

STATE OF NORTH CAROLINA,
Petitioner,

v.

FEDERAL ENERGY REGULATORY
COMMISSION, Respondent,

The City of Virginia Beach,
Virginia, Intervenor.

Nos. 95-1494, 95-1500.

United States Court of Appeals,
District of Columbia Circuit.

Argued Feb. 4, 1997.

Decided May 9, 1997

State of North Carolina and river basin association petitioned for review of Federal Energy Regulatory Commission (FERC) orders granting amendment to license for electric utility's hydroelectric project on lake in interstate waterway to allow city to build intake structure within project's boundaries and withdraw water in Virginia for transport to city. The Court of Appeals issued order remanding record to Commission for determination of whether license amendment would involve activities which might result in discharge into navigable waters that originated in North Carolina within meaning of Clean Water Act (CWA). After Commission issued order on remand determining that activity it approved did not result in such discharge, the Court of Appeals, Sentelle, Circuit Judge, held that: (1) North Carolina did not waive its purported right to make water quality certification as to city's water withdrawal pipeline project under Act; (2) FERC did not have to require that water quality certification first be obtained from North Carolina before granting utility's request for amendment of license for hydroelectric project; (3) FERC population projection was not arbitrary and capricious; (4) FERC's per capita water use projection was not arbitrary and capricious; (5) FERC did not act arbitrarily and capriciously in excluding quantity of water available from aquifer storage and recovery (ASR) systems in determining water supply safe yield projection; and (6) FERC did not act arbitrarily or

capriciously by including drought margin in determining need for water.

Petition denied.

Wald, Circuit Judge, filed dissenting opinion.

1. Statutes \S 219(2, 4)

When reviewing administrative agency's construction of statute which it administers, Court of Appeals applies two-part test: first step is to ask whether Congress has directly spoken to precise question at issue, and if intent of Congress is clear, that is end of matter, but if congressional intent is not clear, Court must then ask whether agency's answer is based on permissible construction of statute.

2. Health and Environment \S 25.7(13.1)

North Carolina did not waive its purported right to make water quality certification as to city's water withdrawal pipeline project under Clean Water Act (CWA) by failing to assert right during prior Army Corps of Engineers dredge-and-fill permit proceeding concerning pipeline project; Act expressed congressional intent to place burden of requesting state water quality certification on license applicant, and utility, which was license applicant, never requested that North Carolina provide water quality certification for pipeline project. Federal Water Pollution Control Act Amendments of 1972, \S 401(a)(1, 3), as amended, 33 U.S.C.A. \S 1341(a)(1, 3).

3. Health and Environment \S 25.7(13.1)

Clean Water Act (CWA) subsection providing that state water quality certification obtained during project's construction stage will satisfy Act state water quality certification requirement at project's operational stage does not require state with water quality certification rights pertaining only to operation of project to assert those rights at time construction permit is issued for project. Federal Water Pollution Control Act Amendments of 1972, \S 401(a)(1, 3), as amended, 33 U.S.C.A. \S 1341(a)(1, 3).

4. Health and Environment ⇨25.7(13.1, 14)

Clean Water Act (CWA) subsection providing that state water quality certification obtained during project's construction stage will satisfy Act state water quality certification requirement at project's operational stage does not provide that construction-stage state water quality certification satisfies need to obtain operational certification from another state in which only operational discharge will originate, nor does subsection require that such other state intervene in construction permit proceeding and assert its right to certify operation of project. Federal Water Pollution Control Act Amendments of 1972, § 401(a)(1, 3), as amended, 33 U.S.C.A. § 1341(a)(1, 3).

5. Health and Environment ⇨25.15(3.1)

Federal Energy Regulatory Commission (FERC) relied, at least in part, on doctrine of claim preclusion in rejecting North Carolina's water quality certification claim under Clean Water Act (CWA), and thus, FERC was not precluded from raising defense of claim preclusion respecting certification claim on appeal, where FERC's rehearing order stated that North Carolina's certification right was "waived," and indicated that consideration of certification claim would reopen issue previously put to rest in prior Army Corps of Engineers dredge-and-fill permit proceeding. Federal Water Pollution Control Act Amendments of 1972, § 401(a)(1), as amended, 33 U.S.C.A. § 1341(a)(1); 18 C.F.R. § 4.38(f)(7)(iii).

6. Administrative Law and Procedure ⇨753

In dealing with determination or judgment which administrative agency alone is authorized to make, reviewing court must judge propriety of such action solely on grounds invoked by agency.

7. Navigable Waters ⇨38

Common-law doctrine of claim preclusion could not be read into Clean Water Act (CWA) subsection, providing that federal license or permit may not be granted until state water quality certification required by Act respecting project has been obtained or waived, and thus, North Carolina's failure to

assert its water quality certification right in prior Army Corps of Engineers dredge-and-fill permit proceeding concerning city water withdrawal pipeline project did not preclude state from raising certification claim in proceeding in which Federal Energy Regulatory Commission (FERC) granted amendment to license for electric utility's hydroelectric project on lake in interstate waterway to allow city to build intake structure and withdraw water in Virginia for transport to city. Federal Water Pollution Control Act Amendments of 1972, § 401(a)(1), as amended, 33 U.S.C.A. § 1341(a)(1).

8. Health and Environment ⇨25.7(13.1)

For purposes of Clean Water Act (CWA) subsection providing that federal license or permit to conduct activity which may result in discharge into navigable waters may not be granted until state water quality certification has been obtained or waived, "activity" licensed by Federal Energy Regulatory Commission's (FERC) grant of amendment to license for electric utility's hydroelectric project on lake in interstate waterway to allow city to build intake structure and withdraw water in Virginia for transport to city was operation of water withdrawal pipeline project and its resultant withdrawal of water from lake, where hydroelectric project had operated under license, water would have continued passing through dam turbines had license amendment not been granted, and amendment did not permit utility to release additional water through turbines. Federal Water Pollution Control Act Amendments of 1972, § 401(a)(1), as amended, 33 U.S.C.A. § 1341(a)(1).

See publication Words and Phrases for other judicial constructions and definitions.

9. Health and Environment ⇨25.7(13.1)

Even assuming that flow of water through dam turbines of electric utility's hydroelectric project on lake in interstate waterway was "discharge" within meaning of Clean Water Act (CWA), city's withdrawal of water from lake in Virginia, resulting in decrease in volume of preexisting discharge of water through dam turbines in North Carolina, was not activity that may "result in any

discharge" for purposes of Act subsection, providing that federal license or permit to conduct activity which may result in any discharge into navigable waters may not be granted until state water quality certification has been obtained or waived, and thus, Federal Energy Regulatory Commission (FERC) did not have to require that water quality certification first be obtained from North Carolina before granting utility's request for amendment of license for hydroelectric project to allow city to build intake structure and withdraw water in lake for transport to city. Federal Water Pollution Control Act Amendments of 1972, § 401(a)(1), as amended, 33 U.S.C.A. § 1341(a)(1).

See publication Words and Phrases for other judicial constructions and definitions.

10. Electricity ⚡10

Court of Appeals reviews Federal Energy Regulatory Commission (FERC) hydroelectric project licensing decisions to determine whether they were arbitrary and capricious.

11. Electricity ⚡10

Court of Appeals' review of Federal Energy Regulatory Commission (FERC) hydroelectric project licensing decisions, to determine whether they were arbitrary and capricious and to determine under Federal Power Act (FPA) whether factual findings underlying decision were supported by substantial evidence, is quite deferential; so long as FERC has examined relevant data and provided reasoned explanation supported by stated connection between facts found and choice made, Court of Appeals will defer to agency's expertise. Federal Power Act, § 313(b), as amended, 16 U.S.C.A. § 825(b).

12. Electricity ⚡10

Fact that Federal Energy Regulatory Commission (FERC) extrapolated region population projection by using growth rates from other population projections that FERC had rejected as less reasonable than projection FERC utilized, for purposes of determining need for water, did not render FERC's population projection arbitrary and capricious, in proceeding in which FERC

granted amendment of license for electric utility's hydroelectric project on lake to allow city to build intake structure within project's boundaries and withdraw water for transport to city, where FERC had explained available evidence and offered rational connection between facts found and choice made. Federal Power Act, § 10(a)(1), as amended, 16 U.S.C.A. § 803(a)(1).

13. Administrative Law and Procedure ⚡309.1

Administrative agency need not have perfect information before it takes any action.

14. Administrative Law and Procedure ⚡507

In face of serious uncertainties, administrative agency need only explain evidence which is available, and offer rational connection between facts found and choice made.

15. Electricity ⚡10

In determining need for water in region including city, Federal Energy Regulatory Commission (FERC) did not rely solely on water use rate data for single year in developing use rate projection so as to render FERC's use rate projection arbitrary and capricious, in proceeding in which FERC granted amendment to license for electric utility's hydroelectric project on lake to allow city to withdraw water for transport to city, as FERC clearly explained that its projected use figure was product of long-term trend analysis. Federal Power Act, § 10(a)(1), as amended, 16 U.S.C.A. § 803(a)(1).

16. Electricity ⚡10

Minor computational errors in one of many figures Federal Energy Regulatory Commission (FERC) relied on in developing 40-year water use projection for region including city for purposes of determining need for water were harmless, absent demonstration that erroneous figure was integral to FERC's projection or that revision of figure would result in altered projection, in proceeding in which FERC granted amendment to license for electric utility's hydroelectric project on lake to allow city to withdraw water for transport to city. Federal Power

Act, § 10(a)(1), as amended, 16 U.S.C.A. § 803(a)(1).

17. Electricity ⇌10

Federal Energy Regulatory Commission (FERC) reasonably concluded that projected water use rate of 118 gallons per capita per day was most appropriate for purposes of determining need for water in region including city, in proceeding in which FERC granted amendment to license for electric utility's hydroelectric project to allow city to withdraw water for transport to city, despite claim that projection was grossly excessive in light of actual city per capita use of 89 gallons per capita per day during certain year; FERC elected to project water use rate for entire region, rather than for city alone, because of interconnectedness of system and growing trend toward regional water sharing, projection was less than actual use rates of other municipalities in region, and FERC expected that use rates in city and other municipalities would likely increase as those areas became more urbanized. Federal Power Act, § 10(a)(1), as amended, 16 U.S.C.A. § 803(a)(1).

18. Electricity ⇌10

Federal Energy Regulatory Commission's (FERC) decision not to rely on more recent water use data in developing use rate projection for purposes of determining need for water in region including city was not arbitrary and capricious; FERC clearly explained its decision, in proceeding in which FERC granted amendment to license for electric utility's hydroelectric project on lake to allow city to withdraw water for transport to city, where, according to FERC, more recent data was somewhat misleading, and FERC concluded that, when data was adjusted to account for deficiencies, it showed small decline in water use which was easily explained as expected year-to-year variation in long-term demand projection. Federal Power Act, § 10(a)(1), as amended, 16 U.S.C.A. § 803(a)(1).

19. Electricity ⇌10

Failure of petitioners for judicial review, within 30 days, to contest in request for rehearing accuracy of Federal Energy Regulatory Commission's (FERC) explanation in

its rehearing order for its decision not to rely on more recent water use data in developing use rate projection for purposes of determining need for water in region including city precluded Court of Appeals from considering issue on appeal of proceeding in which FERC granted amendment to license for electric utility's hydroelectric project on lake to allow city to withdraw water for transport to city. Federal Power Act, §§ 10(a)(1), 313(a, b), as amended, 16 U.S.C.A. §§ 803(a)(1), 825(a, b).

20. Electricity ⇌10

Failure of petitioners to raise in their request for rehearing claim that Federal Energy Regulatory Commission (FERC) erred in concluding that 93.8% of population of region including city would be served by public water in future year for purposes of determining need for water in region including city precluded Court of Appeals from considering issue on appeal, in proceeding in which FERC granted amendment to license for electric utility's hydroelectric project on lake to allow city to withdraw water for transport to city. Federal Power Act, §§ 10(a)(1), 313(b), as amended, 16 U.S.C.A. §§ 803(a)(1), 825(b).

