Washington and Lee Law Review

Volume 50 | Issue 3 Article 12

Summer 6-1-1993

# The Ever-Changing Balance Of Power In Interstate Water Pollution: Do Affected States Have Anything To Say After Arkansas V. Oklahoma?

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# THE EVER-CHANGING BALANCE OF POWER IN INTERSTATE WATER POLLUTION: DO AFFECTED STATES HAVE ANYTHING TO SAY AFTER *ARKANSAS V. OKLAHOMA*?*

Throughout our nation's history, states have struggled over the issue of interstate pollution. States have fought over whether one state may pollute in a manner that causes damage to another state.[1] Entry of the federal government into the pollution arena further complicated the question of who has the power to make such pollution decisions—the polluting state, the affected state, or the federal government.[2] Nowhere is this tangle of competing interests and powers more apparent than in the area of interstate water pollution.[3]

Traditionally, a state had the authority to determine whether to allow or disallow pollution within its boundaries.[4] However, water is transient, and often the pollution of one state affects the waters of a neighboring

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* The author wishes to thank Louise Halper and Moira Roberts for their assistance in the development of this Note.

1. *See* North Dakota v. Minnesota, 263 U.S. 365, 366 (1923) (involving claim by North Dakota that Minnesota's continued use of drainage ditches caused overflows that resulted in subsequent damage to North Dakota and its citizens); New York v. New Jersey, 256 U.S. 296, 298 (1921) (involving action by New York to enjoin New Jersey from discharging sewage into New York Harbor because such discharge resulted in danger to health of New York citizens); Georgia v. Tennessee Copper Co., 206 U.S. 230, 236 (1907) (involving action by Georgia to enjoin Tennessee Copper Company from discharging noxious gas from their works in Tennessee into Georgian territory); Missouri v. Illinois, 200 U.S. 496, 497 (1906) (involving action by Missouri to enjoin Illinois from discharging sewage through an artificial channel connecting Lake Michigan with the Desplaines River, claiming that such discharge heavily polluted Mississippi River in Missouri).

2. *See* LAURA M. LAKE, ENVIRONMENTAL REGULATION: THE POLITICAL EFFECTS OF IMPLEMENTATION 7-22 (1982) (discussing struggle for power in environmental regulation between state and federal government).

3. *See* SUSAN J. BUCK, UNDERSTANDING ENVIRONMENTAL ADMINISTRATION AND LAW 11-13 (1991) (discussing importance of federalism in environmental law).

Buck states that federalism is important in environmental law because federal agencies rely upon state enforcement of environmental regulations and because many environmental problems cross political boundaries. *Id.* at 11. She also notes that federalism affects environmental law because it provides multiple points of access to various interest groups and lobbyists who influence legislative bodies. *Id.* at 12. *See generally* Richard B. Stewart, *Pyramids of Sacrifice? Problems of Federalism in Mandating State Implementation of National Environmental Policy*, 86 YALE L.J. 1196 (1977) (critiquing federal structure in environmental regulation, and arguing that federal government's dependence on state and local governments has compromised environmental policy).

4. *Cf.* Stewart, *supra* note 3, at 1220-21 (discussing state's self-determination in area of environmental regulation). The Clean Water Act (CWA) does leave states autonomy to adopt more stringent water quality standards than the national minimum standard. 33 U.S.C. § 1370 (1988).

state.[5] This transience limits the autonomy of the downstream state by eliminating its ability to choose whether waste shall pollute its water.[6] The upstream state receives all the economic benefits of the polluting industry, the downstream state receives the pollution, and the result is interstate conflict.[7]

For the first seventy years of this century, federal courts resolved interstate pollution conflicts under the federal common law of nuisance,[8] which generally allowed the courts to balance competing interests and fashion a fair and equitable solution to the interstate conflict.[9] In the 1970s

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5. *See* Maria V. Maurrasse, Comment, Oklahoma v. EPA*: Does the Clean Water Act Provide an Effective Remedy to Downstream States or Is There Still Room Left for Federal Common Law?*, 45 U. MIAMI L. REV. 1137, 1138 (1991) (discussing transient nature of water and how pollutants from upstream move downstream).

6. *See* Steven J. Bushong, Case Note, *Upstream Pollution and Downstream Problems:* Oklahoma v. E.P.A. *Makes a Splash in Interstate Water Pollution Disputes*, 63 U. COLO. L. REV. 233, 235 (1992) (arguing that upstream state's choice to pollute effectively deprives downstream state of its choice not to pollute).

7. *See* Maurrasse, *supra* note 5, at 1139 (discussing benefits and burdens that result from interstate pollution).

8. *See* Michael Collins, *The Dilemma of the Downstream State: The Untimely Demise of Federal Common Law Nuisance*, 11 B.C. ENVTL. AFF. L. REV. 297, 311-25 (1984) (summarizing history of federal common-law nuisance); Calvin R. Dexter & Teresa J. Schwarzenbart, Note, City of Milwaukee v. Illinois*: The Demise of the Federal Common Law of Water Pollution*, 1982 WIS. L. REV. 627, 630-36 (same); Steven Gaynor, Comment, *The Dilemma of the Downstream Plaintiff in an Interstate Water Pollution Case*, 37 BUFF. L. REV. 257, 275-77 (1988-1989) (same); R. Stacy Lane, Note, International Paper Co. v. Ouellette, *Clearing the Muddied Preemption Waters of the Federal Water Pollution Control Act*, 17 CAP. U. L. REV. 501, 502-07 (1989) (same); Maurrasse, *supra* note 5, at 1142-45 (same). Federal common-law nuisance in the interstate pollution context originated in Missouri v. Illinois, 200 U.S. 496 (1906), in which the Supreme Court held that the federal courts had power to hear interstate pollution disputes, but that Missouri was not entitled to relief because it had failed to prove damages. *Id.* at 518, 526. In Georgia v. Tennessee Copper Co., 206 U.S. 230 (1907), the Court held that a state has a quasi-sovereign right to preserve the environment within its boundaries. *Id.* at 237. However, it was not until 1972 that the Court explicitly stated that federal common-law nuisance existed in the realm of interstate water pollution disputes. Illinois v. City of Milwaukee (Milwaukee I), 406 U.S. 91, 105 (1972). The Court held that federal common law was a proper remedy for states that suffer degradation of environmental resources by outside sources. *Id.* at 107.

9. *See* Dexter & Schwarzenbart, *supra* note 8, at 631-32, 635-36 (discussing concerns of Supreme Court in interstate nuisance law). The Court in its early decisions expressed three concerns: (1) preserving the balance of power between the Supreme Court and state government; (2) providing a peaceful forum for resolution of interstate pollution disputes; and (3) providing a state with the means to preserve its environment. *See Tennessee Copper*, 206 U.S. at 237-38 (expressing Court's concern that it provide state with means to preserve state's environment); *Missouri*, 200 U.S. at 520-21 (expressing Court's concern that it preserve balance of power between Court and state government and that Court provide peaceful forum for resolution of interstate pollution disputes). The Court found that the provision of equitable remedies through federal common-law nuisance claims properly balanced these interests and concerns. *See Tennessee Copper*, 206 U.S. at 237-38 (holding that equity remedy was proper for deciding interstate pollution disputes); *Missouri*, 200 U.S. at 520-21 (same). The Court reaffirmed these concerns in *Milwaukee I*, 406 U.S. at 104-05, and held that federal common-law nuisance

the balance of power between the states changed dramatically with the introduction of a new federal entity as a major player—the Environmental Protection Agency (EPA). The federal government imposed broad-scale environmental regulation of water pollution with the enactment of the Clean Water Act (CWA) in 1972 and subsequent EPA enforcement.[10] Following this federal incursion into traditional state authority, the United States Supreme Court in two separate decisions declared that the CWA preempted the common-law remedies upon which the downstream states had relied for relief.[11] The result was a severe and sudden shift in the balance of power: the federal EPA and the source state became the dominant powers in interstate water pollution conflicts, leaving the affected state with the limited protection of CWA remedies.

Recently, the Supreme Court altered this balance in *Arkansas v. Oklahoma*,[12] to the apparent detriment of affected states. In *Arkansas* the Court granted the EPA power to interpret a state's water quality standards even though such interpretation is inconsistent with the state's own determination.[13] The result is that the affected state has little, if anything, to say in the interstate water pollution conflict.[14] This Note examines the relationship between the EPA and the states—downstream and upstream—following *Arkansas v. Oklahoma*. First, it examines the history of the interstate water pollution conflict and the balance of power between the EPA and the states from enactment of the CWA to the *Arkansas* opinion. Second, it examines the conflict arising in the *Arkansas* case and the Supreme Court's resolution of that conflict. Third, it examines the balance of power following the *Arkansas* decision, which apparently leaves the affected state without power to protect its waters from other states' pollution. Finally, this Note suggests that the affected state is not so powerless as first appears, and suggests how the affected state can protect its own water quality standards against the encroachment of other states and the EPA.

## I. THE CLEAN WATER ACT

Traditionally, states regulated intrastate water pollution.[15] In 1972 Congress enacted the CWA—a comprehensive national water pollution preven-

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would provide an equitable remedy to these disputes. *Id.* at 106-07. Thus, the Court found the equitable remedy of federal common-law nuisance to balance the competing interests and concerns of interstate pollution.

10. Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. §§ 1251-1387 (1988).

11. *See* International Paper Co. v. Ouellette, 479 U.S. 481, 494 (1987) (holding CWA preempted affected state's common law); City of Milwaukee v. Illinois (Milwaukee II), 451 U.S. 304, 317 (1981) (holding Clean Water Act preempted federal common-law nuisance).

12. 112 S. Ct. 1046 (1992).

13. *See* Arkansas v. Oklahoma, 112 S. Ct. 1046, 1059 (1992) (holding that EPA interpretation was reasonable even though inconsistent with Oklahoma's interpretation).

14. *See infra* notes 115-23 and accompanying text (discussing affected state's power following *Arkansas*).

15. *See* Jeffrey M. Gaba, *Federal Supervision of State Water Quality Standards Under*

tion scheme[16]—in order to provide for a national pollution control effort.[17] The CWA shifted some traditional state power to the EPA, striking a balance between a state's authority to regulate its own water pollution and the federal government's interest in preventing water pollution nationally.

The enforcement mechanism of the CWA is the National Pollution Discharge Elimination System (NPDES).[18] The NPDES program requires issuance of a permit before a discharger may empty waste directly into the nation's waterways.[19] Under the CWA, either the EPA or a state with an EPA-approved program may administer the NPDES program.[20] A state may obtain EPA approval when its program meets the minimum standards of federal law and implementing regulations.[21] However, the EPA oversees all state-approved programs.[22] Therefore, the NPDES program allows states to

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*the Clean Water Act*, 36 VAND. L. REV. 1167, 1176-86 (1983) (discussing increasing intervention of federal government in area of traditional state authority).

16. Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. §§ 1251-1376 (1988).

