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The "new gold rush in the West" has attracted moderate attention in the mainstream media. The relatively high price of gold, and the advent of large-scale methods of leaching gold from low-grade ore have made gold mining profitable in sites formerly left undisturbed. In short, it is an economic delight and a new opportunity for environmental degradation.

When the public policy debates on mining and the environment turn to law, the focus usually is on the Mining Law of 1872. This outdated and, for miners, highly profitable law is not, however, the subject of this Note. This Note focuses on the way in which the Environmental Protection Agency (EPA) and the Army Corps of Engineers (Corps) have had to interpret the Clean Water Act (CWA) in order to allow mines to operate. This Note simply is an examination of the confusion and expedient compromise that occurs when these agencies are confronted with particularly problematic mining proposals. This Note also contains a few comments on reforming the CWA, or regulations made pursuant to it, in order to create a clearer and more honest way of dealing with new mine proposals.

Part I of this Note provides a basic explanation of the mine tailings problem. Part II of this Note discusses the evolution of the agencies' tailings decision, and the statutory and regulatory context in which it occurred. Part III outlines briefly the actual decision, which involved the theory that neither the EPA nor the Corps should apply the usual CWA permit requirements to the initial discharge of mine waste. Part IV evaluates the legal basis for that decision and concludes, based on the language of the CWA, the EPA's own prior policy, and judicial


2. For comment on Alaska mining pros and cons, see Maria Williams, Mining Future, SEATTLE TIMES/SEATTLE POST INTELLIGENCER, Dec. 30, 1990, at E1, E2.


precedent, that the decision was without justification. Part V discusses possible alternatives to the current policy of allowing tailings to be dumped into impounded streams and wetlands under the pretense that the CWA permit requirements are inapplicable to this sort of waste disposal. These alternatives include marine tailings disposal and legislative reform to explicitly allow or forbid the discharge of tailings into impounded streams and wetlands. Regardless of the particular alternative pursued, environmental issues such as tailings disposal need to be addressed directly rather than avoided through twisted statements of policy.

I. THE MINE TAILINGS PROBLEM

The treatment and disposal of mine tailings, the ground-up rock remaining after mined ore has been removed and processed,\(^5\) poses a particularly difficult regulatory problem. The CWA undoubtedly applies to the treatment and disposal of tailings, but exactly how it applies remains unsettled.

The waste product at the end of the ore-extraction process is a slurry of solids ("tailings") and water used in the extraction process ("process water"). Treatment of the slurry consists largely of pouring the slurry into a pond to let the tailings settle out of the water ("impoundment"). Residual heavy metals are likely to remain with the tailings, and the treated wastewater can then be discharged or recycled.

In all but the flattest of regions, valleys are the most suitable land to receive the impoundment. Unless the climate is particularly arid, however, the valley receiving the tailings will contain wetlands and often a stream. The existence of such bodies of water further complicates the waste disposal process.

\(^5\) Tailings are often primarily crushed rock. Some tailings, however, contain the toxic residues from the leaching processes used to extract valuable metals. Even the relatively unprocessed rock may present a chemical problem, such as acidic runoff, with which the surface environment is ill-equipped to cope. The degree of hazard presented by tailings depends on the type of rock in the area and the extraction process used, as well as the configuration and climate of the disposal site. See Office of External Affairs, EPA Region 8, Mining Wastes in the West, Fact Sheet (Aug. 1987) [hereinafter Mining Wastes] (sent by Ad Hoc Mining Coalition to Mayors A-J Mine Scoping Committee, June 23, 1989) (on file with the University of Michigan Journal of Law Reform).
because the CWA applies to these streams and wetlands as well as to the wastewater that the mine is treating.

Even after this initial treatment process, however, many environmental problems persist. Compounds and sediments which do not settle out readily continue to pollute the supposedly treated process water. More significantly, the tailings themselves need to be disposed. A modern hardrock mine may need to dispose of several thousand tons of tailings per day.

A protracted interagency dispute over CWA permits for the proposed Alaska–Juneau (A–J) and Kensington mines in Southeast Alaska highlighted the regulatory problems inherent in tailings disposal. The A–J mine was supposed to use a valley containing a stream and wetlands for their tailings disposal; the Kensington mine was supposed to use only wetlands. The EPA and the Corps disagreed as to which agency would have to consider the applications for permits to place tailings into the stream and the wetlands. Although the tailings have many of the characteristics of solid fill, which the Corps regulates under section 404 of the CWA, the tailings also are undisputedly industrial waste, which the EPA usually handles under section 402 of the CWA. Despite previous efforts at

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6. Accordingly, the EPA, pursuant to the CWA, has set standards regulating treated process water. See 40 C.F.R. § 440 (1993).

7. Of the two gold mines proposed near Juneau, Alaska, the Kensington mine will mill 4000 tons of ore per day and the larger A–J mine will process 22,500 tons per day. ECHO BAY MINES, 1991 ANNUAL REPORT 21, 23 (1992).

8. The A–J and Kensington regulatory dispute is not entirely unique, but it is better publicized and has generated much more formal documentation than similar disputes. Tailings impoundments in Southeast Alaska were also an issue in the debate over the proposed Quartz Hill Molybdenum Mine, where the would-be operators argued that marine disposal of tailings would be less harmful than the construction of impoundments. See infra notes 179, 192–94 and accompanying text.

9. 33 U.S.C. § 1344 (1988). Section 404 of the CWA grants the Corps authority over “dredge and fill” operations which take place in the “waters of the United States” protected by the CWA, including wetlands. Id. The section is an exception to the EPA’s general authority under the CWA, and is designed to allow the Corps, rather than the EPA, to permit construction projects and other activities which the Corps traditionally had regulated. See generally Lee E. Caplin, Is Congress Protecting Our Water?, 31 U. MIAMI L. REV. 445 (1977) (discussing the factors underlying Congress’s passage of section 404); Christopher B. Myrhrum, Comment, Federal Protection of Wetlands Through Legal Process, 7 B.C. ENVTL. AFF. L. REV. 567 (1979) (discussing the interaction between the EPA and the Corps under section 404).

10. 33 U.S.C. § 1342 (1988). Section 402 of the CWA creates the National Pollution Discharge Elimination System (NPDES). This is the more-or-less comprehensive permit program by which the EPA regulates point-source discharges, i.e. end-of-pipe water pollution. Id.
creating jurisdictional guidelines\textsuperscript{11} aimed at promoting inter-agency harmony, the agencies disagreed as to which had jurisdiction over the tailings disposal. The disagreement arose because exercising jurisdiction had become politically unattractive: it was possible that neither mine (especially the A-J mine) could meet the permit requirements of either section 402 or section 404, and neither agency wanted to be responsible for denying the permits and destroying the hope of local jobs and economic development that the mines offer.

The two agencies conveniently resolved the dilemma by agreeing and announcing that the CWA was inapplicable and that neither agency has jurisdiction over the proposed tailings disposal.\textsuperscript{12} The curious reasoning of this decision was that: (1) construction of a dam can transform a stream or wetlands into a "waste treatment facility," (2) because the mining companies would construct dams and impound tailings behind them, the tailings would be discharged into a "waste treatment facility," (3) because the tailings would be discharged into a "waste treatment facility," any discharge would not be into the "waters of the United States," and (4) because any discharge would not be into the "waters of the United States," the CWA is therefore inapplicable.\textsuperscript{13} This conclusion ultimately hinges on the fact that the phrase "waters of the United States" delineates the statutory scope of the CWA and therefore the agencies' jurisdiction. If a body of water is not included in the term "waters of the United States," then the CWA grants no direct authority to protect or regulate it, and a polluter using it does not have to meet the usual permit requirements.\textsuperscript{14}

This Note asserts that agencies' decision is one based on expediency rather than on law. The agencies have ignored their own regulations and policies regarding other mines and industries. They also have ignored their mandate to protect and preserve waters pursuant to the CWA. As the law now stands, either the EPA or the Corps, or both, must assume permitting responsibility for the tailings disposal.

\textsuperscript{11} See Memorandum of Agreement on Solid Waste, 51 Fed. Reg. 8871 (1986) [hereinafter 1986 MOA] (listing the types of discharges to "waters of the United States" which are to be regulated by the Corps and by the EPA).
\textsuperscript{12} See infra note 37 and accompanying text.
\textsuperscript{13} See infra notes 23–27, 37–38 and accompanying text.
\textsuperscript{14} The CWA is intended to protect from pollution the "Nation's waters" and "navigable waters." "Navigable waters" are defined as "waters of the United States." 33 U.S.C. § 1362(7) (1988); see also infra notes 43–49 and accompanying text for discussion of the statutory definition of "waters of the United States."
The dispute over the A-J and Kensington mines, however, is in many ways merely the symptom of a more fundamental regulatory problem. The CWA requires the treatment of process water. The most economical, and perhaps only, technology for treating the massive amounts of process water and tailings generated by a large mine\(^\text{15}\) is the creation of tailings impoundments. Wherever the climate is not extremely arid, the impoundments are likely to encompass existing wetlands and streambeds. A sincere enforcement of the current CWA, which is precisely what the EPA and the Corps did not attempt, requires an acknowledgement that discharges into these impoundments involve pollution of existing waters, and are not equivalent to concrete settling ponds inside factories. Assessing regulation of tailings impoundments requires an exceedingly difficult value judgment: is industrial growth so important that society should permit mines freedom to dump tailings into streams and wetlands, or is a less sullied environment so important that society should impose probably insurmountable costs on many mining operations?

II. BACKGROUND OF THE REGULATORY DISPUTE

The area around Juneau, Alaska historically is known for gold mining. Due to high gold prices and new, cheaper extraction techniques, several companies have expressed an interest in both reopening old mines and exploiting new sites.\(^\text{16}\) Two projects in particular, the A-J mine and the Kensington mine, have reached the final stages of permit seeking. Both mines would use tailings impoundments. At the Kensington mine, the tailings would be placed into wetlands currently adjacent to Ophir and Sherman Creeks, and the streams would be diverted into ditches bypassing the impoundment.\(^\text{17}\) The tailings would

\[\text{15. Hardrock mining “spew[s] out more solid waste each year than all other industrial and municipal sources combined.” Joan Hamilton, Field of Dust, SIERRA, Jan.–Feb. 1993, at 50.}\]


\[\text{17. See U.S. Army Corps of Engineers, Alaska District, Public Notice of Application for Permit (No. 2-900592) (Apr. 9, 1992) (Section 404 permit application for the Kensington mine) (on file with the University of Michigan Journal of Law Reform).}\]
be contained by construction of a dam.\textsuperscript{18} The A–J mine plans tailings impoundment in Sheep Creek Valley, but the project does not attempt to divert Sheep Creek. Instead, tailings would be disposed of directly into the creek.\textsuperscript{19}

Early in the permitting process for the A–J mine, a number of officials raised the issue of jurisdiction over the mine tailings, and differing views appeared as to how the tailings should be regulated. Representatives of the National Marine Fisheries Service (NMFS) and the Alaska Department of Fish & Game took the position that the discharge of mine tailings into Sheep Creek was a discharge of pollutants, from a point source, into waters of the United States, and therefore required a permit issued by the EPA in accordance with section 402 of the CWA.\textsuperscript{20} These agencies in essence were arguing that the disposal of tailings into Sheep Creek was no different than any other pollution of a stream, such as a pipe running sewage into the creek.

The Corps also preferred to place the regulatory responsibility with the EPA.\textsuperscript{21} The Corps apparently recognized that if it had to consider tailings disposal as a section 404 “fill,” then the discharge might well be impermissible under the section 404(b)(1) guidelines, and the Corps then would have to deny

\textsuperscript{18} Id.