21. Electricity ⇌10

Federal Energy Regulatory Commission (FERC) did not act arbitrarily and capriciously in excluding quantity of water available from aquifer storage and recovery (ASR) systems in determining water supply safe yield projection for purposes of determining need for water in region including city, in proceeding in which FERC granted amendment to license for electric utility's hydroelectric project on lake to allow city to withdraw water for transport to city; FERC explained that ASR system was not relevant to calculation of water supply in that it was not new source of water, and noted that ASR system could accommodate only short-term supply and demand. Federal Power Act, § 10(a)(1), as amended, 16 U.S.C.A. § 803(a)(1).

22. Administrative Law and Procedure ⇌763

Final administrative agency order is not rendered arbitrary and capricious simply be-

cause preliminary agency decisions contained errors.

23. Electricity ⇌1

The very purpose of Federal Energy Regulatory Commission (FERC) issuing tentative decisions is to afford Commission opportunity to correct any errors.

24. Electricity ⇌10

Federal Energy Regulatory Commission (FERC) did not act arbitrarily and capriciously in excluding from calculation of water supply projection quantity of water allegedly available through reservoir modifications, for purposes of determining need for water in region including city, despite fact that FERC's discussion of issue was far from model of clarity, in proceeding in which FERC granted amendment to license for electric utility's hydroelectric project on lake to allow city to withdraw water for transport to city, where discussion on that issue in request for rehearing before FERC was tucked away in footnote in paragraph primarily devoted to discussion of aquifer storage and recovery (ASR) systems. Federal Power Act, § 10(a)(1), as amended, 16 U.S.C.A. § 803(a)(1).

25. Electricity ⇌10

Federal Energy Regulatory Commission (FERC) did not act arbitrarily or capriciously by including drought margin in determining need for water in region including city, despite fact that FERC's water supply calculation was based on quantity of water available during drought conditions, in proceeding in which FERC granted amendment to license for electric utility's hydroelectric project on lake to allow city to withdraw water for transport to city, where FERC's calculation also assumed complete interconnection and optimization of city water systems in region, imposition of mandatory water use restrictions or rationing during droughts, and depletion of water storage during certain droughts, which assumptions FERC explained were not consistent with sound water supply planning, given possible eventualities, and additional drought margin was included to protect against those eventualities. Federal Power Act, § 10(a)(1), as amended, 16 U.S.C.A. § 803(a)(1).

26. Electricity ⇌10

Federal Energy Regulatory Commission (FERC) did not act arbitrarily and capriciously in excluding quantity of water available from emergency wells during droughts in calculating drought margin for purposes of determining need for water in region including city, in proceeding in which FERC granted amendment to license for electric utility's hydroelectric project on lake to allow city to withdraw water for transport to city, where emergency wells were owned by jurisdictions surrounding city and leased to city, leases were all to expire shortly, and surrounding jurisdictions had indicated they did not intend to renew leases. Federal Power Act, § 10(a)(1), as amended, 16 U.S.C.A. § 803(a)(1).

27. Electricity ⇌10

By failing to object in their motion for rehearing to Federal Energy Regulatory Commission's (FERC) reliance on Army Corps of Engineers calculation of necessary drought margin in determining need for water in region including city, petitioners for judicial review waived objection to such reliance, in proceeding in which FERC granted amendment to license for electric utility's hydroelectric project on lake to allow city to withdraw water for transport to city. Federal Power Act, §§ 10(a)(1), 313(b), as amended, 16 U.S.C.A. §§ 803(a)(1), 825(b); 40 C.F.R. § 1506.5.

28. Electricity ⇌10

Federal Energy Regulatory Commission (FERC) did not act arbitrarily and capriciously in determining that city would be able to use its water stored in reservoir to replace water withdrawals for purposes of mitigating city water withdrawal pipeline project's environmental effects on river of which lake was part, in proceeding in which FERC granted amendment to license for electric utility's hydroelectric project on lake to allow city to withdraw water for transport to city, as FERC's conclusion appeared consistent with provisions of city's contract with Army Corps of Engineers for storage of water in reservoir. Federal Power Act, § 10(a)(1), as amended, 16 U.S.C.A. § 803(a)(1); National

Environmental Policy Act of 1969, § 2 et seq., 42 U.S.C.A. § 4321 et seq.

On Petitions for Review of an Order of the Federal Energy Regulatory Commission.

Bernard Nash and Patrick M. McSweeney argued the causes for petitioners, with whom Frederick M. Lowther, David L. Engelhardt, William B. Ellis and Alan S. Hirsch, Special Deputy Attorney General, North Carolina Department of Justice, Washington, DC, were on the briefs.

Edward S. Geldermann, Attorney, Federal Energy Regulatory Commission, argued the cause for respondent, with whom Jerome M. Feit, Solicitor, was on the brief.

M. Scott Hart, Washington, DC, argued the cause for intervenor City of Virginia Beach, with whom George A. Somerville and Samuel M. Brock, III were on the brief. Howard E. Shapiro, Michael A. Swiger and John F. Kay, Jr. entered appearances.

Lois J. Schiffer, Assistant Attorney General, United States Department of Justice, John A. Bryson, Attorney, Jonathan Z. Cannon, General Counsel, Environmental Protection Agency, and Randolph L. Hill, Attorney, were on the brief for the United States as *amicus curiae*.

John Paul Woodley, Jr., Roger L. Chaffe and John R. Butcher were on the brief for the Commonwealth of Virginia as *amicus curiae*.

Alan H. Richardson, Donald H. Clarke and Henri D. Bartholomot were on the joint brief for the American Public Power Association, et al., as *amicus curiae*.

Ronald A. Shems, Assistant Attorney General, State of Vermont, was on the brief for the states of Vermont, et al., as *amicus curiae*.

Before: WALD, SILBERMAN and SENTELLE, Circuit Judges.

Dissenting opinion filed by Circuit Judge WALD.

SENTELLE, Circuit Judge:

Petitioners, the state of North Carolina and the Roanoke River Basin Association ("RRBA"), seek review of the decision of the Federal Energy Regulatory Commission ("FERC" or "Commission") to amend a FERC license under which a power project is operated within Lake Gaston on the Roanoke River. The amended license allows the City of Virginia Beach, Virginia to build an intake structure within the power project's boundaries and withdraw water for transport to Virginia Beach. Petitioners maintain that FERC improperly issued the license amendment without first requiring that a water quality certification be obtained from the state of North Carolina. Petitioners further contend that the decision to issue the license amendment was arbitrary and capricious. For the reasons detailed below, we reject each of these arguments and deny the petitions for review.

I. Background

This case arises from the nearly fourteen-year effort of Virginia Beach to secure a new source of water *via* a 76-mile pipeline originating at Lake Gaston and terminating in Norfolk, Virginia (the "Pipeline Project"). Lake Gaston is located on the Roanoke River, a navigable waterway traversing the states of Virginia and North Carolina. While Lake Gaston is primarily located in North Carolina, the intake structure for the Pipeline Project is to be located at Pea Hill Creek Cove in Virginia. That site is within the boundaries of FERC Project No. 2009, a FERC-licensed power project (the "Power Project") operated by Virginia Electric and Power Company ("VEPCO"). Upon completion of the Pipeline Project, Virginia Beach will be able to draw up to 60 million gallons per day ("mgd") of water from Lake Gaston, reducing the discharge of water through the Power Project's dam turbines in North Carolina by that same amount. The drawn water will then be transported through a 76-mile pipeline. This will result in a net increase of 54 mgd of water to Virginia Beach's daily water supply, after adjustment for amounts lost during transport.

Construction of the Pipeline Project's intake facility was to result in sediment discharges into the waters of Lake Gaston. As a result, Section 403(a) of the Federal Water Pollution Control Act, 33 U.S.C. § 1251 *et seq.*, otherwise known as the Clean Water Act ("CWA" or "Act"), required Virginia Beach to obtain a dredge-and-fill permit from the Secretary of the Army, acting through the Army Corps of Engineers ("Corps"). 33 U.S.C. § 1344(f)(2). The City filed its application for a Section 403(a) permit with the Corps on July 15, 1983.

Section 401(a)(1) of the CWA provides that "[a]ny applicant for a Federal license or permit to conduct any activity . . . which may result in any discharge into the navigable waters, shall provide the . . . permitting agency a certification from the State in which the discharge originates or will originate. . . ." The certification must provide that the discharge "will comply with the applicable" water quality standards. *Id.* § 1341(a)(1). As for those states in which the discharge does not "originate" but which may otherwise be "affected" by the discharge, Section 401(a)(2) of the CWA provides a separate set of procedures to ensure compliance with the affected state's water quality standards. *Id.* § 1341(a)(2).

Because the Corps' dredge-and-fill permit is a "Federal license or permit" for purposes of Section 401(a)(1), Virginia Beach was required to obtain a water quality certification from the state of Virginia. Accordingly, Virginia Beach filed an application with the Virginia State Water Control Board ("VSWCB"), requesting certification of the withdrawal of up to 60 mgd of water from Lake Gaston. No certification was sought or received from North Carolina at this time. On September 12, 1983, the VSWCB issued a Section 401(a)(1) certification for the Pipeline Project, subject to certain conditions needed to preserve water quality.

Following the issuance of the water quality certification, the Corps held public hearings on Virginia Beach's application for a dredge-and-fill permit. Both North Carolina and RRBA intervened in this proceeding. Upon conclusion of the hearings, the Corps found that 60 mgd would be needed in the Virginia

Beach area by the year 2030, that the Pipeline Project would have no noticeable impact on downstream water quality, and that the project would have no significant impact on the environment. As a result, the Corps issued a dredge-and-fill permit to Virginia Beach. The issuance of this permit was ultimately upheld on appeal. *North Carolina v. Hudson*, 665 F.Supp. 428 (E.D.N.C.1987), *appeal decided after remand*, 731 F.Supp. 1261 (E.D.N.C.1990), *aff'd sub nom. Roanoke River Basin Ass'n v. Hudson*, 940 F.2d 58 (4th Cir.1991), *cert. denied*, 502 U.S. 1092, 112 S.Ct. 1164, 117 L.Ed.2d 411 (1992).

In 1991, VEPCO filed an application with FERC, requesting that the Power Project license be amended to permit the withdrawal of water for the Pipeline Project. The license for the Power Project was initially issued in 1951 by the Federal Power Commission, the predecessor of FERC. *Virginia Elec. and Power Co., Project No. 2009: Application for License Under Federal Power Act*, 10 F.P.C. 1 (1951) [hereinafter *License Application Order*]. The Federal Power Act ("FPA"), 16 U.S.C. § 791a *et seq.*, governs amendments to FERC licenses and provides that an amendment may be granted "only upon mutual agreement between the licensee and the Commission after thirty days' public notice." 16 U.S.C. § 799. Under VEPCO's requested amendment to the Power Project license, Virginia Beach would be permitted to withdraw 60 mgd of water from Lake Gaston, decreasing the flow of water through the Power Project dams by the same amount.

North Carolina intervened in the license amendment proceeding and requested that FERC prepare an environmental impact statement ("EIS") pursuant to the National Environmental Policy Act, 42 U.S.C. § 4321 *et seq.* On July 23, 1993, FERC issued a draft environmental assessment ("EA") tentatively concluding that the Pipeline Project would have no unmitigable adverse environmental impacts. After receiving numerous comments on the draft EA, FERC staff, on June 23, 1994, issued a final EA finding that the proposed Pipeline Project "constitutes a major federal action significantly affecting the quality of the human environment." As a result, FERC determined to prepare an EIS

to "reflect updated population and water consumptive projections." In the meantime, North Carolina had petitioned the Commission to stay its proceeding until VEPCO obtained a Section 401(a)(1) certification from North Carolina's water control agency. The Commission took no action on the stay request.

