group, 426 U.S. 1, 6 ELR 20549 (1976)

Court of Appeals Decisions

National Cotton Council of America v. U.S. EPA, 553 F.3d 927, 39 ELR 20006 (6th Cir. 2009)
Fairhurst v. Hagener, 422 F.3d 1146 (9th Cir. 2005)
Northern Plains Resource Council v. Fidelity Exploration and Development Co., 325 F.3d 1155 (9th Cir. 2003)
Kentuckians for the Commonwealth, Inc. v. Rivenburgh, 317 F.3d 425 (4th Cir. 2003)
Altman v. Town of Amherst, New York, 47 Fed. Appx. 62 (2d Cir. 2002)
Association to Protect Hammersley, Eld, and Totten Inlets v. Taylor Resources, Inc., 299 F.3d 1007 (9th Cir. 2002)
Borden Ranch Partnership v. U.S. Army Corps of Engineers, 261 F.3d 810, 32 ELR 20011 (9th Cir. 2001)
Headwaters, Inc. v. Talent Irrigation District, 243 F.3d 526, 31 ELR 20535 (9th Cir. 2001)
United States v. Deaton, 209 F.3d 331, 30 ELR 20508 (4th Cir. 2000)
Driscoll v. Adams, 181 F.3d 1285, 29 ELR 21387 (11th Cir. 1999)
Resource Investments, Inc. v. Corps of Eng'rs, 151 F.3d 1162, 28 ELR 21407 (9th Cir. 1998)
Waste Action Project v. Dawn Mining Corp., 137 F.3d 1426, 28 ELR 21035 (9th Cir. 1998)
United States v. Wilson, 133 F.3d 251, 28 ELR 20299 (4th Cir. 1997)
Chemical Weapons Working Group v. Dept. of the Army, 111 F.3d 1485, 27 ELR 21130 (10th Cir. 1997)
United States v. Eidson, 108 F.3d 1336, 27 ELR 20853 (11th Cir. 1997)
Hughey v. JMS Development Corp, 78 F.3d 1523, 26 ELR 20924 (11th Cir. 1996)
Sierra Club, Lone Star Chapter v. Cedar Point Oil Co., Inc., 73 F.3d 546, 26 ELR 20522 (5th Cir. 1996)
Leslie Salt Co. v. United States, 55 F.3d 1388, 25 ELR 21046 (9th Cir. 1995)
Concerned Area Residents for the Environment v. Southview Farm, 34 F.3d 114, 24 ELR 21480 (2d Cir. 1994)
Committee to Save Mokelumne River, Inc. v. East Bay Municipal Utility District, 13 F.3d 305, 24 ELR 20225 (9th Cir. 1993)
United States v. Plaza Health Laboratories, 3 F.3d 643, 23 ELR 21526 (2d Cir. 1993)
United States v. Pozgsai, 999 F.2d 719, 23 ELR 20725 (3d Cir. 1993)
United States v. Schallom, 998 F.2d 196 (4th Cir. 1993)
Town of Norfolk v. Corps of Eng'rs, 968 F.2d 1438, 22 ELR 21337 (1st Cir. 1992)
Rybachek v. U.S. EPA, 904 F.2d 1276, 20 ELR 20973 (9th Cir. 1990)
National Wildlife Federation v. Consumers Power Co., 862 F.2d 580, 19 ELR 20235 (6th Cir. 1988)
Bersani v. EPA, 850 F.2d 36, 18 ELR 20874 (2d Cir. 1988)
United States v. M.C.C. of Florida, Inc., 772 F.2d 1501, 15 ELR 21091 (11th Cir. 1985)
Orleans Audubon Society v. Lee, 742 F.2d 901, 15 ELR 20030 (5th Cir. 1984)
National Wildlife Federation v. Gorsuch, 693 F.2d 156, 13 ELR 20015 (D.C. Cir. 1982)
Minnehaha Creek Watershed District v. Hoffman, 597 F.2d 617, 9 ELR 20334 (8th Cir. 1979)
U.S. Steel Corp. v. Train, 556 F.2d 822, 7 ELR 20419 (7th Cir. 1977)
United States v. Hamel, 551 F.2d 107, 7 ELR 20253 (6th Cir. 1977)
FMC Corp. v. Train, 539 F.2d 973, 6 ELR 20382 (4th Cir. 1976)

