SMALL HYDROPOWER DEVELOPMENT AND THE ENVIRONMENT: A SURVEY OF STATE AND FEDERAL LAW

BENSON D. SCOTCH*

INTRODUCTION

This article analyzes state and federal laws dealing with the environmental impacts of hydroelectric facilities. No attempt will be made to distinguish between impoundment dams and low head projects, as most statutes discussed deal with hydro facilities generally. Some kinds of small hydro facilities, like run-of-the-river projects, tend not to raise certain problems—such as the reduction in dissolved oxygen associated with impoundments. The attempt here, however, is to include the largest range of projects possible, even if some legal issues for hydro dams as a class will not be significant for smaller scale projects. The reader is left to apply whatever is applicable in particular cases because of the great variability in low head projects. The article emphasizes state regulation in Vermont, which is typical of modern state hydro regulation.

I. STATE REGULATION OF HYDRO AND FEDERAL PREEMPTION

It has been thirty-five years since the United States Supreme Court squarely settled the preemptive authority of the Federal Power Act[1] over construction of essentially all hydroelectric generating facilities in *First Iowa Hydro-Electric Cooperative v. Federal Power Commission*.[2] Yet state regulation has not faded in the face of undoubted federal supremacy, and in the 1980's not even the Federal Energy Regulatory Commission (FERC) denies that dual federal and state authority is well established and may even grow. In states such as Vermont the major opportunity for local environmental review of a hydroelectric project may occur as part of the state licensing procedure. Therefore, any policy favoring sole federal authority should be weighed against the concern of Congress

* Assistant Attorney General, Montpelier, Vermont; LL.B., Harvard Law School 1961.

1. 16 U.S.C. §§ 791-823a (1976 & Supp. III 1979).

2. 328 U.S. 152 (1946).

to include the public in the environmental review process, as evidenced in the National Environmental Policy Act,[3] the Clean Water Act,[4] and the Clean Air Act.[5]

First Iowa held that compliance with state permit requirements was not a condition precedent to securing a federal license.[6] The Court did not suggest, however, that states were precluded from regulating certain aspects of hydro project development as long as the state did not seek to proceed beyond its authority:

> In the Federal Power Act there is a separation of those subjects which remain under the jurisdiction of the States from those subjects which the Constitution delegates to the United States and over which Congress vests the Federal Power Commission with authority to act. To the extent of this separation, the Act establishes a dual system of control.[7]

Although state authority is limited by section 9 of the Federal Power Act (FPA),[8] state utility regulatory statutes have not limited their scope to the section 9 areas: bed and banks, appropriation, diversion and use of water, need, and state corporate law. Vermont's statute, which requires utilities to obtain certificates of public good before constructing an electric generating or transmission facility, is typical of state laws.[9]

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3. 42 U.S.C. §§ 4321-4369 (1976 & Supp. II 1978).
4. 33 U.S.C. §§ 1251-1376 (1976 & Supp. III 1979).
5. 42 U.S.C. §§ 1857-1858 (1976 & Supp. II 1978).
6. 328 U.S. 152, 170 (1946).
7. *Id.* at 167.
8. Each applicant for a license under this chapter shall submit to the commission . . .

   . . . .

   (b) Satisfactory evidence that the applicant has complied with the requirements of the laws of the State or States within which the proposed project is to be located with respect to bed and banks and to the appropriation, diversion, and use of water for power purposes and with respect to the right to engage in the business of developing, transmitting and distributing power, and in any other business necessary to effect the purposes of a license under this chapter.

16 U.S.C. § 802(b) (1976).

9. VT. STAT. ANN. tit. 30, § 248 (Supp. 1980).

   (a) No company, as defined in section 201 of this title, or cooperative, may begin site preparation for or construction of an electric generation facility

The Vermont Supreme Court has responded to this facial disparity by interpreting *First Iowa* broadly to exclude Vermont Public Service Board (PSB) *jurisdiction*, though such a result is not mandated by the United States Supreme Court.[10] The court said in *Citizens Utilities Co. v. Prouty*:[11]

> Where a federal agency or administrative body acts in a field permitted by a valid federal statute, its authority is para-

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within the state, or electric transmission facility within the state which is designed for immediate or eventual operation at any voltage or exercise the right of eminent domain in connection with site preparation for or construction of any such transmission or generation facility, except for the replacement of existing facilities with equivalent facilities in the usual course of business, unless the public service board first finds that the same will promote the general good of the state and issues a certificate to that effect. The public service board shall hold a public hearing on each petition for such finding and certificate in a county in which any portion of the construction of the facility is proposed to be located. Notice shall be given to the attorney general, and the operators of public service, the department of health, agency of environmental conservation, historic sites board, scenery preservation council, state planning office, agency of transportation and by certified mail shall be given to the chairman or director of the municipal and regional planning commission and the municipal legislative body for each town and city in which the proposed facility will be located not less than 30 days prior to the hearing. Notice of the public hearing shall be published in a newspaper of general circulation in the county or counties in which the proposed facility will be located two weeks successively, the last publication to be at least 12 days before the day appointed for the hearing.

