

Nutrients in the Courts: Cooperative Federalism Entangles EPA Actions on Nitrogen and Phosphorus

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For over a decade, the regulation of nutrients (nitrogen and phosphorus) under the Clean Water Act (CWA)¹ has been a focus of the U.S. Environmental Protection Agency's (EPA's) attention. Now, it is a focus of litigation. Hypoxia in the Gulf of Mexico, algal blooms in Florida, and reduced aquatic life in the Chesapeake Bay have spawned three very different lawsuits, each shedding light on different issues of administrative law and a different stage of the CWA's process for protecting water quality. The one broad issue these cases share is that—at their core—all three stem from fundamental disputes about when EPA may (or must) step in to take action that the CWA reserves in the first instance (or solely) to the states. At the core of each case is a dispute about the contours of the CWA's system of cooperative federalism.

The Gulf of Mexico case (perhaps better known as the Mississippi River Basin case) explores the standard for determining when EPA must respond to a petition seeking EPA promulgation of federal water quality criteria for nutrients, and what factors EPA may consider on the merits of such a petition. The Florida case shows how a consent decree can affect the process of setting federal criteria, and explores how EPA or a state may (or may not) set such criteria for nutrients. Finally, the Chesapeake Bay case displays the deference that a court may give to EPA when implementing those criteria, and raises the issues as to whether EPA or the state should control such implementation.

We will discuss those cases below, but first we will set the stage by briefly summarizing the CWA's scheme for protecting water quality, and the special attributes of nitrogen and phosphorus in aquatic environments.

I. The Statutory Scheme

A. Adopting Water Quality Standards

In the CWA, the U.S. Congress recognized, preserved, and protected “the primary responsibilities and rights” of the states to achieve the Act's objectives: “to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.”² Accordingly, the Act requires each state to establish water quality standards for surface waters within its jurisdiction.³ Water quality standards consist of “designated uses” for water bodies and “water quality criteria” necessary to protect those uses.⁴ Designated uses are “a State's concise statements of its management objectives and expectations for each of the individual surface waters under its jurisdiction.”⁵ Upon designating uses for its water bodies, a state must then adopt water quality criteria “necessary to protect the uses.”⁶ States may express such criteria as numerical values (based on “scientifically defensible methods”) or “where numerical criteria cannot be established” as “narrative criteria.”⁷

EPA may issue its own standard for a state's waters, but only if the state's standard is inconsistent with the Act, or if EPA determines that a federal standard is “necessary” to meet the Act's requirements.⁸

B. Identifying Impaired Waters

After establishing water quality standards for waters within its boundaries, each state must identify which waters are not meeting those standards (commonly called “impaired” waters). For each impaired water, the states must calculate a

1. 33 U.S.C. §§1251-1387, ELR STAT. FWPCA §§101-607.

2. 33 U.S.C. §1251(a), (b).

3. *Id.* §1313.

4. *Id.* §1313(c)(2)(A); *see also* 40 C.F.R. §131.2.

5. 75 Fed. Reg. at 75762, 75789 (Dec. 6, 2010).

6. 40 C.F.R. §131.2.

7. *Id.* §131.3(b); *see also id.* §131.11(b)(2).

8. 33 U.S.C. §1313(c)(4).

“total maximum daily load”—a TMDL—for each suitable pollutant “at a level necessary to implement the applicable water quality standards[.]”⁹ The states must submit their list of waters and the TMDLs to EPA. If EPA disapproves a state’s impaired waters list or a TMDL, EPA may substitute its own as “as necessary to implement the water quality standards applicable to such waters[.]”¹⁰

C. Implementing Water Quality Standards

Finally, each state is responsible for generating a plan for, among other things, implementing water quality standards.¹¹ Unlike the foregoing steps, the CWA does not authorize EPA to issue a federal plan if it disapproves a state’s plan.

II. Nutrients: Can’t Live With Them, Can’t Live Without Them

A number of special factors—most of which are highlighted in EPA’s technical guidance manuals—govern the establishment of water quality criteria for nutrients. Unlike toxic substances, nutrients “are not only present naturally in aquatic systems, *they are absolutely necessary for the proper functioning of biological communities.*”¹² Thus, reducing nutrients below ecologically sound levels can cause adverse biological effects.¹³

Well aware of the importance of nutrients to ecosystems, EPA has consistently emphasized the need to understand causal relationships between nutrients and biological impairment. For example, EPA’s *Nutrient Criteria Technical Guidance Manual: Rivers and Streams* states: “Recognizing cause-and-effect relationships between nutrient input and general water body response is the first step in mitigating the effects of cultural eutrophication.”¹⁴ Similarly, EPA’s *Nutrient Criteria Technical Guidance Manual: Wetlands* states: “[I]t is the effects of nutrients on the living components of ecosystems that should become the critical determinant of nutrient criteria, rather than the actual nutrient concentrations.”¹⁵ Whether there is a causal relationship between (a) any particular concentration of nutrients and (b) biological impairment in a water body, depends heavily on the characteristics of the water body.

Because a water body’s biological response to nutrients will vary depending on certain key factors, EPA’s guidance calls for a thorough consideration of these factors when classifying streams and lakes for criteria derivation.¹⁶ Specifically, EPA’s guidance recognizes that a *stream’s* biological response to nutrients largely depends on the stream’s size, shape, shade cover, water color, and flow.¹⁷ Likewise, EPA’s guidance recognizes that a *lake’s* biological response to nutrients depends on factors such as the lake’s water color, alkalinity, temperature, retention time, and depth.¹⁸

EPA’s Science Advisory Board (SAB)¹⁹ has stressed that “understanding the causative link between nutrient levels and impairment is necessary in order to assure that managing for particular nutrient levels will lead to desired outcomes.”^{20, 21} The SAB cautioned that

[t]here are numerous empirical examples where a given nutrient level is associated with a wide range of response values due to the influence of habitat, light levels, grazer populations, and other factors. *If the numeric criteria are not based upon well-established causative relationships, the scientific basis of the water quality standards will be seriously undermined.*²²

Like EPA’s guidance, the SAB recognizes the need to account for the many relevant factors that can influence how water bodies respond to nutrients when deriving nutrient criteria.²³

In sum, determining appropriate water quality criteria for nutrients in a particular water body requires analysis of causation of biological harm. Second, causation of biological harm from nutrients depends heavily on factors *other than* their concentration in that water body.