\textsuperscript{19} See U.S. Army Corps of Engineers, Alaska District, Public Notice of Application for Permit (No. 2-890243) (June 5, 1992) (Section 404 permit application for the A–J mine) (on file with the \textit{University of Michigan Journal of Law Reform}).

\textsuperscript{20} See Memorandum from Janet H. Schempf, Area Habitat Biologist, Habitat Division, Alaska Department of Fish & Game, to Gabrielle LaRouche, Project Coordinator, Department of Governmental Coordination 8–9 (Mar. 8, 1991) (reviewing the A–J mine draft Environmental Impact Statement (EIS) and draft NPDES permit) (on file with the \textit{University of Michigan Journal of Law Reform}); see also Letter from Steven Pennoyer, Director, Alaska Region, National Marine Fisheries Service, to Harold E. Geren, Chief, Water Permits and Compliance Branch, EPA Region 10 (Apr. 23, 1991) (reviewing a draft NPDES permit, Public Notice AK-004951-4) (on file with the \textit{University of Michigan Journal of Law Reform}). In his letter, Mr. Pennoyer states:

[The] most serious deficiency of the draft NPDES permit is that the discharge of mine tailings into Sheep Creek is not regulated under the draft permit. The NPDES program requires permits for the discharge of pollutants from any point source into waters of the United States. Although the NPDES regulations exempt discharges into bona fide waste treatment systems from NPDES jurisdiction, Sheep Creek cannot be considered a waste treatment facility.

\textit{Id.} at 2 (emphasis added).

a crucial permit to an applicant who had proceeded through all of the early planning without being informed of such a project stopper.\textsuperscript{22}

The EPA, however, disclaimed responsibility for permitting the tailings discharge into Sheep Creek Valley\textsuperscript{23} and eventually clarified its regulatory theories.\textsuperscript{24} In a letter to the head of the Corps' North Pacific Division, Harold Geren, the Acting Deputy Director of the EPA Region 10 Water Division stated:

The tailings impoundments proposed by the mining operations are the type of treatment technology considered in the development of the effluent guidelines for this industry.

\begin{itemize}
\item \textsuperscript{22} See Letter from Steven Pennoyer, Director, Alaska Region, National Marine Fisheries Service, to Colonel William Kakel, District Engineer, Alaska District, U.S. Army Corps of Engineers 4 (Mar. 29, 1991) (on file with the \textit{University of Michigan Journal of Law Reform}). In his letter, Mr. Pennoyer states that:

The applicant proposes to construct a solid fill dam across Sheep Creek and associated wetlands to create a tailings disposal area . . . . [U]ltimately, the applicant is requesting authorization to convert a special aquatic site into a mining waste disposal site, an action clearly contrary to the Clean Water Act and the Section 404(b)(1) guidelines.

\textit{Id.} at 4.

The Section 404(b)(1) guidelines are regulations promulgated by the EPA which loosely control the conditions under which the Corps may issue a Section 404 permit for "fill" in the "waters of the United States." \textit{See} 40 C.F.R. \textsection 230.10 (1993).

\item \textsuperscript{23} See Letter from Rick Seaborne, NEPA New Source Coordinator, EPA Region 10, to David Dorris, Bureau of Land Management, U.S. Department of the Interior 3 (June 3, 1991) (on file with the \textit{University of Michigan Journal of Law Reform}). In his letter, Mr. Seaborne states that: "With regard to the tailings impoundment, EPA jurisdiction under Section 402 of the Clean Water Act extends to authorization of discharges from the tailings impoundment only." \textit{Id.} This is a bureaucratic way of saying that the EPA should not concern itself with the water in the valley impoundment, and that severe pollution of water in Sheep Creek Valley is irrelevant to the EPA.

By early 1992, the Kensington Mine also was part of the interagency debate. \textit{See} Memorandum from John Zammit, Chief, North Pacific Division, U.S. Army Corps of Engineers to North Pacific Division, U.S. Army Corps of Engineers 1 (Feb. 21, 1992) [hereinafter Zammit Memo] (stating that the "overall issue of mine tailings responsibility was discussed with interest, especially in resolving two permit applications in Alaska, namely, A–J Mine and the Kensington project") (on file with the \textit{University of Michigan Journal of Law Reform}).

\item \textsuperscript{24} The Alaska Department of Environmental Conservation (ADEC) explicitly presented the theory which the EPA eventually relied upon: "Coincident with the deposition of the tailings and waste rock, Sheep Creek valley will change from a stream to a treatment facility." Memorandum from Dick Stokes, Southeast Regional Supervisor, Alaska Department of Environmental Conservation, to Gabrielle LaRouche, Project Coordinator, Department of Governmental Coordination 15 (Mar. 13, 1991) (Review of A–J mine draft EIS from ADEC) (on file with the \textit{University of Michigan Journal of Law Reform}).
\end{itemize}
However, the impoundments would be constructed in waters of the U.S. The critical questions, then, are whether the CWA allows for the conversion of waters of the U.S. into waste treatment systems and, if so, what is the appropriate mechanism for accomplishing that conversion? Any such "conversion" would depend upon the EPA's definition of "waters of the United States," which sets the regulatory limits of the EPA's jurisdiction under section 402. Because the definition of "waters of the United States" excludes "waste treatment systems," mine tailings can be disposed of without the need for a section 402 permit if the impoundment is a "waste treatment system."

As the EPA realized, however, Sheep Creek is undisputedly a "water of the United States," as are the wetlands present in the proposed Kensington impoundment. The EPA letter continues:

It is the EPA position that, under limited, site specific situations, the CWA does allow the conversion of "waters of the U.S." into waste treatment systems. The best mechanism for thoroughly evaluating the merits of such a conversion, as we see it, is the § 404 permitting process.

The EPA therefore expected the Corps to apply the section 404(b)(1) guidelines to the "entire project," including the "impoundment areas," and decide on a section 404 permit accordingly. At least one EPA official feared that this proposed conversion of a stream and wetlands into "treatment facilities" was not justified adequately. This official further stated that "[o]ur problem is that we cannot issue a permit for discharge of untreated waste water into waters of the U.S. I am concerned that we would decide that they are not waters of the United States just so that we can issue a discharge permit."

26. See infra notes 41, 50 and accompanying text.
27. 40 C.F.R. § 122.2 (1994). For discussion of EPA's reliance on this regulation, see infra notes 55–68 and accompanying text.
29. Id. at 2.
The Corps protested having been assigned jurisdiction over the entire project. First, the Corps claimed that mine tailings did not fit the Corps' definition of "fill," pursuant to section 404. The Corps claimed that the tailings instead were solid waste, which it did not have the expertise to evaluate. Second, the Corps maintained that the 1986 Memorandum of Agreement (MOA) between the Corps and the EPA, which attempted to clarify the jurisdictional division between sections 404 and 402, placed responsibility for the tailings with the EPA. Essentially, the Corps retained its previous position in order to avoid having to treat the tailings as a section 404 discharge subject to the section 404(b)(1) guidelines. Although the Corps insisted that streams and wetlands within the impoundments did not stop being "waters of the United States" simply by virtue of their impoundment, the Corps, in an apparently strained effort to reconcile its own views with those of the EPA, did suggest that

The dilemma cited by Mr. North results from the EPA's New Source Performance Standards (NSPS) for gold mines other than placer mining. See 40 C.F.R. § 440.104 (1993). The NSPS set a "zero discharge" standard for these mines; process water and tailings cannot be released into "waters of the United States" unless precipitation and storm exceptions apply. Id. If the stream and wetlands in the tailings impoundments are "waters of the United States," then constant dumping of tailings into Sheep Creek violates the EPA's own regulations. See infra text accompanying notes 155-57.

31. Section 404 of the CWA covers only discharges of "dredged or fill" material into "waters of the United States." 33 U.S.C. § 1344 (1988). This limitation was designed to exempt construction projects from the rigors of Section 402. The Corps' regulations define "fill material" as "any material used for the primary purpose of replacing an aquatic area with dry land or of changing the bottom elevation of an [sic] waterbody." 33 C.F.R. § 323.2(e) (1994). According to the Corps, the mine tailings fail the "primary purpose" test because they are being placed in water for disposal, not primarily to create land or dredge a channel. See Zammit Memo, supra note 23, at 2-3.


33. Id. at 2.

34. Id. at 3. "The Corps believes that since we don't regulate the tailings, we don't undertake a 404(b)(1) analysis for such tailings. We do, however, do such an analysis for the 404 activities." Id.

35. Id. at 2. The Corps' officials questioned the EPA's characterization of the impoundments as "waste treatment" facilities.

In the opinion of the [Alaska] District's Office of Counsel, the impoundment is not a waste treatment system. The draft environmental impact statement prepared primarily by the Bureau of Land Management as the lead agency, consistently refers to the purpose of the impoundment as being for tailings disposal. Nowhere, is it called a treatment facility. Yet EPA is adamant that it is a treatment facility . . . .

waters in the impoundment might cease to be "waters of the United States" upon the addition of mine tailings for disposal.\textsuperscript{36}

III. A CONVENIENT COMPROMISE

Eventually, the EPA and the Corps reached a mutually acceptable compromise expressed in parallel memorandums sent to their respective regional offices in autumn of 1992.\textsuperscript{37} The EPA's interpretation which essentially prevailed, provided that:

[T]he particular basin created by the discharge of fill material contemplated as part of the A–J and Kensington Mine projects, if permitted by the Corps under Section 404 for purposes of creating a waste treatment system, would no longer be waters of the U.S. Consequently there is no need for a Section 402 or an additional Section 404 permit to discharge the tailings into the system.\textsuperscript{38}

By considering Sheep Creek and various wetlands to be potential "waste treatment systems," the EPA has allowed itself to avoid the necessity of reviewing a section 402 permit application for the discharge of mine tailings into these waters. The role of the Corps, however, is not entirely clear. Apparently, the Corps would issue a section 404 permit for construction of the impoundment, and consider the tailings as a "secondary impact"; what constitutes an acceptable secondary impact, however, is not defined.\textsuperscript{39}

The Corps and the EPA compromised their mutually exclusive stances and no longer dispute who has permitting responsibility for tailings discharge into the wetlands and Sheep Creek.

\textsuperscript{36} Memorandum for Record from Glen Justis, Southern Team Leader, Special Actions Section, Regulatory Branch, U.S. Army Corps of Engineers 2 (June 27, 1991) (on file with the University of Michigan Journal of Law Reform).

\textsuperscript{37} See Memorandum from John Studt, Chief, Regulatory Branch, Operations and Readiness Division, Directorate of Civil Works, U.S. Army Corps of Engineers, to Commander, CENPD-OP (Sept. 10, 1992) [hereinafter Corps Decision Memo] (on file with the University of Michigan Journal of Law Reform); Memorandum from LaJuana Wilcher, Assistant Administrator, EPA Region 10, to Charles Findley, Director, Water Division, EPA Region 10 (Oct. 2, 1992) [hereinafter EPA Decision Memo] (on file with the University of Michigan Journal of Law Reform).

\textsuperscript{38} EPA Decision Memo, supra note 37, at 2 (citations omitted); accord Corps Decision Memo, supra note 37, at 1–2.

\textsuperscript{39} See Corps Decision Memo, supra note 37; EPA Decision Memo, supra note 37.
Unfortunately, the compromise was accomplished by a regulatory sleight of hand which lacks support in either the spirit or the letter of the CWA.