On July 7, 1995, FERC issued a final EIS finding that the five-city area in the vicinity of Virginia Beach (including Chesapeake, Norfolk, Portsmouth, Virginia Beach, and Suffolk) will need 54 mgd of water by the year 2030; that the proposed water supply project will ensure Virginia Beach a safe, reliable, and relatively inexpensive source of potable water; that the Pipeline Project is the best source for meeting that water need; and that the project, subject to additional mitigation measures, should be approved. Final Environmental Impact Statement for Virginia Beach Water Supply Project at xxii [hereinafter Final EIS]. On July 14, 1995, North Carolina and RRBA filed a joint motion asking the Commission to condition any order approving the Project on North Carolina's issuance of a water quality certification pursuant to CWA § 401(a)(1). The Commission took no action on this motion.

Finally, on July 26, 1995, the Commission issued an order approving VEPCO's application to amend the license under which the Power Project is operated. *Virginia Elec. and Power Co., Project No. 2009-003: Order Approving Non-Project Use of Project Lands and Waters and Amending License*, 72 F.E.R.C. (CCH) ¶ 61,075 (July 26, 1995) [hereinafter *License Amendment Order*]. In the order, the Commission concluded that Virginia Beach's project is "best adapted to a comprehensive plan for improving or developing the waterway for beneficial public purposes" because Virginia Beach will "be relieved of the serious water supply problems that have severely constrained the lifestyle of its citizens and clouded its economic future." *Id.* at 61,399. Relying on the findings of its Final EIS, the Commission concluded that by the year 2030 Virginia Beach and the other regional cities will need the entire 54 mgd that the Pipeline Project is designed to provide. *Id.* at 61,396. In addition, the Com-

mission concluded that the downstream effects of the Pipeline Project withdrawals could be sufficiently mitigated by the release of the water the city had stored upstream in Kerr Reservoir. *Id.* at 61,398.

The Commission denied petitioners' request to stay its proceeding or to withhold its approval until North Carolina issued a Section 401(a)(1) certification for the Project. *Id.* at 61,393. The Commission ruled that "even assuming, *arguendo*, that the proposed amendment to the [Power Project] license to accommodate the construction and operation of Virginia Beach's water supply project is subject to the provisions of Section 401(a)(1)," the certification requirement was not triggered because the Commission's regulations require a new certification only for license amendments that will cause a "material adverse impact on the water quality in the discharge from the project." *Id.* at 61,393-94 (quoting from 18 C.F.R. § 4.38(f)(7)(iii)). Relying on the findings and conclusions of its Final EIS, the Commission concluded that a one-percent reduction in flow releases into the Roanoke River from the project dam "will not significantly affect water quality." *Id.* at 61,394.

Petitioners moved for rehearing. On September 22, 1995, the Commission denied the motion. *Virginia Elec. and Power Co., Project No. 2009-008: Order Denying Rehearing and Denying Stay*, 72 F.E.R.C. (CCH) ¶ 61,283 (Sept. 22, 1995) [hereinafter *Rehearing Order*]. The Commission found that the need for a reliable water source in the area surrounding Virginia Beach "cannot be disputed." *Id.* at 62,216. Further, the Commission reaffirmed its prior ruling that a Section 401(a)(1) certification was not required because VEPCO's license amendment would not have a "material adverse impact on the water quality in the discharge from the project." *Id.* at 62,218. Alternatively, the Commission held that North Carolina had waived its Section 401 certification claim. *Id.* at 62,219.

Petitioners then sought review in this court, challenging FERC's decision to issue the amended license. According to petitioners, FERC violated CWA § 401(a)(1) by issuing the amended license without receiving a

water quality certification from North Carolina. In addition, petitioners asserted that certain of FERC's findings necessary to justify issuance of the amended permit were arbitrary and capricious.

After the first oral argument in this case, we issued an order remanding the record and directing the Commission to determine whether the license amendment would involve "activities . . . which may result in any discharge into the navigable waters" that "originate" in North Carolina within the meaning of CWA § 401(a)(1). *See North Carolina v. FERC*, No. 95-1494 (D.C.Cir. Sept.11, 1996) (order remanding record to the Commission). On remand, the Environmental Protection Agency ("EPA" or "Agency") filed a letter with FERC stating that, in its view, the license amendment authorizing the Pipeline Project would result in such a discharge, thus necessitating a Section 401(a)(1) certification from North Carolina. Letter from Jonathan Z. Cannon, General Counsel, EPA, to Lois D. Cashell, Secretary, FERC 1 (October 24, 1996) [hereinafter EPA Letter].¹

On November 7, 1996, FERC issued an order in which it concluded that "the activity that the Commission approved in this proceeding (the construction and operation of facilities and withdrawal of water from the Virginia Beach water supply project) is not an activity that results in a discharge originating in the State of North Carolina within the meaning of Section 401(a)(1) of the CWA." *Virginia Elec. and Power Co., Project No. 2009-010: Order on Remand*, 77 F.E.R.C. (CCH) ¶ 61,138 (Nov. 7, 1996) [hereinafter *Order on Remand*]. More specifically, the Commission found that the construction and operational activities (and any resulting discharges originating therefrom) would occur entirely in Virginia. *Id.* at 61,518. Because Virginia Beach obtained a Section 401(a)(1) certification from the state of Virginia, the Commission determined that the requirements of CWA § 401(a)(1) were satisfied. *Id.* at 61,521. We now review the Commission's orders.

1. Because we conclude, under the first step of *Chevron*, that congressional intent underlying Section 401(a)(1) is clear, *infra*, we find it unne-

II. Analysis

A. Section 401(a)(1) Certification Claim.

[1] Petitioners first challenge the Commission's conclusion that Section 401(a)(1) does not require that VEPCO obtain a water quality certification from the state of North Carolina before issuing an amendment to VEPCO's license. When reviewing "an agency's construction of the statute which it administers," we apply the two-part test developed by the Supreme Court in *Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837, 104 S.Ct. 2778, 81 L.Ed.2d 694 (1984). The first step of the *Chevron* test is to ask "whether Congress has directly spoken to the precise question at issue. If the intent of Congress is clear, that is the end of the matter." *Id.* at 842, 104 S.Ct. at 2781. If, however, the congressional intent is not clear, we must then ask "whether the agency's answer is based on a permissible construction of the statute." *Id.* at 843, 104 S.Ct. at 2782. As discussed in more detail below, we conclude that the congressional intent underlying Section 401(a)(1) of the CWA is clear and unambiguous.

1. Waiver

[2] Before turning to the merits of petitioners' Section 401(a)(1) claim, we first address FERC's argument that North Carolina waived its certification right by failing to assert such during the Corps' dredge-and-fill permit proceeding. The Commission's waiver argument is premised on the view that, under Section 401(a)(1), it is a state's duty to request that a license applicant obtain a water quality certification. *See* FERC's Brief at 40 (referring to North Carolina's failure "to assert a timely request for [a water quality] certification" (emphasis added)). The Commission plainly misconstrues Section 401 in this respect.

Section 401(a)(1) provides that "[n]o license or permit shall be granted until the certification required by this section has been obtained or waived as provided in the

essayary to resolve the thorny question as to whether EPA is entitled to deference as the arguably primary administrator of the CWA.

preceding sentence." 33 U.S.C. § 1341(a)(1) (emphasis added). The referenced preceding sentence states that a waiver occurs when a "State . . . fails or refuses to act on a request for certification, within a reasonable period of time (which shall not exceed one year) after receipt of such request." *Id.* (emphasis added). This language clearly expresses a congressional intent to place the burden of requesting a state water quality certification on the license applicant. Only after a request has been made can a state waive its certification right, and then only by refusing to respond to the request within a reasonable period of time. VEPCO, the license applicant in this case, never requested that North Carolina provide a water quality certification for the proposed Pipeline Project. Therefore, under the plain language of Section 401(a)(1), North Carolina could not have waived its certification right.

Despite the clarity of Section 401(a)(1), FERC proposes two theories—one statutory and one common law—on which to base a finding of waiver. First, the Commission argues that CWA § 401(a)(3) creates an alternative means by which a state can waive its certification right. Section 401(a)(3) provides that "[t]he certification obtained pursuant to [CWA § 401(a)(1)] with respect to the construction of any facility shall fulfill the requirements of this subsection with respect to certification in connection with any other federal license or permit required for the operation of such facility." 33 U.S.C. § 1341(a)(3). As the Commission reads Section 401(a)(3), any state having certification rights as to the operation of a licensed activity must intervene and assert those rights at the time a license is granted to construct the facilities. Failure to intervene at the time a construction license is granted will, according to FERC, result in a waiver of the right to certify the operation of the project. In support of this argument, the Commission cites *Keating v. FERC*, 927 F.2d 616, 620 (D.C.Cir.1991), in which we stated that "under section 401(a)(3) of the Clean Water Act, . . . , FERC was obliged to accept the certification underlying the Corps permit as satisfying the state certification with respect to . . . [the FERC] license application."

[3] To be sure, Section 401(a)(3) does provide that a certification obtained during a facility's construction stage will satisfy the Section 401(a)(1) certification requirement at the project's operational stage. Section 401(a)(3) does not, however, require a state with certification rights pertaining only to the operation of a project to assert those rights at the time a construction permit is issued for the project. By its terms, Section 401(a)(3) provides only that a construction certification actually "obtained" from a state will satisfy the certification requirement as to the operation of the project. As discussed above, no water quality certification was obtained from North Carolina at the construction stage of the Pipeline Project. Only the state of Virginia certified the Project's construction.

The Commission responds that it is irrelevant for purposes of Section 401(a)(3) that only Virginia certified the construction of the Pipeline Project. As the Commission reads Section 401(a)(3), a certification obtained at a project's construction stage from the state in which construction discharge will originate obviates the need to obtain a certification from those other states in which a discharge will originate as a result of the project's operation. To the extent a state in which an operational discharge will originate wishes to exercise its right to certify the operation of a project, that state must intervene and assert its certification rights during the construction permit proceeding. We disagree.

[4] Section 401(a)(3) provides that obtaining a construction-stage certification satisfies the need to obtain an operational certification from "the certifying State." See 33 U.S.C. § 1341(a)(3). Not one word of Section 401(a)(3) in any way indicates that the construction-stage certification satisfies the need to obtain an operational certification from another state in which only an operational discharge will originate. Nor does the section require that such other state intervene in the construction permit proceeding and assert its right to certify the operation of the project. Indeed, to so hold would place the burden of requesting a certification on the certifying state directly contrary to Section 401(a)(1)'s express requirement that the li-

cense applicant initiate the "request for certification." *Id.* § 1341(a)(1).

The *Keating* case upon which FERC relies in attempting to avoid this interpretation of Section 401(a)(3) is easily distinguishable. In *Keating*, the state of California issued a blanket certification in connection with an applicant's request for a Corps' dredge-and-fill permit. 927 F.2d at 619-20. When a party subsequently attempted to use the blanket certification to obtain a FERC license, the state purported to revoke its earlier certification. *Id.* at 620. On petition for review, we held that once a state grants certification in a dredge-and-fill permit proceeding, "section 401(a)(3) permits state revocation of the prior certification only if certain conditions are met." *Id.* at 624. Absent such conditions, "FERC was obliged to accept the certification underlying the Corps permit as satisfying the state certification requirement with respect to Keating's [FERC] license application." *Id.* at 620. In this case, as there was no "prior certification" by the state of North Carolina but only by the state of Virginia, the *Keating* case is inapposite.

The Commission's second theory of waiver is based on the common law doctrine of claim preclusion. The Commission would have us read that doctrine into Section 401(a)(1). During the dredge-and-fill permit proceeding, the Corps specifically considered the environmental impacts not only of the project construction, but also of its operation and resultant discharges in North Carolina. Further, the Corps proceedings involved the same issues, parties, and discharge as are involved in the proceeding before FERC. As a result, the Commission argues, North Carolina's failure to raise its Section 401(a)(1) certification claim before the Corps should bar it from raising the claim in this proceeding.