9. *See id.* §1313(c).

10. *Id.* §1313(d)(2).

11. *See id.* §§1313(e), 1288(b), 1329(b).

12. Fla. Dep’t of Envtl. Prot., State of Florida Numeric Nutrient Criteria Development Plan, at 1 (Mar. 2009), available at <http://www.dep.state.fl.us/water/wqssp/nutrients/docs/fl-nutrient-plan-v030309.pdf>.

13. *Id.*

14. U.S. EPA, Nutrient Criteria Technical Guidance Manual: Rivers and Streams, EPA-822-B-00-002, at 3 (July 2000), available at http://www2.epa.gov/sites/production/files/documents/guidance_rivers.pdf [hereinafter EPA Rivers and Streams Guidance].

15. U.S. EPA, Nutrient Criteria Technical Guidance Manual: Wetlands, EPA-822-B-08-001, at 8-4 (June 2008), available at http://www2.epa.gov/sites/production/files/documents/wetlands_full.pdf.

16. *See* EPA Rivers and Streams Guidance, at ch. 2; *see also* U.S. EPA, Using Stressor-Response Relationships to Derive Numeric Nutrient Criteria, EPA-820-S-10-001 (Nov. 2010), at 5-14, available at <http://water.epa.gov/scitech/swguidance/standards/criteria/nutrients/upload/Using-Stressor-response-Relationships-to-Derive-Numeric-Nutrient-Criteria-PDF.pdf> [hereinafter EPA Stressor-Response Guidance].

17. *See* EPA Rivers and Streams Guidance, at ch. 2.

18. *See* U.S. EPA, Nutrient Criteria Technical Guidance Manual: Lakes and Reservoirs, EPA-822-B00-001, at ch. 3 (Apr. 2000), available at http://www2.epa.gov/sites/production/files/documents/guidance_lakes.pdf; *see also* EPA Stressor-Response Guidance, at 6-10.

19. The SAB, established by Congress, is a public advisory group that provides scientific information and advice to EPA and is charged with providing impartial, expert assessment of the quality and relevance of the scientific and technical information used or proposed as the basis for EPA regulations. *See* <http://yosemite.epa.gov/sab/sabpeople.nsf/WebCommittees/BOARD>.

20. Although these SAB statements appear within a document critiquing one particular approach to nutrient criteria derivation (i.e., the stressor-response approach), the SAB emphasized the need for a “mechanistic understanding and a clear causative link between nutrient levels and impairment” underlies any approach to deriving numeric nutrient criteria. AR084074.

21. U.S. EPA, SAB Review of Empirical Approaches for Nutrient Criteria Derivation, EPA-SAB-10-006, at 4 (Apr. 27, 2010), available at [http://yosemite.epa.gov/sab/sabproduct.nsf/0/e09317ec14cb3f2b85257713004bed5f/\\$FILE/EPA-SAB-10-006-unsigned.pdf](http://yosemite.epa.gov/sab/sabproduct.nsf/0/e09317ec14cb3f2b85257713004bed5f/$FILE/EPA-SAB-10-006-unsigned.pdf).

22. *Id.* at 6 (emphasis added).

23. *See id.*; *see also id.* at 24 (“In order to be scientifically defensible, empirical methods must take into consideration the influence of other variables.”).

III. The Gulf of Mexico: Gulf Restoration Network et al. v. EPA (the Mississippi River Basin Case)

Gulf Restoration Network et al. v. EPA,²⁴ is one of the few cases to address the scope of EPA's responsibility when responding to a petition demanding that EPA set federal water quality criteria under CWA §303(c)(4). As mentioned above, states are primarily responsible for establishing water quality standards for the waters within their borders. Section 303(c)(4) authorizes EPA to promulgate federal standards for a state, however, "in any case where the Administrator determines that a revised or new standard is necessary to meet the requirements" of the Act.²⁵ This provision allows EPA to make a "necessity determination," i.e., to determine that federal criteria are necessary to protect water quality if a state is unwilling or unable to do so.

Although the Mississippi River Basin states generally have *narrative* criteria addressing nutrient pollution and some states have established numeric nutrient criteria for certain water bodies, environmental groups filed a petition urging EPA to make a "necessity determination" for the Basin because, according to the groups, *numeric* nutrient standards were necessary to address nutrient pollution within the Basin and in the northern Gulf of Mexico. When EPA denied the petition, stating its preference for state action to address the nutrient pollution, the groups filed suit in district court. The district court ruled that EPA's explanation for denying the petition did not meet the requirements of the Administrative Procedure Act (APA)²⁶ and remanded the "necessity" determination to the agency.

A. The Petition for EPA to Establish Federal Numeric Nutrient Criteria

In July 2008, national and state environmental organizations petitioned EPA for rulemaking under §303(c)(4) of the CWA. The groups' petition asserted that high levels of nitrogen and phosphorus in the Mississippi River Basin have caused a "dead zone" or "hypoxic zone" in the northern Gulf of Mexico and degradation of waters throughout the Basin. At the time of the petition, the 10 states that border the Mississippi River, like nearly all states nationwide, relied on *narrative* standards—such as fishable or swimmable criteria—to protect against nutrient pollution.²⁷

The environmental groups alleged that the available scientific information, the lack of numeric criteria in most

states, and some of EPA's own statements over the previous decade made clear that federal *numeric* water quality standards for nitrogen and phosphorus were "necessary to meet the requirements" of the CWA. Relying on §303(c)(4), the groups argued that because of this "necessity," EPA was required to propose numeric nutrient criteria regulations "for all water bodies in all states" in which numeric criteria for nitrogen and phosphorus had not been established. In the alternative, the groups requested that EPA establish such standards for the 31 states in the Mississippi River Basin or, "at a minimum," the 10 states that border the main stem Mississippi River.²⁸

In April 2011, nearly three years after submitting their petition, the environmental groups wrote EPA to demand a response. They argued that EPA's failure to respond promptly was unreasonable under the APA and threatened to file suit.