17. *See* Maurrasse, *supra* note 5, at 1146 (discussing congressional reasons for federal intervention in environmental regulation). Congress entered the area of water pollution control in 1948 with the enactment of the Federal Water Pollution Control Act of 1948. Federal Water Pollution Control Act of 1948, ch. 758, 62 Stat. 1155 (1948) (codified as amended at 33 U.S.C. §§ 1251-1387 (1988)). The 1948 Act provided that the federal government fund state efforts at pollution control and offer states technical advice. *See* Gaba, *supra* note 15, at 1177 (discussing Federal Water Pollution Control Act of 1948). Pollution control efforts remained within the authority of the states. *Id.* The 1948 Act provided no provision for federal review and limited opportunity for federal enforcement. *Id.* In 1965 Congress adopted the Water Quality Act of 1965. Pub. L. 89-234, 79 Stat. 903. The 1965 Act differed from the 1948 Act by authorizing federal enforcement of water quality standard violations. *See* Gaba, *supra* note 15, at 1178 (discussing differences between Water Quality Act of 1965 and Federal Water Pollution Control Act of 1948). In addition the 1965 Act required that states adopt water quality standards subject to the review and approval of the federal government. *Id.* Although an improvement over the 1948 Act, the 1965 Act was largely ineffective because federal enforcement was limited. *Id.* at 1179 (discussing ineffectiveness of 1965 Act in controlling pollution). Because of the inability of the prior acts to effectively control water pollution, Congress adopted the Federal Water Pollution Control Act Amendments of 1972. *See id.* at 1180 (discussing reasons for amendment).

18. 33 U.S.C. § 1342 (1988). *See generally* Kristy A. Niehaus Bulleit & Diane U. Montgomery, *Clean Water Act Permitting: The NPDES Program at Twenty*, *in* THE ENVIRONMENTAL LAW MANUAL 161 (Theodore L. Garrett ed., 1992) (detailing requirements of National Pollution Discharge Elimination System (NPDES) program); Claudia Copeland, *Comprehensive Clean Air and Clean Water Permits: Is the Glass Still Just Half Full?*, 21 ENVTL. L. 2135 (1991) (detailing requirements of NPDES program and comparing requirements to permitting requirements under Clean Air Act (CAA).

19. 33 U.S.C. § 1342 (1988).

20. *Id.*

21. *Id.* § 1342(b). The CWA requires that the state's governor submit to the federal administrator a description of its proposed program to gain approval. *Id.* The program must ensure compliance with the state's water quality standards and effluent limitations. *Id.* § 1342(b)(1). In addition, the plan must provide for notice and an opportunity for comment if the issued permit will affect another state. *Id.* § 1342(b)(3), (5).

22. *Id.* § 1342. The CWA requires that state-approved programs "shall at all times" comply with the federal requirements. *Id.* § 1342(c)(2). Thus, by implication, the EPA must

continue to regulate water pollution, but balances state authority against EPA authority to review state determinations.[23]

The CWA development of national water quality standards also strikes a balance between state and federal power. The CWA requires each state to comply with a federal minimum water quality standard.[24] To comply, each state must promulgate a standard and obtain EPA approval.[25] Once the state satisfies the federal minimum requirements, it is free to adopt more stringent standards.[26] Thus, the state has some freedom to regulate its own water quality.

In addition to meeting minimum federal water quality standards, states must comply with federal limits on the amount of pollutants discharged into waterways.[27] The EPA promulgates discharge limitations that the states must incorporate into state permits.[28] As with the water quality standards, states have the authority to impose more stringent discharge limitations than those of the EPA.[29]

The balancing of various state and federal interests becomes more complex when an interstate waterway is involved. Congress specifically addressed the interstate conflict in the CWA.[30] The statute provides that if a discharge permit affects a state other than the source state, the source state must notify the affected state and allow it opportunity for comment.[31] The source state is free to reject or to accept the written recommendations of the affected state provided that it justifies its action to the EPA.[32] Regardless of the effect on, and objections of, other states, the source state may issue a pollution permit if the permit complies with the source state's own standards.[33] The downstream state's only recourse is to seek EPA review.[34]

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ensure that state programs comply. For a more thorough discussion of EPA oversight, see Colburn T. Cherney & Karen M. Wardzinski, *State and Federal Roles under the Clean Water Act*, *in* THE ENVIRONMENTAL LAW MANUAL 233, 235-40 (Theodore L. Garrett ed., 1992) (discussing federal oversight of state programs and how such oversight is important for effective administration of NPDES program).

23. *See generally* Cherney & Wardzinski, *supra* note 22, at 33-34 (examining roles of state and federal government under NPDES program). Cherney and Wardzinski observe that the federal government has complete authority for requiring the minimum pollution protection. *Id.* at 233-34. However, they also note that states have considerable autonomy to issue more stringent standards than the federal requirements. *Id.* The authors argue that such flexibility and balance in the NPDES program promotes effective management of pollution control. *Id.* at 234.

24. 33 U.S.C. § 1313(a)(1) (1988).

25. *Id.* § 1342(a)(3).

26. *Id.* § 1370.

27. *Id.* § 1311.

28. *Id.* § 1314(b).

29. *Id.* § 1370.

30. *Id.* § 1342(b).

31. *Id.* § 1342(b)(5).

32. *Id.*

33. *Id.* §1342(b).

34. *Id.* § 1342(d)(2). The Environmental Protection Agency (EPA) may object to a

Inevitably, interstate conflicts over discharge permits reached the Supreme Court. The first conflict to reach the Supreme Court was in *City of Milwaukee v. Illinois* (*Milwaukee II*),[35] in which Illinois sued the city of Milwaukee, Wisconsin, claiming that Milwaukee's discharges into Lake Michigan constituted a nuisance.[36] The Supreme Court ruled that the CWA's comprehensive regulatory scheme preempted Illinois's claim.[37] The Court reasoned that, under the CWA, only Congress and the EPA had the authority to require standards.[38] Because the federal common law imposed stricter standards than those required under the CWA, the CWA preempted the claim.[39] The Court further found that the CWA provided an affected state with a forum to protect its interests—the EPA[40]—and therefore, the affected state had an opportunity to seek redress.[41]

In *Milwaukee II* the Court did not address whether the CWA preempts a state common-law claim brought by an individual citizen.[42] Six years later,

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permit if the EPA determines that the issuance was outside the guidelines and requirements of § 1342. *Id.*

35. 451 U.S. 304 (1981). This case was the second meeting between Illinois and Milwaukee in the Supreme Court. In 1972, five months before Congress enacted the CWA, Illinois filed a motion for leave to file a complaint against four cities and two local sewerage commissions in Wisconsin for allegedly polluting Lake Michigan. Illinois v. City of Milwaukee (Milwaukee I), 406 U.S. 91, 93 (1972). The Supreme Court declared that states may seek a remedy under federal common-law nuisance if an out-of-state source's discharge violates the downstream state's water quality. *Id.* at 107. However, the Court did not grant the motion, but rather remitted the case on other grounds. *Id.* at 108.

36. City of Milwaukee v. Illinois (Milwaukee II), 451 U.S. 304, 309-10 (1981). Illinois claimed that the Milwaukee sewage discharges contained pathogens, disease-causing viruses and bacteria that constituted a threat to the health of Illinois citizens. *Id* at 309. The United States District Court for the Northern District of Illinois entered judgment in favor of Illinois and ordered Milwaukee to eliminate all overflows and to achieve specified effluent limitations on treated sewage. *Id.* at 311. The Court of Appeals for the Seventh Circuit held that the CWA did not preempt federal common-law nuisance but stated that a court should use the CWA as guidance. *Id.* at 312. The circuit court reversed the district court's effluent limitation requirements because such requirements were more stringent than the CWA. *Id.* However, the court of appeals upheld the district court's order to eliminate all overflows. *Id.*

37. *Id.* at 317. *See generally* Collins, *supra* note 8 (critiquing Supreme Court's holding in *Milwaukee II*, and arguing that Court wrongly conceptualized congressional intent and therefore wrongly determined that federal common law and CWA are irreconcilable).

38. *Milwaukee II*, 451 U.S. at 320. The Court noted that Congress and its administrative agency had thoroughly addressed the problem of effluent limitations; therefore, a federal court lacks the authority to impose more stringent limitations than those imposed by the statute and regulations. *Id.*

39. *Id.*

40. *Id.* at 325-26. The Court examined in depth the forum provided by the CWA. *Id.* at 326. The Court noted that the CWA provides that each affected state must receive notification of the permit application, an opportunity to participate in a public hearing, and an opportunity to submit written recommendations concerning the permit applicant. *Id.* In addition, the EPA may veto any permit which may affect waters of another state. *Id.*

41. *Id.* The Court noted that Illinois failed to avail itself of the opportunities for redress provided by the CWA. *Id.*

42. *See* Bushong, *supra* note 6, at 242 (discussing failure of Supreme Court to address

the Court addressed this issue in *International Paper Co. v. Ouellette*.[43] In *Ouellette* a group of Vermont property owners sued a New York paper mill under Vermont nuisance law.[44] The Supreme Court held that the CWA preempts the common law of an affected state to the extent that such law imposes liability on a source in another state.[45] The Court reasoned that the comprehensive scheme of the CWA demonstrated congressional intent to preempt state law suits,[46] except for those suits specifically preserved in the statute.[47] The Court then examined the CWA's carefully constructed balance between the source state, the affected state, and the EPA.[48] The Court concluded that imposing the affected state's common law on the source would upset the CWA balance[49] and would put the affected state in a stronger position than Congress intended.[50]

The *Ouellette* Court reasoned, however, that although the CWA preempted claims based on the laws of the affected state, the CWA did not preempt claims based on the laws of the source state.[51] The Court noted that the

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whether state common-law claims applied to interstate pollution following *Milwaukee II*); Dexter & Schwarzenbart, *supra* note 8, at 662-88 (analyzing possible effects of *Milwaukee II* on state nuisance law); *see also* Illinois v. City of Milwaukee (Milwaukee III), 731 F.2d 403, 410-11 (7th Cir. 1984) (holding that CWA preempted state's common-law claim in state where injury occurred), *cert. denied*, 469 U.S. 1196 (1985).

43. 479 U.S. 481 (1987).

44. International Paper Co. v. Ouellette, 479 U.S. 481, 484 (1987). In *Ouellette* a group of Vermont property owners brought suit in Vermont against the International Paper Company, a paper mill operating in New York. *Id.* at 484. The plaintiffs claimed that the mill's discharge violated Vermont common-law nuisance. *Id.* The United States District Court for the District of Vermont held that the savings clause of the CWA permitted a common-law nuisance claim under the law of the state in which the injury occurred. *Id.* at 486. The Court of Appeals for the Second Circuit affirmed. *Id.* at 487. The Supreme Court granted certiorari to resolve the conflict between the Second Circuit and the Seventh Circuit. *Id.*; *see Milwaukee III*, 731 F.2d at 414 (holding that CWA preempts state common law of state in which injury occurred).

45. *Ouellette*, 479 U.S. at 494. *See generally* Lane, *supra* note 8 (arguing that *Ouellette* was correct because it clarified roles of each state in interstate water pollution conflicts and provided recourse to injured individuals); Maurrasse, *supra* note 5 (arguing that *Ouellette* was incorrect because Court was unable to provide convincing basis for preferring upstream state interests over those of downstream state and because decision eliminated downstream state's effective remedy).

46. *Ouellette*, 479 U.S. at 492.

47. *Id.* The Court examined the savings clause of the CWA and concluded that it was not applicable. *Id.* at 493. The Court then examined the goals and purposes of the CWA and concluded that application of an injured state's common law would interfere with these goals and purposes. *Id.* at 493-94.

48. *Id.* at 494-97.

49. *Id.* at 497.

50. *Id.* The Court determined that the affected state's nuisance laws would subject the source to liability in the event that the affected state's standards were more stringent than the source state. *Id.* at 495. The Court reasoned that such liability would compel the source to adopt different control standards even though the source was in compliance with its own standards. *Id.* Thus, the Court concluded that such liability indirectly would allow affected states to regulate the conduct of out-of-state sources. *Id.*

51. *Id.* at 497.