[5, 6] In response, North Carolina argues that the common law defense of claim preclusion cannot now be raised because it did not form the actual basis for FERC's order. While it is true that "a reviewing court, in dealing with a determination or judgment which an administrative agency alone is authorized to make, must judge the propriety of such action solely on the grounds invoked

by the agency," *Securities & Exch. Comm'n v. Chenery Corp.*, 332 U.S. 194, 196, 67 S.Ct. 1575, 1577, 91 L.Ed. 1995 (1947), it appears that the Commission's order was based in part on the doctrine of claim preclusion. The Commission's *Rehearing Order* states that North Carolina's certification right was "waived" and also refers to the fact that consideration of the certification claim "would reopen an issue that has already been put to rest by the . . . Corps . . . and the courts in the *Hudson* litigation." 72 F.E.R.C. at 61,218-19. These statements indicate that FERC did rely, at least in part, on the doctrine of claim preclusion in rejecting North Carolina's certification claim.

[7] Nevertheless, we believe that the Commission erred in reading the doctrine of claim preclusion into Section 401(a)(1). As discussed above, that section clearly provides that a Federal license or permit may not be granted "until the certification required by [Section 401(a)(1)] has been obtained or has been waived" as a result of a state's "refus[al] to act on a request" for such in a timely manner. 33 U.S.C. § 1341(a)(1). We see no room for the doctrine of claim preclusion in such a precisely worded provision. To hold otherwise would, in our view, require us to usurp the legislative function. This we cannot do.

In sum, we do not believe that North Carolina waived its certification right. We therefore turn to the merits of the certification claim.

2. Merits

Petitioners maintain that the Commission improperly interpreted Section 401 of the CWA and, as a result, erroneously issued an amended license to VEPCO without first requiring that a water quality certification be obtained from the state of North Carolina. As quoted above, Section 401(a)(1) of the CWA provides that "[a]ny applicant for a Federal license or permit to conduct any activity . . . which may result in any discharge into the navigable waters, shall provide the licensing or permitting agency a certification from the State in which the discharge originates or will originate. . . ." 33

U.S.C. § 1341(a)(1). In the case of a license amendment, a Commission regulation interpreting this section requires the applicant to obtain a new water quality certification only "if the amendment would have a material adverse impact on the water quality in the discharge from the project." 18 C.F.R. § 4.38(f)(7)(iii) (1995).

In the initial order granting an amendment to the Power Project license, the Commission assumed *arguendo* that the activity licensed by the amendment would result in a "discharge." However, relying on its regulation, the Commission concluded that a water quality certification from North Carolina was unnecessary given that "the amendment to the license [would] not have a 'material adverse impact on the water quality in the discharge from the project.'" *License Amendment Order*, 72 F.E.R.C. at 61,393-94 (quoting 18 C.F.R. § 4.38(f)(7)(iii)).

After the first oral argument in this case, we remanded the record to the Commission to answer the "logically antecedent" question whether the proposed amendment to the Power Project license to accommodate the construction and operation of the Pipeline Project is subject to the provisions of Section 401(a)(1). *See North Carolina v. FERC*, No. 95-1494, at 1-2 (D.C.Cir. Sept. 11, 1996) (order remanding record to Commission). On remand, the Commission altered its reasoning on the Section 401(a)(1) issue, concluding that a water quality certification was unnecessary because the license amendment would not result in a "discharge" as that term is used in Section 401(a)(1). *See Order on Remand*, 77 F.E.R.C. at 61,517. Alternatively, the Commission found that "even if the word 'discharge' is ultimately determined to be broad enough to include the removal of water," the license amendment would still not be subject to the requirements of Section 401(a)(1) as "the activity involved in enabling such removal occurs entirely (i.e., for CWA

purposes 'originates' in) Virginia, and not in North Carolina." *Id.* at 61,518.

As an initial matter, we note that on remand the Commission discarded 18 C.F.R. § 4.38(f)(7)(iii) as an alternative basis for upholding the decision not to require that a water quality certification be obtained from North Carolina. As a result, we need not address the legality of that regulation despite our serious reservations concerning FERC's attempt to redefine the statutory phrase "any discharge," 33 U.S.C. § 1341(a)(1), to mean only those discharges that are "material," 18 C.F.R. § 4.38(f)(7)(iii). We need only review the Commission's interpretation of Section 401(a)(1) itself.

[8] Petitioners argue that the Commission's orders misinterpret the requirements of Section 401(a)(1). According to petitioners, the relevant statutory "activity" is VEPCO's "substantially altered operation" of the Power Project under which less water will flow through the dam turbines thus generating less electricity. These alterations in the operation of the Power Project will, petitioner argues, "result in an altered discharge."² Alternatively, petitioners argue that the relevant "activity" is the operation of the Pipeline Project, which will result in "a new and different discharge." In either case, petitioners contend, a discharge "originates" at the point where water exits the dam turbines in North Carolina under the Supreme Court's holding in *PUD No. 1 of Jefferson County v. Washington Dep't of Ecology*, 511 U.S. 700, 114 S.Ct. 1900, 128 L.Ed.2d 716 (1994). As a result, they conclude that a Section 401(a)(1) certification from North Carolina was required.

The Commission responds that the "activities" licensed in this case are the construction and operation of the Pipeline Project. The construction of the Pipeline Project re-

2. Our dissenting colleague suggests that "[l]ogically, if a State must consent before a new discharge is introduced into its waters, then a change in that discharge must require a new consent." Dissent at 1195. The logic escapes us. The statute provides that the right of certification arises from an "activity ... which may result in any discharge...." The triggering event is the causation of the discharge. Under

our colleague's reasoning, a statute referring to "conduct resulting in injury" would include conduct which reduced injury. A transaction "resulting in financial loss" would include a transaction which prevented financial loss. Neither in those hypotheticals nor in this actual case does either logic or language lead us to our colleague's conclusion.

sulted in a discharge of dredged material only in Virginia. The operation of the Pipeline Project, by contrast, will result in no "discharge" at all as the Project will only withdraw water from and add nothing to Lake Gaston. The fact that the amended license will result in an "altered discharge" at the North Carolina dam cannot, FERC argues, constitute a basis for granting certification rights to North Carolina. To hold otherwise would render superfluous Section 401(a)(2) governing the rights of those states affected by license amendments.

We agree with the Commission that the "activities" licensed by the amendment are the construction and operation of the Pipeline Project. As no party contends that the *construction* of the Pipeline Project resulted in a discharge "originat[ing]" in North Carolina, only the *operation* of the Project is relevant for our purposes. Even assuming *arguendo* that the flow of water through the Power Project dam turbines is a "discharge" as that term is defined in the CWA,³ we fail to see how operation of the Pipeline will "result in any discharge."

The Lake Gaston Power Project has operated under a FERC license for many years. See *License Application Order*, 10 F.P.C. at 18-19. Under that license, water has been passing through the dam turbines. Had the license amendment not been granted, water would have continued passing through the dam turbines. The amendment does not permit VEPCO to release additional water through the turbines. It simply permits VEPCO "to authorize the City of Virginia Beach, Virginia to withdraw up to 60[mgd] of water from the Project No. 2009 Lake Ga-

ston reservoir." *License Amendment Order*, 72 F.E.R.C. at 61,400. These facts lead us to agree with FERC that the "activity" authorized by the license amendment is the operation of the Pipeline Project and its resultant withdrawal of water from Lake Gaston.

[9] We recognize that the withdrawal of water from Lake Gaston will reduce the volume of water passing through the dam turbines. But neither the withdrawal of water from the Lake nor the reduction in the volume of water passing through the dam turbines "results in a discharge" for purposes of Section 401(a)(1). 33 U.S.C. § 1362 is the definitional section for chapter 26 of Title 33, the chapter that includes the CWA. That section does not provide an express definition of the term "discharge" but rather provides a statement of inclusion: "The term 'discharge' when used without qualification includes a discharge of a pollutant, and a discharge of pollutants." 33 U.S.C. § 1362(16). Thus, we find useful in our analysis 33 U.S.C. § 1362(12), which defines the terms "discharge of a pollutant" and "discharge of pollutants" as "mean[ing] (A) any addition of any pollutant of navigable water from any point source, and (B) any addition of any pollutant to the waters to the contiguous zone . . . from any point source other than a vessel or other floating craft." Thus, although the focus of the definitional section is on the regulation of pollutants rather than the general regulation of project discharges, the nearest evidence we have of definitional intent by Congress reflects, as might be expected, that the word "discharge" contemplates the addition, not the withdrawal, of a substance or substances.⁴

3. Our dissenting colleague suggests that *PUD No. 1, supra*, and *National Wildlife Fed'n v. FERC*, 912 F.2d 1471 (D.C.Cir.1990) (per curiam), compel the conclusion that we assume. While we do not interpret either of those opinions as compelling such a conclusion, since we are willing to assume so for purposes of this case, there is no point in our pursuing the distinctions at any length. Suffice it to say that we are satisfied for the reasons set forth at pp. 1188-89, *infra*, that a construction of the statutory language herein is in no way inconsistent with *PUD No. 1* or *National Wildlife*.

4. Our dissenting colleague "reject[s] the majority's 'substance-adding' threshold condition on

the exercise of State certification rights." Dissent at 1196. The threshold is not ours, but Congress's. Granted, the congressional instruction of "discharge" in 33 U.S.C. § 1362(16) does not define discharge, but rather describes it as including "discharge of a pollutant" which Congress has heretofore defined in § 1362(12) as "mean[ing] . . . any *addition* of any pollutant . . ." (emphasis added). It would seem to us apparent that since Congress meant "discharge" to include "discharge of a pollutant" then Congress intended the word "discharge" to be defined in the inclusive use consistently with the included use. Therefore, if "discharge of a pollutant" requires addition, then the inclusive understanding of "discharge" also requires an addi-

On the evidence of record, the operation of the Pipeline Project will not result in the "addition" of anything to the waters of Lake Gaston. Obviously, the withdrawal of water from Lake Gaston will add nothing; nor will the withdrawal of water from Lake Gaston increase the volume of water flowing through the turbines of the Project dams. Indeed, that is petitioners' very point; the volume of water flowing through the turbines will decrease as a result of the project. *Order on Remand*, 77 F.E.R.C. at 61,519-20. A decrease in the volume of water passing through the dam turbines cannot be considered a "discharge" as that term is defined in the CWA. *Save Our Community v. United States EPA*, 971 F.2d 1155, 1165 (5th Cir. 1992) (holding that removal of water from wetlands is not a "discharge" for purposes of Section 404 of the CWA).

We are not persuaded by petitioners' argument that Section 401(a)(1) confers certification rights upon North Carolina merely because operation of the Pipeline Project will "result in an altered discharge" through the dam turbines. Stating that operation of the Pipeline Project will "result in an altered discharge" is simply a way of saying in legalese that operation of the Pipeline Project will alter the discharge. However, the existence of certification rights under Section 401(a)(1) does not depend on whether a discharge is "altered." Section 401(a)(1) certification rights vest only if an activity "may result in" a discharge. This distinction is of no small moment. The word "alter" means to change something from its previous state, WEBSTER'S NEW INT'L DICTIONARY 63 (3rd ed.1961) ("to cause to become different"), implying that the thing changed was already in existence. By contrast, the word "result" implies causation. See *id.* at 1937 ("arise as a consequence"). Obviously, a subsequent event cannot be the cause of something that is already in existence. Given the disparity between petitioners' proposed test and the words of the Act, we elect to remain faithful to the language chosen by Congress and require that an activity "result in" a dis-

tion. Indeed, we have seen no definition of "discharge" in any source, including the dissent,

charge in order to trigger the certification requirements of Section 401(a)(1).