B. EPA's Response to the "Necessity" Petition

EPA denied the environmental groups' petition in July 2011. In its denial letter, EPA stated that it agreed with many of the groups' environmental concerns and that nitrogen and phosphorus pollution present a "significant water quality problem" for the country. EPA stated that reducing nutrient pollution is a "high priority" for the Agency and summarized many of the actions it was taking to reduce nutrient pollution. EPA pointed to a statement of the Agency's governing strategy, a 2011 memorandum entitled, "Working in Partnership With States to Address Phosphorus and Nitrogen Pollution Through Use of a Framework for State Nutrient Reductions" (the Framework Memo).²⁹

In the Framework Memo, EPA stated its belief that the "most effective and sustainable" way to reduce nutrient pollution nationwide was to "work cooperatively with states and tribes to strengthen nutrient management programs." Relying on the Memo, EPA's denial letter reiterated its preference for this state-led approach and asserted that federal nutrient rulemaking would be time- and resource-intensive, and overly complex. EPA explained that using its rulemaking authority was not "a practical or efficient way" to address the nutrient problem on a nationwide or regional scale. The Agency reserved its authority, however, to rely on federal rulemaking in the future. In fact, despite denying the petition, EPA explicitly stated that the Agency "is not determining that [numeric nutrient criteria] are not necessary to meet the requirements" of the CWA. This statement turned out to be pivotal to the outcome of the ensuing lawsuit.³⁰

24. No. 12-cv-677, 43 ELR 20218 (E.D. La. 2013).

25. 33 U.S.C. §1313(c)(4).

26. 5 U.S.C. §§551-559.

27. All 10 states immediately adjacent to the Mississippi River have narrative criteria for nutrients. See 014-004-002 ARK. CODE R. §2.509; IOWA ADMIN. CODE r. 567-61.3(2); ILL. ADMIN. CODE tit. 35, §302.203; 401 Ky. ADMIN. REGS. 10:03(1, 2); LA. ADMIN. CODE tit. 33, §1113(A); MINN. R. 7050.0150, Subp. 3, 7050.0210; 08-030-006 MISS. CODE R. §II(1); MO. CODE REGS. tit. 10, §20-7.030(3); TENN. COMP. R. & REGS. §1200-4-3.02; WIS. ADMIN. CODE §102.04.

28. The groups also petitioned that EPA establish TMDLs for nitrogen and phosphorus in all waters throughout the Mississippi River Basin and the northern Gulf of Mexico that are impaired by nutrient pollution and for which TMDLs have not yet been established. The groups did not challenge EPA's denial of this request in the district court.

29. Available online at http://www2.epa.gov/sites/production/files/documents/memo_nitrogen_framework.pdf.

30. EPA's response to the environmental groups' rulemaking petition is available online at <http://water.epa.gov/scitech/swguidance/standards/upload/>

C. The Lawsuit Challenging EPA's Denial of the Petition

In March 2012, the environmental groups filed suit in the Eastern District of Louisiana against EPA under the APA, challenging EPA's denial of their §303(c)(4) petition for rulemaking. Citing *Massachusetts v. EPA*, the groups claimed that EPA's denial was procedurally deficient because EPA "dodged" the question presented by failing to answer either way whether numeric nutrient standards were necessary to meet the requirements of the Act.³¹ In *Massachusetts*, the U.S. Supreme Court found that EPA had acted arbitrarily when, faced with a rulemaking petition under the Clean Air Act, (CAA)³² it failed to reach a judgment regarding whether greenhouse gases were harming people or the environment.

The environmental groups also argued that EPA's rationale for denying the petition did not conform to the relevant statutory factors. They asserted that a decision under §303(c)(4) of the CWA "must be based on information regarding water quality, i.e., scientific and technical criteria,"³³—not the policy and administrative considerations cited in EPA's denial. Finally, the environmental plaintiffs claimed that EPA acted arbitrarily and capriciously because the "undisputed" facts compelled EPA to grant the petition, not to deny it.

Soon after the plaintiffs filed suit, dozens of states throughout the Mississippi River Basin intervened as defendants. National and state agricultural associations and groups representing the fertilizer industry also intervened on EPA's behalf.

EPA moved to dismiss plaintiffs' complaint. The Agency argued that the court lacked jurisdiction because a decision not to exercise rulemaking under §303(c)(4) is "committed to agency discretion by law" and therefore is exempt from review under the APA. The intervenor-defendants took no position on EPA's motion to dismiss.

All parties moved for summary judgment.

D. The District Court Decision

By order dated Sept. 20, 2013, Judge Jay C. Zainey denied EPA's motion to dismiss and granted in part and denied in part the cross motions for summary judgment.

I. The Administrative Law Questions: Denial of the Petition

In denying the motion to dismiss, the court found, contrary to a prior decision on this issue by another district court, that EPA's denial decision was a final Agency action reviewable under the APA. Judge Zainey rejected EPA's

argument that the language "necessary to meet the requirements of the [Act]" is so broadly drawn that EPA's denial decision is "committed to agency discretion by law." Citing *Heckler v. Cheney*,³⁴ the court affirmed that final Agency action is presumptively reviewable unless the statute is drafted such that there exists "no meaningful standard against which to judge the agency's exercise of discretion." The court found that "whether EPA could refuse to make a necessity determination and do so based on non-statutory factors" are "legal questions" that the court could "decide without eroding any of the deference owed to EPA." This decision contrasts sharply with another federal district court decision interpreting §303(c)(4)(B).³⁵

On the merits, the court agreed to some extent with plaintiffs' analogy to the Supreme Court's decision regarding greenhouse gases in *Massachusetts*. The court found that CWA §303(c)(4)—like the CAA provision at issue in *Massachusetts*—is a provision that involves a "discretionary agency determination that serves as a restraint to federal action," by compelling federal action in at least some circumstance.³⁶ The court acknowledged the "highly deferential" and "limited scope of review" that applies to the denial of a petition for rulemaking, but found that the discretion surrounding the threshold necessity determination required by §303(c)(4) "is not necessarily limitless" and in fact is "bounded by the text of the authorizing statute."³⁷ The court found that EPA "lacks the discretion to simply decline to make the threshold determination in response to a rulemaking petition even where the statutory text does not explicitly require it to do so."³⁸ The court flatly rejected EPA's attempt to "simply decline to make a necessity determination" presented by the petition.