CWA specifically preserved source state remedies,[52] and that suits brought under the laws of the source state would maintain the intended balance and not frustrate the goals of Congress.[53]

In calibrating the source state-affected state-EPA balance in *Milwaukee II* and *Ouellette*, the Supreme Court determined that Congress intended for the EPA and the source state to dominate affected states in interstate pollution disputes.[54] The Court relegated the affected state to a subordinate position, with only a minor say in the process of issuing pollution permits.[55] Moreover, the affected state has only limited opportunity to seek redress outside of the permitting process.[56] Following *Ouellette*, the affected state may bring suit under the common law of the source state, but in most instances the discharger will have complied with the standards of the source state.[57] Therefore, source state common law offers little help to the affected state. The affected state is therefore left with only the authority to voice objections, first to the source state, which may disregard the objections, and then to the EPA, which previously has approved the source state's standards.[58]

## II. *Arkansas v. Oklahoma*

Whereas *Milwaukee II* and *Ouellette* significantly diminished the role of the affected state, *Arkansas v. Oklahoma* expanded the role of the EPA.[59] This expanded role changes the balance of power in instances

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52. *Id.* The Court determined that the Savings Clause of the CWA allows states to impose higher standards on their own point sources, and that this authority may include the right to impose higher common-law as well as higher statutory restrictions. *Id.*

53. *Id.* at 498. The Court concluded that because the CWA permits source states to impose higher standards, the application of the source state's law does not disturb the balance among federal, source state, and affected state interests. *Id.* at 498-99. In addition the Court determined that application of source state common law prevents a source from being subject to an indeterminate number of potential regulations; the source need only look to the permit regulations and the common law of its location. *Id.* at 499.

54. *See id.* at 489-91 (describing CWA structure among parties involved in interstate pollution dispute). In *Ouellette*, the Supreme Court articulated its interpretation of the CWA framework. *Id.* at 490. The Court determined that the CWA established a "partnership" between the Federal Government and the source state. *Id.* However, the role of the affected state is clearly subordinate. *Id.* at 491. *See generally* City of Milwaukee v. Illinois, 451 U.S. 304 (1981) (holding that federal common law was preempted, and thus providing downstream states with CWA procedure as only means to protect its interests).

55. *See* International Paper Co. v. Ouellette, 479 U.S. 481, 491 (1987) (declaring that affected states occupy subordinate position to source states); *Milwaukee II*, 451 U.S. at 328 (holding that states cannot enforce more stringent standards on out-of-state sources).

56. *See Ouellette*, 479 U.S. at 497-99 (holding that affected state may use source state common law to seek redress); *Milwaukee II*, 451 U.S. at 325-36 (holding that CWA provides ample opportunity for affected state to seek redress).

57. *See* Maurrasse, *supra* note 5, at 1157 (discussing ineffectiveness of common-law remedy following *Ouellette*).

58. *See supra* notes 30-34 and accompanying text (discussing affected state's options for redress under CWA).

59. *See* Arkansas v. Oklahoma, 112 S. Ct. 1046, 1059-61 (1992) (holding that EPA has considerable power to interpret CWA and water quality standards).

involving a downstream state and its own antidegradation standard—a water quality standard that requires protection and maintenance of high quality waters.

The *Arkansas* dispute originated when the city of Fayetteville, Arkansas, decided to build a new sewage treatment facility that would discharge waste into a nearby stream.[60] This stream ran into the Illinois River and crossed the border into Oklahoma about forty miles downstream.[61] Arkansas applied for and received an EPA discharge permit.[62] Oklahoma challenged the permit, claiming that the discharge violated Oklahoma antidegradation water quality standards.[63] An EPA administrative law judge (ALJ) concluded that the discharge would not violate Oklahoma standards unless it created an "undue impact,"[64] and that no undue impact in this case existed.[65] On administrative appeal, the EPA Chief Judicial Officer (CJO) ruled that the undue impact standard was too lenient to the source state to be consistent with the protections of the CWA.[66] The CJO ruled that if the discharge caused a "detectable violation" in the Oklahoma water quality standards, then the EPA should deny the permit.[67] On remand the ALJ found no detectable violation of Oklahoma's water quality standards and affirmed the issuance of the permit.[68]

### *A. The Tenth Circuit's Decision*

The administrative decision of the CJO and ALJ did not satisfy either Oklahoma or Arkansas. Oklahoma appealed because the EPA granted the

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60. *Id.* at 1051.

61. *Id.*

62. *Id.* The permit authorized the plant to discharge up to half of its effluent into the unnamed stream that eventually flows into the Illinois River. *Id.* The permit imposed limitations on quantity, content, and character of the discharge. *Id.* In addition the permit included a special condition which provided that the permit would be modified to ensure compliance with Oklahoma's water quality standards if a study determined that more stringent limitations were necessary. *Id.*

63. *Id.* Oklahoma claimed that its antidegradation policy prohibited any degradation of outstanding resource waters. Respondent's Brief at 32-33, *Arkansas*, (No. 90-1262). Oklahoma determined and advised the EPA that the Illinois River had undergone considerable degradation and that Fayetteville's own assessment of the impact of its discharge showed that the resulting changes would be degradation and not consistent with Oklahoma nutrient standards. *Id.* Thus, Oklahoma advised the EPA that the discharge would violate its antidegradation standard. *Id.*

64. Arkansas v. Oklahoma, 112 S. Ct. 1046, 1051 (1992). The Administrative Law Judge (ALJ) determined that the "undue burden" test requires something more than a de minimis impact on the affected state's water quality. Petitioner's Brief Appendix F at 102a, (No. 90-1262).

65. *Arkansas*, 112 S. Ct. at 1051. The ALJ concluded that the plant's discharge would be de minimis at most because the changes suggested by the Oklahoma witnesses would be unmeasurable, and the witnesses failed to consider the assimilative capacity of the river. Petitioner's Brief Appendix F at 103a. Thus, the ALJ held that the plant's discharge would not constitute an undue burden on the interstate waters. *Id.*

66. *Arkansas*, 112 S. Ct. at 1052.

67. *Id.* The detectable violation test requires a showing that the discharge would result in a verifiable and measurable violation. Petitioner's Brief Appendix G at 117a.

68. *Arkansas*, 112 S. Ct. at 1052.

permit in spite of its objections.[69] Arkansas appealed because the EPA required compliance with a downstream state's water quality standards.[70] The Court of Appeals for the Tenth Circuit[71] addressed this issue by first considering whether a pollution source must comply with the water quality standards of all affected states.[72] The court analyzed the issue in light of congressional intent,[73] judicial precedent,[74] and the statutory and regulatory framework of the CWA.[75] The court concluded that the EPA must deny a permit when the applicant's discharge would violate the water quality standards of the downstream state.[76]

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69. Oklahoma v. EPA, 908 F.2d 595, 597 (10th Cir. 1990), *rev'd sub nom.* Arkansas v. Oklahoma, 112 S. Ct. 1046 (1992).

70. *Id.*

71. *Id.* at 595. For a thorough analysis of *Oklahoma v. EPA*, see generally Bushong, *supra* note 6 (arguing that Tenth Circuit's ruling is correct because it comports with Congressional intent by encouraging reduction of water pollution); Maurrasse, *supra* note 5, at 1158-77 (criticizing Tenth Circuit's holding as contradictory to text and legislative history of CWA); John Treangen, Note, *Cleaning up the Clean Water Act:* Oklahoma v. Environmental Protection Agency, 36 S.D. L. REV. 739 (1991) (arguing throughout that Tenth Circuit's holding promotes interests and intent of CWA).

72. *Oklahoma*, 908 F.2d at 602-15.

73. *See id.* at 604-07 (examining whether Congress intended that source states comply with water quality standards of downstream states). The Court examined the legislative intent in light of the purpose of the CWA. *Id.* The court focused on § 1311(b)(1)(C) of the CWA. Although this implementation section lacks clarity, the court found the fact that the section does not distinguish between the source and affected state important. *Id.* at 606. Furthermore, the court concluded that unless source states comply with the water quality of affected states, a disproportionate burden will fall upon those dischargers within the affected state to prevent violations of water quality standards. *Id.* Finally, the court concluded that compliance with an affected state's water quality standards prevents "pollution shopping," consistent with the goals of Congress. *Id.*

74. *See id.* at 607-09 (distinguishing *Milwaukee II* and *Ouellette*). The court acknowledged in its discussion of *Ouellette* that some language within the opinion prohibits the EPA from requiring that a source state comply with the law of an affected state. *Id.* at 608. However, the court noted that such language was dicta and thus not controlling. *Id.* Furthermore, the court noted that *Milwaukee II* and *Ouellette* turned on state law questions, whereas *Oklahoma* turned on the question of how to apply federally approved standards. *Id.*

75. *See id.* at 609-15 (examining plain language of CWA). The court found § 1341(a)(1)-(2) persuasive. *Id.* at 609-10. The section states that if an affected state determines that a discharge will affect the water quality, the affected state shall notify the source state and request a public hearing. 33 U.S.C. § 1341(a)(1) (1988). Furthermore, the statute states that the source state must condition the permit in a manner which shall ensure compliance with applicable water quality standards. *Id.* The court interpreted this provision as enabling the affected state to ensure that the source will not violate the affected state's water quality standards. Oklahoma v. EPA, 908 F.2d 595, 610 (10th Cir. 1990), *rev'd sub nom* Arkansas v. Oklahoma, 112 S. Ct. 1046 (1992).

The court also examined § 1365(h) of the CWA, which allows a governor to sue the EPA to enforce an effluent limitation. 33 U.S.C. § 1365(h) (1988); *Oklahoma*, 908 F.2d at 614-15. The court determined that this section provided a remedy for an injurious impact on that state's water quality because "effluent limitations are not an end in themselves, but simply a means to an end—the desired water quality." *Oklahoma*, 908 F.2d at 614.

76. *See Oklahoma*, 908 F.2d at 615 (holding that CWA and EPA regulations prohibit discharge to navigable water unless discharge complies with all applicable water quality standards).

The court next considered whether the CWA permitted a new discharge into a currently degraded waterway. Although the parties did not raise the issue,[77] the Tenth Circuit raised the issue sua sponte because the court determined that the issue was of extreme importance.[78] The court first concluded that Oklahoma's highest antidegradation standard applied because Oklahoma had designated the Illinois River a scenic river.[79] The Tenth Circuit next concluded that the EPA had misinterpreted and misapplied the standard,[80] and that the EPA therefore was arbitrary and capricious by granting the Arkansas permit.[81] Finally, the Tenth Circuit held that the CWA prohibits further discharges into waterways that do not comply with state water quality standards,[82] and thus, the EPA should have denied the permit because the Illinois River violated Oklahoma water quality standards.[83]

The Tenth Circuit altered the federal-state balance by lessening the power of the EPA and the upstream state and by strengthening the power of the downstream state. *Oklahoma* required the source state to comply with the laws of the downstream state.[84] Furthermore, the decision limited the EPA's ability to interpret state water quality standards. *Oklahoma* held that the CWA mandated a complete ban on discharges into a body of water not currently in compliance with state water quality standards.[85] This ban eliminated EPA discretion to interpret whether a discharge would affect the water when the water violated current quality standards.

### *B. The Supreme Court's Decision*

Arkansas and the EPA appealed, and the Supreme Court granted certiorari.[86] The petitioners asked the Court to consider three issues: (1)

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77. *Id.* at 615-16.