Our conclusion that the operation of the Pipeline Project will not result in a "discharge" is in no way inconsistent with the Supreme Court's opinion in *PUD No. 1, supra*. In that case, the state of Washington had issued a water quality certification under Section 401(a)(1) imposing a variety of conditions on the proposed project, including a minimum stream flow requirement. 511 U.S. at 709, 114 S.Ct. at 1907-08. The license applicants argued that the minimum stream flow requirement was unlawful in that it was "unrelated to the[] specific discharges" at issue. *Id.* at 711, 114 S.Ct. at 1908. The Supreme Court rejected this argument, stating that:

If § 401 consisted only of subsection (a), which refers to a state certification that a "discharge" will comply with certain provisions of the Act, petitioners' assessment of the scope of the State's certification would have considerable force. Section 401, however, also contains subsection (d), which expands the State's authority to impose conditions on the certification of a project.

Id. at 711, 114 S.Ct. at 1908-09. As the Court read Section 401, subsection (a) "identifies the category of activities subject to certification—namely those with discharges"—while subsection (d) authorizes a state to place "additional conditions on the activity as a whole once the threshold condition, the existence of a discharge, is satisfied." *Id.* at 711-12, 114 S.Ct. at 1909. But the Court never attempted to define a discharge and in no way indicated that an alteration of a discharge was sufficient to invoke the certification requirement of Section 401(a)(1). *PUD No. 1* therefore is inapposite.

Nor is our conclusion that the operation of the Pipeline Project will not result in a "discharge" in conflict with our holding in *National Wildlife Fed'n, supra*. In *National Wildlife*, we held that the Commission did not abuse its discretion in concluding that the discharge resulting from the construction and operation of a new dam "originate[d] by

which suggests that that term includes withdrawal or reduction.

the dam" where the flow of water was blocked resulting in a water backup. 912 F.2d at 1484. This holding is distinguishable in two respects from the case at hand. First, the parties in *National Wildlife* did not dispute whether the construction and operation of the dam would create a discharge. The issue there was where that discharge would "originate." See *id.* at 1483-84. In addition, the *National Wildlife* case involved the creation of a discharge as a result of the construction and operation of a new dam. *Id.* at 1473. That case did not involve an alteration (much less a volume reduction) of a preexisting discharge.

Because we conclude that the withdrawal of water from Lake Gaston resulting in a decrease in the volume of a preexisting discharge is not an activity that "results in any discharge" for purposes of the Section 401 of the CWA, we must reject petitioners' claim that the Commission erred when it granted VEPCO's request for a license amendment without requiring that a water quality certification first be obtained from the state of North Carolina.

B. Arbitrary and Capricious Claims.

[10, 11] Petitioners also assert that the findings underlying the Commission's decision to grant the amendment to VEPCO's license were not supported by substantial evidence and that the decision itself was arbitrary and capricious. Under the FPA, we review a Commission licensing decision to determine whether the factual findings underlying the decision were "supported by substantial evidence." 16 U.S.C. § 825l(b). We also review Commission licensing decisions to determine whether they were "arbitrary and capricious." *Bangor Hydro-Electric Co. v. FERC*, 78 F.3d 659, 663 & n. 3 (D.C.Cir.1996). In both cases, the review is quite deferential. So long as the Commission has examined the relevant data and provided a "reasoned explanation supported by a stated connection between the facts found and the choice made," we will defer to the agency's expertise. *United States Dep't of Interior v. FERC*, 952 F.2d 538, 543 (D.C.Cir.1992). Applying these principles of

review, we consider each of petitioners' claims.

1. Need for 54 mgd of water.

Petitioners first challenge the Commission's conclusion that there is a "need" for the Pipeline Project. Section 10(a) of the FPA provides that the project for which a Commission license is issued must

be such as in the judgment of the Commission will be best adapted to a comprehensive plan of improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce, for the improvement and utilization of water-power development, for the adequate protection, mitigation, and enhancement of fish and wildlife . . . , and for other beneficial public uses, including irrigation, flood control, *water supply*, and recreational and other purposes. . . .

16 U.S.C. § 803(a)(1) (emphasis added). The parties all agree that, under this provision, the Commission could only issue the license amendment authorizing the Pipeline Project if the Commission, in its judgment, determined that there is a need for 54 mgd of water in Virginia Beach. The only issue here is whether the Commission's conclusion that there is such a need was supported by substantial evidence.

The Commission relied on the findings of its Final EIS in concluding that the five-city Virginia Beach region would need 54 mgd of water by the year 2030. *Rehearing Order*, 72 F.E.R.C. at 62,216. The Final EIS calculation of water need was derived from three figures: (1) projected water demand in the five-city region by the year 2030, (2) projected supply in that region by 2030, and (3) a drought margin. Final EIS at 1-6 to 1-22. The demand projection was a function of the five-city region's projected population and per capita water use in the year 2030. *Id.* at 1-9 to 1-13. Projected supply was based on the "safe yield" of available water sources in the five-city region. *Id.* at 1-16 to 1-20. The difference between the projected supply and the projected demand equaled the water supply deficit for the five-city region. *Id.* at 1-20. Then, in order to ensure "sound water supply planning," a drought margin was add-

ed to the water supply deficit to reach the 54 mgd of water need. *Id.* at 1-21. Petitioners challenge each step of this water need calculation. We consider these challenges in turn.

a. Population Projection.

[12] Petitioners first contest the Commission's population projection for the year 2030. In formulating its population projection, the Commission had before it six different population projections, only four of which attempted to project the five-city region's population through the year 2030. The Commission elected not to use any of the 2030 projections. Instead, the Commission selected the population projection prepared by the Hampton Roads Planning District Commission ("HRPDC") which projected the population of the five-city region through the year 2015. That projection, according to the Commission, was "the most reasonable in that [it] considered local economic factors . . . and the recent decrease in the region's growth rate." Final EIS at 1-12. The Commission then extrapolated the HRPDC projection through 2030 using the average annual growth rates underlying two of the four 2030 projections. The result was a population projection of 1,306,000 for the five-city region.

[13,14] Petitioners argue that this projection was arbitrary and capricious in that extrapolation of the HRPDC estimate was based on growth rates from projections the Commission had "rejected as *too high*." North Carolina's Brief at 32. We disagree. The Commission explained that the HRPDC estimate was chosen as "the most reasonable" because it considered "local economic factors." While the Commission's calculation of an extrapolation rate was based on the average growth rates from population projections rejected by the Commission as less "reasonable" than the HRPDC projection, the fact that these estimates were less "reasonable" does not necessarily make them unreasonable or arbitrary. Projections of any kind—especially those extending 40 years into the future—are necessarily speculative, inexact, and riddled with uncertainty. But at times, such as here, projections must be made. The mere fact that the Commission

relied on necessarily imperfect information in calculating an extrapolation rate for the years 2015 to 2030 does not render the projection arbitrary. An agency need not "have perfect information before it takes any action." *United States Dep't of the Interior v. FERC*, 952 F.2d 538, 546 (D.C.Cir.1992). In the face of "serious uncertainties," an agency need only "explain the evidence which is available, and . . . offer a 'rational connection between the facts found and the choice made.'" *Motor Vehicle Mfrs. Ass'n of the United States v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 52, 103 S.Ct. 2856, 2871, 77 L.Ed.2d 443 (1983) (quoting *Burlington Truck Lines, Inc. v. United States*, 371 U.S. 156, 168, 83 S.Ct. 239, 245-46, 9 L.Ed.2d 207 (1962)). The Commission has done so.

b. Per Capita Use Projection.

[15] Petitioners also contest FERC's projected per capita water use figure of 118 gallons per capita per day ("gpcd") as arbitrarily inflated. First, RRBA contends that the Commission reached its projected water use rate simply by taking the 1990 actual use rate for the five-city region of 121 gpcd and subtracting 3 gpcd to account for future improvements in water use efficiency. Reliance on a single year's data to develop a long-term projection is, according to RRBA, arbitrary and capricious.

RRBA's depiction of the process by which the Commission developed its water use projection is without basis in the record. The Commission clearly explained that its projected use figure was the product of a long-term "trend analysis." *Rehearing Order*, 72 F.E.R.C. at 62,217. In reaching its projection, the Commission began by noting that the use projections for Virginia Beach alone "cluster[ed] around 100 gpcd" with actual use in 1990 for the entire five-city region equaling 121 gpcd. Final EIS at 1-12. The Commission went on to explain that it expected these figures to rise as Virginia Beach and its surrounding areas became more urbanized. *Id.* at 1-12 to 1-13. However, the Commission also recognized that water conservation measures required by the Federal Energy Policy Act of 1992 were likely to result in a demand reduction of approximate-

ly 3.7 mgd. *Id.* at 1-13 to 1-15. Taking all of these factors into account, the Commission concluded that a projected per capita use rate of 118 gpcd was "reasonable for planning purposes." *Id.* at 1-15.

North Carolina asserts that the Commission's water use projection is arbitrary as demonstrated by Virginia Beach's concession that water use in the five-city region is declining. North Carolina too misstates the record. Virginia Beach did not concede that water use in the five-city region is declining, but only that it had "decline[d] slightly between 1990 and 1994." The Commission recognized and explained this decline as an expected year-to-year variation in demand.

[16] North Carolina also asserts that Virginia Beach conceded that the water use data in the Commission's Final EIS was erroneous. Again, North Carolina misinterprets the record. What the city actually conceded was that one of the many figures relied upon by the Commission in developing a 40-year water use projection contained some minor computational errors. North Carolina, however, has not demonstrated that the erroneous figure was integral to the Commission's water use projection or that revision of the figure would result in an altered projection. As a result, the error was harmless. See *Chemical Waste Mgmt., Inc. v. United States EPA*, 976 F.2d 2, 32 (D.C.Cir.1992), *cert. denied*, 507 U.S. 1057, 113 S.Ct. 1961, 123 L.Ed.2d 664 (1993).

[17] North Carolina further argues that the Commission's water use projection of 118 gpcd is grossly excessive in light of the actual per capita water use in Virginia Beach during 1990 of 89 gpcd. This argument too is not persuasive. The Commission elected to project a water use rate for the entire five-city region, rather than for Virginia Beach alone "because of the existing interconnect-edness of the system and the growing trend toward regional water sharing." *Rehearing Order*, 72 F.E.R.C. at 62,216. While the Commission's projected use figure for the five-city region exceeds the actual use figure for Virginia Beach, it is significantly less than the actual use rates of the more urbanized municipalities in the region such as Norfolk (166 gpcd) and Portsmouth (160 gpcd).

Moreover, the Commission expected that per capita use rates in Virginia Beach and the other municipalities would likely increase as those areas became more urbanized. Final EIS at 1-12 to 1-13. These considerations led the Commission reasonably to conclude that a projected use rate of 118 gpcd was most appropriate.

[18] Still further, petitioners together argue that the Commission's use rate projection is arbitrary in that it was developed without reference to more recent use rate data. According to petitioners, the Commission relied solely on 1990 use rate data in developing its projection despite the fact that more recent data indicated that use rates are declining. Petitioners contend that the Commission's failure to utilize this more recent data was arbitrary and capricious. We must again disagree with petitioners.

[19] As discussed above, the assertion that the Commission relied solely on 1990 use rate data in developing its use rate projection is without merit. Moreover, the Commission clearly explained its decision not to rely on the more recent water use data. According to the Commission, the more recent data was "somewhat misleading" in that it considered "finished water only" and was "not corrected to account for water from municipal wells of the portion of the population not served by public water." When the data was adjusted to account for these deficiencies, the Commission concluded that it showed only a small decline in per capita water use which was easily explained as an expected year-to-year variation in a long-term demand projection. *Rehearing Order*, 72 F.E.R.C. at 62,217. RRBA challenges the accuracy of this explanation on several grounds. However, the Commission refused to consider each of these arguments on the ground that they were not raised in a timely motion for reconsideration. *Id.* at 62,217 n. 11. The review provisions of the FPA provide that a party "aggrieved by an order issued by the Commission . . . may apply for a rehearing within thirty days after the issuance of such order." 16 U.S.C. § 825(a). An objection not raised before the Commission in a timely request for rehearing may

not be considered by this court. *Id.* § 825l(b). There is no dispute that petitioners did not contest the Commission's explanation within the thirty-day time period. As a result, we are precluded from considering the issue on appeal.

c. Water Demand Projection.