IV. MISINTERPRETATION OF THE CLEAN WATER ACT

The EPA and the Corps' determination that the CWA does not grant them jurisdiction over the A-J and Kensington tailings disposal is unjustified. The twisted reasoning of the agencies' compromise not only violates the settled definition of "waters of the United States" under the CWA, but violates the goals of other CWA regulations, and previous EPA policy. Because the compromise is not supported by law, the EPA should consider the tailings disposal as a section 402 discharge, and then either permit or deny such disposal accordingly.40

A. Inconsistency with the Definition of "Waters of the United States"

A critique of the EPA's current view as to the jurisdiction over tailings impoundment begins by examining what "waters of the United States" means under the CWA. The EPA's decision rests upon the regulations which define "waters of the United States"—those waters which are to be protected under the CWA.41 In particular, the EPA relies upon language which states that "waste treatment systems" are not "waters of the United States."42 However, the EPA's theory that building a dam can convert "waters of the United States" into a waste treatment

40. Assuming the EPA theory is at least partly valid, the Corps might have to consider a permit for the tailings discharge under section 404 of the CWA. If the Corps considered the tailings a section 404 discharge, the disposal would have to meet the section 404(b)(1) guidelines for a discharge of "fill" into "waters of the United States." This is an issue beyond the scope of this Note. Numerous other articles discuss the role of the Corps and the requirements for a section 404 permit. E.g., Lawrence R. Liebesman, The Role of EPA's Guidelines in the Clean Water Act § 404 Permit Program, [1984] 14 Envtl. L. Rep. (Envtl. L. Inst.) 10,272 (July 1984); Bruce D. Ray, Section 404 of the Clean Water Act: An EPA Perspective, 2 NAT. RESOURCES & ENV'T, Winter 1987, at 20; William K. McGreevey, Note, A Public Availability Approach to Section 404(b)(1) Alternatives Analysis, 59 GEO. WASH. L. REV. 379 (1991).

41. 40 C.F.R. § 122.2 (1994).

42. Id.
system is inconsistent with the history of the term "waters of the United States."

1. The Statutory Definition of "Waters of the United States"—The "water" to be protected by the CWA is not defined precisely by the statute itself. The language is inclusive, but not detailed. In the "declaration of goals and policy" section of the Federal Water Pollution Control Act Amendments of 1972,43 Congress stated that "[t]he objective of this chapter is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."44 This declaration remains the central statement of the purpose of the CWA. The declaration lists a number of goals and policies necessary to achieve the Act's objective, including the elimination of the "discharge of pollutants into the navigable waters."45 The CWA forbids "the discharge of any pollutant," with various exceptions.46 "Discharge of a pollutant" is defined as "(A) any addition of any pollutant to navigable waters from any point source, (B) any addition of any pollutant to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft."47

The CWA itself never defines "the Nation's waters" referred to in the declaration of purpose;48 however, "navigable waters" are defined broadly as "waters of the United States, including the territorial seas."49 This all-encompassing definition and the statements indicating the broad Congressional objective of the CWA are the only literal statutory guidance available.

2. The EPA Regulations Defining "Waters of the United States"—Because the CWA does not actually define the term "waters of the United States" and therefore fails to delineate precisely the jurisdiction it confers, the EPA has defined that term through subsequent regulations, and has done so rather expansively.50 For the purposes of NPDES permit jurisdiction,

45. Id. § 1251(a)(1) (emphasis added).
46. Id. § 1311(a).
47. Id. § 1362(12) (emphasis added).
48. See id. § 1251(a).
49. Id. § 1362(7). This definition is an explicit expansion of the definition of "navigable waters" used in older statutes such as the Rivers and Harbors Act of 1899. See id. §§ 401-467.
50. The EPA defines "waters of the United States" and "navigable waters" several times in the Code of Federal Regulations. The most relevant language is in the section on permits under the National Pollutant Discharge Elimination System. See 40 C.F.R.
"waters of the United States" includes "[a]ll other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, 'wetlands,' sloughs, prairie potholes, wet meadows, plana lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce"51 and "[a]ll impoundments of waters otherwise defined as waters of the United States under this definition."52 The definition also includes tributaries of waters identified previously as "waters of the United States."53 The Corps, in promulgating regulations to implement its section 404 duties, has adopted the EPA's definition of "waters of United States."54

The EPA's definition, however, excludes "[w]aste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA" from "waters of the United States."55 A sentence which had followed immediately—until "suspended" from the definition on July 21, 1980—had noted that "[t]his exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as disposal areas in wetlands) nor resulted from the impoundment of waters of the United States."56 Without the suspended text, the definition simply excludes "waste treatment systems" from the list of waterbodies the CWA is to protect, but does not discuss further how a "waste treatment system" itself should be defined.

The general purpose of the "waste treatment system" exclusion seems to be a sensible desire not to punish compliance with the CWA. If the CWA seeks, for example, to make a city build a sewage treatment plant instead of piping its raw sewage into the harbor, then it is perverse to belabor a municipality for

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§ 122.2 (1994). The EPA guidelines for the Corps' administration of the Section 404 permit program duplicates that definition. See 40 C.F.R. §§ 230.3(s), 232.2(q) (1993); see also id. § 401.11(1) (defining "waters of the United States" for the purposes of the EPA's Effluent Guidelines and Standards for the CWA).
51. 40 C.F.R. § 122.2 (1994).
52. Id.
53. Id.
54. See 33 C.F.R. § 328.3(a) (1994) (duplicating the definition in 40 C.F.R. § 122.2 (1944)).
55. 40 C.F.R. § 122.2 (1994).
56. Id. Although this text is still in the CFR, section 122.2 contains a footnote stating: "At 45 FR 48620, July 21, 1980, the Environmental Protection Agency suspended until further notice in § 122.2, the last sentence, beginning 'This exclusion applies . . . ' in the definition of 'Waters of the United States.' This revision continues that suspension." Id.
putting sewage into a settling pond at the sewage treatment plant. A similar example is a factory which treats its effluent instead of pumping it immediately into a nearby stream. Nonetheless, should the factory be able to meet its CWA requirements by labelling part of the stream its “waste treatment system”?

The history of the waste treatment system exception indicates that such waters would remain protected by the CWA. The 1979 version of the “waste treatment system” exception was contained in the definition of “navigable waters” and only stated that “waste treatment systems (other than cooling ponds meeting the criteria of this paragraph) are not waters of the United States.” In May, 1980, the EPA attempted to clarify this language while promulgating regulatory definitions for the NPDES program. The EPA's explanation of the “waste treatment system” exclusion appears to comport with the common sense interpretation:

The proposal exempted “treatment ponds or lagoons designed to meet the requirements of the CWA.” . . . [I]t is now written to cover “waste treatment systems including treatment ponds or lagoons. . . .” Because CWA was not intended to license dischargers to freely use waters of the United States as waste treatment systems, the definition makes clear that treatment systems created in those waters or from their impoundment remain waters of the United States. Manmade waste treatment systems are not waters of the United States, however, solely because they are created by industries engaged in, or affecting, interstate or foreign commerce. Finally, as in the proposal, certain cooling ponds fall outside the exemption.

The EPA therefore promulgated final regulations with the rewritten waste treatment systems exemption to the definition of “waters of the United States” and with the soon-to-be suspended sentence clarifying that exemption.

57. 40 C.F.R. § 122.3(t) (1979).
58. See 45 Fed. Reg. 32,298 (1980). The EPA also replaced “navigable waters” with “waters of the United States” due to complaints by commentators that the CWA’s conflation of the two terms was confusing. Id. EPA noted that “[w]aters of the United States’ was chosen for the same reason that it is used in the Clean Water Act: the Act covers much more than waters which are traditionally ‘navigable.’” Id.
59. Id. (emphasis added).
60. See id. at 33,424.
The suspension of the clarifying exemption was merely an attempt to protect the interests of those who possessed older facilities. The EPA enacted the suspension in July, 1980 because several industry representatives feared that the language “this exclusion applies only to manmade bodies of water” was overbroad and would inadvertently outlaw existing waste treatment facilities—those constructed in streams or other “waters of the United States” before the regulation in question existed. The suspension did not indicate a fundamental change in the EPA’s earlier intent, but merely a concern over the possible application of the regulation to certain existing facilities. The EPA did not question the regulation’s application with regard to future projects. Rather, the EPA reaffirmed that application by stating that its “purpose in the new last sentence [the one suspended] was to ensure that dischargers did not escape treatment requirements by impounding waters of the United States and claiming the impoundment was a waste treatment system, or by discharging waste into wetlands.”

Despite the clear-cut history of the suspension, the EPA has now interpreted the suspension as sweeping away the policy explicitly set forth in the May, 1980 regulations. Although the suspension was not intended to change the policy against allowing the creation of “waste treatment systems” in “waters of the United States,” the recent EPA decision maintains that the suspension has precisely that effect. The memo setting forth the EPA’s view of the A–J and Kensington mines cites to 40 C.F.R. § 122.2 as support for the argument that the waters within the tailings impoundments, if the impoundments were “permitted . . . for purposes of creating a waste treatment system, would no longer be waters of the U.S.” In its parallel

61. See id. at 48,620. The EPA stated: “[t]his action suspends a portion of the definition of the term, ‘waters of the United States’ in the Consolidated Permit Regulations pending further rulemaking.” Id. Further rule making has been pending for over a decade.
62. Id.
63. Id.
64. Id.
65. EPA Decision Memo, supra note 37, at 2.
66. The memo also cites 33 C.F.R. § 328.3(a) and 40 C.F.R. §§ 230.3(s), 232.2(q). Id. All of these sections contain the same definition of “waters of the United States” as 40 C.F.R. § 122.2.
67. EPA Decision Memo, supra note 37, at 2. The memo states:

Corps Headquarters agrees with our view that the particular basin created by the discharge of fill material contemplated as part of the A–J and Kensington
memo, the Corps uses substantially the same language. The two agencies have decided that the “waste treatment systems” exemption allows the conversion of wetlands and a stream into “waste treatment systems” which are not protected by the CWA. This is a peculiar distortion of the definition of “waters of the United States” and the exemption related to it.

3. Judicial Interpretation of “Waters of the United States”— Only one case, West Virginia Coal Ass’n v. Reilly, specifically addresses whether treatment ponds created in streams remain “waters of the United States.” Other case law further supports an expansive interpretation of “waters of the United States.” The federal courts have read the CWA’s grant of agency jurisdiction broadly and have refused to accept unnecessary restrictions on the law’s scope. Although West Virginia Coal is consistent with this long-standing judicial philosophy, the EPA’s decision regarding the A–J and Kensington Mines is not. Despite the precedent they previously helped establish, the EPA and the Corps seek to expand the exception for “waste treatment systems” in a manner contrary to the recognized broad protective intent of the CWA.

In West Virginia Coal, the court considered whether sedimentation ponds constructed in streams remained “waters of the United States.” The court had to decide between conflicting interpretations of the regulation defining “waters of the United States.” According to the EPA at that time, waters in a stream used for sedimentation ponds were still “waters of the United States.” The court accepted this interpretation.

The litigation centered around the sediment run-off from heaps of overburden, or spoil, produced by surface coal mining

Mine projects, if permitted by the Corps under Section 404 for purposes of creating a waste treatment system, would no longer be waters of the U.S. (see 33 CFR Section 328.3(a) and 40 CFR Sections 122.2, 230.3(s), and 232.2(q)). Consequently, there is no need for a Section 402 or an additional Section 404 permit to discharge the tailings into the system.