78. *Id.*

79. *Id.* at 617.

80. *Id.* at 616. The Tenth Circuit interpreted the Beneficial Use-Antidegradation policy to prohibit any degradation of the water quality of the scenic rivers. *Id.* at 618. The court concluded that the ALJ erred by requiring Oklahoma to prove that the discharge would create a nuisance rather than placing the burden upon the permit applicant. *Id.* at 620.

81. *Id.*

82. *Id.* The court justified its decision with testimony stating that the Illinois River could not assimilate any further discharge because of its degraded condition. *Id.* at 620 n.39. In addition, the court stated, "once water quality standards in a stream were violated, additional new discharges might be permitted indefinitely so long as each one would have an unmeasurable individual impact." *Id.* at 632.

83. *Id.* at 629. The Tenth Circuit made three determinations in reaching its decision. *Id.* at 621. First, the court concluded that the record showed sufficient evidence to determine that the Illinois River was degraded and violated Oklahoma's water quality standards. *Id.* at 625. Second, the court determined that the evidence showed that Fayetteville's effluent would travel downstream to the Illinois River. *Id.* at 627. Finally, the court concluded that ample evidence showed that the Fayetteville effluent would contribute to the further deterioration of the river. *Id.* at 629.

84. *Id.* at 615.

85. *Id.* at 615-20.

86. Arkansas v. Oklahoma, 112 S. Ct. 1046, 1052 (1992). The Court cited the importance

whether the CWA requires the EPA to apply the water quality standards of a downstream state;[87] (2) whether the EPA has the authority to mandate such compliance if the CWA does not require the agency to apply the downstream state's water quality standards;[88] and (3) whether the CWA prohibits a further discharge into an already degraded waterway if such discharge yields effluent that reaches the degraded water.[89] The Court chose not to resolve whether the CWA requires the EPA to apply the water quality standards of a downstream state.[90] The Court concluded that the EPA decision to regulate compliance was reasonable, and therefore, the issue of whether the CWA requires a source to comply with downstream state water quality standards was relatively unimportant.[91]

As to whether the EPA has authority to require compliance with downstream state standards, the Court concluded that the EPA regulations requiring compliance were reasonable and within EPA statutory authority.[92] The Court reasoned that the CWA gave the Administrator broad discretion to institute requirements for NPDES permits,[93] and that the regulations fell within that statutory discretion[94] and were consistent with the general purpose of the statute.[95] Arkansas argued that the application of Oklahoma standards was inconsistent with *Ouellette*.[96] Arkansas contended that requiring compliance with an affected state's standards grants the affected state a much greater role than the "subordinate" role specified in *Ouellette*.[97] The Court rejected Arkansas's argument, reasoning that *Ouellette* pertained merely to an affected state's input into the permit process and did not constrain EPA

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of the issue and the novelty of the Tenth Circuit's decision as the reason for the grant of certiorari. *Id.*

87. *Id.* at 1056.

88. *Id.*

89. *Id.*

90. *Id.*

91. *Id.* In addition, the arguments of the parties relied extensively on governing provisions of both federal permits and state permits, and the Court deemed it unwise to analyze these arguments when the case involved only a federal permit. *Id.*

92. *Id.*

93. *Id.* The Court noted the broad authority that the CWA gave to the EPA. *Id.* The statute provides that the EPA shall prescribe conditions to assure compliance with the requirements of the NPDES program and "such other requirements as he deems appropriate." 33 U.S.C. § 1342(a)(2) (1988). In addition the statute gave the EPA broad authority to oversee state permit programs. *Id.* § 1342(d)(2).

94. Arkansas v. Oklahoma, 112 S. Ct. 1046, 1056 (1992).

95. *Id.* The general purpose of the statute is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251 (1988). In addition one of the CWA's central objectives is the achievement of state water quality standards. *Id.* § 1311(b)(1)(C). The Court concluded that the EPA regulations are a well-tailored means of achieving the stated goals and objectives. *Arkansas*, 112 S. Ct. at 1056.

96. *Arkansas*, 112 S. Ct. at 1056-57; *see* International Paper Co. v. Ouellette, 479 U.S. 481, 490-91 (1987) (characterizing position of affected state as subordinate to source state under CWA).

97. *Arkansas*, 112 S. Ct. at 1056-57.

authority to require a source to comply with an affected state's standards.[98]

The Court also rejected Arkansas's argument that the EPA requirements were inconsistent with the legislative history of the CWA and the federal-state scheme that the CWA created.[99] The Court examined the legislative history and found no congressional intent to preclude the EPA from requiring compliance with affected states' standards.[100] The Court acknowledged that the CWA balanced competing interests, but found the regulations compatible with that balance.[101] Therefore, the Court concluded that regulations requiring compliance with downstream states' standards were a reasonable exercise of EPA discretion.[102]

In addressing whether the CWA prohibited any additional discharge into a waterway already in violation of existing water quality standards, the Court rejected the Tenth Circuit's categorical rule.[103] The Court concluded that no precedent supported the categorical ban.[104] In addition the Court concluded, contrary to the statutory interpretation of the Tenth Circuit,[105] that no provision of the CWA mandates such a ban.[106] Moreover, the Court noted that a categorical ban would frustrate the intent of the CWA because it would prohibit construction of new plants with superior technology that might improve existing conditions.[107]

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98. *Id.* at 1057.

99. *Id.* Arkansas contended that because the legislative history revealed no congressional statement addressing whether downstream water quality standards should apply, Congress did not intend to make downstream standards applicable to sources. Petitioner's Brief at 19-20, Arkansas v. Oklahoma, 112 S. Ct. 1046 (1992) (No. 90-1262). In addition Arkansas noted that Congress had the opportunity to amend the CWA in 1987 to include a veto requirement when a source would cause a substantial downstream violation, but chose to reject such a requirement. *Id.* at 22-23.

100. Arkansas v. Oklahoma, 112 S. Ct. 1046, 1057 (1992).

101. *Id.*

102. *Id.* Generally, courts defer to an agency's interpretation of a statute so long as the interpretation is reasonable. *See* Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc., 467 U.S. 837, 843-44 (1984) (holding that court should defer to agency if interpretation reasonable within meaning of statute).

103. *Arkansas*, 112 S. Ct. at 1057-58. The Tenth Circuit held that the CWA prohibits any further discharge into an already degraded body of water. *See* Oklahoma v. E.P.A., 908 F.2d 595, 620 (10th Cir. 1990) (holding that CWA prohibits further discharge into already degraded body of water), *rev'd sub nom.* Arkansas v. Oklahoma, 112 S. Ct. 1046 (1992).

104. *Arkansas*, 112 S. Ct. at 1058. The Court noted that no other federal court had advanced the Tenth Circuit's theory. *Id.* Furthermore, the Court noted that no party in the suit raised the issue during the court proceedings. *Id.*

105. *Id.* The Court noted that the only statutory justification the Tenth Circuit invoked for support was 33 U.S.C. § 1342(h) (1988). *Arkansas*, 112 S. Ct. at 1058. The Court stated that section 1342(h) merely authorized the EPA to prohibit a treatment plant from accepting any further pollutants for treatment until the plant corrects its permit violations, but did not authorize a complete ban on further discharges into a degraded waterway. *Id.*

106. *Id.* The Court noted that the CWA contained provisions which directed compliance with state water quality standards, but none which mandated a complete ban on discharges into a waterway not in compliance with the water quality standards. *Id.* The Court noted that the CWA instead contained provisions designed to remedy existing water quality violations and to allocate reduction of discharges between existing sources and new sources. *Id.*

107. *Id.* The categorical ban on new discharges concerns the Court because it would

Finally, the Supreme Court considered whether the EPA decision to issue the permit was arbitrary and capricious.[108] The Court rejected the Tenth Circuit's conclusion that the EPA decision was arbitrary and capricious and based on a misinterpretation of Oklahoma's water quality standards.[109] The Court stated that lower courts must defer to the EPA if the EPA acts reasonably,[110] and that in this case, deference was especially appropriate because water quality standards have a federal character.[111] The Court found that the CJO's ruling that only a detectable change in water quality violates the standards[112] was reasonable within the meaning of the CWA.[113] The Court determined that substantial evidence supported the ALJ's finding of no detectable change, and therefore, the Court concluded that the Tenth Circuit's reversal of the EPA decision was erroneous.[114]

## III. The Balance of Power Following *Arkansas*

In *Arkansas*, the Supreme Court held for the first time that the EPA may require sources to comply with an affected state's standards.[115] The Court's decision assures downstream states of some affirmative power in the permit process. Therefore, the Court shifted the balance of power to equalize the position of downstream states. However, the shift is small. The Court did not consider Oklahoma's interpretation and application of its own standards, but rather gave broad deference to the EPA's interpretation and application of Oklahoma's water quality standards.[116] *Arkansas* gives the EPA explicit power to determine whether a discharge will violate a state

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prohibit the construction of new plants that would improve existing conditions. *Id.* Once the ban is in effect, a new source cannot discharge into the violated waterway. Thus, a newer, technologically superior plant would not be able to replace an older, more environmentally destructive plant because the newer plant would add discharge to the already polluted waterway. A ban would prohibit all new discharges, not merely those that are environmentally unwise.

108. *Id.* at 1058-61.

109. *Id.* at 1058-59.

110. *Id.* at 1060; *see* Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc., 467 U.S. 837, 843-44 (1984) (holding that agency interpretation is entitled to judicial deference because agency has special knowledge and expertise).

111. Arkansas v. Oklahoma, 112 S. Ct. 1046, 1059 (1992). The Court concluded that state water quality standards have a federal character in the context of interstate water pollution for two reasons: (1) federal law governs water pollution; and (2) such a characterization accords with the CWA purpose of achieving uniform water pollution regulation. *Id.*

112. *Id.*

113. *Id.* The Court reasoned that the Chief Judicial Officer's (CJO) interpretation was sensible in the interstate context because such an interpretation prevented downstream states from wielding an effective veto over upstream discharges. *Id.*

114. *Id.* at 1060.

115. *See id.* at 1056 (holding that regulations requiring sources to comply with downstream state's water quality standards were reasonable exercise of EPA statutory discretion).

116. *See id.* at 1059-60 (holding that Oklahoma's water quality standards had federal character in interstate context, and that EPA interpretation of the standards was reasonable and consistent with purposes of CWA).

standard in future permit conflicts.[117] With this broad power the EPA may overrule a state's interpretation of its own standard.[118]

The *Arkansas* Court chose not to address whether the CWA requires source polluters to comply with the water quality standards of an affected state, reasoning that so long as the regulations were reasonable, a determination of whether they were required was unnecessary.[119] The Court's refusal to address this question is important for the downstream state because a statutory mandate provides greater protection than a regulatory requirement and would place the downstream state on a more equal footing with the EPA and the source state.[120] Without a statutory mandate, the downstream state's protection is lessened because the EPA has the ability to rescind the regulation.

The Court also left unanswered whether the *Arkansas* balance applies to state-issued permits. Because Arkansas did not have an approved permit program, the EPA issued the challenged permit.[121] Normally, the Supreme Court defers to a regulatory decision made by an entity with special and specific expertise.[122] When that entity is the EPA, the court has confidence that the decision is impartial and fair. However, such confidence is lacking when the entity is a state, because the state is serving its own interests. If the Supreme Court gives the same deference to a state entity as to the EPA, the downstream state would be worse off because the source state would no longer have to convince an impartial entity that the permit it issues is fair. Therefore, the balance of power would shift in favor of the source state at the expense of the downstream state.[123]

## IV. ANTIDEGRADATION AND THE BALANCE OF POWER

Unlike other federal water quality standards, the CWA does not specifically require an antidegradation provision. Antidegradation is a creature

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117. *See id.* at 1059 (holding that state water quality standards had federal character in interstate pollution context, and therefore that EPA was entitled to interpret them so long as its interpretation was reasonable and was consistent with purposes of CWA).