Relying on its population and water use projections, the Commission derived a water demand figure for the five-city region for the year 2030. The Commission first adjusted its population projection of 1,306,000 to reflect the fact that only approximately 93.8 percent of the population will be served by public water in 2030. Multiplying this adjusted population figure by the projected per capita water use figure of 118 gpcd, the Commission reached a projected water demand for the five-city region of 144.6 mgd. Final EIS at 1-15 to 1-16.

[20] RRBA argues that the Commission erred in concluding that 93.8 percent of the five-city region's population would be served by public water in 2030. However, this claim was not raised in petitioners request for rehearing. We are therefore barred from considering the issue on appeal. 16 U.S.C. § 825l(b).

d. Water Supply Projection.

[21] Petitioners next challenge as arbitrary the Commission's projected water supply "safe yield" of 112.8 mgd. "Safe yield" is defined as the quantity of raw water that could be withdrawn from a water source during the worst dry period of record since 1930 without depleting the source. Final EIS at 1-16 to 1-17. Petitioners first argue that FERC's calculation of water supply arbitrarily excluded 3 mgd of water available from aquifer storage and recovery ("ASR") systems. In its *Rehearing Order*, the Commission explained that the ASR system was not relevant to the calculation of water supply in that it "is not a new source of water." An ASR system "merely stores water from the existing supply for retrieval at a later date," and thus is not relevant to a calculation of long-term water supply. *Rehearing Order*, 72 F.E.R.C. at 62,217. The Commission further explains the relevance of its

grounds for rejecting the ASR system data by noting that "an ASR system can accommodate only short term (seasonal) supply and demand; it does not resolve the significant long term regional water deficit described in the FEIS." *Id.* North Carolina's position that the ASR is relevant to the water available to a portion of the five-city area may be a reasonable one. However, FERC has considered and rejected that position in the language quoted above. It is not our role under an arbitrary and capricious review to reweigh the evidence, and we cannot say that the Commission's response to this comment was so unreasonable as to fail the deferential standard we must apply.

[22, 23] Petitioners make much of the fact that the Commission's draft EIS erroneously concluded that the Chesapeake ASR system had been abandoned due to cost. However, this error was not repeated in the Commission's *Rehearing Order*. See 72 F.E.R.C. at 4006. A final agency order is not rendered arbitrary and capricious simply because preliminary agency decisions contained errors. "Indeed, the very purpose of issuing tentative decisions is to afford the Commission an opportunity to correct any errors." *Freeman Eng'g Assocs., Inc. v. FCC*, 103 F.3d 169, 179 (D.C.Cir.1997).

[24] Finally, petitioners assert that the Commission, without explanation, excluded from its calculation of water supply 2 mgd of water available through reservoir modifications. As we read the *Rehearing Order*, the Commission's discussion of ASR systems was also meant to apply to the reservoir modification issue. Neither ASR systems nor reservoirs are new sources of water; both simply store water from existing supplies for use at a later time. Thus, under the Commission's reasoning, neither was relevant to a calculation of longterm water supplies. We recognize that the Commission's discussion of this issue was far from a model of clarity. But petitioners' discussion of the issue in their request for rehearing was tucked away in a footnote in a paragraph primarily devoted to a discussion of ASR systems. Under these circumstances, the Commission "cannot be asked to make silk purse responses to sow's

ear arguments.” *City of Vernon v. FERC*, 845 F.2d 1042, 1047 (D.C.Cir.1988).

e. Drought Margin.

Having projected water supply and demand for the five-city region, the Commission subtracted the former from the latter to reach a regional water supply deficit of 31.8 mgd. To this figure the Commission added a drought margin of 22.2 mgd to reach the projected water need of 54 mgd. Final EIS at 1-20 to 1-21. Petitioners raise several objections to this drought margin.

[25] Petitioners first contend that a drought margin of any size is unnecessary given that the Commission’s calculation of water supply was based on the “safe yield” which is defined as the quantity of raw water that could be withdrawn from a water source during the worst dry period of record since 1930 without depleting the source. We reject this argument. While the Commission’s calculation of water supply was based on the quantity of water available during drought conditions, the calculation also assumed “complete interconnection and optimization of the five-city water systems . . . , the imposition of mandatory water use restrictions or rationing during droughts, and depletion of water storage during a drought of equal or greater severity than that on which the safe yield estimates are based.” Final EIS at 1-20 to 1-21. But as the Commission explained, these assumptions are not consistent with “sound water supply planning” given that: (1) especially severe droughts might occur, (2) water sharing within the five-city region was not guaranteed, (3) water restrictions create public health and safety risks, and (4) future water demand might exceed projections. *Id.* at 1-21. It was to protect against these eventualities that an additional drought margin was included. We cannot say that such precautions are arbitrary or capricious.

[26] In addition to objecting to the drought margin *per se*, North Carolina also objects to the Commission’s calculation of the margin. North Carolina contends that it was arbitrary for the Commission to calculate the drought margin without taking into account the 50 mgd of water available from emergen-

cy wells during droughts. We disagree. The emergency wells in the five-city area are all owned by the jurisdictions surrounding Virginia Beach. While the wells are presently being leased back to Virginia Beach, these leases all expire by 1998 and the surrounding jurisdictions have indicated that they do not intend to renew the leases. *Rehearing Order*, 72 F.E.R.C. at 62,217. Therefore, it was entirely appropriate for FERC to exclude emergency well supplies when calculating the quantity of water that will be available for drought emergencies in the year 2030.

In a similar vein, North Carolina also argues that, in calculating the drought margin, the Commission arbitrarily failed to consider demand management techniques that could be employed during times of drought. This argument is without merit. The Commission clearly explained that it considered demand management techniques such as water rationing and use restrictions to be a threat to public safety and health. Final EIS at 1-21. For this reason, such measures were rejected as a solution to the five-city region’s long-term water supply deficit.

[27] Finally, RRBA argues that the Commission erred in simply adopting a Corps calculation of the necessary drought margin without independently verifying the Corps calculation. *See* 40 C.F.R. § 1506.5. The Commission contends that we should not reach this argument because it was not advanced before the Commission. In their rehearing motion, petitioners objected to the Commission’s reliance on population and water use projections supplied “by the cities to be served by the project and the [HRPDC].” Rehearing Motion at 8. Petitioners did not object to the Commission’s reliance on the Corps’ drought margin calculation. We therefore agree with the Commission that petitioners waived this objection. 16 U.S.C. § 825l(b).

In sum, we hold that the Commission’s calculation of water need for the five-city region was supported by substantial evidence and was neither arbitrary nor capricious.

2. Kerr Reservoir

[28] Petitioners also maintain that the Commission failed to respond to significant

comments concerning the availability of Kerr Reservoir water for purposes of mitigating the Pipeline Project's environmental effects on the Roanoke River. As mentioned above, the Commission prepared an EIS for the Pipeline Project analyzing the effects of the Project on the Roanoke River Basin. Final EIS at 3-1, 5-2. The EIS concluded that the Project withdrawals will "not have any significant adverse effects" on the Basin. *Id.* at 6-4. This conclusion was premised on the Commission's belief that the water Virginia Beach had stored in Kerr Reservoir would be available for release to mitigate the Project's downstream effects. *Id.* at 4-31. Petitioners contend, however, that evidence before the Commission demonstrated that Virginia Beach was not legally entitled to order releases from Kerr Reservoir.

Petitioners' argument is without merit. The Commission concluded in its *License Amendment Order* that "Virginia Beach would be able to use its stored water to replace withdrawals on a gallon-for-gallon basis" to meet the striped bass target flows. 72 F.E.R.C. at 61,398. This conclusion appears consistent with the provisions of Virginia Beach's contract with the Corps for the storage of water in Kerr Reservoir which provides that Virginia Beach has the "right to order releases to be made" subject only to the government's rights to maintain downstream releases to meet established water requirements, to preserve life and/or property, and to maintain the project facilities. *See Contract Between the United States of America and the City of Virginia Beach for Water Storage in Kerr Reservoir* at 3. To the extent that evidence presented by petitioners contradicted the express language of this contract, it was rejected by the Commission.

3. Other Claims.

Petitioners claim that the Commission's decision was arbitrary and capricious in numerous other respects. Having considered each of these arguments carefully, we find them unworthy of separate discussion. Suffice it to say that we reject each of the additional claims.

III. Conclusion

For the foregoing reasons, we conclude that the Commission was not required to obtain a water quality certification from the state of North Carolina prior to granting the amendment to VEPCO's license for FERC Project No. 2009. We further conclude that the Commission's order granting the license amendment was neither arbitrary nor capricious. We therefore deny the petition for review.

WALD, Circuit Judge, dissenting:

The majority holds (1) that the Federal Energy Regulatory Commission ("FERC") did not err in granting the Virginia Electric and Power Company ("VEPCO") an amendment to its license for the Lake Gaston power project authorizing the withdrawal of sixty million gallons per day of project water without requiring VEPCO to obtain a water quality certification from the State in which the power project's "discharge" originates, and (2) that FERC's decision to issue this license amendment was not arbitrary and capricious. I disagree with both of these propositions.

A. *North Carolina's Clean Water Act § 401(a)(1) Certification Rights*

The first paragraph of the Federal Water Pollution Control Act, popularly known as the Clean Water Act ("the Act"), declares that its goal is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). The second subsection sets forth Congress' overarching policy in the Act, of "recogniz[ing], preserv[ing], and protect[ing] the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution...." *Id.* at § 1251(b). The Act charges each State with the duty of instituting comprehensive standards establishing quality goals for all intrastate waters. *See* 33 U.S.C. §§ 1311(b)(1)(C), 1313.

Section 401(a)(1) of the Act, 33 U.S.C. § 1341(a)(1), implements the policy of empowering States to protect their water quality programs by authorizing them to veto federal licenses or permits that threaten to undermine the quality of their waters. Specifically, § 401(a)(1) requires "[a]ny applicant

for a Federal license or permit to conduct any activity ... which may result in any discharge into the navigable waters" to provide the licensing or permitting agency with "a certification from the State in which the discharge originates or will originate" that the discharge does not threaten the water quality standards that the State has implemented pursuant to other provisions of the Act. *Id.* I disagree with the majority's conclusion that North Carolina had no such certification right with regard to this license amendment, because I believe it ignores the language, structure, and purpose of the Act, and wrests away from North Carolina the very power to make water quality judgments about its own waterways that Congress expressly meant for that State alone to have.

The § 401 certification right is an essential component of the Act's state-oriented regulatory scheme. See *Keating v. FERC*, 927 F.2d 616, 622 (D.C.Cir.1991) ("The States remain, under the Clean Water Act, the prime bulwark in the effort to abate water pollution ... Congress intended that the States would retain the power to block, for environmental reasons, local water projects that might otherwise win federal approval.") (citation and internal quotation marks omitted). Obviously, how courts construe the Act's language specifying those situations in which States may wield this powerful weapon can critically affect their ability to protect the integrity of their waters in the way Congress intended. Too stingy an interpretation of § 401(a)(1) will severely burden each State's ability to implement the water quality program mandated by the Act, and will frustrate Congress' clear intent to institute a system under which States carry both the responsibility of setting their own water quality standards and a corresponding power to protect

those standards from federally-licensed activities that threaten to undermine them. It is precisely because the § 401(a)(1) certification right is so vital to each State's ability to maintain its water quality that thirty-nine States signed an *amicus* brief strongly opposing FERC's assertion that North Carolina has no certification rights over this license amendment. See Brief of *Amici Curiae* States of Alabama, Alaska, Arizona, Arkansas, California, Connecticut, Delaware, Florida, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nevada, New Hampshire, New Mexico, New York, North Dakota, Ohio, Oklahoma, Pennsylvania, South Dakota, Texas, Utah, Vermont, Washington, West Virginia, and Wyoming.