2. The CWA Question: The Permissible Basis for EPA's Decision

The court rejected plaintiffs' reading of *Massachusetts* as compelling the conclusion that EPA cannot rely on non-scientific factors when making a necessity determination under §303(c)(4). To the contrary, the court found that *Massachusetts* "does not stand for the broad proposition that every discretionary EPA determination that serves as a restraint or hurdle to federal action must be based on scientific data as opposed to policy judgments."³⁹ Moreover, that case does not preclude EPA from relying on factors "not expressly mentioned" in the statute.⁴⁰ The court read the "lesson" of *Massachusetts* to be that an agency "cannot ignore a specific statutory mandate that *expressly* curtails the exercise of its discretion" (emphasis added) when it

34. Slip op., *supra* note 24, at 8 (quoting *Heckler v. Cheney*, 470 U.S. 821, 830, 15 ELR 20335 (1985)).

35. *Missouri Coal. for the Env't Found. v. Jackson*, 853 F. Supp. 2d 903 (W.D. Mo. 2012) (finding §303(c)(4) so standardless that EPA's decision not to undertake rulemaking was unreviewable).

36. Slip op., *supra* note 24, at 12.

37. *Id.* (citing *Massachusetts v. EPA*, 548 U.S. 497, 533, 37 ELR 20075 (2007)).

38. *Id.*

39. Slip op., *supra* note 24, at 13.

40. *Id.*

Response-to-Mississippi-River-Petition-07-29-11.pdf.

31. 5 U.S.C. §701(a)(2).

32. 42 U.S.C. §§7401-7671q, ELR STAT. CAA §§101-618.

33. Slip op., *supra* note 24, at 11 (characterizing plaintiffs' statutory-factors argument).

denies a rulemaking petition.⁴¹ The court found that nothing in the text of §303(c)(4), however, precluded EPA from relying on the policy and administrative considerations—e.g., emphasis on state action, time, and resources—that the Agency cited in the denial decision.⁴²

The court's reading of the text of §303(c)(4) was informed by the cooperative federalism of the CWA. The court noted that, unlike the CAA, where "states have no role in regulating the emission of air pollutants from new motor vehicles," the CWA is "by design a states-in-the-first-instance" regulatory scheme.⁴³ The necessity determination was therefore designed to serve as a "hurdle that EPA must overcome before it moves in to preempt a state's sovereign authority to regulate its own waters."⁴⁴

Judge Zainey remanded the case and ordered EPA to respond to the rulemaking petition within 180 days.⁴⁵ EPA has appealed his decision to the U.S. Court of Appeals for the Fifth Circuit.

E. Implications of the Decision

Judge Zainey's decision has important implications for administrative law and CWA jurisprudence.

I. Administrative Law

First, on the administrative law front, Judge Zainey found that an agency has an affirmative duty to respond to a petition for rulemaking. This is a potentially important holding. Judge Zainey described this duty to respond as "perhaps the most important" aspect of *Massachusetts*, and noted that Justice Antonin Scalia's dissent in that case "found this aspect of the decision to be particularly troubling" because the duty to respond to a rulemaking petition was not derived from the statutory text, but instead from the fact that a petition for rulemaking was the source of the dispute.⁴⁶ This duty to respond is potentially significant because it entails a serious risk that a rulemaking petitioner can commandeer agency resources and priorities by forcing the agency to respond on the merits of a particular request for rulemaking. For now, the scope of the agency's responsibility in this area remains unresolved. Judge Zainey did not address the extent of the record an agency must build (if any) to support a rulemaking petition denial. An agency may have to build a countering record to support a denial of a well-supported petition.

Second, the 180-day deadline for an agency decision on the petition for rulemaking is relatively short given the breadth of the plaintiffs' petition. This aspect of Judge Zainey's decision departs from a large body of

administrative law that allows an agency more time and flexibility to respond.⁴⁷

2. Interpretation of the CWA

Judge Zainey's decision affirms the primacy of state programs and the breadth of the analysis that must undergird EPA's regulatory decisions before issuing federal water quality criteria under the CWA. Importantly, Judge Zainey found that EPA may rely on §303(c)(4) to issue a federal criterion "only when the states demonstrate that they either cannot or will not comply."⁴⁸ Based on this decision, EPA can rely on the primacy of states and administrative considerations, such as resources and complexity, when responding to a petition to establish water quality standards under §303(c)(4).

Finally, the litigation history of the case reflects strong, bipartisan state opposition to federal nutrient regulation. Thirteen states intervened in support of EPA's decision not to promulgate federal regulations. Such strong state opposition to federal water quality rulemaking will likely affect the future course of nutrient regulation under the CWA.

IV. The State of Florida: *Florida Wildlife Federation v. Jackson (Federal Numeric Nutrient Criteria for the State of Florida)*

Florida Wildlife Federation v. Jackson,⁴⁹ was originally filed in the U.S. District Court for the Northern District of Florida by a coalition of environmental groups in 2008. The complaint alleged that in 1998, EPA made a determination under CWA §303(c)(4)(B)⁵⁰ that numeric nutrient water quality criteria are necessary to meet the requirements of the Act and that states must establish such criteria by 2003. Under the plaintiffs' theory, this "necessity determination" took the form of two broad policy statements issued in 1998: the *Clean Water Action Plan: Restoring and Protecting America's Waters*, jointly issued by EPA and the U.S. Department of Agriculture; and EPA's National Strategy for the Development of Regional Nutrient Criteria.⁵¹ The plaintiffs' complaint further alleged that because the state of Florida had not issued numeric nutrient criteria, EPA failed to perform its nondiscretionary duty under §303(c)(4)(B) to establish such criteria for Florida's waters. Since its inception, this case has taken various twists and turns that have raised a number of important administrative law and CWA issues.

41. *Id.*

42. Slip op., *supra* note 24, at 15.

43. Slip op., *supra* note 24, at 14.

44. Slip op., *supra* note 24, at 15.

45. The court did not reach plaintiffs' substantive claim—that the facts compelled a necessity determination—noting that plaintiffs "seem to recognize in their briefing that it would be inappropriate" for the court to make a §303(c)(4) necessity determination "in the first instance." Slip op. at 9 n.8.

46. Slip op., *supra* note 24, at 12.

47. See, e.g., *National Ass'n of Clean Water Agencies v. EPA*, ___F.3d___ 2013 WL 4417438, *45, 43 ELR 20191 (D.C. Cir. Aug. 20, 2013) (remanding portions of Clean Air Act regulations to Agency for further explanation without specific time line for response).

48. Slip op., *supra* note 24, at 14.

49. No. 08-cv-324, 42 ELR 20048 (N.D. Fla. 2012).

50. 33 U.S.C. §1313(c)(4)(B).