118. *See id.* (declaring that EPA properly interpreted Oklahoma's water quality standards even though its interpretation was different from Oklahoma's interpretation).

119. *Id.* at 1056.

120. *See* Petitioner's Brief at 29-30, Arkansas v. Oklahoma, 112 S. Ct. 1046 (1992) (No. 90-1262) (arguing that statutory mandate requiring sources to comply with downstream state's water quality standards would eliminate agency's broad discretion to weigh all factors before determination).

121. Arkansas v. Oklahoma, 112 S. Ct. 1046, 1055 (1992). The Court appears to affirm implicitly the EPA regulations permitting an EPA veto of a state permit if such permit does not comply with any affected state's standards. *See id.* at 1055-56 (approving same regulatory language in EPA permit process, thus implicating approval of EPA regulations requiring that state-issued permits comply with downstream state standards).

122. *See* SEC v. Chenery Corp., 332 U.S. 194, 209 (1947) (holding that courts should defer to agency if agency decision rests within area of agency expertise).

123. *See supra* notes 115-18 and accompanying text (discussing balance of power under *Arkansas*). The theoretical scenario changes the balance of power because judicial deference to the source state would in effect eliminate the veto power of the EPA except in cases of extreme arbitrariness and capriciousness on the part of the source state.

solely of EPA regulations.[124] The EPA mandates that each state adopt an antidegradation regulation that satisfies the minimum requirements specified in the EPA model.[125] However, the EPA issued no guidelines on how to interpret and apply the model.[126] States have adopted the model without any explanatory interpretation of their own.[127] The result is uncertainty as to what the state legislatures intended, and the EPA is free to interpret the state regulations however it pleases.[128] This lack of boundaries on interpretative scope grants the EPA very broad authority when interstate conflicts arise.

The EPA model antidegradation standard originated with the 1965 Water Quality Act, the predecessor to the CWA.[129] The Federal Water Pollution Control Administration issued guidelines for states to follow in enacting their water quality standards,[130] and these guidelines broadly articulated an antidegradation policy.[131] Although the guidelines were strict, the implementation was lax.[132] However, in 1968 the Secretary of the Interior

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124. *See* N. William Hines, *A Decade of Nondegradation Policy in Congress and the Courts: The Erratic Pursuit of Clear Air and Clean Water*, 62 IOWA L. REV. 643, 674-75 (1977) (discussing legitimacy of antidegradation standard under CWA); Stephen Hull, Note, *Nondeterioration and the Protection of High Quality Waters Under Federal Water Pollution Control Law*, 1977 UTAH L. REV. 737, 740-45 (same). Various factors legitimize the antidegradation provisions absent statutory authority. First, the EPA had promulgated similar regulations under the 1965 Act. Hines, *supra*, at 675. Second, the courts mandated that the EPA include an antidegradation provision in the CAA. *Id.*; Hull, *supra*, at 744-45. Third, the legislative history of the CWA made considerable reference to an antidegradation policy. Hines, *supra*, at 675; Hull, *supra*, at 743.

For the sake of clarity and consistency, the author will call the EPA antidegradation provision the EPA model standard, and state antidegradation standards antidegradation regulations.

125. 40 C.F.R. § 131.12 (1991).

126. *See* Petitioner's Brief at 23, EPA v. Oklahoma, 112 S. Ct. 1046 (1992) (No. 90-1266) (noting lack of national rulemaking or determination on how to interpret and apply terms of antidegradation standard); Hull, *supra* note 124, at 748-49 (arguing that antidegradation standards lack detail as to what uses state should protect and what implementation procedures state should establish to protect those uses).

127. *Cf.* Petitioner's Brief at 20 n.25, (noting that Oklahoma adopted EPA model standard with no clear indication of its different interpretation).

128. *See* United States v. Larionoff, 431 U.S. 864, 872 (1977) (holding that administrative agency has considerable authority to interpret vague regulations unless interpretation is plainly erroneous or inconsistent).

129. *See generally* Hines, *supra* note 124 (discussing thoroughly history of antidegradation under CWA and CAA).

130. U.S. DEP'T OF INTERIOR, FEDERAL WATER POLLUTION CONTROL ADMIN., GUIDELINES FOR ESTABLISHING WATER QUALITY STANDARDS FOR INTERSTATE WATERS (1966).

131. *See id.* (articulating officially for first time antidegradation policy). One guideline stated, "In no case will standards providing for less than existing water quality be acceptable." *Id.* at 5. A second guideline required that water quality standards provide for "[t]he maintenance and protection of quality and use or uses of water now of a higher quality or of a quality suitable for present and potential uses." *Id.* at 7.

132. *See* Hines, *supra* note 124, at 658-59 (discussing effects of stated antidegradation policy).

declared that states must adopt regulations conforming to federal antidegradation policy.[133] By 1972 all fifty states had adopted an antidegradation policy statement, but most states failed to actively implement their policy statements.[134]

Congress failed to include an antidegradation provision when it enacted the CWA in 1972.[135] However, the EPA determined that an antidegradation requirement was implicit in the CWA,[136] and in 1975, promulgated the current EPA model antidegradation standard that serves as the federal minimum with which states must comport in developing their own antidegradation regulations.[137] The model standard contains three elements. First, the state must maintain existing water uses and the level of water quality necessary to protect those uses.[138] Second, the state must maintain existing water quality when the quality exceeds the fishable-swimmable use designation unless the state determines that lowering of water quality is necessary for economic or social development.[139] Finally, the model standard requires that states must maintain and protect the high quality of waters constituting a national resource.[140] All fifty states have adopted antidegradation regula-

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133. *See id.* (discussing history of antidegradation policy). Hines comments that the Secretary's statement firmly established the antidegradation policy as a fully developed concept within the water pollution laws. *Id.*

134. *See id.* at 659-60 (arguing that although all 50 states had adopted antidegradation standards, standards were largely undeveloped and unenforced by either state or federal government).

135. *See id.* at 674 (commenting on omission of antidegradation policy in CWA).

136. *See id.* at 674-75 (discussing EPA determination that continuation of existing water quality standards implied continued existence of antidegradation policy because policy was component in earlier water quality standards). The EPA subsequently announced its continued commitment to the policy, but failed to take further action for over two years. *See id.* at 675 (discussing history of antidegradation policy).

137. 40 Fed. Reg. 55,340 (1975) (codified at 40 C.F.R. § 35.1550(3) (1976)) (current version at 40 C.F.R. § 131.12 (1992)).

138. 40 C.F.R. § 131.12(a)(1) (1992). The regulation provides: "Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected." *Id.*

139. *Id.* § 131.12(a)(2). The regulation provides:

> Where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the State finds . . . that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the State shall assure water quality adequate to protect existing uses fully. Further, the State shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.

*Id.*

140. *Id.* § 131.12(a)(3). The regulation provides:

> Where high quality waters constitute an outstanding National resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

*Id.*

tions which at a minimum satisfy the EPA model,[141] and many of these regulations are substantially similar to the model EPA standard.[142]

An antidegradation provision appears consistent with congressional intent.[143] Congress enacted the CWA to eliminate water pollution nationally.[144] Preventing degradation of high quality waters serves this purpose. Without a mandatory requirement that high water quality be maintained at its current level, dischargers would be free to degrade until the water quality significantly deteriorated to a level that violated a specified EPA or state standard. The result would be increased pollution nationally, contrary to congressional intent.[145]

### *A. The EPA Model Antidegradation Standard: Its Shortcomings and Alternative Approaches*

Although the EPA model antidegradation standard plays an important role in the elimination of water pollution, it has two serious shortcomings. First, the model standard is vague.[146] It requires that states maintain their current water quality in their waterways,[147] but fails to articulate a standard by which to measure maintenance or degradation of quality.[148] Second, the

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141. *See* Gaba, *supra* note 15, at 1190 n.115 (stating that all states had adopted some form of antidegradation standard by 1972).

142. *See, e.g.*, Alabama Water Quality Criteria Standards, ALA. ADMIN. CODE r. 335-6-10-.04 (1991), *reprinted in* [1 State Water Laws] Env't Rep. (BNA) 701:1002 (1992); Alaska Water Quality Standards, ALASKA ADMIN. CODE tit. 18, § 70.010(c) (Nov. 1989), *reprinted in* [1 State Water Laws] Env't Rep. (BNA) 706:1001 (1990); Arkansas Surface Water Quality Standards § 3 (1991), *reprinted in* [1 State Water Laws] Env't Rep. (BNA) 716:1003 (1992); Georgia Water Quality Control Regulations, GA. COMP. R. & REGS. r. 391-3-6-.03(2)(b) (1991), *reprinted in* [1 State Water Laws] Env't Rep. (BNA) 751:0503 (1991); Hawaii Water Quality Standards § 11-54-01.1 (1990), *reprinted in* [2 State Water Laws] Env't Rep. (BNA) 756:1001 (1990); Idaho Water Quality Standards § 01.2051 (1990), *reprinted in* [2 State Water Laws] Env't Rep. (BNA) 761:1004 (1990). The Supreme Court cited the similarity between Oklahoma's standard and the EPA model as evidence of the reasonableness of the EPA interpretation. *See* Arkansas v. Oklahoma, 112 S. Ct. 1046, 1060 (1992) (holding that EPA interpretation was reasonable because EPA was interpreting its own regulation).

143. *See* Gaba, *supra* note 15, at 1191-92 (discussing legality of antidegradation provision under CWA).

144. 33 U.S.C. § 1251 (1988). The statute provides in relevant part, "The objective of this chapter is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." *Id.*

145. *Cf.* Sierra Club v. Ruckelshaus, 344 F. Supp. 253, 256 (D.D.C. 1972) (holding that language similar to CWA in Clean Air Act required antidegradation provision).

146. *See* WILLIAM N. ESKRIDGE, JR. & PHILIP P. FRICKEY, CASES AND MATERIALS ON LEGISLATION: STATUTES AND THE CREATION OF PUBLIC POLICY 839 (1988) (arguing that vagueness is usually intentional and creates variety of possible meanings whereas ambiguity is usually unintentional and creates "either/or" situation). Because the EPA model has more than two possible interpretations, the author considers it vague rather than ambiguous.

147. 40 C.F.R. § 131.12(a) (1991).

148. *See* Gaba, *supra* note 15, at 1192-94 (arguing that EPA antidegradation policy lacks focus and therefore fails to identify what policy is actually protecting); *supra* notes 138-40 and accompanying text (discussing EPA antidegradation model's requirements for maintaining

model standard includes an exception capable of swallowing the rule.[149] The model standard permits a state to degrade water quality if the state determines that the degrading discharges are necessary to further important economic or social development.[150] However, the standard fails to specify what specifically constitutes important economic and social development,[151] and thus, virtually all source polluters could defend such a claim. Because *Arkansas* granted the EPA broad power to interpret state water quality regulations over state objections,[152] this vague model standard with its broad exception provides very limited protection to waters of existing high quality.[153]

However, states are not helpless. A state can assert its own interpretation by rewriting its antidegradation regulations so the regulation is clear, precise, and objective.[154] In so doing, the downstream state narrows the range of permissible interpretations available to the EPA. Two states have added clarity, precision, and objectivity: Colorado[155] and Wisconsin.[156] In addition, the EPA has itself adopted a clear and objective antidegradation standard for a different resource—clean air.[157]

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high water quality). Gaba notes that the EPA has combined a protection of existing use concept with a protection of existing water quality. *See* Gaba, *supra* note 15, at 1192-94 (discussing differing concepts included within antidegradation policy). Gaba argues that these opposing concepts of deterioration result in a vague policy with little focus. *See id.* (arguing that combination of use-oriented policy and water quality policy contributed significantly to vagueness in standard).