224. 40 C.F.R. §261.2.
225. 40 C.F.R. §266.202, which survived judicial review in *Military Toxics Project v. EPA*, 146 F.3d 948, 28 ELR 21350 (D.C. Cir. 1998).
226. Coeur Alaska, Inc. v. Southeast Alaska Conservation Council, 557 U.S. 261 (2009).

District Court Decisions

United States v. Brink, 795 F. Supp. 2d 565 (S.D. Tex. 2011)
Gouger v. Corps of Eng'rs, 779 F. Supp. 2d 588 (S.D. Tex. 2011)
Alabama Rivers Alliance, Inc. v. Corps of Eng'rs, 697 F. Supp. 2d 1251 (N.D. Ala. 2009)
Peconic Baykeeper, Inc. v. Suffolk County, 585 F. Supp. 2d 377 (E.D.N.Y. 2008), *rev'd in part*, 600 F.3d 180 (2d Cir. 2002)
D'Olive Bay Restoration and Preservation Committee, Inc. v. Corps of Eng'rs, 513 F. Supp. 2d 1261 (S.D. Ala. 2007)
Simsbury-Avon Preservation Society, LLC v. Metacom Gun Club, Inc., 472 F. Supp. 2d 219 (D. Conn. 2007)
Tungett v. Papierski, 2006 WL 51148 (E.D. Tenn. 2006)
Florida Wildlife Federation v. Corps of Eng'rs, 401 F. Supp. 2d 1298 (S.D. Fla. 2005)
City of Shoreacres v. Waterworth, 332 F. Supp. 2d 992 (S.D. Tex. 2004)
National Wildlife Federation v. Norton, 332 F. Supp. 2d 170 (D.D.C. 2004)
North Carolina Shellfish Growers Ass'n v. Holly Ridge Associates, LLC, 278 F. Supp. 2d 654 (E.D.N.C. 2003)
U.S. PIRG v. Atlantic Salmon of Maine, LLC, 215 F. Supp. 2d 239, 32 ELR 20535 (D. Me. 2002)
Kentuckians for the Commonwealth, Inc. v. Rivenburgh, 204 F. Supp. 2d 927 (S.D. W. Va. 2002), *rev'd on other grounds*, 317 F.3d 425 (4th Cir. 2003)
Altman v. Town of Amherst, New York, 190 F. Supp. 2d 467 (W.D.N.Y. 2001), *rev'd*, 47 Fed. Appx. 62 (2d Cir. 2002)
U.S. EPA ex rel. McKeown v. Port Authority of New York and New Jersey, 162 F. Supp. 2d 173 (S.D.N.Y. 2001)
Pronsolino v. Marcus, 91 F. Supp. 2d 1337, 30 ELR 20460 (N.D. Cal. 2000)
United States v. United Homes, Inc., 1999 WL 117701 (N.D. Ill. 1999)
United States v. Gulf Park Water Co., Inc., 972 F. Supp. 1056 (S.D. Miss. 1997)
Long Island Soundkeeper Fund, Inc. v. New York Athletic Club of the City of New York, 1996 WL 131863 (S.D.N.Y. 1996)
Beartooth Alliance v. Crown Butte Mines, 904 F. Supp. 1168 (D. Mont. 1995)
Hudson River Fishermen's Ass'n v. Arcuri, 862 F. Supp. 73, 25 ELR 20460 (S.D.N.Y. 1994)
Hudson River Fishermen's Ass'n v. City of New York, 751 F. Supp. 1088, 21 ELR 20647 (S.D.N.Y. 1990), *aff'd without opinion*, 940 F.2d 649, 21 ELR 21226 (2d Cir. 1991)
Dague v. City of Burlington, 732 F. Supp. 458, 20 ELR 21001 (D. Vt. 1989), *aff'd on other grounds*, 935 F.2d 1343, 21 ELR 21133 (2d Cir. 1991), *rev'd on other grounds*, 505 U.S. 557, 22 ELR 21099 (1992)
Hanson v. United States, 710 F. Supp. 1105, 19 ELR 21074 (E.D. Tex. 1989)
National Wildlife Federation v. Consumers Power Co., 657 F. Supp. 989, 17 ELR 20801 (W.D. Mich. 1987)
Higbee v. Starr, 598 F. Supp. 323 (W.D. Ark. 1984)
United States v. Bradshaw, 541 F. Supp. 880, 12 ELR 20629 (D. Md. 1981)
National Wildlife Federation v. Gorsuch, 530 F. Supp. 1291, 12 ELR 20268 (D.D.C. 1982), *rev'd*, 693 F.2d 156, 13 ELR 20015 (D.C. Cir. 1982)
United States v. Weisman, 489 F. Supp. 1331, 10 ELR 20698 (M.D. Fla. 1980)
United States v. Frezzo Brothers, Inc., 461 F. Supp. 266, 9 ELR 20139 (E.D. Pa., 1978), *aff'd*, 602 F.2d 1123, 9 ELR 20556 (3d Cir. 1979)
South Carolina Wildlife Federation v. Alexander, 457 F. Supp. 118, 8 ELR 20757 (D.S.C. 1978)