51. See 63 Fed. Reg. 34648 (June 25, 1998).

A. *The Impact of the Consent Decree*

On Jan. 14, 2009, in response to the complaint described above, EPA made an “explicit and unequivocal” necessity determination under CWA §303(c)(4)(B) regarding the need for numeric nutrient criteria for Florida’s waters.⁵² In that determination, EPA wrote that the state of Florida’s narrative water quality criterion for nutrients was not adequately protective. Among other things, EPA emphasized that the efforts required to translate the narrative criterion into site-specific effluent limitations were so resource-intensive that they hampered the state’s ability to protect its waters from excess nutrients. In July 2009, the plaintiffs amended their complaint to allege that EPA once again failed to perform its nondiscretionary duty under §303(c)(4)(B) to establish federal numeric nutrient criteria for Florida’s waters despite making that necessity determination six months earlier.

Shortly thereafter, EPA and the plaintiffs reached an agreement to settle the case and jointly moved the court to enter a consent decree. That decree, which required EPA to propose and finalize numeric nutrient criteria for Florida’s waters in two separate phases by dates certain, led to protracted rulemaking and additional litigation over the past four years and counting. Industry and local government intervenors appealed the district court’s order approving the consent decree to the U.S. Court of Appeals for the Eleventh Circuit, which dismissed for lack of standing on the ground that the industry appellants would not be affected by the decree before the mandated regulations were actually issued.⁵³

In the face of fierce local opposition and renewed state efforts to issue its own numeric criteria, EPA went on to issue federal criteria that were challenged, partially vacated by the district court, and conditionally replaced by the state’s own criteria. But despite the state’s promulgation of numeric nutrient criteria for most of its waters, and EPA’s conditional approval of those criteria, EPA had difficulty withdrawing from the arena of nutrient regulation in Florida.

After several months’ delay, EPA filed a motion to modify the consent decree in light of changed circumstances, e.g., the state’s promulgation of its own criteria. The environmental groups opposed EPA’s motion and filed their own motion to enforce the original terms of the consent decree. On January 7, 2014, the district court granted EPA’s motion to modify the consent decree, and denied the plaintiffs’ motion to enforce it.⁵⁴ The court found that the state’s adoption of numeric criteria, EPA’s approval of those criteria, and EPA’s amendments to its January 2009 determination concerning the need for numeric nutrient

criteria, qualified as changed circumstances that justified modification of the decree.⁵⁵

This case is a good example of the profound impact that consent decrees can have on the development of environmental regulation, a lesson that has not been lost on Congress or regulated stakeholders opposing the “sue and settle” phenomenon. EPA’s extensive rulemaking efforts and the ongoing litigation challenging those efforts grew out of a claim that broad policy statements from EPA in the late 1990s constituted a formal determination under CWA §303(c)(4)(B) that numeric nutrient criteria are necessary in not just Florida, but all other states. EPA initially defended against that claim on the merits, and we believe that the Agency would have had a reasonably strong chance of prevailing on its argument that neither of those policy statements constituted a formal determination that numeric nutrient criteria are necessary to meet the requirements of the CWA.

Nevertheless, rather than defend the case fully on the merits, EPA changed course and issued what many viewed was a voluntary “necessity determination” specific to Florida. That determination eventually led to the consent decree requiring federal promulgation of criteria unless the state took action first. Whatever the reason(s) for EPA’s decision not to defend against the original claim in this case, and to instead issue a necessity determination specific to Florida’s waters, this much is clear: the resulting federal rulemaking efforts and related litigation have been time-consuming and resource-intensive.

B. *Reviewability of a “Necessity Determination”*

Since the passage of the CWA, courts rarely have had occasion to review EPA necessity determinations under §303(c)(4)(B) because EPA has rarely made them. As part of their challenges to EPA’s Phase I rule, which were consolidated in the Northern District of Florida with the environmental plaintiffs’ original case (No. 08-cv-324), the state of Florida and a number of local governments and industry plaintiffs also sought judicial review of EPA’s issuance of the 2009 necessity determination. Those plaintiffs questioned the factual and legal underpinnings of the necessity determination and raised at least half a dozen specific claims as to why the determination was invalid. In response, EPA argued for dismissal of those challenges on the grounds that (a) the determination is not final Agency action and (b) it is committed to Agency discretion by law and hence is unreviewable by a court. EPA also defended against each of those claims on the merits.

The court denied EPA’s motion to dismiss, finding that the necessity determination satisfies the two-part test for final Agency action under *Bennett v. Spear*.⁵⁶ The court also rejected EPA’s argument that judicial review was

52. Fla. Wildlife Fed’n v. S. Fla. Water Mgmt. Dist., 647 F.3d 1296, 1300 (11th Cir. 2011).

53. See *id.* at 1306-07.

54. See Order Modifying the Consent Decree, Fla. Wildlife Fed’n v. Jackson, ECF No. 463 (Jan. 7, 2014).

55. See *id.* at 10-18.

56. 520 U.S. 154, 177-78, 27 ELR 20824 (1997). See Order Denying Motions to Dismiss, Fla. Wildlife Fed’n v. Jackson, ECF No. 307, at 3-4 (Sept. 30, 2011).

unavailable for the 2009 necessity determination. The court first noted that when EPA makes a necessity determination under §303(c)(4)(B), it must consider whether a new or revised water quality standard is necessary to meet the requirements of the Act, which is essentially the same standard that applies when EPA reviews the sufficiency of proposed state water quality standards under §303(c)(3). The court then correctly held that EPA decisions approving state water quality standards under §303(c)(3) are routinely subject to “arbitrary and capricious” review and thus, EPA determinations under §303(c)(4)(B) are similarly reviewable.