Id. 68. Corps Decision Memo, supra note 37, at 1.
70. See infra notes 97–115 and accompanying text.
71. West Virginia Coal, 728 F. Supp. at 1286–90.
72. See infra notes 82–86 and accompanying text.
73. West Virginia Coal, 728 F. Supp. at 1290.
74. “Overburden” is excess topsoil and gravel displaced by a mining operation. The district court in West Virginia Coal uses the term “spoil” interchangeably with “overburden.” See id. at 1281; see also Mining Wastes, supra note 5, at 8 (“overburden or spoil is the waste rock removed in exploration or mining to reach metallic ore.”).
operations. The piles were placed in valleys in order to make use of the flat land, just as the proposed tailings disposal sites in Southeast Alaska are located in valleys. Run-off collected from the spoil heaps were channelled into sedimentation ponds, located in existing streams downstream from the disposal sites. The EPA overruled the state’s approval of forty-one draft NPDES permits, all of which authorized in-stream sedimentation ponds, stating that in-stream sedimentation ponds were contrary to the CWA. The coal mining association and various companies filed suit against the EPA, arguing that because in-stream settling ponds were “waste treatment systems” excluded from the definition of “waters of the United States,” the EPA lacked statutory authority to object to such ponds. If the areas upstream of the dam were not “waters of the United States,” then the EPA could not impose section 402 (NPDES) permit requirements on the discharge of sediment into the upstream water.

The plaintiffs in West Virginia Coal claimed that the EPA’s suspension of the clarifying language—which stated that “[the waste treatment system] exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as disposal area in wetlands) nor resulted from the impoundment of waters of the United States”—amounted to a declaration that the contrary was now true: treatment ponds were no longer “waters of the United States.” The court summarized the EPA’s contrary position:

75. West Virginia Coal, 728 F. Supp. at 1281.
76. See supra notes 5–6 and accompanying text.
77. West Virginia Coal, 728 F. Supp. at 1281.
78. Id.
79. Id. at 1289.
80. Id. at 1282.
81. Id. The EPA still may have had authority to regulate the discharge as an "internal waste stream" because the EPA can set maximum concentrations for pollutants for discharge points within a waste treatment system. See, e.g., Texas Mun. Power Agency v. EPA, 836 F.2d 1482, 1486–88 (5th Cir. 1988) (citing 40 C.F.R. § 122.45(h) (1986)). However, the usual effluent limits and anti-degradation policy which are meant to protect “waters of the United States” do not apply to an "internal waste stream." The EPA may set requirements which are considerably more relaxed than would be acceptable for discharge into “waters of the United States,” or the EPA may decide to set no requirements at all. Texas Mun. Power Agency, 836 F.2d at 1486–88. The West Virginia Coal court did not reach the issue of internal waste stream regulation because it decided that the usual permit provisions of the CWA applied. West Virginia Coal, 728 F. Supp. at 1282.
82. See supra note 56 and accompanying text.
83. West Virginia Coal, 728 F. Supp. at 1289.
According to the EPA, the last [suspended] sentence was not definitional, rather it was merely explanatory in nature. Accordingly, EPA contends, the suspension of the last sentence has no effect upon the clear definitional mandate that impoundments of waters of the United States remain "waters of the United States."\textsuperscript{84}

According to EPA, an "impoundment of waters otherwise defined as waters of the United States under this definition" was still "waters of the United States,"\textsuperscript{85} and therefore, the sedimentation ponds at issue were "waters of the United States" because they were impoundments of water which had, until the construction of the ponds, been "otherwise defined as waters of the United States."\textsuperscript{86}

The court explicitly affirmed the District Court and upheld the EPA's interpretation of its regulations.\textsuperscript{87}

After reviewing the relevant law and facts, we agree with the district court's conclusion that the in-stream treatment ponds and the waters above such ponds fall within the definition of 'waters of the United States,' see 40 C.F.R. § 122.2(d), and EPA did not act beyond its statutory authority in regulating these waters.\textsuperscript{88}

*West Virginia Coal* has a limited application. First, the case does not preclude a change of position by the EPA because the court merely held that the EPA's interpretation was acceptable, not that the coal association's position was legally untenable. The holding was based on deference to the EPA's interpretation: the court held that the EPA's position was a permissible interpretation of the CWA, but did not conduct a *de novo* review.

\textsuperscript{84} *Id.* at 1290–91; *see also supra* notes 59, 64 and accompanying text (citing regulatory language implying that the EPA did not consider the July 1980 revision a marked change in policy, but rather a house cleaning measure consistent with the pre-1980 regulation).

\textsuperscript{85} *West Virginia Coal*, 728 F. Supp. at 1289–90 (citing 40 C.F.R. § 232(q)(4) (1988)); *see also* 40 C.F.R. § 122.2 (1993) (defining "impoundments of waters otherwise defined as waters of the United States under this definition" to be "waters of the United States").

\textsuperscript{86} *West Virginia Coal*, 728 F. Supp. at 1289–90.

\textsuperscript{87} *Id.* at 1290.

of the merits of that position. See West Virginia Coal, 728 F. Supp. at 1290. Although courts usually are deferential to an agency's interpretation of its own regulations, United States v. Riverside Bayview Homes, Inc., 474 U.S. 121, 134 (1985), the EPA's and the Corps' recent interpretation of the "waste treatment systems" exception should not be entitled to complete deference by the court. When an agency departs from its prior interpretation of its regulations, it is required to provide a reasoned explanation for that departure. See, e.g., National Coal Ass'n v. Lujan, 979 F.2d 1548, 1553 (D.C. Cir. 1992) (stating that an agency should say why it departed from a prior regulatory scheme, but a "concise statement" is sufficient); Pittsburgh Press Co. v. NLRB, 977 F.2d 652, 655 ("The Board, like any other agency, however, has a corresponding justification for any departure from its prior policies or practices."); Seldovia Native Ass'n, Inc. v. Lujan, 904 F.2d 1335, 1345 (D.C. Cir. 1992) (requiring the agency "to show not only that its new policy is reasonable, but also to provide a reasonable rationale supporting its departure from prior practice") (emphasis added); see also Motor Vehicles Mfrs. Ass'n v. State Farm Auto Ins. Co., 463 U.S. 29, 42 (1983) ("[A]n agency changing its course by rescinding a rule is obligated to supply a reasoned analysis for the change beyond that which may be required when an agency does not act in the first instance."); cf. Chevron USA, Inc. v. Natural Resources Defense Council, Inc., 467 U.S. 837, 865 (1984) ("[T]he Administrator's interpretation represents a reasonable accommodation of manifestly competing interests and is entitled to deference.")

90. West Virginia Coal, 728 F. Supp. at 1280 n.2 (setting forth the 1988 version of the "EPA Region III Policy for In-stream Treatment of Mining Wastewaters").

91. Id. at 1282.

92. Id. at 1280 n.2, 1284 n.3. Despite this policy of selective enforcement, however, the EPA insisted that it possessed the enforcement power. Id. at 1282–83.
United States," however, the EPA and the Corps are arguing in favor of cutting a large hole in the scope of CWA protection.

In the leading Supreme Court case on the scope of "waters of United States," United States v. Riverside Bayview Homes, Inc., the Court acknowledged that Congress intended the CWA's jurisdiction, as defined by "waters of the United States," to be based on the Commerce Clause of the United States Constitution.

Congress chose to define the waters covered by the Act broadly. . . . [T]he Act's definition of "navigable waters" as "the waters of the United States" makes it clear that the term 'navigable' as used in the Act is of limited import . . . Congress evidently intended . . . to exercise its powers under the Commerce Clause to regulate at least some waters that would not be deemed "navigable" under the classical understanding of that term.

The Court then held wetlands saturated only by ground water, but adjacent to other surface waters, to be "waters of the United States."

Lower courts have made it clear that CWA jurisdiction over "waters of the United States" extends as far as the generous provisions of the Commerce Clause allow. "The legislative history of the Amendments establishes that Congress wanted to give the term 'navigable waters' the 'broadest possible constitutional interpretation.' "We agree . . . that Congress intended to create a very broad grant of jurisdiction in the Clean Water Act, extending to any aquatic features within the reach

95. Riverside Bayview Homes, 474 U.S. at 133 (quoting S. CONF. REP. NO. 1236, 92d Cong., 2d Sess. 144 (1972); 118 CONG. REC. 33,756–57 (1972) (statement of Rep. Dingell)).
96. See id. at 133–35.
97. E.g., Leslie Salt Co. v. United States, 896 F.2d 354, 357 (9th Cir. 1990); Quivira Mining Co. v. EPA, 765 F.2d 126, 129 (10th Cir. 1985); United States v. Earth Sciences, Inc., 599 F.2d 368, 373 (10th Cir. 1979); United States v. Byrd, 609 F.2d 1204, 1209 (7th Cir. 1979); Natural Resources Defense Council, Inc. v. Callaway, 392 F. Supp. 668, 686 (D.D.C. 1975); United States v. Ashland Oil & Transp. Co., 504 F.2d 1317, 1328 (6th Cir. 1974); see also Texas Mun. Power Agency v. EPA, 836 F.2d 1482, 1487 (5th Cir. 1988) ("This definition of ["waters of the United States"] is expansive and, in keeping with the intent of Congress, the courts construe it liberally to give the broadest possible reach to EPA regulation.").
of the commerce clause power.”\textsuperscript{99} “Waters of the United States” include abandoned salt pits which flooded part of the year and harbored migratory birds,\textsuperscript{100} intermittent streams,\textsuperscript{101} and water above land permanently flooded by the raised water level of a reservoir.\textsuperscript{102}

Courts have read the CWA’s purpose as the protection of whole watersheds, and, ultimately, the oceans into which they drain. Because the CWA is intended to protect “entire aquatic systems,” “waters of the United States” include rivers and their tributaries, the creeks feeding the tributaries and the wetlands where ocean water mingles with the tributaries and rivers. As explained in \textit{United States v. Ashland Oil & Transp. Co.}:\textsuperscript{103}

\textit{[P]ollution is an obvious hazard to navigation which Congress has every right to seek to abate under its interstate commerce powers.}

It would, of course, make a mockery of those powers if its authority to control pollution was limited to the bed of the navigable stream itself. The tributaries which join to form the river could then be used as open sewers as far as federal regulation was concerned. The navigable part of the river could become a mere conduit for upstream waste.

Such a situation would have vast impact on interstate commerce. States with cities and industries situated upstream on the nonnavigable tributaries of our great rivers could freely use them for dumping raw sewage and noxious industrial wastes upon their downstream neighboring states. . . . In such a situation industrial frontage on a creek which flowed ultimately into a navigable stream would become valuable as an access point to an effectively unrestricted sewer.\textsuperscript{104}

\textsuperscript{99} \textit{Leslie Salt}, 896 F.2d at 357.

\textsuperscript{100} \textit{Id.}; see also National Wildlife Fed’n v. Laubscher, 662 F. Supp. 548 (S.D. Tex. 1987) (holding that an isolated pond visited by migratory birds is “waters of the United States”). \textit{But see} Hoffman Homes, Inc. v. EPA, 961 F.2d 1310 (7th Cir. 1992) (holding that isolated wetland is not “waters of the United States”).

\textsuperscript{101} \textit{Quivira Mining}, 765 F.2d at 129; see also \textit{United States v. Phelps Dodge Corp.}, 391 F. Supp. 1181, 1187 (D. Ariz. 1975) (holding that “waters of the United States” include “normally dry arroyos through which water may flow, where such water will ultimately end up in public waters such as a river or stream . . . or ocean either within or adjacent to the United States”).

\textsuperscript{102} \textit{See} Swanson v. United States, 789 F.2d 1368 (9th Cir. 1986).

\textsuperscript{103} 504 F.2d 1317 (6th Cir. 1974).