(b) Before the public service board issues a certificate of public good, it shall find that the construction:

(1) will not unduly interfere with the orderly development of the region with due consideration having been given to the recommendations of the municipal and regional planning commissions and the municipal legislative bodies;

(2) is required to meet the need for present and future demand for service;

(3) will not adversely affect system stability and reliability and economic factors;

(4) will not have an undue adverse effect on esthetics, historic sites, air and water purity, the natural environment and the public health and safety;

(5) plans have been submitted to the municipal and regional planning commissions in accordance with this section.

Id.

10. Citizens Utility Co. v. Prouty, 122 Vt. 443, 176 A.2d 751 (1961); *In re* Bellows Falls Hydro-Electric Corp., 114 Vt. 443, 47 A.2d 409 (1946).

11. 122 Vt. 443, 176 A.2d 751 (1961).

> mount to that of any state board or agency, and where a federal board assumes jurisdiction of a particular case after a state board has taken jurisdiction thereof, the state board's jurisdiction is ousted.[12]

Under title 30, section 248 of Vermont Statutes Annotated the PSB must issue a certificate of public good before site preparation or construction may begin on any new electric generation or transmission facility.[13] The Vermont cases appear to presume that power to require a section 248 hearing and to issue a certificate of public good are *per se* precluded by *First Iowa*. Although the PSB may not deny a certificate of public good once FERC issues a permit, *First Iowa* does not prevent the PSB from issuing other orders which are not inconsistent with that permit.[14] Under the Supreme Court's recent analysis of federal preemption, the question is whether the regime of dual regulation—state and federal—has the *effect* of conflict, not whether the stated purpose of the statutes appears to be in conflict. Under a "stated purpose" test, the Vermont certificate of public good statute would be preempted.

As the Supreme Court said, however, in *Florida Lime & Avocado Growers, Inc. v. Paul*:[15]

> [I]t is suggested that the coexistence of federal and state regulatory legislation should depend upon whether the *purposes* of the two laws are parallel or divergent. This Court has, on the one hand, sustained state statutes having objectives virtually identical to those of federal regulations, . . . and has, on the other hand, struck down state statutes where the respective purposes were quite dissimiliar. . . . *The test of whether both federal and state regulations may operate, or the state regulations must give way, is whether both regulations can be enforced without impairing the federal superintendence*

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12. *Id.* at 452, 176 A.2d at 757 (citations omitted).

13. VT. STAT. ANN. tit. 30, § 248 (Supp. 1980).

14. Section 248 has never been amended to exclude hydroelectric facilities. The question of whether a hydro developer must comply with the procedural requirements of § 248 even if the PSB lacks authority to issue a certificate of public good is still open.

15. 373 U.S. 132 (1963).

> *of the field, not whether they are aimed at similiar or different objectives.*[16]

In *Huron Portland Cement Co. v. City of Detroit*,[17] the Supreme Court analyzed preemption in terms of the "actual conflict" standard:

> *In determining whether state regulation has been preempted by federal action, "the intent to supersede the exercise by the State of its police power as to matters not covered by the Federal legislation is not to be inferred from the mere fact that Congress has seen fit to circumscribe its regulation and to occupy a limited field.* In other words, such intent is not to be implied unless the act of Congress fairly interpreted is in actual conflict with the law of the State.[18]

Federal preemption alters the nature of the section 248 process since the avowed purpose of the Vermont statute is to determine whether an electrical generation or transmission facility should be built. An ordinary permit is a document issued by the state which authorizes private action in a regulated field. If the PSB lacks the power to deny a certificate of public good and enforce its denial order against a developer with a FERC license, then the end product of the state regulatory process cannot be called a true permit. Despite this lack of permit status, the authority remaining in the state may have a significant function. The developer may be required to analyze the impact of a proposed hydro facility, and the permit may be conditioned in accordance with the criteria under section 248(b), where those conditions do not conflict with federal law or the terms of a FERC permit.[19]

The legislative decision to build state environmental review into the section 248 process leaves the PSB in a quandary when a hydro developer seeks to avoid review on grounds that the PSB cannot exercise binding authority in granting or denying a certificate of public good. The project's proponents may argue that sec-

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16. *Id.* at 142 (citations omitted) (emphasis added).