Although the court’s rejection of EPA’s “committed to agency discretion” argument meant that EPA does not enjoy limitless discretion in making §303(c)(4)(B) determinations, the court showed little hesitation in disposing of each of the factual and legal contentions raised by the state, local government, and industry plaintiffs under the “arbitrary and capricious” standard of review.⁵⁷

C. Judicial Response to Perceived Inaction

Perhaps most interesting, the court’s discussion highlights the powerful effect of judicial impatience with perceived state inaction. The court began its analysis of the challenges to the necessity determination by emphasizing the “substantial, indeed overwhelming” evidence supporting EPA’s conclusion that the narrative criterion was not sufficiently protecting Florida’s waters.⁵⁸ The court agreed that “[a] significant portion of the state’s waters was impaired by nutrient pollution” and that “[t]he situation had persisted for many years.”⁵⁹ The court then stressed that the state of Florida’s contrary contentions were “especially curious” because the Florida Department of Environmental Protection “never wavered” from its “commit[ment] to a timely establishment of numeric nutrient criteria” from 2003 to 2009 and “spent millions of dollars studying not whether numeric criteria were needed, but what the numeric criteria should be.”⁶⁰ The plaintiffs challenging the necessity determination were unable to overcome these findings. Although some of the plaintiffs appealed the district court’s decision upholding the necessity determination, the Eleventh Circuit dismissed the appeal for lack of subject matter jurisdiction on Nov. 4, 2013, on the grounds that because the district court had remanded the challenged federal nutrient criteria to the Agency, its decision is neither a final judgment nor an immediately appealable injunction and that the collateral order doctrine does not apply.⁶¹

57. See *Missouri Coal*, 853 F. Supp. 2d at 1156-60.

58. *Id.* at 1157.

59. *Id.*

60. *Id.* At oral argument, the court in that case appeared visibly frustrated with the state’s inability to move more quickly in developing numeric criteria and the state’s insinuation that the factual record did not support EPA’s necessity determination.

61. See Order Granting Motion to Dismiss Appeal for Lack of Jurisdiction, *Gulf Restoration Network v. EPA*, No. 12-12119 (Nov. 4, 2013).

D. The Court’s Review of EPA’s Numeric Nutrient Criteria

In late 2010, EPA issued the “Phase I” rule, which established numeric criteria for all of Florida’s lakes and springs, as well as all flowing waters (e.g., rivers, streams, canals, etc.) outside of south Florida. The state of Florida, local governments, and numerous industry plaintiffs and environmental groups immediately challenged that rule.⁶² The district court invalidated portions of the rule while upholding others.

E. Overcoming Deference to Agencies

In a challenge to technical rulemakings within an agency’s expertise, it is ordinarily very difficult to overcome the deference that the reviewing court will give to the agency, and this case was no different. The court gave tremendous deference to EPA’s scientific judgment and analyses when rejecting most of the arguments raised by *all* plaintiffs (environmental groups, the state and local governments, and industry) as to why the federal criteria for Florida’s lakes and springs were not sufficiently stringent, or were overly stringent, were unsupported by the rulemaking record, were unsupported by a rationale explanation, etc. Thus, even though the many plaintiffs presented some reasonably persuasive arguments from both ends of the spectrum, the court overrode few of EPA’s conclusions.

There was one significant exception: industry plaintiffs prevailed in their challenge to EPA’s streams criteria. They succeeded in large part because their challenge did not depend on purely scientific arguments. It rested on EPA’s failure to base the criteria on the protection of designated uses—a fundamental CWA requirement for water quality criteria.⁶³

EPA derived the criteria for Florida’s streams using a “reference-based” approach. EPA essentially divided the state into five regions, compiled a reference set of the least-disturbed streams for each of those regions, calculated annual geometric means (based on the available data) for nitrogen and phosphorus concentrations for the least-disturbed streams in each region, applied a statistical distribution method, and set the criteria at the 90th percentile of the distribution for four of the regions and the 75th percentile for the remaining region. EPA justified this approach on a number of grounds. For example, the Agency explained that, based on models and field studies, the “observed correlation between [changes in] nutrient[] [concentrations] and [the] result[ing] [biological response] did not produce a consistent pattern.”⁶⁴ EPA further explained that its reference method was intended to translate the state’s narrative

62. In addition to challenging the rule itself, several state and local governments and industry plaintiffs directly challenged the EPA necessity determination in the same lawsuit.

63. See 33 U.S.C. §1313(c)(2)(A); 40 C.F.R. §131.2.

64. *Missouri Coal*, 853 F. Supp. 2d at 1167.

nutrient criterion⁶⁵ into numbers; thus, it was attempting to set the criteria at a level above which one would expect to start to see impairment. Finally, EPA asserted that, by focusing on the least-disturbed streams, it was able to isolate those streams that were meeting designated uses from those that were not.

The court began its analysis of EPA's streams criteria by rejecting many of the technical arguments raised by each of the plaintiff groups. Specifically, the court upheld EPA's classification scheme and selection of reference streams and also the Agency's method of measuring compliance with the rule (the environmental groups' criticisms of the duration and frequency components) because "[t]hese are matters of scientific judgment on which the rule would survive arbitrary or capricious review."⁶⁶

The court then turned to the state and industry plaintiffs' argument that EPA failed to base its criteria on designated uses, which the court described as a "more fundamental problem—one that turns not on scientific judgment, but on the substantive law and the requirement for an agency to provide a reasoned explanation of its action."⁶⁷ The court first held that EPA was justified in trying to translate Florida's narrative nutrient criterion. But, in the court's view, to properly establish numeric criteria through a translation of that narrative criterion, EPA was supposed to look for *harmful* increases in nutrient levels—in other words, increases that would *cause an imbalance* of flora or fauna. The court found that EPA went wrong when it sought to issue a criterion that would prohibit *any* increase from naturally occurring nutrient levels. By doing so, EPA did not account for the possibility that there can be increases in nutrient levels (above background) that are not harmful. The court concluded by noting that even if EPA might have been justified in aiming for what appeared to be the wrong target, EPA did not adequately explain its decision to do so, and it did not cite to any sound scientific basis to support that decision.

The court's rejection of EPA's stream criteria could have significant consequences for the development of future numeric nutrient criteria nationwide because it calls into question the validity of using a reference-based approach in this manner. The court's decision underscores the need to base criteria on the protection of designated uses. Under the court's analysis, EPA can no longer use its reference method simply to mandate that all streams in a particular state (or subset thereof) must meet nutrient criteria that are equal to ambient concentrations in the streams that are least disturbed by human activity. Instead, EPA must explain how the resulting criteria are actually based on the protection of designated uses. EPA's "reference-based" omits this necessary analysis.

The Florida saga raised many interesting factual, technical, and legal issues. This litigation resulted in the most

comprehensive numeric nutrient regulations in any state. The newly promulgated state regulations were driven heavily by the state of Florida's desire to be the captain of its own regulatory ship.