The majority assumes *arguendo* that the flow of water through the power project's turbines in North Carolina is a § 401(a)(1) "discharge" implicating that State's certification rights, and this assumption is in fact required under the precedents set by the Supreme Court,¹ this court,² and FERC.³ Furthermore, it appears that North Carolina will wield a § 401(a)(1) certification right in 2001, when the project's license will expire and VEPCO will request a new license. See Brief for Appellant Roanoke River Basin Association at 18-22. Yet the majority reaches the paradoxical conclusion that FERC may approve this license amendment, which all parties concede will alter the North Carolina "discharge," without requiring any certification from North Carolina. It is candidly difficult for me to get past this conundrum: Logically, if a State must consent before a new discharge is introduced into its waters, then a change in that discharge must require

1. See *PUD No. 1 of Jefferson County v. Washington Dep't of Ecology*, 511 U.S. 700, 711, 114 S.Ct. 1900, 1908, 128 L.Ed.2d 716 (1994) ("There is no dispute that petitioners were required to obtain a certification from the State pursuant to § 401. Petitioners concede that, at a minimum, the project will result in two possible discharges—the release of dredged and fill material during the construction of the project, and the discharge of water at the end of the tailrace after the water has been used to generate electricity.").

2. See *National Wildlife Federation v. FERC*, 912 F.2d 1471, 1484 (D.C.Cir.1990) ("Common sense supports FERC's conclusion that the discharge in this case would occur at the dam, where the flow of water would be blocked and consequently the water would be backed up....").

3. See *City of Fort Smith*, 42 F.E.R.C. ¶ 61,362 at 62,047 (1988) ("In the case of the Lee Creek project, the discharge will occur over the dam and from the powerhouse tailrace"), *on reh'g*, 44 F.E.R.C. ¶ 61,160 at 61,513 (1988), *aff'd*, 912 F.2d 1471 (D.C.Cir.1990).

a new consent.⁴ A question might, of course, be raised as to whether some license amendments are so clearly outside of the scope of § 401(a)(1) as to create no certification rights; license amendments that propose to alter a project in a way that will have no effect on an existing discharge, or that will have at most a *de minimis* effect on the discharge, may perhaps be granted without requiring a new certification from the State in which the discharge originates.⁵ But the majority imposes a far more sweeping and arbitrary limitation on State certification rights, by declaring that no alteration of a discharge triggers a certification right unless it represents an "addition . . . of a substance or substances" to the discharge. Majority opinion at 1187.

I reject the majority's "substance-adding" threshold condition on the exercise of State certification rights. It badly distorts the definitions section of the Act, and improperly usurps crucial judgments on water quality that Congress reserved for the States into which the discharges flow. The initial flaw is the majority's characterization of the Act's definition of "discharge of a pollutant" as "the nearest evidence we have of definitional intent by Congress" as to when States have certification rights under § 401(a)(1). *Id.* The Act's legislative history says otherwise. The language creating certification rights in States in which a "discharge" may "originate" as a result of federally-licensed activities first appeared as part of the Water Quality Improvement Act of 1970, Pub.L. No. 91-224, 84 Stat. 91 (1970). The phrase "dis-

charge of a pollutant," on which the majority leans so heavily, was nowhere to be found in that early version of the Act. It was only added with the passage, two years later, of the Federal Water Pollution Control Act Amendments of 1972, Pub.L. No. 92-500, 86 Stat. 816 (1972), which introduced it in conjunction with a set of provisions requiring permits for the "discharge of pollutants." 33 U.S.C. § 1342. Because the bare-bones term "discharge" was part of the Act before the 1972 amendments, and because it wasn't until two years later that Congress organized its new permit program around the separately coined and defined phrase "discharge of a pollutant," the notion that the latter phrase provides compelling evidence of the meaning of the former term is totally unpersuasive.

An even stranger facet of the majority's statutory analysis is its insistence that "near[er]" evidence of Congress' "definitional intent" as to what constitutes a discharge can be found by looking at the Act's definition of the phrase "discharge of a pollutant" than by relying on the Act's own definition of the very term under discussion—"discharge." The Act expressly states that the term "discharge" when used without qualification *includes* a discharge of a pollutant, and a discharge of pollutants." 33 U.S.C. § 1362(16) (emphasis added). The only inference I can discern from this clear expression of nonexclusivity in the definition of "discharge" is that it was meant to encompass a wider array of interferences with the navigable waters than would qualify as "discharges of

4. The majority questions the logic of this assertion by arguing that it would be irrational as applied to statutes that refer to "conduct resulting in injury" and "transactions resulting in financial loss." See majority opinion at 1186 n.2. But these analogies are clearly inapt. The more appropriate analogy would be to an argument that a statute referring explicitly to conduct that threatens to cause one *type* of injury or loss might be construed also to cover closely related types of injury or loss, rather than to an argument that a statute referring to conduct that causes some injury or loss should be construed also to cover conduct that causes the *reduction* of these ills. After all, the record before us involves a situation in which a *reduction* in a discharge may *increase* the very sort of "injury" to a State's water quality that the Act seeks to empower States to prevent. See *infra*.

5. Additionally, there is in all cases the threshold requirement that a discharge covered by the license in question must "originate" within the State claiming a § 401(a)(1) certification right. The rights of "affected" States that cannot satisfy this threshold condition are defined in § 401(a)(2). See 33 U.S.C. § 1341(a)(2). Since there is no question that a discharge covered by the license that FERC amended originates in North Carolina, my interpretation would not by any means make § 401(a)(2) superfluous, *cf.* majority opinion at 1186 (summarizing FERC's arguments); if North Carolina were not the locus of a discharge covered by the license to be amended, its rights would be defined by § 401(a)(2), as are the rights of downstream "affected" States in regard to this license amendment.

pollutants.” See *National Wildlife Federation v. Gorsuch*, 693 F.2d 156, 171–72 (D.C.Cir.1982) (distinguishing between statutory definitions that specify what a term “means” and those that offer a non-exclusive listing of what a term “includes”).⁶ How the majority manages to limit the scope of the unqualified term “discharge” to one subset that is “include[d]” in the broader term is beyond my ken.

Further evidence that Congress intended for States to have the power to protect their waters from interferences created by changes to a “discharge” that do not comprise the “addition” of any “substance or substances” is observable in the Act’s treatment of the term “pollution.” Section 304 of the Act “expressly recognizes that water ‘pollution’ may result from ‘changes in the movement, flow, or circulation of any navigable waters....’” *PUD No. 1*, 511 U.S. at 719–20, 114 S.Ct. at 1913 (quoting 33 U.S.C. § 1314(f)). The Environmental Protection

Agency’s regulations implementing the Act likewise express a concern with interferences that have “flowage effects.” *Id.* I had thought it beyond dispute that even alterations of existing discharges that do not “add” any “substance or substances” to the water may yet affect the water’s “movement, flow, or circulation,” that this effect may constitute “pollution,” and that “[i]t is the policy of the Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution.” 33 U.S.C. § 1251(b) (emphasis added).⁷ Yet the majority is comfortable in wrenching away from a State this very power to protect its water quality from the “pollution” threatened by the alteration of an existing discharge.

The majority’s niggardly construction of the term “discharge” threatens a congressional policy permeating the general structure of the Act, a policy specifically declared in the Act’s second subsection: States were

6. I cannot fathom the majority’s reasoning that, since the phrase “discharge of a pollutant” describes the addition of substances to the water, Congress meant for the term “discharge” also to refer only to the addition of substances to the water. See majority opinion at 1187 n.4. I find the majority’s reasoning untenable—it seems far more reasonable that, by retaining the term “discharge” unmodified by the words “of a pollutant,” Congress must have intended that the term would have a broader meaning when used *without* these restrictive modifying words than it does when used *with* these restrictive modifying words. And this broader meaning should encompass the subtraction of part of an existing discharge because, as I explain *infra*, the subtraction of water from a discharge may be just as harmful to a waterway as the addition of substances to the water. Under the majority’s reasoning, even the initial construction of this power project—which created a new discharge in North Carolina—would not have triggered any certification rights in North Carolina if § 401(a)(1) had then been in effect, provided that the project did not add any substance to the water that passed through the dam turbines. Such a result, of course, would be at odds with the majority’s assumption *arguendo* that the flow of water through a power project’s turbines is a discharge. See majority opinion at 1187.

7. Employing the currently popular “dictionary jurisprudence,” the majority reasons that the “activity” here—the diversion of water to Virginia Beach—will not “result in” a discharge, as required by § 401(a)(1), see majority opinion at

1188, because the activity authorized by the license amendment gives rise only to an “altered” discharge, rather than a brand new one. I fail to see how this dictionary exercise provides any compelling reason to ignore the implications of the Act’s State-enforcement policy and central concern with preventing and eliminating “pollution.” To the contrary, it would block a State’s certification rights even in the case of a license amendment authorizing the “addition” of a “substance or substances” to an existing discharge, since the “addition” of substances merely “alters” a discharge, and does not cause the discharge to “arise as a consequence” of the addition. *Id.* I find the majority’s use of the dictionary to support its assertion that there is no hint of ambiguity in § 401(a)(1), see *id.* at 1183 n. 1, unacceptable; to my mind, there is certainly enough ambiguity to justify consideration of the purpose and structure of the Act in determining the scope of States’ certification rights. After all, the Act defines the term “discharge” in a purposely open-ended fashion, see 33 U.S.C. § 1362(16), and § 401(a)(1) doesn’t even require concrete certainty that a discharge will “result” from the activity to be licensed—it requires State certification for any activity that “may result in” a discharge. 33 U.S.C. § 1341(a)(1) (emphasis added). Imposing dictionary-derived limitations on the Act is particularly dangerous in this context and invites egregious abuses—for example, a licensee could obtain a State’s certification of a minor, non-threatening discharge and then transform the discharge into a pollution-causing nightmare, evading the State’s power to prevent the change by characterizing it as merely as merely an “alteration” of an existing discharge.

to be put in charge of making and enforcing the crucial judgments surrounding water quality within their borders. See 33 U.S.C. § 1251(b). When a federally-licensed activity would "result in" a "discharge" into the State's waters, the decision whether that interference with the State's waters would be tolerated was to belong solely to the State in which that discharge originated, not to a federal agency or to a federal court. Given the relative competency of State water quality agencies and federal courts, this policy seems quite sound. The waterways that we judges see only as lines on a diagram are in reality extraordinarily complex and sensitive systems in which water, oxygen, dissolved minerals, sediment, and other materials intermingle and interact. Interferences with the integrity of a waterway need not take the archetypal form of sludge spewing from an outfall; other changes can be just as deadly to fish and other wildlife as are toxic chemicals. For example, alterations that cause the temperature of the water in a discharge to rise, or that rearrange the spatial distribution of oxygen, sediment, or minerals in the downstream water, could be catastrophic from the perspective of water quality, see *Gorsuch*, 693 F.2d at 163-64.⁸ Yet the effect of this court's decision will be to bar States in which altered discharges originate from acting to protect their waters from such pernicious effects, whenever the alteration does not "add" any "substance or substances" to the water. I do not believe Congress intended to give this court's essentially *ad hoc* and inevitably inexpert judgments precedence over the expert judgments of the States' water quality authorities, in the making of such crucial determinations.