17. 362 U.S. 440 (1960).

18. *Id.* at 443 (quoting Savage v. Jones, 225 U.S. 501, 533 (1912)) (emphasis added).

19. FERC's own NEPA regulations reflect concern for state environmental compliance. *See* 44 Fed. Reg. 50,052-62 (1979) (to be codified in 18 C.F.R. §§ 3d.1-.21).

tion 248 review is an empty form and should not be required.[20] The unstated premise of this argument is that unless a state administrative order can prevail over a supervening federal administrative order, the permit applicant cannot be compelled to comply with the state administrative *process*. Although a definitive answer can only come from the courts or Congress, the state could counter this argument under several theories.

The first theory is that requiring a hydro developer to comply with state regulatory procedures does not depend on whether the state order will or will not conflict with a FERC order.[21] Conditions imposed by the PSB, especially those relating to construction, may eventually conflict with a FERC order, but this possibility is impossible to predict until the process is complete. It is difficult, however, to argue that no valid state purpose is served by requiring the applicant to present its case before the PSB because the informational function alone of such presentation may prove invaluable.

Secondly, preemption cases in recent years support the view that only those conditions in a section 248 order that are in fact repugnant to a provision of a FERC order are preempted.[22] Although every hydro developer must apply to FERC at the date of issuance of a PSB order, it is difficult to predict which element will survive a later FERC order. A PSB order will not be presumed to have the effect of conflicting with federal law; on the contrary, the basis for preemption must be clearly demonstrated.[23]

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20. The town of Springfield has taken just such a position. Town of Springfield Hydro-Electric Project, Vermont PSB Docket No. 4444; Vermont Environmental Board Docket Ruling 111.

21. Justice Barney, in his concurring opinion in *Prouty*, stated:

> The statute contains no exceptions. The inference is that the legislature wished the "public good" examined before eminent domain is exercised in connection with dams. Neither the public service commission nor the parties have any authority to dispense with the specified prerequisites, however small the proposed exercise of sovereignty.

122 Vt. at 453, 176 A.2d at 78.

22. *See* California v. United States, 438 U.S. 645 (1978); Merrill Lynch, Pierce, Fenner & Smith, Inc. v. Ware, 414 U.S. 117, 127 (1973); Florida Lime & Avocado Growers, Inc. v. Paul, 373 U.S. 132, 142 (1963).

23. *See* Ray v. Atlantic Richfield, 435 U.S. 151 (1978); Jones v. Rath Packing Co., 430

In *California v. United States*,[24] the Supreme Court construed section 8 of the Reclamation Act of 1902[25] —a section very similiar to section 27 of the FPA[26] —which compels the Secretary of the Interior to comply with state law in the "control, appropriation, use or distribution of water."[27] The Supreme Court reversed and remanded the ninth circuit decision and held that the state could impose conditions on a federal appropriation permit not inconsistent with federal law.[28] Although imposing nonconflicting state environmental conditions would not directly involve section 27 of the FPA, *California* supports the exercise of state authority which does not conflict with federal law. It also supports necessary state procedures for determining the extent of state interest and authority in the issuance of a federal license. After *California* it would be difficult for an applicant for a FERC license to argue that the Vermont PSB has no jurisdiction because any PSB order could be superseded by FERC.[29] Until the PSB acts, conflict cannot be presumed. The Supreme Court has made it clear that the procedures designed to apply nonconflicting state law to an applicant for a federal permit are not barred by federal preemption doctrine.[30]

U.S. 519 (1977); Chicago-Midwest Meat Ass'n v. City of Evanston, 589 F.2d 278 (7th Cir. 1978); New England Coalition on Nuclear Pollution v. NRC, 582 F.2d 87 (1st Cir. 1978); General Mills, Inc. v. Jones, 530 F.2d 1317 (9th Cir. 1975); Brown v. EPA, 521 F.2d 827 (9th Cir. 1975); Chrysler Corp. v. Tofany, 419 F.2d 499 (2d Cir. 1969).

24. 438 U.S. 645 (1978).

25. 43 U.S.C. § 383 (1976).