149. *See supra* note 139 and accompanying text (discussing EPA model's economic and social development exception to antidegradation policy). Gaba suggests that the failure to specify exactly what constitutes justifiable reasons could leave the policy with few existing degradation limitations. *See* Gaba, *supra* note 15, at 1193 (discussing potential problems with economic and social development exception to antidegradation policy).

150. 40 C.F.R. § 131.12(a)(2) (1992).

151. *See id.* § 131.12(a)(2) (allowing degradation if such degradation is necessary to accommodate important economic or social development, but issuing no guidance as to what constitutes important development); Hull, *supra* note 124, at 749-50 (discussing EPA failure to include standards for determining what is necessary to accommodate economic or social development).

152. *See* Arkansas v. Oklahoma, 112 S. Ct. 1046, 1059-60 (1992) (holding that EPA had authority to reasonably interpret state water quality standards).

153. *See* Colin S. Diver, *The Optimal Precision of Administrative Rules*, 93 YALE L.J. 65, 73 (1983) (arguing that vague standard invites misinterpretation because it may be underinclusive and overinclusive); Gaba, *supra* note 15, at 1192-93 (noting water quality protection limitations of EPA antidegradation policy).

154. *See* United States v. Larionoff, 431 U.S. 864, 872 (1977) (holding that administrative agency has considerable authority to interpret vague regulations unless interpretation is plainly erroneous or inconsistent). Conversely, it follows that an agency has less authority and discretion to interpret when the regulations are detailed, clear, and unambiguous.

155. *See infra* notes 160-73 and accompanying text (discussing clarity, precision, and objectivity of Colorado's water quality regulations).

156. *See infra* notes 185-201 and accompanying text (discussing clarity, precision, and objectivity of Wisconsin's water quality regulations).

157. *See infra* notes 208-28 and accompanying text (discussing clarity, precision, and objectivity of Prevention of Significant Deterioration (PSD) provision of CAA).

Colorado's antidegradation enforcement rests with the state Water Quality Division and the Water Quality Control Commission.[158] The Colorado antidegradation regulations include a general rule similar to the EPA model standard,[159] but also include specific evaluation criteria and review procedures that add clarity, precision, and objectivity.

Colorado expands the EPA model standard with an explicit review procedure for new or additional discharges that may degrade the water quality.[160] First, the procedure requires the Water Quality Division to make a degradation determination[161] based on an exact, numeric formula.[162] The Water Quality Division applies the formula to the permit application and compares the results to specific values for degradation listed in the regulations.[163] Based upon this precise calculation and comparison, the Water

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158. Colorado Water Quality Standards § 3.1.8(3)(b) (1991), *reprinted in* [1 State Water Laws] Env't Rep. (BNA) 726:1007 (1992).

159. *Compare id.* § 3.1.8(1)(a), *reprinted in* [1 State Water Laws] Env't Rep. at 726:1006 *with* EPA antidegradation policy, *supra* notes 137-39 and accompanying text (containing similar language in both standards). The Colorado regulations provide in relevant part:

> (i) The highest level of water quality protection applies to certain waters that constitute an outstanding state or national resource. These waters, which are those designated high quality 1 . . . shall be maintained and protected at their existing quality.
>
> (ii) An intermediate level of water quality protection applies to certain other high quality waters. These waters shall be maintained and protected at their existing quality unless it is determined that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located . . . . For these waters, no degradation is allowed unless deemed appropriate following an antidegradation review. . . . Further, all applicable statutory and regulatory requirements for point sources and, if applicable control regulations have been adopted, all cost-effective and reasonable best management practices for nonpoint sources shall be met.
>
> (iii) At a minimum, for all State surface waters existing classified uses and the level of water quality necessary to protect such uses shall be maintained and protected. No further water quality degradation is allowable which would interfere with or become injurious to these uses. The classified uses shall be deemed protected if the narrative and numerical standards are not exceeded.

Colorado Water Quality Standards § 3.1.8(1)(a).

160. Colorado Water Quality Standards § 3.1.8(3), *reprinted in* [1 State Water Laws] Env't Rep. at 726:1007-08.

161. *Id.* § 3.1.8(3)(c), *reprinted in* [1 State Water Laws] Env't Rep. at 726:1007-08.

162. *Id.* The regulation provides:

> The initial step in an antidegradation review shall be a determination whether the activity in question is likely to result in significant degradation of reviewable waters, with respect to adopted narrative or numeric standards. This significance determination shall be made with respect to the net effect of the new or increased water quality impacts of the proposed activity, taking into account any environmental benefits resulting from the activity and any water quality-enhancing mitigation measures impacting the segment or segments under review, if such measures are incorporated with the proposed activity.

*Id.*

163. *Id.* The regulation provides:

> The activity shall be considered not to result in significant degradation, as measured

Quality Division determines whether the new discharge significantly degrades the water quality.[164]

If the degradation determination shows that the proposed activity is likely to result in a significant degradation of water quality, the Water Quality Division must determine whether the degradation is necessary to accommodate important economic or social development.[165] In order for the permit applicant to meet this requirement, the Water Quality Division must determine that the proposed activity is important for development.[166] The applicant must submit supporting evidence,[167] and the public may submit contrary evidence during a public review process.[168] The Water Quality Division decides whether the proposed activity is important based upon the evidence, giving substantial weight to relevant determinations by local governments and land use planning authorities.[169]

If the Water Quality Division determines that the proposed activity is important to development, it then must determine whether appropriate alternatives are available.[170] Appropriate alternatives include measures that

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in the reviewable waters segment, if;

(i) The value of a new or increased discharge under review is small enough that it will be diluted by 100 to 1 or more at low flow, as defined in section 3.1.9, by water in the stream; or

(ii) The new or increased loading from the source under review is less than 10 percent of the existing total load to that segment for critical constituents . . .; provided, that the cumulative impact of increased loadings from all sources shall not exceed 10 percent of the baseline total load established for the segment . . .; or

(iii) The new or increased loading from the source under review will consume, after mixing, less than 15 percent of the available increment between low flow pollutant concentrations and the relevant standards for critical constituents; or

(iv) The activity will result in only temporary or short term changes in water quality.

*Id.*

164. *Id.*

165. *Id.* § 3.1.8(3)(d), *reprinted in* [1 State Water Laws] Env't Rep. at 726:1008.

166. *Id.* § 3.1.8(3)(d)(ii), *reprinted in* [1 State Water Laws] Env't Rep. at 726:1008.

167. *Id.* If the permit applicant submits evidence, the Water Quality Division presumes that the proposed activity is important development unless another party submits evidence to the contrary. *Id.*

168. *Id.* The public may submit evidence contrary to the applicant's evidence during the public review process. *Id.* The regulations require that the Water Quality Division consider all information received when it makes its determination as to the economic and social importance of the proposed activity. *Id.*

169. *Id.*

170. *Id.* § 3.1.8(3)(d)(iii), *reprinted in* [1 State Water Laws] Env't Rep. at 726:1008. The regulation provides:

This determination shall be based on an assessment of whether such alternatives are available, based upon a reasonable level of analysis by the project proponent, consistent with accepted engineering practice, and any information submitted by the public or which is otherwise available. The assessment shall address practical water quality control technologies, the feasibility and availability of which has been demonstrated under field conditions similar to those of the activity under review. The scope of alternatives considered shall be limited to those that would accomplish

would result in no degradation or less degradation than the proposed activity and are economically, environmentally, and technologically feasible.[171] The regulations list specific analytic techniques for the evaluation of alternatives,[172] including accepted engineering practices and cost-benefit analyses.[173]

The Colorado antidegradation regulation eliminates much of the EPA model standard's vagueness. The regulation explicitly and precisely states what constitutes the prohibited level of degradation.[174] In contrast, the EPA model merely states that water quality "shall be maintained and protected."[175] Nothing in the model indicates what degradation, if any, would constitute a violation.[176] In grappling with the EPA model, the ALJ in *Arkansas* found prohibited degradation when the discharge caused an *undue impact* on the water quality;[177] the CJO found prohibited degradation when the discharge caused a *detectable violation* of water quality.[178] The EPA model is vague enough to encompass "undue impact," "detectable violation," and many other interpretations. The Colorado regulation, on the other hand, specifies in exact detail what constitutes prohibited degradation.[179] Colorado applies a formula to determine the level of degradation produced by the activity.[180] The Water Quality Division compares the verifiable results to a set of numeric values included within the regulation to determine whether the regulation prohibits the amount of degradation produced.[181] Such detail makes the regulation clear, precise, and objective, thus narrowing the range of permissible interpretations.

Although Colorado significantly improves upon the EPA model regarding the degradation determination, it remains vague regarding the economic and social development exception. Colorado leaves considerable discretion with the Water Quality Division to determine whether the proposed activity

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> the proposed activity's purpose. Any alternatives that would be inconsistent with section 25-8-104 of the Water Quality Control Act shall not be considered available alternatives.

*Id.*

171. *Id.*

172. *Id.*

173. *Id.*

174. *See supra* notes 160-64 and accompanying text (discussing Colorado's procedure for determining whether permit applicant would degrade high water quality significantly).

175. *See supra* notes 138-40 and accompanying text (discussing EPA model antidegradation standard).

176. *See supra* notes 138-40 and accompanying text (discussing EPA model antidegradation standard).

177. Petitioner's Brief Appendix F at 105a, Arkansas v. Oklahoma, 112 S. Ct. 1046 (1992) (No. 90-1262).

178. *Id.* at Appendix G, 117a.

179. *See supra* notes 160-64 and accompanying text (discussing clarity of Colorado's degradation determination).

180. *See supra* notes 162-63 and accompanying text (discussing Colorado's degradation determination formula).

181. *See supra* notes 160-64 and accompanying text (discussing Colorado's procedure for determining whether applicant would significantly degrade water quality).

is important development.[182] However, Colorado limits this discretion somewhat by requiring the Water Quality Division to engage in a standardized method of alternative analysis using accepted engineering practices and cost-benefit analyses.[183] Although Colorado's economic and social development exception allows some interpretive discretion, on the whole its antidegradation regulation greatly narrows the broad range of interpretations permissible under the EPA model.[184]

Wisconsin also departed from the EPA model by adding detail to its water antidegradation policy. However, unlike Colorado,[185] Wisconsin separated its antidegradation regulation and its implementation procedure into two distinct regulations: the Wisconsin Water Quality Standards[186] and the Wisconsin Water Pollution Rules.[187] The antidegradation provision within the Water Quality Standards is similar to the EPA model.[188] Wisconsin adds clarity by means of its procedural implementing rules, which apply to all proposed new or increased discharges into the surface waters of the state.[189]

The Wisconsin implementing rules add clarity by defining key terms[190] such as "assimilative capacity,"[191] "increased discharge,"[192] and "significant

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182. *See supra* notes 165-73 and accompanying text (discussing Colorado's economic and social development exception).