\textsuperscript{104} \textit{Id.} at 1326.
Prevention of water pollution requires protection of all the connected waters of the United States, not just major rivers, lakes, or other particular parts of a watershed, because there are no “discrete” separate waters.\textsuperscript{105}

Federal courts regard all interconnected waters—those parts of a “hydrologic cycle”—as equally important parts of a whole. Holding that non-flooded wetlands adjacent to bodies of water were “waters of the United States,” the \textit{Riverside Bayview Homes} Court quoted legislative history emphasizing the importance of protecting hydrologically interconnected waters. “Protection of aquatic ecosystems, Congress recognized, demanded broad federal authority to control pollution, for ‘[w]ater moves in hydrologic cycles and it is essential that discharge of pollutants be controlled at the source.’”\textsuperscript{106} The fact that the condition of the wetlands may affect the quality of adjacent water was a critical factor in the Court’s decision.\textsuperscript{107} The court in \textit{United States v. Saint Bernard Parish},\textsuperscript{108} after quoting the same section of legislative history used in \textit{Riverside Bayview Homes}, stated that “[r]eal protection of water must include protection of the complete aquatic system. Part of that system cannot be degraded or destroyed without adversely affecting the remaining parts.”\textsuperscript{109} The only bodies of water, aside

\begin{itemize}
\item \textsuperscript{105} \textit{Id.} at 1323-28.
\item \textsuperscript{107} \textit{Id.} at 134.
\item \textsuperscript{108} 589 F. Supp. 617 (E.D. La. 1984).
\item \textsuperscript{109} \textit{Id.} at 621.
\end{itemize}

\textsuperscript{105} \textit{Id.} at 1323-28.
\textsuperscript{107} \textit{Id.} at 134.
\textsuperscript{109} \textit{Id.} at 621.

\textsuperscript{105} \textit{Id.} at 1323-28.
\textsuperscript{107} \textit{Id.} at 134.
\textsuperscript{109} \textit{Id.} at 621.

\textsuperscript{105} \textit{Id.} at 1323-28.
\textsuperscript{107} \textit{Id.} at 134.
\textsuperscript{109} \textit{Id.} at 621.

[F]or the purposes of [the Clean Water Act] to be effectively carried into realistic achievement, the scope of its control must extend to all pollutants which are discharged into \textit{any waterway}... where any water which might flow therein could reasonably end up in any body of water, to which or in which there is some public interest, including underground waters.”

\textit{United States v. Phelps Dodge Corp.}, 391 F. Supp. 1181, 1187 (discussing the proper scope of “waters of the United States”).

In \textit{Quivira Mining Co. v. EPA}, 765 F.2d 126, at 130 (10th Cir. 1985), uranium mining waste was discharged into two arroyos. The court held that the arroyos’ sporadic streams were “waters of the United States” because of their connection to other surface waters. \textit{Id., see also Leslie Salt Co. v. United States}, 896 F.2d 354 (9th Cir. 1990) (deciding that abandoned salt pits seasonally filled with water are “waters of the United States”). The court in \textit{Leslie Salt} stated that “[t]he property was substantially affected by construction... . . . This construction created ditches, roadbeds, \textit{and most importantly, culverts which hydrologically connected the property to the Newark Slough.” \textit{Id.} at 356 (emphasis added).
from disputed wetlands, actually held not to be "waters of the United States" have been rare, naturally isolated ponds. An artificial body of water hydrologically connected to other "waters of the United States" is still subsumed within the definition. Regardless of whether the water in question is behind a dam, or lying in artificially built ponds behind tide gates, or stagnating in a canal, the crucial question is whether the water is hydrologically connected to other waters, and thus part of an "aquatic system." Even drastically modifying the flow of "waters of the United States" does not remove the water from the full protection of the CWA.

Whether mine tailings ponds are "waste treatment systems" exempted from the definition of "waters of the United States" therefore depends on whether the water in the ponds is viewed as part of a continuous watershed. The Sheep Creek tailings impoundment proposal for the A–J mine is to place a dam across the creek and then put tailings into that creek. The caselaw, including the explicit holding of West Virginia Coal, uniformly acknowledges that such an impounded stream is still "waters

110. Numerous cases concern whether a given batch of boggy ground meets the technical criteria for a "wetland." Such criteria include whether the ground is sufficiently saturated, and what constitutes wetlands vegetation. E.g., Bailey v. United States Army Corps of Engineers, 647 F. Supp. 44 (D. Idaho 1986).


112. Swanson v. United States, 789 F.2d 1368 (9th Cir. 1986); National Wildlife Fed’n v. Gorsuch, 693 F.2d 156, 165 (D.C. Cir. 1982) ("The parties agree... that both the reservoir and the downstream river are 'navigable waters' within the statutory meaning [of the Clean Water Act]."); see also Hudson River Fishermen’s Ass’n v. City of New York, 751 F. Supp. 1088 (S.D.N.Y. 1990) (holding that a city water supply in a reservoir is impounded river water, and therefore "water of the United States" within the meaning of the CWA), aff’d mem. 940 F.2d 649 (2d Cir. 1991).

113. Leslie Salt Co. v. Froehlke, 578 F.2d 742, 755 (9th Cir. 1978) ("We see no reason to suggest that the United States may protect these waters from pollution while they are outside of Leslie’s tide gates, but may no longer do so once they have passed through these gates into Leslie’s ponds.").

114. United States v. Saint Bernard Parish, 589 F. Supp. 617, 621 (E.D. La. 1984) ("The waters [of the canal] are no less interstate... due to the presence of the pumps and the levee. These merely control the natural flow of water to the wetlands; they control where nature does not.").

115. See National Wildlife Fed’n v. Consumers Power Co., 862 F.2d 580, 589 (6th Cir. 1988) (holding that water piped from Lake Michigan to a specially constructed, artificial reservoir and returned to the lake through turbines remained "waters of the United States").

116. Although no stream would flow through the Kensington impoundment, at least during the life of the mine, the impoundment would cover wetlands in the valley.
of the United States." 117 The newly impounded stream would have the same destination as it had previously, Gastineau Channel. The only change that the impoundment would affect is that all of Sheep Creek's sources now would flow into, and through, tons of mine tailings. To say, therefore, that the water is no longer "waters of the United States" is grossly inconsistent with the principles guiding the existing caselaw. Piping the water directly into Gastineau Channel 118 would not break the hydrological connection between Sheep Creek and Gastineau Channel. The impoundment would not become isolated and cut off from other waters. Although water piped into an industrial facility for use in waste treatment is not "waters of the United States" within the factory, the creation of culverts, dams, or other modifications does not cause "waters of the United States" to cease being "waters of the United States." 119

**B. Consistency with the Purpose Behind the New Source Performance Standards for Hard Rock Mines**

Another set of CWA regulations, the EPA's New Source Performance Standards (NSPS), 120 affects greatly the legal status of proposed tailings impoundments. The NSPS delineate the pollution reduction the EPA requires of new facilities; separate regulations for each industry category establish the precise standards. 121 For the A-J and the Kensington, which are underground gold mines, the applicable regulations are the NSPS for the Ore Mining and Dressing Point Source Category, Copper, Lead, Zinc, Gold, Silver, and Molybdenum Ores Sub-category. 122

The NSPS requirements for this subcategory have made the legal status of the tailings impoundments a major issue. The NSPS set a "zero discharge" standard; new mines are forbidden from discharging any process water into "waters of the United

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117. See supra notes 69-88 and accompanying text.
119. See supra notes 93–115 and accompanying text.
121. See id. § 440.
122. Id. § 440.104.
States." 123 Thus, if tailings impoundments are "waters of the United States," then dumping tailings into them is probably illegal under the NSPS.124 This leaves the planned mines unworkable.

Yet it may be the case that the NSPS regulations contemplate tailings ponds as the precise means by which mines will be able to attain zero discharge and therefore remain operational.125 If the only place to construct an impoundment is on wetlands or in a stream bed, then the NSPS requires stretching the definition of "waters" just enough to be practical, and allow construction of that impoundment, regardless of the consequences.

If the EPA did in fact contemplate that tailings ponds would be located in creeks, wetlands, or other "waters of the United States," then the history of the NSPS may lend strength to the

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123. Paragraph (b)(1) of the regulation provides:

Except as provided in paragraph (b) of this section, there shall be no discharge of process wastewater to navigable waters from mills that use the froth-flotation process alone, or in conjunction with other processes, for the beneficiation of copper, lead, zinc, gold, silver, or molybdenum ores or any combination of these ores.

Id. § 440.104(b)(1). Paragraph (d)(1) states: "Except as provided in paragraph (d) of this section, there shall be no discharge of process wastewater to navigable waters from mills that use the cyanidation process to extract gold or silver." Id. § 440.104(d)(1). The A-J and Kensington both would use some combination of froth-flotation and cyanide processing. See COEUR ALASKA, INC. & ECHO BAY ALASKA, INC., THE KENSINGTON VENTURE 8–10 (1992) (on file with the University of Michigan Journal of Law Reform); ECHO BAY ALASKA, INC., THE A–J PROJECT 6–7 (1991) (on file with the University of Michigan Journal of Law Reform).

124. The EPA defines "process waste water" as "any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, by-product, or waste product." 40 C.F.R. § 401.11(q) (1993). Tailings slurry is a mixture of waste water and waste products; thus, the entire slurry is "process waste water." See Mining Wastes, supra note 5; ROGER L. BAER ET AL., SUBMARINE DISPOSAL OF MILL TAILINGS FROM ON-LAND SOURCES (Engineering and Economic Analysis Section, Alaska Field Operations Center, Bureau of Mines, U.S. Dept. of the Interior) (1992) [hereinafter SUBMARINE DISPOSAL] (on file with the University of Michigan Journal of Law Reform).

125. See 47 Fed. Reg. 54,601 (Dec. 3, 1982) (preamble to NSPS) (discussing feasibility of zero-discharge tailings ponds). Contemporary correspondence also demonstrates the EPA's reliance on tailings ponds for tailings disposal. See, e.g., Letter from John R. Spencer, Administrator, EPA Region 10, to Steven Schatzow, Director, EPA, Office of Water Regulations and Standards 1 (July 15, 1982) ("The current proposal requires no discharge of process wastewater from the milling operations (except in certain precipitation events). This is based on the existing practice of disposing the tailings on land to ponds to settle out the tailings, and complete recycle of the wastewater.") (on file with the University of Michigan Journal of Law Reform).
EPA's current theory that the A–J and Kensington impoundments within streams and wetlands are lawful "treatment systems." If the NSPS do not encompass the use of in-stream impoundments, however, then the zero discharge standard makes the agencies' decision blatantly unlawful if the impoundments remain "waters of the United States."

In two letters, the Corps has suggested that the EPA, in promulgating the NSPS, actually intended tailings impoundments to be built in streams or wetlands. The argument is peculiar; the Corps, relying on a single quoted sentence from the regulation, maintains that the EPA intended to meet the "zero discharge" requirement by using some "waters of the United States" as tailings dumps in order to protect "navigable waters." The authors of this argument apparently believed that the plain

126. See Memorandum from Daniel R. Burns, Director of Operations, Construction, and Readiness, North Pacific Division, U.S. Army Corps of Engineers, to Commander CECW-OR, U.S. Army Corps of Engineers 3 (Apr. 20, 1992) (on file with the University of Michigan Journal of Law Reform). In his memorandum Mr. Burns states:

d. Tailings impoundments are consistent with EPA's New Source Performance Standards (NSPS) at 40 CFR 440 which state in part: "The Agency recognizes that the elimination of the discharge of pollutants to navigable waters may result in an increase in discharges of some pollutants to other media ".

e. EPA has responsibility for siting the impoundment within any drainage due to NSPS BAT [best achievable technology] specification; if EPA considers a site to be unacceptable or to have an unacceptable tradeoff in impacts between navigable waters and other waters of the U.S., EPA should select another site.

Id. A slightly earlier memorandum expresses a similar view:

EPA states in their New Source Performance Standards (NSPS) at 40 CFR 440: "The Agency recognizes that the elimination of the discharge of pollutants to navigable waters may result in an increase in discharges of some pollutants to other media. The Agency has considered these impacts and has addressed them in the preamble published on December 3, 1982 (47 FR 54609). . . . (we assume EPA understood that other media included waters of the U.S., including wetlands). . . . EPA also has responsibility for siting the impoundment within any drainage due to NSPS BAT specification; if EPA considers a site to be unacceptable or to have an unacceptable tradeoff in impacts between navigable waters and other waters of the U.S., EPA should select another site.