26. 16 U.S.C. § 821 (1976).

27. 438 U.S. at 675.

28. *Id.* at 679.

29. *But see* text accompanying note 10 *supra*.

30. In the event that Citizens Utilities Co. v. Prouty, 122 Vt. 443, 176 A.2d 751 (1961) and *In re* Bellows Falls Hydro-Electric Corp., 114 Vt. 443, 47 A.2d 409 (1946) continue to serve as the basis of denying PSB jurisdiction so that hydro developers may avoid the mandate of § 248 with impunity, it is at least possible and perhaps likely that Act 250 jurisdiction will be successfully asserted. Act 250 does not now apply because under the Act "[t]he word 'development' shall not include an electric generation or transmission facility which requires a certificate of public good under section 248 of Title 30." VT. STAT. ANN. tit. 10, § 6001(3) (Supp. 1980). If a court should hold, however, that an electric generation or transmission facility continues to escape § 248 jurisdiction, then it follows that such a project does not require a certificate of public good under § 248. Therefore, the project would not fall within the § 6001(3) exception of Act 250 and thus would be a development under § 6001. This is not to say that an order of a District Commission or the Environmental Board under Act 250 is any more likely to survive a conflict with a FERC order under the

Currently, the most active area in preemption litigation concerns state legislation regulating the construction of nuclear power plants. Two major cases are now on appeal before the ninth circuit—*Pacific Legal Foundation v. State Energy Resources Conservation and Development Commission*[31] and *Pacific Gas and Electric Co. v. State Energy Resources Conservation and Development Commission*[32] —on the issue of the validity of California statutes that condition state certification of nuclear facilities on fulfillment of numerous conditions,[33] most notably approval by the Nuclear Regulatory Commission of a technology for disposal of high level nuclear wastes. The obvious parallel between federal preemption in the nuclear power and hydroelectric fields has not escaped the courts[34] or the litigants. California has argued in support of its statute that *First Iowa* is distinguishable because the FPA confers on FERC authority to determine all issues except water rights, while no such sweeping preemptive authority may be found in the Atomic Energy Act (AEA).[35]

The impression that the FPA is a stronger basis for federal preemption than the AEA may, however, be misleading. The statutes are significantly different in their impact on state environmental controls. The total FERC stranglehold on the issue of need for the facility is totally consistent with a more conciliatory FERC approach on state environmental requirements. In the nuclear area state laws are sometimes perceived as an attempt to secure a veto power in an area arguably preempted by federal authority. No similiar generalization seems justified in hydro cases; and in view

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principles enunciated in *First Iowa*. Act 250 is limited to environmental criteria, however, rather than the broader use and need review that is implicit in a certificate of public good. Therefore, *Prouty* and *Bellows Falls* should not be regarded as necessarily barring the review process, even if the role of the review were limited to imposing nonconflicting conditions to the state "permit."

31. 472 F. Supp. 191 (S.D. Cal. 1979).

32. 489 F. Supp. 699 (E.D. Cal. 1980).

33. *See* CAL. PUB. RES. CODE §§ 25500-25542 (West 1977 & Supp. 1980).

34. Pacific Legal Foundation v. State Energy Resources Conservation & Dev. Comm'n, 472 F. Supp. 191, 200-01 (S.D. Cal. 1979).

35. 42 U.S.C. §§ 2011-2296 (1976 & Supp. III 1979). *See* Brief for Appellant at 39-40, Pacific Legal Foundation v. State Energy Resources Conservation & Dev. Comm'n (9th Cir., Docket Nos. 79-3365 and 79-3382).

of the different emphases in the two acts, it would be unfortunate if the nuclear power case holdings were viewed as equating the two fields on the issue of state environmental controls.

II. Vermont Statutory Law

A. *Title 30, section 248 of Vermont Statutes Annotated*

Under Vermont statute no site preparation nor construction may begin on any new electric generation or transmission facilities until the PSB finds that the facility "will promote the general good of the state and issues a certificate to that effect."[36] The PSB must find specifically that the construction:

> (1) will not unduly interfere with the orderly development of the region . . .;
> (2) is required to meet the need for present and future demand for service;
> (3) will not adversely affect system stability and reliability and economic factors;
> (4) will not have an undue adverse affect on esthetics, historic sites, air and water purity, the natural environment and the public health and safety;
> (5) plans have been submitted to the municipal and regional planning commissions . . .; and
> (6) complies with the twenty-year electrical energy plan for the state . . . or that there is good cause to allow the project.[37]

Although section 248 is generally regarded as the section of Vermont law dealing with the need for and cost of new electric generating facilities, it is also the sole provision for overall review of the environmental effects and implications of a proposed generation facility.[38]

In addition to the lingering questions about the need for a PSB certificate in light of possible federal preemption, there are

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36. Vt. Stat. Ann. tit. 30, § 248(a) (Supp. 1980).