183. *See supra* notes 165-73 and accompanying text (discussing Colorado's economic and social development exception).

184. *Compare supra* note 139 and accompanying text (discussing EPA model's social and economic development exception) *with supra* notes 165-73 and accompanying text (discussing Colorado's social and economic development exception).

185. *See supra* notes 158-73 and accompanying text (discussing Colorado's antidegradation policy and procedure).

186. Wisconsin Water Standards, WIS. ADMIN. CODE § NR 102.05(1)(a) (Aug. 1989), *reprinted in* [6 State Water Laws] Env't Rep. (BNA) 951:1003 (1989). The regulation provides:

> No waters of the state shall be lowered in quality unless it has been affirmatively demonstrated to the department that such a change is justified as a result of necessary economic and social development, provided that no new or increased effluent interferes with or becomes injurious to any assigned uses made of or presently possible in such waters.

*Id.*

187. Wisconsin Water Pollution Rules, WIS. ADMIN. CODE § NR 207 (Mar. 1989), *reprinted in* [6 State Water Laws] Env't Rep. (BNA) 951:0511 (1989).

188. *Compare supra* notes 138-40 and accompanying text (discussing EPA model antidegradation standard) *with supra* note 186 and accompanying text (discussing Wisconsin's antidegradation standard).

189. Wisconsin Water Pollution Rules § NR 207.01(1), *reprinted in* [6 State Water Laws] Env't Rep. at 951.0511.

190. *Id.* § NR 207.02, *reprinted in* [6 State Water Laws] Env't Rep. at 951:0511.

191. *Id.* § NR 207.02(1), *reprinted in* [6 State Water Laws] Env't Rep. at 951:0511. The regulations provide, "'Assimilative capacity' means the difference between the water quality criterion for a substance. . .and the existing level of the substance in a surface water." *Id.* A precise definition of assimilative capacity is important because Wisconsin uses this term in the determination of significant degradation. *Id.* § NR 207.05, *reprinted in* [6 State Water Laws] Env't Rep. at 951:0512.2-12.3.

192. *Id.* § NR 207.02(6)(a), *reprinted in* [6 State Water Laws] Env't Rep. at 951.0511. The regulations provide, "'Increased discharge' means any change in concentration, level or

lowering of water quality.''[193] In addition, the rules prescribe a specific procedure for antidegradation determinations.[194] First, the Department of Natural Resources must determine whether the proposed discharge will cause a significant lowering of water quality,[195] using a precise numeric formula contained within the regulations.[196] If the results of this calculation compare unfavorably with specific values listed in the regulation, the determination is that the discharge will cause a significant lowering of water quality.[197]

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loading of a substance which would exceed an effluent limitation specified in a current WPDES permit." *Id.*

193. *Id.* § NR 207.02(11), *reprinted in* [6 State Water Laws] Env't Rep. at 951:0511. The regulations provide, "'Significant lowering of water quality' means a lowering of water quality determined to be significant under s. NR 207.05." *Id.*

194. *Id.* § NR 207.03-.05, *reprinted in* [6 State Water Laws] Env't Rep. at 951:0511-12.3.

195. *Id.* § NR 207.05, *reprinted in* [6 State Water Laws] Env't Rep. at 951:0512.2-12.3.

196. *Id.* § NR 207.05(2), *reprinted in* [6 State Water Laws] Env't Rep. at 951:0512.2. The regulations provide:

> (a) Determine the expected levels of the indicator parameters in the discharge.
>
> (b) Determine existing levels of the indicator parameters upstream of, or adjacent to, the discharge site using applicable procedures in chs. NR 102 and 106 or specified by the department if none of those procedures apply. . . .
>
> (c) Calculate expected levels in the receiving water of the indicator parameters as a result of the proposed new or increased discharge. In calculating expected levels in the receiving water, the following shall be used:
>
> 1. Applicable design low flow rates or dilution ratios for the receiving water in ch. NR 102 or 106 or specified by the department if none of those rates or ratios apply.
>
> 2. The daily average discharge loading rates for the new or increased portion of a municipal discharge or the yearly average discharge loading rates for the new or increased portion of an industrial discharge.
>
> (d) Compare the expected levels in the receiving water of each indicator parameter as calculated in par. (c) to:
>
> 1. The assimilative capacity multiplied by one-third for all indicator parameters except dissolved oxygen; or
>
> 2. The sum of the existing level multiplied by two-thirds and the water quality criterion multiplied by one-third for dissolved oxygen.

*Id.*

197. *Id.* § NR 207.05(4), *reprinted in* [6 State Water Laws] Env't Rep. at 951:0512.3. The regulations provide:

> The department shall determine that a proposed new or increased discharge will result in a significant lowering of water quality if either:
>
> (a) The proposed new or increased discharge, along with all other new or increased discharges after March 1, 1989, taking into account any changes in assimilative capacity over time that have been demonstrated . . ., results in an expected level of an indicator parameter in the receiving water of either of the following:
>
> 1. Greater than one-third multiplied by the assimilative capacity for any indicator parameter other than dissolved oxygen; or
>
> 2. Greater than the sum of the existing level multiplied by two-thirds and the water quality criterion multiplied by one-third for dissolved oxygen.
>
> (b) For a discharge to Great Lakes waters or their tributaries, the mass loading to the receiving water of any substance in the proposed new or increased discharge having a bioaccumulation factor greater than 250 would be increased.

*Id.*

Following such a determination, the permit applicant must show that the proposed activity will accommodate important economic or social development.[198] The Wisconsin rules specifically list several items that constitute important economic or social development.[199] For example, the list includes an increase in employment; an increase in production; an avoidance of a reduction in employment; an increase in efficiency; and an increase in industrial, commercial, or residential growth in the community.[200] Finally, the permit applicant must show that no cost-effective way exists to prevent the degradation.[201]

Wisconsin adds clarity, precision, and objectivity to its regulation by giving clear, exact definitions of terms used without definition in the EPA model.[202] Furthermore, the Wisconsin regulation relies heavily upon exact, numerical criteria for the determination of impact on water quality, rendering the determination objective and verifiable.[203] Finally, unlike Colorado,[204] Wisconsin adds considerable clarity to its economic and social development exception.[205] The regulation lists exactly what constitutes an important economic or social development.[206] The Wisconsin regulation not only reduces the range of permissible interpretations under the EPA model, but also improves on the Colorado regulation.[207] Wisconsin's regulation is clear, precise, and objective and permits only a narrow range of interpretations.

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198. *Id.* § NR 207.04(1)(c), *reprinted in* [6 State Water Laws] Env't Rep. at 951:0512.1.

199. *Id.* § NR 207.04(1)(c)1, *reprinted in* [6 State Water Laws] Env't Rep. at 951:0512.1.

200. *Id.*

201. *Id.* § NR 207.04(1)(d), *reprinted in* [6 State Water Laws] Env't Rep. at 951:0512.1. The regulations provide in relevant part:

> If the new or increased discharge is found to result in a significant lowering of water quality or if the person proposing the new or increased discharge has waived the procedure . . ., the permit applicant shall demonstrate the following:
>
> 1. The proposed significant lowering of water quality cannot be prevented in a cost effective manner by the following types of pollution control alternatives;
>
> a. Use of conservation measures.
>
> b. Use of recycling measures.
>
> c. Use of other applicable wastewater treatment process or operational changes.
>
> d. Use of source reduction measures.

*Id.*

202. *See supra* notes 190-93 and accompanying text (discussing Wisconsin's use of definitions in antidegradation standard).

203. *See supra* notes 195-97 and accompanying text (discussing Wisconsin's use of specific numeric criteria).

204. *See supra* notes 165-73 and accompanying text (discussing Colorado's vagueness in its important social and economic development exception).

205. *Compare supra* notes 165-73 and accompanying text (discussing Colorado's economic and social development exception) *with supra* notes 198-201 and accompanying text (discussing Wisconsin's economic and social development exception).

206. *See supra* note 200 and accompanying text (discussing Wisconsin's list of important social and economic activities).

207. *Compare supra* text accompanying notes 165-73 (discussing economic and social development exception of Colorado standard and its weaknesses) *with supra* notes 198-201 and accompanying text (discussing economic and social development exception of Wisconsin standard).

Finally, the EPA formulated a clear set of antidegradation standards over ten years ago for another resource—clean air.[208] The Prevention of Significant Deterioration (PSD) provision of the Clean Air Act (CAA) requires that each state's clean air plan contain a provision to prevent significant deterioration of air quality in areas that have attained a level of high quality.[209] The CAA adds precision through the use of defined maximum allowable increases for discharge pollutants.[210] The CAA lists in numeric detail the prohibited level of deterioration for a new or additional discharge of sulfur dioxide and particulate matter[211] and requires that the EPA adopt similar regulations for other air pollutants.[212] In addition, the

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208. 42 U.S.C. § 7470 (1988); Prevention of Significant Deterioration of Air Quality, 40 C.F.R. §§ 51.166, 52.21 (1992). Clean air antidegradation originated in 1969 and was modeled after the antidegradation policy in the 1966 Water Guidelines. *See* Hines, *supra* note 124, at 660 (discussing history of antidegradation under CWA and CAA). However, soon after publication of the 1969 Air Guidelines, Congress completely revised the current air laws with its enactment of the CAA in 1970. *Id.* Because the CAA did not contain an antidegradation provision, questions arose over the authority of the EPA to require such a provision. *Id.* at 661. The EPA originally continued the antidegradation policy; however, within a few months, the EPA reversed its position and no longer required such a policy. *Id.* at 663. However, in 1972 the United States District Court for the District of Columbia Circuit issued an injunction against EPA approval of state implementation plans allowing significant deterioration of air quality, and ordered the EPA to promulgate corrective regulations. *See* Sierra Club v. Ruckelshaus, 344 F. Supp. 253, 256-57 (D.D.C. 1972) (holding that EPA failure to include antidegradation standard was contrary to legislative policy of CAA). As a result, the EPA developed regulations to prevent significant deterioration of air quality. *See* Hines, *supra* note 124, at 668-73 (discussing development of prevention of significant deterioration regulations). In 1977 Congress amended the CAA to include provisions for the prevention of significant deterioration of air quality. 42 U.S.C. §§ 7470-7479 (1988). Thus, the EPA has treated antidegradation under the CAA less consistently than under the CWA; yet currently, the prevention of significant deterioration of air quality is statutorily authorized whereas the antidegradation provisions of the EPA lack such authorization. *See* Hines, *supra* note 124, at 673-74.

209. 42 U.S.C. § 7471 (1988). The geographic scope of this section has been considered quite broad. *See* David P. Currie, *Nondegradation and Visibility Under the Clean Air Act*, 68 CAL. L. REV. 48, 51-54 (1980) (discussing potentially broad scope of PSD provisions). Currie does note that the courts have tried to limit the scope of the provisions. *Id.*; *see* Alabama Power Co. v. Costle, 606 F.2d 1068, 1083 (D.C. Cir. 1979) (holding that PSD provisions do not apply to sources in nonattainment areas merely because source has adverse impact on clean air area within same state). However, Currie suggests that these attempts to limit the broad scope have little practical significance because the EPA has determined that almost every area in the country shows attainment for at least one pollutant. Currie, *supra*, at 54. Therefore, the CAA will require PSD review for almost every permit applicant. *Id.*

210. 42 U.S.C. § 7473 (1988).