Table B
Analysis of Decisions

Decision Number	Year	+/-[a]	Type of Case[b]	Canons Used[c]	Number of Canons Used	Type of Material[d]
Supreme Court Decisions						
1.	2009	--	Jud. Rev.	1, 3, 7, 11	4	R
2.	1982	+	Cit. S.	7	1	M
3.	1976	--	Cit. S.	5, 8, 9, 11	4	Q
Court of Appeal Decisions						
4.	2009	+	Jud. Rev.	3, 7, 9, 10	4	N
5.	2005	--	Cit. S.	1, 3, 7, 9, 10	5	N
6.	2003	+	Cit. S.	3, 5, 7, 10, 11	5	P
7.	2003	--	Jud. Rev.	3, 9, 11	3	R
8.	2002	+	Cit. S.	10, 3, 10	3	N
9.	2002	--	Cit. S.	1, 2, 4, 11	4	I
10.	2001	+	Enf.	7, 10	2	U
11.	2001	+	Cit. S.	1, 3, 7, 9	4	N
12.	2000	+	Enf.	7, 10	2	U
13.	1999	+	Cit. S.	7, 10	2	R
14.	1998	+	Jud. Rev.	7, 8, 11	3	L
15.	1998	--	Cit. S.	3, 7, 8, 9, 10	5	Q