V. Chesapeake Bay: American Farm Bureau Federation v. EPA

A. The Chesapeake Bay Litigation

On Sept. 13, 2013, Judge Sylvia H. Rambo of the Middle District of Pennsylvania upheld EPA's TMDL regulation for the Chesapeake Bay Watershed.⁶⁸ Three weeks later, on Oct. 7, 2013, the plaintiffs appealed Judge Rambo's decision to the U.S. Court of Appeals for the Third Circuit. That appeal is pending. The following discussion will explain the issues addressed in this case, and their potential nationwide impact.

B. The Challenged Action

EPA has described the Chesapeake Bay TMDL as the "largest and most complex thus far" of the 40,000 TMDLs completed to date across the United States.⁶⁹ It is a regulation of unprecedented scale, covering the 64,000-square-mile watershed of the Chesapeake Bay. The Bay is bordered by the states of Delaware, Maryland, and Virginia. It is fed by the Potomac River, which passes through the District of Columbia, and by rivers that originate in New York, Pennsylvania, and West Virginia.

The Bay TMDL establishes total amounts of nitrogen, phosphorus, and sediment that can be discharged into each of 92 tidal segments of the Chesapeake Bay to achieve the applicable water quality standards. It also imposes detailed pollutant allocations to source categories and even to specific facilities throughout the 64,000-square-mile watershed. The TMDL sets individual limits on sources, and aggregate limits on source categories, in all seven jurisdictions. Those limits include restrictions on nonpoint sources, over which the Act gives EPA no direct regulatory authority. It also requires the states to provide "reasonable assurance" that they will institute the required measures, and establishes federal deadlines for compliance.

Both the 92 loads (for each of the three pollutants) and the individual source limits were based on a series of three linked computer models that were used to estimate, first, the *loadings* of nitrogen, phosphorus, and sediment from various sources, entering the waters draining into Chesapeake Bay ("Scenario Builder"). Second, those estimates were used, along with meteorological and other data, to estimate the *fate, transport, and delivery* of those substances to the Bay ("watershed model"). In turn, those

65. Florida's narrative criterion provides that "nutrient concentrations of a body of water [must not] be altered so as to cause an imbalance in natural populations of aquatic flora or fauna." FLA. ADMIN. CODE r. 62-302.530(47)(b).

66. *Missouri Coal*, 853 F. Supp. 2d at 1168.

67. *Id.*

68. *American Farm Bureau Federation v. EPA*, No. 1:11-cv-0067, 43 ELR 20213 (M.D. Pa. 2013).

69. U.S. EPA, Chesapeake Bay Total Maximum Daily Load for Nitrogen, Phosphorus, and Sediment, at ES-3 (Dec. 29, 2010), available at http://www.epa.gov/reg3wapd/pdf/pdf_chesbay/FinalBayTMDL/BayTMDLExecutiveSummaryFINAL122910_final.pdf.

fate and transport estimates were used to estimate the *concentrations* of these substances in various segments of the Bay itself (“water quality and sediment transport model”).

EPA promulgated the Chesapeake Bay TMDL on Dec. 29, 2010,⁷⁰ just two days before a deadline set in an EPA settlement agreement with the Chesapeake Bay Foundation and other environmental groups.⁷¹ Shortly thereafter, several national and regional associations representing agricultural and residential development stakeholders challenged the Bay TMDL.⁷² Several nongovernmental organizations (NGOs) intervened in defense of EPA’s regulation.⁷³

C. The Issues

This case raised two sorts of claims. One category—under the APA—contained a challenge to the 45-day comment period for this complex rule, challenges to EPA’s failure to provide, during the public comment period, adequate information about the models it relied on, and a challenge to the data EPA used in the models themselves.

Potentially more far-reaching claims challenged EPA’s statutory authority to issue portions of the TMDL. The plaintiffs asserted that EPA was not authorized by the CWA to include “allocations” (limits on individual sources and source categories) in a federal TMDL. According to the plaintiffs, federally required “reasonable assurance” of implementation by the states, and implementation deadlines, also go beyond the statutory authority to establish a total load. They asked the court to vacate the EPA-established annual and daily limits for specific sectors (regulated agriculture, regulated stormwater, and wastewater) and the limits for the 478 individually permitted facilities in each of the seven Bay-watershed jurisdictions. They also asked the court to vacate annual and daily limits that EPA had established in each jurisdiction for certain *nonpoint* sources (under the CWA, “nonpoint” refers, in general, to diffuse sources such as stormwater runoff). Those non-point sources were aggregated into “sectors” (“agriculture, forest, nontidal atmospheric deposition, on-site septic, and urban”).

The plaintiffs’ second statutory authority claim asserted that EPA lacked authority to regulate—in the Bay TMDL itself—sources in states upstream of the states for which the total loads were established. The impaired Chesapeake Bay tidal segments are located in Delaware, the District of Columbia, Maryland, and Virginia, but the TMDL

imposes individual or sector source limits on sources as far away as New York, Pennsylvania, and West Virginia. The plaintiffs pointed out that EPA’s only authority to issue a federal TMDL follows its disapproval of a state’s TMDL, in which case EPA may “establish such loads” as necessary to implement the water quality standards for such waters.⁷⁴ The applicable water quality standards are in the four tidal states, and when EPA issues a federal TMDL for a state, it stands in those states’ shoes. The plaintiffs asserted that because *states* have no authority to impose limits on sources in upstream states, EPA, as a surrogate for a state, is subject to the same constraint.

D. The District Court Decision

1. Standing

As a threshold issue, EPA challenged plaintiffs’ standing. The court found their standing to be “self-evident” because “economic injuries are a sufficient basis for standing.”⁷⁵

2. Procedural Issues

With respect to the public comment period, Judge Rambo held that it was sufficient because “the Final TMDL is the product of an open process spanning more than a decade.”⁷⁶ Judge Rambo also emphasized that the plaintiffs “fail to state specifically how they were harmed” by a short comment period.⁷⁷

Similarly, in rejecting the plaintiffs’ claim that stakeholders were deprived of key modeling information during the public comment period, Judge Rambo found that, although data were indeed missing, the plaintiffs failed to show how they were prejudiced.⁷⁸ She distinguished a Third Circuit case cited by the plaintiffs that held that when data are withheld from the administrative record, prejudice is automatic.⁷⁹ With respect to flaws in the models themselves, Judge Rambo found that despite the comment by an independent peer review panel that the watershed model was insufficient to support management decisions at the local watershed scale, the individual limits were not based solely on that model, and “Plaintiffs have failed to meet their burden of showing that there was no rational relationship between the use of the Watershed Model and the development of local allocations.”⁸⁰ Judge Rambo rejected the plaintiffs’ claims that EPA relied on flawed data, concluding instead that “EPA had a rational basis for the data used.”⁸¹

70. See 76 Fed. Reg. 549 (Jan. 5, 2011) (notice of availability).

71. *Fowler v. EPA*, No. 1:09-C-00005-CKK (D.D.C. 2009).