211. *Id.*

212. *Id.* § 7476. Section 7476 governs such pollutants as hydrocarbons, carbon monoxide, petrochemical oxidants, and nitrogen oxides. *Id.* The statute further provides:

> (c) Such regulations shall provide specific numerical measures against which permit applicants may be evaluated, a framework for stimulating improved control technology, protection of air quality values, and fulfill the goals and purposes set forth in section 7401 and section 7470 of this title.
>
> (d) The regulations of the Administrator under subsection (a) of this section shall

CAA adds clarity by defining key terms.[213] These definitions specify which sources are subject to the PSD provisions[214] and what point in time establishes the benchmark level of air quality concentration.[215]

The CAA regulations add further detail to the PSD provisions.[216] The regulations expand upon the CAA list of definitions by adding approximately twenty-five key terms,[217] such as "net emissions increase"[218] and "significant."[219] The definitions include numeric factors and guidelines that inform states and permit applicants whether the PSD provisions apply to a proposed activity.[220]

The regulations also include a detailed permit procedure within the PSD provisions.[221] The regulations list the qualifications that make the PSD provisions applicable to the permit applicant and list exemptions that allow the source to avoid the permitting process.[222] If the provision applies to the permit applicant, the applicant must undergo a series of reviews,[223] including a review of the proposed technology,[224] a review of the potential impact of the polluting source on air quality,[225] a review of the current air quality,[226] and a review of the potential impact of the source on other resources.[227] A

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provide specific measures at least as effective as the increments established in section 7473 of this title to fulfill such goals and purposes, and may contain air quality increments, emission density requirements, or other measures.

*Id.*

213. *Id.* § 7479.

214. *Id.*

215. *Id.*

216. 40 C.F.R. § 51.166 (1992) (discussing state implementation plan for prevention of significant deterioration of air quality); *id.* § 52.21 (discussing federal implementation plan for prevention of significant deterioration of air quality). These two sections are largely the same in terms of basic degradation requirements. *Compare id.* § 51.166 *with id.* § 52.21 (including similar provisions regarding basic degradation requirements).

217. *Id.* §§ 51.166(b), 52.21(b).

218. *Id.* §§ 51.166(b)(3), 52.21(b)(3). The regulations provide:

(i) *Net emissions increase* means the amount by which the sum of the following exceeds zero:

(a) Any increase in actual emissions from a particular physical change or change in method of operation at a stationary source; and

(b) Any other increases and decreases in actual emissions at the source that are contemporaneous with the particular change and are otherwise creditable.

*Id.*

The regulations continue to describe what increases and decreases are creditable for the net emission increase determination. *Id.*

219. *Id.* §§ 51.166(b)(23), 52.21(b)(23). The regulations list a schedule of rates for various pollutants. *Id.* The regulations state that if the net emissions increase or the potential of a source to emit exceeds these set rates, the deterioration is significant. *Id.*

220. *Id.* §§ 51.166(b), 52.21(b).

221. *Id.* §§ 51.166, 52.21.

222. *Id.* §§ 51.166(i), 52.21(i).

223. *Id.* §§ 51.166(j)-(r), 52.21(j)-(r).

224. *Id.* §§ 51.166(j), 52.21(j).

225. *Id.* §§ 51.166(k), 52.21(k).

226. *Id.* §§ 51.166(m), 52.21(m).

227. *Id.* §§ 51.166(o), 52.21(o).

standardized air quality model serves as the basis of the review process.[228] As a result, the procedure has considerable specificity and is subject to verifiable standards.

The CAA-PSD provisions demonstrate that an EPA antidegradation standard can be clear, precise, and objective. The PSD provision defines in specific detail terms used throughout,[229] so the meaning of the provision's language is clear. The PSD provision also expresses in exact numeric terms the prohibited level of air quality deterioration[230] and establishes a specific, detailed procedure based on a standardized model.[231] The result is an antidegradation standard that is clear, precise, and objective with a narrow range of permissible interpretations.

A specific and precise standard is advantageous for an affected state because it narrows the range of permissible interpretations by outside sources.[232] However, increased specificity offers one disadvantage: it reduces an affected state's own discretion and internal flexibility to handle unforeseen hazards.[233] For example, a state may consider one pollutant safe based on current knowledge, and thus not include it within its own specific antidegradation regulation. Ten years later, new scientific data may show that the pollutant constitutes a health hazard. If the state's regulation is so precise as to be inflexible, the state will not be able to regulate that pollutant without rewriting its standard.[234] Therefore, although the state's antidegradation standard needs more specificity, the affected state should save some limited vagueness to maintain flexibility for future unforeseen hazards.[235]

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228. *Id.* §§ 51.166(l), 52.21(l).

229. *See supra* notes 213-20 and accompanying text (discussing PSD provisions' definitions of key terms).

230. *See supra* note 219 and accompanying text (discussing CAA determination of significant deterioration).

231. *See supra* notes 221-28 and accompanying text (discussing CAA PSD permit procedure).

232. *See infra* text accompanying notes 237-48 (discussing benefits of specific and detailed antidegradation standards to affected state).

233. *See* Diver, *supra* note 153, at 73 (arguing that rulemaker may be unable to predict every future consequence of clearly stated rule, and thus, actual outcome may differ from what was originally intended); Frederick Schauer, *Slippery Slopes*, 99 HARV. L. REV. 361, 372 (1985) (arguing that vagueness in rules provides flexibility that enables accommodation of unexpected and unforeseen events).

234. *See* Diver, *supra* note 153, at 73 (arguing that rulemaker can change clearly stated rule after learning of its failure to include unforeseeable events; however, process of amendment is costly and gives rise to social losses in interim).

235. *See* Colorado Water Quality Standards § 3.1.8(3)(d) (1991), *reprinted in* [1 State Water Laws] Env't Rep. (BNA) 726:1008 (1992) (granting Water Quality Division some discretion for determining whether proposed activity is important for social or economic development); Wisconsin Water Pollution Rules, WIS. ADMIN. CODE § NR 207.04(c) (Mar. 1989), *reprinted in* [6 State Water Laws] Env't Rep. (BNA) 951:0512.1 (1989) (retaining decisionmaker discretion in social or economic development exception by including broad concepts of development in list); 40 C.F.R. § 52.21(g) (1992) (retaining decisionmaker discretion in redesignation of air quality classifications so that areas may be subject to stricter or more lenient standards as conditions change over time).

The affected state should narrow, but not eliminate, the range of permissible interpretations.

### *B. A Better Antidegradation Standard*

A state can assert its own interpretation of its antidegradation regulation by rewriting the regulation to add clarity and precision. The rewritten regulation should include detail, measurable and objective criteria, and a standardized procedure.[236] Such a regulation will protect a state's autonomy because it will limit the range of permissible interpretations available to the EPA and to other states in determining whether a discharge will be a violation.

A detailed antidegradation standard provides a basis for appeal if an EPA decisionmaker interprets the standard differently than the state. Ordinarily, courts defer to an agency interpretation unless it is arbitrary and capricious.[237] In *Arkansas*, the Supreme Court deferred to the EPA interpretation because the interpretation was reasonable in light of CWA principles and purposes.[238] However, a more detailed standard with specific guidelines offers less interpretive discretion than does a vague standard.[239] Therefore, an interpretation that strays far from the clear meaning of a precise standard is more likely to be arbitrary and capricious. A state that writes a clear and precise standard limits EPA power to undermine state intent through interpretation.

In addition, a detailed antidegradation regulation should entitle the state to EPA deference. The EPA must approve each state's water quality standards, including any detailed procedure contained within the antidegradation provision.[240] Therefore, because the EPA reviewed and approved the detailed procedure, it should defer to the state's consistent application of the rule. Otherwise, the EPA frustrates the CWA's carefully constructed balance of power allowing states the opportunity to alter the EPA model standard provided that such alteration meets the federal minimums.[241]

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236. *See supra* notes 158-73 and accompanying text (discussing Colorado's detailed antidegradation standard); *supra* notes 185-201 and accompanying text (discussing Wisconsin's detailed antidegradation standard); *supra* notes 208-28 and accompanying text (discussing CAA antidegradation standard).

237. *See* Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc., 467 U.S. 837, 843-44 (1984) (holding that court should defer to agency if agency interpretation is reasonable within meaning of statute).

238. *See* Arkansas v. Oklahoma, 112 S. Ct. 1046, 1059 (1992) (holding that EPA interpretation was reasonable and consistent with purposes and principles of CWA).

239. *See* United States v. Larionoff, 431 U.S. 864, 872 (1977) (holding that administrative agency has considerable authority to interpret vague regulations unless interpretation is plainly erroneous or inconsistent).

240. 33 U.S.C. § 1313(c) (1988). The statute requires that whenever a state revises or adopts a new standard, the state shall submit the standard to the EPA for review. *Id.* § 1313(c)(2). Upon EPA determination that the new standard meets the requirements of the CWA, the EPA shall approve the standard, and the standard becomes effective within the state. *Id.* § 1313(c)(3).

241. *See supra* notes 18-23 and accompanying text (discussing CWA balance of power within NPDES permit scheme).

A detailed standard also protects a downstream state when the decisionmaker is a source state. Because most states have federally approved NPDES programs,[242] they may issue permits with little EPA involvement.[243] Source states have little incentive to sympathize with the concerns of a downstream neighbor, especially when the affected neighbor's water quality standards are stricter than their own. The affected state has the opportunity for comment,[244] but the source state is free to determine whether the discharge will violate the water quality of the affected state.[245] The affected state's only recourse is to appeal to the EPA.[246] However, the EPA will likely defer to the source state's determination unless the affected state offers evidence that the source state violated the NPDES requirements.[247] A vague standard will not provide sufficient evidence because the source state can interpret the standard to defend its position. The source state will have a more difficult time defending its interpretation when the permit violates a clear, precise, and objective regulation, and the EPA will be more likely to review the source state's decision and veto apparent violations. Furthermore, in the event that the EPA fails to give relief to the affected state, the affected state may appeal to the courts. Armed with a clear and detailed antidegradation regulation, the affected state can challenge as arbitrary and capricious a lax interpretation by the EPA and the source state.[248]

## V. CONCLUSION

After *Arkansas*, the interstate water pollution's tangle of competing and conflicting interests seemed to provide affected states with little power to protect their waters. However, a closer examination reveals that the affected state is not powerless. If the affected state departs from the vague EPA model standard and adopts a clear, precise, and objective antidegradation regulation, the affected state narrows the range of permissible interpretations. Therefore, the affected state removes much of the broad EPA discretion to interpret the state's regulation in a way that allows other states to pollute its waters. This result is in keeping with the purpose of the CWA

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242. *See* Cherney & Wardinski, *supra* note 22, at 234 (stating that EPA has approved 39 jurisdictions to administer own NPDES programs).

243. *See id.* (commenting that when EPA transfers administration of NPDES program to state governments, it relinquishes its control over day-to-day operations so long as federal requirements are met).

244. 33 U.S.C. § 1342(b)(5) (1988).

245. *Id.*

246. *Id.* § 1342(d)(2).

247. *Cf. id.* § 1342 (structuring EPA role as mainly oversight role in NPDES program). For the program to work as designed, the states shall make the determinations, and the EPA shall only object and veto a state determination if there is clear evidence of a program violation. *Id.*

248. *See supra* notes 237-39 and accompanying text (discussing how detailed and precise antidegradation standards provide opportunity for appeal on grounds of arbitrariness and capriciousness).

to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters."[249]

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249. 33 U.S.C. § 1251 (1988).