37. *Id.* Section 248 also contains provisions relating to the construction of a nuclear fission plant which is inapplicable to the present discussion.

38. See note 9 *supra*.

additional issues raised as to possible conflict with other areas of state regulation included in section 248(b)(4): historic preservation, water pollution, the natural environment, and public health.[39]

1. Environmental Considerations

The Agency of Environmental Conservation (AEC) is responsible for the administration of almost all of the program elements recited in section 248(b)(4) involving "air and water purity [and] the natural environment."[40] The responsibilities of the Agency discussed here are among those administered by the state under the Clean Water Act. The programs principally affected by a proposed hydroelectric facility would be those of the Department of Fish and Game,[41] the Department of Water Resources,[42] and the Water Resources Board (WRB) which establishes water quality standards[43] and has supervision over encroachments in the waters of the state.[44]

The AEC acts under section 248 as an advocate before the PSB. It also plays a role in certain program areas as a direct regulator, most notably in administering the National Pollutant Dis-

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39. The PSB is the only state agency dealing with the land use criteria in § 248(b)(1), (5). Possible conflict with other state regulatory programs is most apparent under VT. STAT. ANN. tit. 10, §§ 6001-6092 (Supp. 1980) (Act 250). Act 250 seeks to regulate most land use and land development within the state. No development or construction on a development may occur without a permit granted under Act 250. In evaluating a development, the district environmental commission (the primary review level) must make findings on ten separate environmental and administrative criteria including, for example, pollution, soil erosion, aesthetics, and historic sites. *See* VT. STAT. ANN. tit. 10, § 6086 (Supp. 1980). Act 250 does, however, specifically exclude electric generation or transmission facilities which require a certificate of public good under VT. STAT. ANN. tit. 30, § 248 (Supp. 1980). VT. STAT. ANN. tit. 10, § 6001(3). *See* note 30 *supra*.

40. *See* VT. STAT. ANN. tit. 10, §§ 551-572 (air pollution), 1251-1373 (water pollution), 2001-2514 (forests and parks), 4001-5225 (fish and game conservation), 6601-6613 (solid waste management) (1973 & Supp. 1980).

41. VT. STAT. ANN. tit. 10, §§ 4001-4198 (1973 & Supp. 1980).

42. *Id.* §§ 901-923.

43. *Id.* §§ 1251-1277.

44. *Id.* tit. 29, §§ 401-410 (Supp. 1980). The powers of the WRB appear to be at least equivalent to those of the Water Resources Department within the AEC. *See, e.g., id.* tit. 10, § 905. In practice, and as a result of the reorganization of state government in 1970, the powers of the WRB as a practical matter are limited to rulemaking and quasi-judicial appeals concerning water matters. See Op. Att'y Gen. 47-79 (1978).

charge Elimination System (NPDES)[45] under the Clean Water Act. The AEC also has the authority to enforce that Act against violators.[46]

The decisions of the Secretary of the AEC on discharge or temporary pollution permits are appealable to the WRB[47] and thereafter to the state superior court.[48] The WRB as a body legally independent of the Secretary also issues orders classifying state waters according to use and adopts certain state regulations such as the Vermont Water Quality Standards.[49]

Efforts to maintain the water quality of Vermont's lakes and streams have been the active concern of the Vermont Legislature since at least the 1960's.[50] The major tool of the AEC under the Clean Water Act and Vermont's concomitant statute, sections 1251-1384 of title 10 of Vermont Statutes Annotated,[51] is the prohibition against the discharge of "any waste, substance or material into waters of the state . . . without first obtaining a permit for such discharge from the secretary."[52] Although the word waste may harken the image of industrial or domestic effluent, the definition is much broader, including "effluent, sewage or any substance or material, liquid, gaseous, solid or radioactive, including heated li-

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45. 33 U.S.C. § 1342 (1976 & Supp. II 1978).