Decision Number	Year	+/-[a]	Type of Case[b]	Canons Used[c]	Number of Canons Used	Type of Material[d]
16.	1997	+	Crim.	7	1	U
17.	1997	--	Cit. S.	1, 9	2	B
18.	1997	+	Crim.	7	1	O
19.	1996	+	Cit. S.	10	1	T
20.	1996	+	Cit. S.	2, 3, 5, 6, 7, 8	6	P
21.	1995	+	Enf.	7	1	R
22.	1994	+	Cit. S.	7	1	K
23.	1993	+	Cit. S.	10	1	A
24.	1993	+	Crim.	7	1	C
25.	1993	+	Enf.	7, 8, 10, 11	4	D, U
26.	1993	+	Crim.	7	1	D
27.	1992	--	Jud. Rev.	7	1	R
28.	1990	+	Jud. Rev.	7	1	R
29.	1988	+	Cit. S.	7	1	I
30.	1988	+	Jud. Rev.	7	1	U
31.	1985	+	Enf.	8	1	R, U
32.	1984	--	Cit. S.	7	1	T
33.	1982	-	Cit. S.	3, 6, 8, 11	4	E
34.	1979	+	Jud. Rev.	2, 3, 5, 7, 8, 11	6	R
35.	1977	+	Jud. Rev.	5, 8, 11, 12	4	F
36.	1977	+	Crim.	7, 8, 9, 10, 11	5	O
37.	1976	+	Jud. Rev.	7, 11	2	F
District Court Decisions						
38.	2011	+	Enf.	7	1	D, R
39.	2011	+	Jud. Rev.	7	1	R
40.	2009	+	Jud. Rev.	7	1	R
41.	2008	--	Cit. S.	3, 7, 9, 10	4	Q
42.	2007	o	Jud. Rev.	7	1	R
43.	2007	+	Cit. S.	3, 7, 10	3	M
44.	2006	+	Cit. S.	2, 7, 10	3	R, U
45.	2005	+	Jud. Rev.	7	1	R
46.	2004	+	Jud. Rev.	7	1	R
47.	2004	+	Jud. Rev.	7	1	R
48.	2003	+	Cit. S.	7, 10, 11	3	R
49.	2002	+	Cit. S.	7, 10	2	I
50.	2002	+	Cit. S.	2, 3, 7, 8, 11	5	R
51.	2001	--	Cit. S.	3, 7, 9, 10	4	N
52.	2001	--	Cit. S.	9, 10	2	B
53.	2000	+	Jud. Rev.	2, 3, 8, 10, 11	5	R
54.	1999	--	Enf.	7, 8, 11	3	R
55.	1997	+	Enf.	7, 10	2	S
56.	1996	+	Cit. S.	3, 7, 10	3	M
57.	1995	+	Cit. S.	2, 10, 11	3	A
58.	1994	+	Cit. S.	7	1	R
59.	1990	+	Cit. S.	2, 3, 7, 10, 11	5	F
60.	1989	+	Cit. S.	7, 11	2	J
61.	1989	+	Enf.	7	1	R
62.	1987	+	Cit. S.	3, 7, 10	3	I
63.	1984	+	Cit. S.	7	1	K
64.	1981	+	Enf.	7, 10	2	R
65.	1982	+	Cit. S.	1, 2, 7, 10, 11	5	I

Decision Number	Year	+/-[a]	Type of Case[b]	Canons Used[c]	Number of Canons Used	Type of Material[d]
66.	1980	+	Enf.	3, 7, 10	3	G, R
67.	1978	+	Crim.	7	1	K
68.	1978	+	Cit. S.	1, 7	2	E

a. Plus (+) denotes an environmental positive decision in terms of defining "pollutant," i.e., an expansive interpretation. Minus (-) denotes an environmental negative decision, a restrictive interpretation. NOTE, even though the decision on the definition of "pollutant" may be expansive, the environmental party may have lost the case.

b. Cit. S. means citizens suit; Crim. means criminal prosecution; Enf. means civil enforcement action; Jud. Rev. means judicial review.

c. 1. Avoid absurd results; 2. Broad interpretation to effectuate statutory purpose; 3. Deference to agency interpretation of statute; 4. *Ejusdem generis*; 5. Exception proves the rule; 6. Exclusive/inclusive nature of definition; 7. Plain meaning; 8. Legislative history; 9. Harmonize with other statutes; 10. Precedent; 11. Structure of statute; 12. *Expressio unius*.

d. A. acid mine drainage; B. air pollutants; C. blood; D. cement; E. changes in water quality; F. chemical wastes, including chlorine residue and alum floc; G. demolition debris; H. dredged or fill material; I. fish, fish parts, and fish feces; J. listed toxics; K. manure; L. municipal solid waste; M. munitions; N. pesticides; O. petroleum derivatives; P. produced water; Q. radioactive waste; R. rock, sand, and sediment; S. sewage; T. stormwater; U. soil and vegetation.