127. "The Agency recognizes that the elimination of the discharge of pollutants to navigable waters may result in an increase in discharges of some pollutants to other media." 40 C.F.R. § 440.104(b)(1), (d)(1) (1993).
requirements of the NSPS applied only to navigable-in-fact waters, such as oceans or rivers; they therefore ignored the CWA's equation of "navigable waters" with "waters of the United States." Protecting "navigable waters" from tailings dumps, however, necessarily means that "waters of the United States" likewise will be protected.

The court in *West Virginia Coal Ass'n v. Reilly* faced an issue very similar to whether the existence of the NSPS makes it more or less likely that impoundments are "waters of the United States." The coal association plaintiffs in *West Virginia Coal* suggested that the Surface Mining Control and Reclamation Act (SMCRA) in effect required the use of in-stream fills, just as the Corps has argued that the NSPS requires the use of in-stream tailings impoundments. The SMCRA requires sedimentation ponds; the plaintiff mining groups argued that, in West Virginia's damp terrain, the only way to construct sedimentation ponds and therefore comply with the SMCRA was to build the ponds in stream valleys, usually by damming existing streams. According to the plaintiffs, therefore, the EPA's attempt to require the sedimentation ponds to meet water quality standards as "waters of the United States" violated the SMCRA because it hindered construction of in-stream sedimentation ponds. The court pointed out that the SMCRA actually did not mandate in-stream sedimentation ponds, but merely recognized them as a possibility. Further, the SMCRA did not purport to deprive the EPA of its jurisdiction over existing "waters of the United States." The court held that there was no conflict between the SMCRA and the CWA, and upheld the EPA's regulation of the sedimentation ponds pursuant to section 402.

Even if the NSPS contemplated the use of existing waters for tailings disposal, they certainly do not mandate that the EPA abdicate jurisdiction over those waters. Assuming arguendo that the NSPS "zero discharge" requirement is not what it states,  

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132. *Id.*
133. *Id.*
134. *Id.*
135. *Id.*
at least for selected areas, it is difficult nonetheless to see how the NSPS could support the EPA’s current position regarding the A–J and Kensington. The EPA suggests not only that “zero discharge” should not apply to some waters, but that no standards whatsoever should apply. The NSPS does not suggest that a stream or other “water of the United States” suddenly ceases to exist as “water” under the CWA.

Finally, the NSPS “zero discharge” rule actually allows a considerable amount of discharge. In particular, the regulation provides for a “net precipitation exception.” This allows the operator of the mine to discharge from the impoundment an amount of water equal to annual rainfall on the impoundment and the “drainage area” around it, minus the annual evaporation. The EPA intended that the bulk of an impoundment’s water be recycled for further use in the mine. This “net precipitation exception” does not on its face appear, however, to contemplate a “drainage area” consisting of an entire stream and its associated watershed. It would be odd for the EPA to actually intend such a large exception in its “zero discharge” regulation, yet only make it available by surreptitiously straining the regulation’s language.

C. Consistency with Prior Policy and Other Regions

The EPA’s and the Corps’ dispute regarding the A–J and Kensington appears to be the latest of several similar disputes in other EPA regions, a few of which were decided in much the same way as the A–J and Kensington dispute. But the EPA’s regional offices ultimately do not agree on whether to permit tailings impoundments in streams and wetlands. Those regions which have considered tailings impoundments in “waters of the United States” carefully, such as Region 3, have developed policies inconsistent with the slipshod expediency demonstrated by the EPA and the Corps in Southeast Alaska.

No nationwide policy concerning tailings impoundments exists. In 1988, the EPA’s headquarters in Washington, D.C. convened a workgroup to consider “instream treatment.” The committee considered both the difficulties with permitting waste disposal

in impounded streams and wetlands, and the difficulties with shutting down the mines and other industrial facilities which consider this kind of dumping a necessary practice.\textsuperscript{138} The committee surveyed the various legal postures which the EPA might adopt, including the theory that "waters of the United States" could be removed from CWA jurisdiction by means of a section 404 permit—the theory later used by the Corps and the EPA for the A–J and Kensington. The committee questions whether this theory was legally supportable.\textsuperscript{139} But no national policy emerged from this meeting, and the various EPA offices are still interpreting the CWA in different ways.

EPA Region 10 has dealt with two other regulatory disputes involving tailings impoundments similar to the proposed impoundment at the Kensington mine. At the Sunbeam-Grouse Creek mine in Idaho, the EPA issued an NPDES permit for discharge from a tailings impoundment. The agency considered the impoundment itself a waste treatment system and the water within it not "waters of the United States," despite the fact that the impoundment was to be constructed in wetlands. Region 10 expected the Corps' section 404 permit for the impoundment construction to cover all of the CWA requirements:

The construction of a tailings treatment facility in the wetlands of Pinyon Basin has been authorized by the COE through a CWA Section 404 permit. The impacts associated with construction of the facility, including the wetland losses which would occur due to the placement of a liner, berms, and embankment, have been evaluated under the Section 404(b)(1) Guidelines by the COE. . . . The impacts of the discharge of mine tailings into the tailings treatment facility are evaluated as secondary impacts in the Section 404(b)(1) evaluation. Once the tailings treatment facility is constructed and completed pursuant to the COE Section 404 permit, the facility will be considered a waste treatment system designed to meet the requirements of the CWA as defined at 40 CFR 122.2.\textsuperscript{140}

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{138} See Memorandum from Ephraim King, Chief, Program Implementation Branch, EPA, to Workgroup Members (July 1, 1988) (on file with the University of Michigan Journal of Law Reform).
\item \textsuperscript{139} \textit{Id.} at 3–4.
\item \textsuperscript{140} Proposed Grouse Creek Project, Record of Decision, EPA (Oct. 6, 1992) (NPDES permit issued for Grouse Creek-Sunbeam Mine) (on file with the University of Michigan Journal of Law Reform).
\end{itemize}
\end{footnotesize}
Similar to the reasoning in the EPA and Corps Decision Memos regarding the A-J and Kensington, the Corps permits, pursuant to section 404, the construction of the impoundment, with the actual tailings discharge treated as a “secondary impact.” The EPA therefore succeeds in avoiding the problems involved in considering a section 402 permit for the discharge of mine tailings into the impoundment.

However, practical differences exist between the Sunbeam-Grouse Creek and the A-J projects. Because the annual evaporation at the Sunbeam site, near Stanley, Idaho, is close to the annual rainfall, the tailings pond is not expected to discharge frequently. Further, the stream which otherwise would run through the site, Washout Creek, is to be diverted around the impoundment. Finally, if the wetlands actually are covered by a clay liner for the impoundment, and no stream runs through the impoundment, then the tailings’ contact with “waters of the United States” will be quite minimal.

Region 10 and the Northern Pacific Division of the Corps also dealt with an impoundment for the Smoky Canyon Phosphate Mine in Idaho. The impoundment and tailings were to cover 137 acres of wetlands and capture some of the water originally draining into Roberts Creek. As with the A-J and Kensington, the Corps initially contended that the discharge of mine tailings was the EPA’s responsibility, pursuant to section 402. The

141. Id.
143. Id.
144. This rosy view of the Sunbeam impoundment assumes that the liner actually is effective and complete, and that all the streams and normal drainage into the valley are in fact diverted from the impoundment.
146. See Letter from James B. Royce, District Engineer, Walla Walla District, U.S. Army Corps of Engineers, to Robie Russell, Regional Administrator, EPA Region 10 (June 16, 1988) (on file with the University of Michigan Journal of Law Reform). The relevant portion of the letter reads as follows:

This is in regard to an application we received . . . for a Department of the Army permit to construct a new tailings ponds in Tygee Creek. . . . Their plans involve the discharge of mine tailings into Tygee Creek and adjacent wetlands. In order to accomplish this, the applicant proposes to construct an earthen dam across the Tygee Creek valley and relocate Tygee Creek around the tailings pond. Since these latter activities involve the discharge of fill material into waters of the United States, a Department of the Army permit is required by Section 404 of the Clean Water Act. . . .
Corps cited the 1986 MOA between the EPA and the Corps, which purports to determine which types of solid and semi-solid waste are covered by section 402 and which by section 404, to argue that the 1986 MOA placed responsibility for tailings discharge with the EPA.\textsuperscript{147} The EPA, however, balked at issuing an NPDES permit for the discharge of tailings into the impoundment.\textsuperscript{148} Nor did the EPA apparently ever issue an NPDES permit for the tailings discharge. The Corps never issued a comprehensive section 404 permit allowing the tailings discharge, issuing instead a permit covering only the discharge of fill to build the impoundment and divert a stream around it.\textsuperscript{149} The result was a classic regulatory block, and the tailings, a topic of considerable correspondence from 1988–1990, magically dropped out of regulatory sight.

During the Smoky Canyon debates, no one suggested the peculiar rationale used in the recent EPA-Corps decision, that the wetlands in an impoundment cease to be “waters of the United States.” Despite the similarity in regulation between the Sunbeam Mine and the A–J and Kensington situations, and despite the partial permitting of the Smoky Canyon impound-

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In accordance with the Memorandum of Agreement between the Corps of Engineers and the Environmental Protection Agency regarding discharges of solid waste, it is our opinion that discharge of the mine tailings into Tygee Creek and adjacent wetlands would be regulated by the Environmental Protection Agency under Section 402 of the Clean Water Act. To assist us in our scoping and evaluation of this project, you are requested to advise us whether or not a Section 402 permit will be required and the basis for your determination.

\textit{Id.}

147. See 51 Fed. Reg. 8871 (1986). The MOA provides in part:

5. On the other hand . . . a pollutant (other than dredged material) will normally be considered by EPA and the Corps to be subject to section 402 if it is a discharge in liquid, semi-liquid, or suspended form or if it is a discharge of solid material of a homogeneous nature normally associated with single industry wastes, and from a fixed conveyance, or if trucked, from a single site and set of known processes. These materials include placer mining wastes, phosphate mining wastes, titanium mining wastes, sand and gravel wastes, fly ash, and drilling muds. As appropriate, EPA and the Corps will identify additional such materials.

\textit{Id.} at 8872.


149. Permit Evaluation, \textit{supra} note 145.
ment, Region 10 does not appear to have created a deliberate policy. Instead Region 10 seems to have ignored the regulatory difficulties as best it could and treated each mine on a case-by-case basis.

EPA Region 9 confronted a situation analogous to the proposed A–J mine. The site for a proposed impoundment to accommodate copper mine tailings was Elder Gulch, Arizona, which contained an intermittent stream. Elder Gulch's occasional stream collected water from other desert washes and drained into a more substantial creek, Mineral Creek. Region 9 declared that the entire impoundment and the tailings disposal could be permitted by the Corps under section 404, and therefore the EPA need only issue a section 402 permit for discharge from the impoundment. Elder Gulch, its few acres of wetlands, and its stream are now engulfed in mine tailings.\textsuperscript{150}

When it first considered the Elder Gulch impoundment, the EPA intended to require a section 402 permit for the tailings discharge:

While the construction of the tailings facility is clearly subject to authorization under Section 404 of the CWA, the discharge of tailings is regulated under Section 402 of the CWA. . . . Under the Memorandum of Agreement between the Corps and EPA (51 FR 8871), the “discharge of solid material of homogenous nature [sic] normally associated with single industry wastes”, such as mine tailings, is subject to Section 402. \textit{EPA will inform the applicant that a NPDES permit is required for any discharge of mining waste to waters of the United States above the starter dike.}\textsuperscript{151}

It soon became clear, however, that the tailings impoundment simply would not be able to meet the water quality standards imposed by a section 402 permit.\textsuperscript{152} Rather than reject the proposed impoundment, the EPA and the Corps agreed to permit the tailings discharge; as well as the initial construction, under

\textsuperscript{150} \textit{See generally infra} notes 151–54 and accompanying text (discussing the background and resolution of the Elder Gulch permit application).