The majority itself recognizes, in expressing "serious reservations" about FERC's ability to limit by regulation States' certification rights to license amendments that might have a "material adverse impact" on the water quality in a discharge, that judgments intrinsically related to water quality in the context of the alteration of existing discharg-

es are the sole province of the States in which the discharges originate. See majority opinion at 1186 (quoting 18 C.F.R. § 4.38(f)(7)(iii) (1995)). By empowering itself to make a threshold determination regarding whether an alteration in a discharge threatens a "material adverse impact" on the State's water quality, FERC is taking from the State a power that Congress intended for the State alone to have. Section 401(a)(1) enables States to raise an absolute bar to federal licenses that threaten their waters; Congress completely stripped federal agencies of the power to issue covered licenses without the State's certification. Indeed, FERC is assigning itself a function which makes no sense in light of the structure of the Act, which puts each State in charge of authoritatively defining the term "water quality" within its borders—why, in this one context, should a federal agency be able to stand in a State's shoes and make the State's "water quality" determinations for it? Thus, I share the majority's concerns about FERC's regulation, but I can't help but wonder why the majority doesn't feel the same discomfort about its own arrogation of a similar power to preempt a State's water quality determinations. Congress did not intend for this court to usurp North Carolina's power to manage its water quality program any more than it intended to give FERC such a role, and surely we are as ignorant as FERC on the subject of what "water quality" is optimal for the citizens of North Carolina.

The Supreme Court and our own court have previously exercised appropriate reluctance to read the Clean Water Act in the arbitrary and artificial fashion proffered today. When a city and a utility district urged the Supreme Court in *PUD No. 1* to adopt a formalistic approach very much like the majority's, the Court categorically refused. The *PUD No. 1* petitioners asserted that the Clean Water Act is concerned only with water "quality," and does not regulate water "quantity." See *PUD No. 1*, 511 U.S. at 717-19, 114 S.Ct. at 1912. The Supreme Court

8. In *Gorsuch*, this court observed that the term "pollutant" might reasonably include such "Dam-Induced Water Quality Changes" as low dissolved oxygen, dissolved minerals, heat, sediment, and oxygen "supersaturation," *id.* at 161,

166, though we deferred to the EPA's interpretation of the term "pollutant," in a different section of the Act, as not including these effects. See *id.* at 183.

rejected this "artificial distinction," *id.*, noting that water quantity is closely related to water quality, and that both the definitions section and § 304 of the Act set forth a "broad conception of pollution" which "expressly evinces Congress' concern with the physical and biological integrity of water." *Id.* at 719, 114 S.Ct. at 1913. And in *National Wildlife Federation* this court likewise recognized that the Clean Water Act is not to be constrained by artificial limitations such as the majority's "substance-adding" standard. In that case, we found that the "backing up" of water by a dam constituted a § 401(a)(1) "discharge," see *National Wildlife Federation*, 912 F.2d at 1483-84; in so doing, we apparently recognized that an interference with a river that results in the alteration of the "movement, flow, or circulation" of water (and thus causes "pollution") is cause for the recognition of a certification right in the State where this discharge originates.⁹ Since the "backing up" of water does not satisfy the majority's "substance-adding" standard, it is clear that today's holding is in tension with our own precedent.¹⁰

Instead of crafting an arbitrary and exceedingly formalistic new standard governing the scope of State certification rights under § 401(a)(1), we should be traversing the main channel charted by the Act, the Supreme Court, and our own precedent. These authorities require us to find that the license amendment at issue in this case is one that triggers a certification right in North Carolina, the State in which the project's discharge originates. Thus I would suspend consideration of the other challenges to these orders, and require FERC to await a § 401(a)(1) certification from North Carolina

before considering whether to grant the amendment.

B. FERC's Finding of a Need to Withdraw Sixty Million Gallons of Water per Day

Even if North Carolina's failure to certify the license amendment were not contrary to the Act, however, I would vacate the challenged orders and remand this matter to FERC on the ground that FERC's estimate of the "need" for the fifty-four million gallons per day to be supplied by the pipeline project was arbitrary and capricious.

FERC had already reached the conclusion that Virginia Beach needed to withdraw sixty million gallons of the Roanoke River per day by October of 1994, when it declared that "[n]o new analysis" of this estimate was necessary. Scoping Document 2, FERC No.2009-003; Deferred Appendix "D.A." at 2547, 2551. It is hardly surprising, therefore, that FERC's July, 1995 Final Environmental Impact Statement arrived at this precise estimate of Virginia Beach's "need." Nor is it surprising that FERC's attempt to disguise the fact that it was "backing into" this number fails rather badly.

I agree with my colleagues that the first few steps in FERC's analysis were tolerably reasonable. FERC organized its analysis into separate projections of the demand for water in the year 2030 and of regional supply in that year. The basic structure of the inquiry was sound, as was the projection of the region's 2030 demand for water. But when FERC turned to the supply side of the equation, its logic became curiouser and curiouiser. On the apparent assumption that the water supply from existing sources would remain constant through 2030, FERC's pro-

9. In that case, we declined to recognize a certification right in the upstream State, however, because we found that the discharge "originate[d]" at the dam, which was located downstream in another state. See *id.* at 1484.

10. The majority disclaims tension between this case and *National Wildlife Federation* on the grounds that the parties in that case did not dispute the question of whether the construction and operation of the dam would create a discharge, and that the discharge at issue related to a new dam, rather than to the altered operations of an existing dam. See majority opinion at

1188. But the *National Wildlife* opinion refers to the expulsion of water through the dam's turbines as a § 401 "discharge," and describes the "discharge" as follows: "[T]he discharge in this case would occur at the dam, where the flow of water would be blocked and consequently the water would be backed up" *National Wildlife Federation*, 912 F.2d at 1484 (emphasis added). The fact that the "backing up" of water resulted from the construction of a new dam, rather than from the alteration of an existing dam, played no part in the *National Wildlife Federation* court's analysis.

jection of 2030 supply was based on the water available from existing sources. Specifically, FERC's supply estimate was based on the amount the residents of the region could withdraw from the existing water sources during the worst drought of record since 1930; this drought occurred in 1930, and the U.S. Geological Survey estimates that such droughts may recur at intervals of between thirty and eighty or more years. The estimated "Water Supply Deficit" for 2030, based on this drought-adjusted supply, came out to 31.8 million gallons per day.

Common sense would seem to indicate that the obvious way to prepare for short-term periods of special water need is to create water storage systems that can be filled during nondrought periods, exhausted to meet these short-term needs when they arise, and refilled when the droughts recede. But FERC rejected all of the storage options pressed by participants in the proceedings below, arguing that storage techniques were irrelevant to its "need" calculation because storage systems do not constitute "sources" of water, and because they serve only short-term need. *See* majority opinion at 1192. Of course, the fact that storage systems aren't new "sources" of water in the sense of meeting long-term, continuous demand hardly justifies FERC's refusal to consider the availability of these systems, because they just as clearly are precisely suited to serve short-term periods of special demand that occur at intervals more than long enough to permit the storage systems to be replenished, and thus could be used to obviate any increment in the quantity of water to be *constantly* supplied to the region to protect it from droughts of extraordinary severity.

A similar illogic permeates FERC's attempt to explain its refusal to take account of the water available from the region's wells. FERC specifically refused to factor in the water available from two Norfolk wells on the ground that these wells were meant to be used only during droughts that threaten mili-

tary readiness, and FERC likewise thought it unnecessary to consider the water available from unspecified "emergency wells" in the region on the ground that their use was restricted to municipally-declared emergencies.¹¹ The Corps, FERC noted, "considers these wells as protection against extreme droughts." D.A. at 3166. I can only speculate as to what the terms "municipal emergency" and "extreme drought" are meant to cover, if not droughts more severe than the worst since 1930. FERC's reasoning falls far short of providing any rational or even vaguely comprehensible explanation for its refusal to integrate into its need calculation the water available from "emergency" wells and water storage systems—the most intuitively obvious strategies for dealing with infrequent, short-term, emergency water needs.

Having rejected the commonplace strategies that would enable the region to weather droughts, but would not enable FERC to claim that a pipeline continuously withdrawing sixty million gallons of water per day was needed, FERC's next step was to ratchet its "need" estimate up to that amount. For this final adjustment, FERC set out five reasons for its conclusion that a second "drought adjustment" was necessary, explaining that merely covering the 31.8 million gallon per day "deficit" was insufficient because:

- it provides no protection against droughts of greater severity than those that occurred in the past;
- there is no guarantee that water sharing would occur among the cities;
- severe water use restrictions would continue to place local users at a public health and safety risk;
- future water demands may exceed projections; and
- loss of a water supply in this large metropolitan area would be catastrophic.

D.A. at 3167, *see also* majority opinion at 1193. For these "reasons," FERC concluded

based on the supply of water available to the region, rather than to Virginia Beach alone, and therefore it is irrelevant that this emergency supply may become unavailable to one of the cities in the region.

11. The majority asserts that FERC's refusal to consider the water in these wells in its estimate of the regional supply was appropriate because these wells may not be available for use by Virginia Beach after next year. *See* majority opinion at 1193. But this portion of FERC's analysis was

that it was necessary to jack up the "need" estimate to include another thirteen to sixty-eight million gallons per day of continuous supply. But these "reasons" simply amount to FERC's generalized worry that its entire analysis leading up the 31.8 million gallon per day "deficit" might be flawed in such a way as to make its need estimate too low. If water were an unlimited, free resource, it might seem appropriate to double the estimate of water "need" in case actual need were to exceed all expectations, but if water were an unlimited, free resource, nothing much would turn on whether FERC's "need" estimate satisfied any baseline standard of rationality. FERC itself recognizes that the amount of water to be removed from the river must correspond to a rational calculation of actual "need," and thus makes a show of reaching this estimate by using the available data and reasonable assumptions; it cannot at the end of the game simply knock the pieces off the chessboard in the name of unforeseen contingencies and unprecedented emergencies, and still claim that it did not act arbitrarily or capriciously because it played by the rules *almost* to the end.

Because, finally, I believe that the license amendment FERC approved by its challenged order may not be granted consistently with § 401(a)(1) of the Clean Water Act unless and until North Carolina has certified that the activity to be conducted pursuant to the amendment does not threaten that State's water quality standards, I would vacate FERC's order and rehearing order, and remand the matter to FERC with the instruction that it withhold the amendment pending North Carolina's certification. Even if I did not believe that FERC's failure to require VEPCO to obtain North Carolina's certification was illegal, I would still vacate these orders on the ground that they were arbitrary and capricious, and would remand the matter to FERC for an estimate of Virginia Beach's "need" for water that gives due consideration to storage options and "emergency" sources. On both of these grounds, I respectfully dissent from the majority opinion.



CITY OF COLUMBUS, OHIO, Appellant

v.

COMMISSIONER OF INTERNAL
REVENUE SERVICE,
Appellee.

No. 96-1282.

United States Court of Appeals,
District of Columbia Circuit.

Argued Feb. 24, 1997.

Decided May 13, 1997.

City filed petition seeking declaratory judgment that interest on proposed bonds, intended to satisfy financial obligation to state pension fund, would be tax-exempt. The Tax Court, 106 T.C. 325, denied relief, and city appealed. The Court of Appeals, Randolph, Circuit Judge, held that it would have to be determined whether city would presently acquire investment-type property by prepaying obligation to state before bonds could be treated as arbitrage bonds ineligible for tax-exempt status.

Vacated and remanded.

1. Internal Revenue § 3132.10

Even if state's prior assumption of municipal pension liability qualified as property, new municipal bonds issued to refinance resulting debt to state did not involve any prepayment of that property and such property was not treated as investment-type, such as would make bonds arbitrage bonds ineligible for tax-exempt status; it would have to be determined on remand whether city would presently acquire investment-type property by prepaying obligation to state. 26 U.S.C.A. §§ 103(b), 148(b)(2)(D); Technical and Miscellaneous Revenue Act of 1988, § 1013(d)(3), 26 U.S.C.A. § 141 note; 26 C.F.R. §§ 1.148-1(b), 1.148-9(b)(1).

2. Internal Revenue § 3132.10

It had to be determined whether city, by satisfying its obligation to state pension fund,