72. The plaintiffs were American Farm Bureau Federation, Pennsylvania Farm Bureau, The Fertilizer Institute, National Pork Producers Council, National Corn Growers Association, National Chicken Council, U.S. Poultry & Egg Association, National Turkey Federation, and the National Association of Home Builders.

73. Intervenor included the following environmental groups: Chesapeake Bay Foundation, Inc., Citizens for Pennsylvania’s Future, Defenders of Wildlife, Jefferson County Public Service District, Midshore Riverkeeper Conservancy, and the National Wildlife Federation. The following municipal associations also intervened: The Maryland Association of Municipal Wastewater Agencies, Inc., the Virginia Association of Municipal Wastewater Agencies, Inc., and the Pennsylvania Municipal Authorities Association.

74. 33 U.S.C. §1313(d)(2), ELR STAT. FWPCA §303(d)(2).

75. Slip op., *supra* note 24, 35, 36-37.

76. Slip op., *supra* note 24, at 78.

77. Slip op., *supra* note 24, at 77.

78. Slip op., *supra* note 24, at 82, 85, 89, 90.

79. Slip op., *supra* note 24, at 83 (discussing *Hanover Potato Prods. v. Shalala*, 989 F.2d 123, 130 n.9 (3d Cir. 1993)).

80. Slip op., *supra* note 24, at 94.

81. Slip op., *supra* note 24, at 96.

3. Cooperative Federalism

The more far-reaching issues go to what may be included in a federal TMDL. The plaintiffs had argued that the CWA's use of the term "total maximum daily load" and the Act's clarification that "such load shall be established at a level" necessary to meet water quality standards⁸² denote only a total load that will achieve a water quality standard, not source limits, a state's "reasonable assurance" of implementation, or federal implementation deadlines. Since EPA's authority extends only to what Congress has specified, the plaintiffs argued, EPA has no authority to issue source limits under a CWA provision that authorizes only total loads. The plaintiffs further pointed out that setting individual source limits was an activity that was reserved to the states, and that the CWA itself expressly establishes congressional policy to protect the primary rights of the states to control water pollution.⁸³ The Act also provides that it should not be construed so as to impair the states' rights with respect to their own waters.⁸⁴ The plaintiffs cited to the doctrine that congressional silence does not authorize an Agency to expand its activities into unauthorized areas, but the court found the opposite. Indeed, Judge Rambo held that Congress was silent "as to the precise variables attributable to a TMDL," so EPA's addition of source limits (and federal deadlines) to the Bay TMDL was permissible.

The same divergence about congressional silence is at the heart of the dispute about EPA's authority to use a TMDL—intended to set a load that will achieve water quality in the TMDL state—to impose limits on upstream sources from another state. Again, the court concluded: "Although nothing in the CWA specifically authorizes EPA to take this holistic, or watershed approach, it is equally true that nothing in the CWA prohibits such an approach."⁸⁵ The court also relied on an EPA interpretation of a regulation that EPA offered for the first time in this litigation—an EPA regulation defining "load allocation" as the capacity of a receiving water "attributed either to one of *its* existing or future [point or nonpoint] sources of pollution . . ."⁸⁶ EPA argued that "its" is ambiguous and can include out-of-state sources, and the court deferred to EPA's interpretation.⁸⁷ The court also found support in the Supreme Court's decision in *Arkansas v. Oklahoma*,⁸⁸ which dealt with §402 permitting. But, in contrast to the statutory provision governing TMDLs, §402 *does* specifically provide EPA with authority to impose limits in permits.⁸⁹

82. See 33 U.S.C. §1313(d)(1)(C).

83. See *id.* §1251(b).

84. See *id.* §1370.

85. Slip op., *supra* note 24, at 70.

86. 40 C.F.R. §§130.2(g)-(h); slip op., *supra* note 24, at 71.

87. Slip op., *supra* note 24, at 72.

88. 503 U.S. 91, 22 ELR 20552 (1992).

89. See 33 U.S.C. §1342(d).

4. Impact of the Decision

The key issues in the Chesapeake Bay case, like the others discussed here, rest on disputes about the contours of cooperative federalism. If a federal TMDL can include source limits on nonpoint sources, reasonable assurance requirements, and federal deadlines, then the ultimate power to establish those requirements passes from the states to EPA wherever an impaired water may be affected. For nutrients, this shifting of authority could include much of the United States, about 40% of which is in the Mississippi River Basin, as well as the 64,000-square-mile Chesapeake Bay drainage basin, parts of Florida, and presumably other areas.

VI. Conclusion

Nutrients (nitrogen and phosphorus) make plants grow, which is why they are essential elements of fertilizer. Since some plant growth is generally good for aquatic ecosystems, adequate nutrients are generally beneficial, too. If nutrients cause excessive plant growth, however, then they can cause visible harm. Determining how much is too much in any particular water body can be challenging. Generic numeric limits for nitrogen and phosphorus are difficult to establish because their effect in any particular stream or lake depends on how they interact with other local factors that help or hurt plant growth, such as sunlight, substrate, alkalinity, temperature, and water flow. That challenge was explored in detail in the Florida case, which also entailed a struggle between EPA and the state over whose rules would govern that determination.

Perhaps, due to the foregoing challenges in setting numeric limits, most states have narrative nutrient criteria. Many environmental NGOs, however, would like to compel EPA to establish numeric limits. EPA's Florida experience shows that establishing federal criteria can be an enormously burdensome task. The Mississippi River Basin case addressed the ground rules for that battle, including EPA's duty to respond to a citizen petition and the permissible considerations for that decision.

Finally, where nutrient criteria (narrative or numeric, federal or state) are not being achieved in a stream, the Chesapeake Bay case addresses whether EPA or the states have ultimate authority under the CWA to decide whether and how those criteria will be achieved.

Nitrogen and phosphorus have thus become a focal point for administrative and judicial battles, and the issues in dispute expose fundamental questions about administrative law, how the CWA should work, and how its authority will be divided between EPA and the states. Hard cases are making new law.