\textsuperscript{151} Letter from Harry Seraydarian, Director, Water Management Division, EPA Region 9, to Colonel Charles Thomas, District Engineer, Los Angeles District, U.S. Army Corps of Engineers 2 (July 9, 1990) (emphasis added) (on file with the University of Michigan Journal of Law Reform).

\textsuperscript{152} \textit{See Record of Communication from EPA Region 9 to Arizona Congressional/Gubernatorial Staffs 1 (May 23, 1991) (on file with the University of Michigan Journal of Law Reform).}
The two agencies ignored their 1986 MOA, which the EPA already had stated controlled this issue. The section 404 program, being more flexible and therefore more forgiving of egregious water quality violations, allowed the EPA to avoid its own section 402 standards for mining waste.

The EPA and the Corps did not, however, claim that Elder Gulch ceased to be "waters of the United States." The section 404 permit that the Corps eventually issued allowed not only the fill necessary for construction, but also permitted the discharge of "copper sulfide tailings (tailings facility), and leachable ore (heap leach dump) in Elder Gulch and other waters of the United States."¹⁵⁴

Unlike Regions 9 and 10, Region 8, when confronted with mining waste disposal into streams and wetlands, faced the issue in a manner consistent with the EPA's own regulations, rather than ignoring the issue or attempting to pass the regulatory problem to the Corps of Engineers during permit proceedings. When Region 8 was considering a NPDES permit for the Blue Spruce Placer Mine in Colorado, questions arose as to the status of two streams, some wetlands, and a pond created in one of the streambeds. Region 8 cited the regulatory history of the EPA's definition of "waters of the United States" and stated that the "waste treatment system" exclusion definitely was not intended to remove streams or wetlands from the jurisdiction of the CWA.¹⁵⁵ Region 8 considered the two streams, Gamble Gulch and South Boulder Creek, to be "waters of the United States," as well as "the pond around which Gamble Gulch has recently been diverted," "because the pond was originally constructed in waters of the U.S. (whether stream bed or wetland is of no significance for these purposes)."¹⁵⁶ Region 8 concluded that "both the streams and the ponds are waters of the U.S. deserving of NPDES permit protections."¹⁵⁷

Region 8 acted consistently with the EPA's own regulations and with the 1986 MOA. When considering the Blue Spruce Placer Mine, Region 8 rejected the idea that building a pond

¹⁵³. Id.
¹⁵⁵. See Memorandum from Marion Yoder, EPA Region 8, to Vern Berry & Bob Erickson, EPA Region 8, 1–3 (Oct. 31, 1990) (on file with the University of Michigan Journal of Law Reform).
¹⁵⁶. Id. at 2.
¹⁵⁷. Id. at 3.
or impoundment removed waters from CWA jurisdiction.\textsuperscript{158} Region 8 also apparently rejected the idea that responsibility for the permits could lie with the Corps rather than with the EPA.\textsuperscript{159}

In contrast to most of the EPA regional offices, Region 3 has developed a written policy addressing in-stream impoundments.\textsuperscript{160} Although the policy may leave much to be desired, it does attempt to address consistently the problem of impoundments in streams and wetlands, a course preferable to a case-by-case effort to place responsibility with the Corps.\textsuperscript{161}

\begin{quote}
158. \textit{See id. at 1} (stating that "all interstate streams and other water bodies . . . are waters of the U.S. \textit{So are impoundments of water otherwise defined as waters of the U.S.}") (emphasis added).

159. \textit{See id. at 3.} (In advising Colorado on whether or not Blue Spruce Placer Mine is subject to EPA jurisdiction, Region 8 stated that "regardless of Colorado's conclusions, EPA has an overriding permit veto power if Colorado chooses to apply its definition too narrowly to comport with EPA's").

160. The policy reads in part as follows:

The impoundment of waters of the United States for instream treatment of mining related wastewaters is prohibited. In a case where the regulatory authority determines that there is no feasible alternative and that any necessary lowering of water quality complies with the anti-degradation requirements in 40 CFR 131.12, EPA will not object to instream treatment under the following conditions:

1. Such facility will be located as close as feasible to the headwaters of the stream.

2. Placement of dredged or fill material for construction and operation of such facility will be in compliance with any permit issued under Section 404 of the Clean Water Act and applicable State wetland regulations.

3. Placement of any material for construction and operation of such facility will be consistent with the guidelines issued under the authority of Section 404(b)(1) of the Clean Water Act and 40 CFR 230.10.

4. The discharge from such facility located in a wet weather stream will be in compliance with applicable effluent guidelines.

5. Such facility may be located in an intermittent stream only if the discharge from the facility complies with Water Quality Standards, in addition to applicable effluent guidelines.

6. \textit{No such facility or fill material may be located in a perennial stream or wetland, as defined in 40 CFR 230.3.}

7. At the completion of mining and reclamation, settled material in such facility shall be stabilized to prevent migration of the material downstream. This may be accomplished by removal and proper disposal of the material, capping the impoundment or other appropriate measures.

\textbf{POLICY FOR INSTREAM TREATMENT OF MINING WASTEWATERS, EPA REGION 3} (emphasis added) (on file with the University of Michigan Journal of Law Reform).

161. The most interesting feature of the policy is its attempt to distinguish between more and less significant "waters of the United States," a sort of triage for the agency to use while compromising with the coal mining industry. \textit{See generally infra Part IV.}
D. An Important Distinction: Tailings Disposal in Streams versus Wetlands

The problems presented by the A-J and the Kensington proposals are not precisely the same, and the agencies' misconstrual of the CWA is especially egregious in the case of the A-J proposal. The proposed Kensington impoundment would destroy wetlands. The proposed A-J impoundment not only would fill a streambed and adjacent wetlands, but would create a tailings impoundment in a running stream, polluting both an entire watershed, and wetlands in the valley below.

The Kensington proposal resembles the Sunbeam Mine and Smoky Canyon permits, all three projects represent the relatively common practice in the United States of mines disposing of their tailings onto wetlands or onto clay liners on wetlands. Any streams at the impoundment site are usually diverted around the impoundment. While this destruction of wetlands arguably is in violation of the CWA, most mining operations probably could not operate without this disposal practice. If the EPA actually regulated mining waste discharges into wetlands—as it probably should, according to current law—then a great many mines in the United States would find their environmental cleanup costs skyrocketing and a number of mines would be unable to operate. If the Corps regulated such discharges as “fill,” the standards would be more flexible, but tailings disposal still would be more difficult for mines.

Sheep Creek is a different situation because no diversion of the creek is planned. The impoundment would be a tailings dump with a year-round stream running through it. It is very difficult to distinguish this plan from tailings disposal into “waters of the United States,” which is regulated by section 402

162. See supra notes 140–46 and accompanying text.
163. Telephone Interview with David Chambers, Mining Expert, Sierra Club Legal Defense Fund (Dec. 9, 1993) [hereinafter Chambers Interview]; see also supra notes 144–45 and accompanying text (detailing the fact that permit applications for the Sunbeam/Grouse Creek and Smoky Canyon Mines called for clay liners on wetlands).
164. Id.; see also supra notes 17, 143, 149 and accompanying text (documenting the fact that permit applications for the Kensington, Sunbeam/Grouse Creek, and Smoky Canyon Mines called for diversion of streams around the impoundments).
165. Chambers Interview, supra note 163.
166. Id.
167. Id.
168. See supra note 19 and accompanying text.
and absolutely banned by the NSPS for froth-flotation gold mines.\textsuperscript{169}

Whatever reasons the EPA has for ignoring its own regulations, the reasons are not as compelling for the A–J as they are for the Kensington and mines like it. The Kensington-type of impoundment—wetlands only—is more common, and perhaps less damaging.\textsuperscript{170} Its very commonness makes it more likely that the Kensington-type impoundment is at least consistent with prior EPA policy. In contrast, the proposed A–J impoundment is an egregious case of environmental destruction, and an especially obvious violation of the CWA.

\section*{V. ALTERNATIVES TO THE CURRENT SITUATION}

\subsection*{A. Marine Tailings Disposal}

A repeated suggestion during the A–J and Kensington debates has been to deposit the tailings in a deep inlet.\textsuperscript{171} This suggestion has been favored particularly for the A–J Mine, in part

\begin{itemize}
\item[169.] See supra notes 122–24, 136–37 and accompanying text. The NSPS allow discharge from the impoundment only for “net precipitation” and for various “storm events.” See 40 C.F.R. § 440.104 (1993). Neither of these exceptions seems to encompass the entire flow of a stream through the impoundment.

Of course, the EPA simply has ignored numerous discharges into streams over the years, either because of lack of enforcement authority or because of political reasons. See Letter from Ronald L. Miller, Assistant Director, Office of Water Quality, Arizona Department of Environmental Quality, to Harry Seraydarian, Director, Water Management Division, EPA Region 9 (Sept. 28, 1990) (listing several unregulated mine tailings dumps in Arizona) (on file with the \textit{University of Michigan Journal of Law Reform}).

\item[170.] Whether a given impoundment on wetlands is particularly damaging to the environment depends on a number of factors, including its proximity to ground water, the ecological value of the wetlands, and the potential for dam failure. See Mining Wastes, supra note 5.

\item[171.] See Ralph Thomas, \textit{Marine Dumping of Tailings Eyed}, \textit{JUNEAU EMPIRE}, Apr. 17, 1991, at 1. Further, according to the Zammit Memo:

The Corps of Engineers contends that in the AJ Mine application, the environmentally preferred alternative for tailings disposal is in deep marine waters. However EPA noted that this is presently not a viable option to the applicant; and it is even questionable whether it is indeed less damaging to the environment.

Zammit Memo, supra note 23.

The possibility of marine tailings disposal at the A–J and Kensington mines is discussed further in a publication by the Department of the Interior, Bureau of Mines. See \textit{SUBMARINE DISPOSAL}, supra note 124.
\end{itemize}
because A–J would generate a greater volume of tailings, but also because the Kensington site is adjacent to a major commercial fishery, making marine disposal politically unpalatable.

Marine dumping of tailings has a number of advantages: (1) it obviates the need for a tailings impoundment; (2) no dam must be maintained for years after a mine closing; and (3) compared to the hundreds of acres destroyed by an impoundment, few wetlands would be lost. Most importantly to the mining industry, marine disposal is less expensive. Although ocean dumping is becoming less and less favored in the United States, and marine disposal is geographically unavailable to most United States mines, marine disposal probably will remain an issue in mining proposals in Southeast Alaska and other coastal areas.

The method of tailings disposal recently contemplated is somewhat more sophisticated than simply abandoning the tailings in nearby coastal water. The technique currently

172. See supra note 7.
174. See *SUBMARINE DISPOSAL*, supra note 124, at 5.
175. See Chuck Kleeschulte, *Plotting the A–J Mine’s Comeback Trail*, ALASKA BUS. MONTHLY, May 1989, at 43. The author notes that:

Initially the leading candidate [for tailings disposal] was for the firm to build an eight-mile-long submarine pipeline down the middle of the Gastineau Channel and dump the rock in the 700-foot-deep fjord trench formed by Taku Inlet, Douglas Island and Admiralty Island. Noting that a submarine pipeline would have cost only $5.4 million, compared to the $38.4 million cost of a dam at Sheep Creek, Echo Bay argued that since the tailings are largely inert sand and never would have risen to within 300 feet of the surface, they would have had no effect on passing fish.

Id. at 45.
177. See *MARINE TAILINGS DISPOSAL* (Derek V. Ellis ed., 1982). For a more detailed view of the scientific merits of marine tailings disposal, see *SUBMARINE DISPOSAL*, supra note 124.
178. The old Juneau mines, including the former A–J, simply dumped tailings and waste rock at the edge of the water, filling in parts of the Gastineau Channel. The “rock dump” of the old A–J Mine was considered as a potential Superfund site, but apparently was found not to be in need of clean-up efforts. The most recent action taken
discussed takes advantage of particularly deep fjords which exist
in Southeast Alaska and along the coast of British Columbia.
In a model plant, the tailings slurry would be deaerated and
mixed with seawater, to eliminate the difference in fluid
density), and then carried by pipe to an outfall near the bottom
of the fjord or inlet.\textsuperscript{179} Once beneath the photic zone, approxi-
mately the first thirty meters, or 100 feet, below the surface,
the tailings would theoretically do little harm to commercially
valuable marine life such as salmon, which reside primarily in
the photic zone.\textsuperscript{180} In the model, the tailings remain on the sea
bottom, at least forty meters (133 feet), and as much as 260
meters (866 feet), below the surface.\textsuperscript{181} The tailings may migrate
along the ocean bottom.\textsuperscript{182}
Submarine tailings disposal arguably may be less damaging
than the use of impoundments on land, but the model presented
above is optimistically oversimplified. First, valuable fish do
not reside exclusively in the photic zone—for example, halibut
are bottom fish—smothering the benthic life\textsuperscript{183} with tailings
depreves these bottom fish of habitat. Second, the tailings do
not necessarily stay inert on the bottom. Even the U.S. Bureau
of Mines’ overview of submarine tailings disposal, which is
sanguine about the potential of marine tailings disposal, admits
that problems exist: the two Canadian mines cited as examples
of the technology both have suffered upwellings of tailings
causing excessive turbidity.\textsuperscript{184} At the Black Angel Mine in

by the EPA was a site inspection, after which the EPA let the matter drop. See Site
Inspection Report for Alaska Juneau Dump, (Contract No. 18-444-88), Ecology and
Environment, Inc. (June 1990) (Submitted to Mary Siroky, Superfund Ecologist,
Division of Environmental Quality, Alaska Department of Environmental Conservation)
(on file with the University of Michigan Journal of Law Reform).
\textsuperscript{179} See SUBMARINE DISPOSAL, supra note 124, at 7–9.
\textsuperscript{180} Id.
\textsuperscript{181} Id. at 7, 14.
\textsuperscript{182} The tailings in Rupert Inlet from the Island Copper Mine have migrated
slightly over three miles (five kilometers) from the outfall, forming a long ridge of
tailings along the bottom of Rupert Inlet. Id. at 14. This ridge is approximately one-half
the length of Rupert Inlet. Id. at 13. The ideal location for tailings disposal therefore
is a fjord with a natural sill near the mouth of the fjord, so that the bottom resembles
a pit. See id. at 17, 19.
\textsuperscript{183} “Benthic” is defined as “occurring at the bottom of a body of water.” WEBSTER’S
NINTH NEW COLLEGIATE DICTIONARY 144 (Merriam-Webster 1988).
\textsuperscript{184} SUBMARINE DISPOSAL, supra note 124, at 9:

Within the last twenty years, successful examples of modern submarine disposal
technology have included the Island Copper and Kitsault Mines in British
Columbia, Canada. . . . Some mines have had difficulty with turbidity. . . . For
example, the Island Copper Mine has had some difficulty with an occasionally
Greenland, bioaccumulation of metals was found in marine life near the site\(^\text{185}\)—exactly the sort of environmental damage careful disposal intends to prevent. While acid tailings may be less harmful in sea water than in freshwater,\(^\text{186}\) they are not necessarily harmless. The same factors which make tailings problematic in freshwater—acidity, heavy metals, and turbidity caused by suspended tailings, can and do pose environmental threats in the marine environment as well.

Regardless, the proposals favoring marine tailings disposal are somewhat moot, because the EPA clearly is forbidden from permitting marine discharge of tailings by mines such as the Kensington and the A–J by the same provision which makes disposal into Sheep Creek problematic: the "zero discharge" requirement in the New Source Performance Standards.\(^\text{187}\) Except for the special "precipitation" and "storm" exemptions, and exceptional discharges due to "a build up of contaminants in the recycle water which significantly interferes with the recovery process,"\(^\text{188}\) froth-flotation mines are forbidden to discharge process water, including tailings slurry,\(^\text{189}\) into waters of the United States.\(^\text{190}\) The coastal fjords are undisputedly "waters of the United States" as defined by the CWA,\(^\text{191}\) and therefore the EPA, pursuant to its own NSPS regulations, is unable to permit marine disposal of mine tailings.

The EPA and other interested parties consistently have accepted the above interpretation of the NSPS. During promulgation of the NSPS regulations, Region 10 of the EPA, mining interests, and others objected to the proposed standards precisely because they would preclude marine dumping of

\[^{185}\text{unstable depositional environment. This is due to the presence of a tidal jet created by water movement through Quatsino Narrows [the mouth of Rupert Inlet].}\]

\[^{186}\text{See supra note 124, at 9.}\]

\[^{187}\text{See supra note 123 and accompanying text.}\]
The final version of the NSPS even contains a built-in exemption for a single proposed mine, the Quartz Hill Molybdenum Project, located in Misty Fjords National Monument in Southeast Alaska. The Quartz Hill exemption was provided in order to allow only that mine to use submarine disposal. Aside from this special case, the EPA currently maintains that it is unable to permit marine discharge.

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We are greatly concerned that the proposed regulations . . . will result in an unreasonably burdensome and costly impediment to the development of the Quartz Hill molybdenum deposit located in Southeast Alaska.

The development of Quartz Hill will include froth flotation to separate the molybdenite from the host rock and it contemplates disposal of the tailings by submarine discharge . . .

[We do not believe the Quartz Hill operation could meet the zero discharge requirement of the proposed regulations from a land tailings disposal system and the regulations would not be allowed [sic] submarine disposal.

Id.; see also Letter from Ernst Mueller, Commissioner, Alaska Department of Environmental Conservation, to John Spencer, Regional Administrator, EPA Region 10 (July 16, 1982) (on file with the University of Michigan Journal of Law Reform).

[It appears that the possibility of effluent discharge into marine waters is precluded for new sources. . . . Certain parts of Alaska . . . have substantial amounts of rainfall. This fact could in some cases cause the discharge of effluents into marine waters to be the preferred method of disposal [over impoundments on land].

Id.; Letter from Senator Frank Murkowski to Anne Gorsuch, Administrator, EPA (Sept. 30, 1982) (on file with the University of Michigan Journal of Law Reform) ("These guidelines would limit new sources of copper, lead, zinc, gold, silver, platinum, and molybdenum mills to zero discharge of waste water. . . . I believe marine tailings disposal may be preferable to the present zero discharge requirement.").


194. The opposition to Quartz Hill highlighted all the problems with large-scale marine disposal. Over the life of the mine, the tailings were to turn Wilson Arm from a deep fjord to a shallow bay. U.S. DEPARTMENT OF AGRICULTURE, FOREST SERVICE, FINAL ENVIRONMENTAL IMPACT STATEMENT, QUARTZ HILL MOLYBDENUM PROJECT MINE DEVELOPMENT (1988) (on file with the University of Michigan Journal of Law Reform). Any miscalculations as to turbidity, heavy metals leaching, or the ability of the salmon to tolerate alteration of the area could damage the salmon runs on the Wilson and Blossom Rivers, or the herring fishery in Wilson Arm. Id. at 4-146 to 4-147. Bottom fisheries would be reduced, and probably destroyed, for the life of the mine and some time afterwards, even if the tailings were non-toxic enough to permit return of benthic organisms after the mine ceased operating. Id. at 4-145. Even given the best possible conditions, the impacts would still be drastic.

195. See SUBMARINE DISPOSAL, supra note 124, at 16 ("Currently, the mining industry in the United States is prohibited from using marine disposal of mill tailings
B. Proposals for Legislative Reform

The EPA and the Corps must face the tailings disposal problem squarely, and abandon the twisted interpretation of the CWA which the agencies currently are relying on. Because tailings impoundments are indeed "waters of the United States," the EPA has responsibility, pursuant to section 402 of the CWA, for deciding whether to permit or refuse to permit the tailings discharges. Given the New Source Performance Standards for gold mines, the EPA probably cannot issue a permit for tailings discharges.196 If the agencies determine that the Corps should treat the tailings as "fill" and consider a section 404 permit specifically for tailings disposal, the proper outcome is unclear. The regulations instructing the Corps in its determination of acceptable environmental consequences, the section 404(b)(1) guidelines, are flexible, but exactly how flexible is not clear.197

Reform could consist of the agencies, especially the EPA, deriving a position on the A–J and Kensington which matches their prior broad view of the scope of the CWA. But if the agencies believe that current CWA regulations are too onerous, economically impractical, or perhaps not even necessary for protection of the environment, then full-scale regulatory revision is called for. The current situation is, in my opinion, no more nor less than hypocrisy: the EPA and Corps are circumventing their own policies and provisions. To anyone who considers honesty in government a basic tenet, the agencies' position is unsound. If the agencies wish to change their view of the CWA, they should do so by actual rule making, not by muddled correspondence, and let all who are interested see the new policy as clearly as possible.

Regulatory change—as opposed to acting in a manner consistent with current regulations—could involve rewriting the definition of "waters of the United States," changing the NSPS, or providing a special standard for mining waste under section

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by an Environmental Protection Agency (EPA) interpretation of the Clean Water Act. These regulations can be found in [40 C.F.R. § 440].). Although the Bureau of Mines' report mentions the fact that some individuals question EPA's interpretation, it does not go into specifics. Id.

196. See supra notes 120–25 and accompanying text.

197. A discussion of Section 404 permit criteria is beyond the scope of this Note. For citations to articles dealing with the Corps as an environmental agency, see supra notes 9 and 40.
404. Any of these regulatory options would affect more than the Kensington and A–J mines and would probably attract greater public attention. Instead of a quiet exception to CWA regulations for one or two projects, the agencies would face a difficult debate over mine waste and the role of the Clean Water Act. The already overworked agencies would no doubt want to avoid such a high profile debate. Furthermore, explicit regulatory change would raise the stakes for both the mining industry and conservationists. Nonetheless, the debate would at least concern legitimate and candid regulatory reform instead of out-of-sight action catering to the political or economic pressure of the moment.

Congressional action is also a possibility. The CWA could be amended to demand explicitly agency jurisdiction or deny the same. Alternatively, Congress could create special statutory exemptions for one or both of the mines. The CWA could be amended to allow for marine disposal, but such a step is unlikely because ocean dumping has become unacceptable in the United States. Regardless, any Congressional action, like regulatory reform, necessarily would require public debate and open, legitimate change in the law.

Future legal or regulatory reform should account for the differences between the A–J and Kensington proposals. It is possible to consider forbidding the type of tailings disposal proposed for the A–J, while allowing Kensington-type operations. Banning the sort of tailings disposal intended for the Kensington—tailings would be discharged into wetlands and the stream would be diverted—would have drastic impact on the mining industry because many mines in the United States use wetlands as tailings disposal sites. Conversely, discharging tailings into a stream, as proposed for the A–J, is relatively rare but more damaging, because it pollutes both the disposal site and areas downstream of the discharge. Because of these differences, any reform policy should take into account the significant differences between the two types of tailings disposal.

**CONCLUSION**

In the end, any solution requires that the EPA and the Corps begin to honestly construe the CWA. The muddled, indifferent
treatment of the CWA by the two agencies serves only to conceal the problem, preventing proper resolution through open discussion of the pros and cons of all of the alternatives.\footnote{198}