46. The National Pollutant Discharge Elimination System can be administered by a state under authority contained in § 402(b) of the Clean Water Act. 33 U.S.C. § 1342(b) (Supp. II 1978). Section 301(a) of the Act, 33 U.S.C. § 1311 (1976), makes the discharge of any pollutant by any person unlawful. The NPDES, however, provides a method for a state to grant a permit allowing discharge of a pollutant if the discharge complies with the effluent guidelines and water quality standards adopted at the federal level by the Environmental Protection Agency (EPA). Standards for these guidelines are found in §§ 301, 302, 306, 308, and 403 of the Clean Water Act. 33 U.S.C. §§ 1311, 1312, 1316, 1317, 1318, 1343 (Supp. II 1978). Section 402(b), in granting the EPA Administrator power to approve state permit systems, contains detailed requirements to insure that a state program conforms to the goals outlined in the Clean Water Act. *Id.* § 1342(5).

47. VT. STAT. ANN. tit. 10, § 1269 (1973).

48. *Id.* § 1270.

49. *Id.* §§ 1252-1258 (1973 & Supp. 1980).

50. A general modernization of Vermont's water pollution control laws culminated in the adoption of Act 252. 1969 Vt. Acts, No. 252.

51. VT. STAT. ANN. tit. 10, §§ 1251-1384 (1973 & Supp. 1980).

52. *Id.* § 1259 (Supp. 1980).

quids, whether or not harmful or deleterious to waters."[53] In light of the broad definition of discharge and waste, it would be open to the Secretary under Chapter 47 to enforce the requirements of the NPDES program against a hydro developer who only proposed to discharge other water into the waters of the state without a permit.

The link between the NPDES program and hydropower facilities is not as clear as it is between the program and industrial facilities generally. Run-of-the-river hydro dams may not involve an impoundment at all. Other small hydropower facilities may, however, and construction of a facility with an impoundment can affect water quality and therefore fish habitat. The impoundment may decrease the amount of aeration in the water. Additional problems resulting from a collection of nutrients and an increase in water temperature, particularly in summer, can result in the loss of dissolved oxygen. These conditions are most critical in the summer and early fall months when natural flows are at their lowest and when aquatic organisms are active in reproducing. Downstream reaches are particularly affected since they depend heavily on the continual release of water. The reduction of dissolved oxygen bears a direct relationship to the ability of the water to break down wastes such as sewage, industrial discharges, and animal and plant byproducts. Ultimately, fish habitat is affected by the limitation of the water's ability to assimilate these wastes. The Water Quality Division of the AEC has set a standard of minimum flow that must be maintained to preserve downstream water quality.[54] The assimilative capacity of a stream is directly related to the dissolved oxygen in the water. The major determinants of dissolved oxygen are the volume and speed of a river's flow, the two primary river characteristics affected by hydro development. The Water Quality Division has determined that the most practical standard for establishing the required minimum flow for a river is "the lowest mean discharge for seven consecutive days which has a 10% chance of

53. *Id.* § 1251(6) (1973).

54. *See* WATER RESOURCES BOARD, REGULATIONS GOVERNING WATER CLASSIFICATION AND CONTROL OF QUALITY, Rule 7 (1978).

occurring in any given year."[55] This minimum standard is called the "7 Q 10 flow."[56]

The Secretary of the AEC is bound by law to investigate the impact of a proposed hydro facility and to certify the results of the investigation.[57] It is clear, however, that investigation and certification fall short of any actual decisionmaking authority. The ultimate decision on minimum instream flows resulting from a proposed hydro project is left to the PSB, at least for purposes of the section 248 process.

Some of the same issues as to the maintenance of minimum instream flows are presented to the Secretary of the AEC in his capacity as an environmental program administrator.[58] It is possible that the decision of the PSB on issues involving potential effects on fish and wildlife habitats may not be in concert with the decisions of the Secretary exercising his own authority in program areas unrelated to hydropower. The resolution of the conflict will depend on whether the statute under which the AEC acts is subject to preemption under the Federal Power Act. The Agency, however, might assert that a facility that impounds water requires a discharge permit. The theory underlying such an assertion was recently upheld by the United States District Court in *South Carolina Wildlife Federation v. Alexander*[59] in which the major pollutant alleged was oxygen-deficient water. The court stated:

> If defendants *cause* the character of the water to change from a life sustaining body when it is received in the reservoir to one incapable of properly supporting life when released, they will have *added* pollutants to a navigable water.[60]

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55. VT. DEP'T OF WATER RESOURCES, WINOOSKI RIVER BASIN WATER QUALITY MANAGEMENT PLAN, vi (June 1976).

56. *Id.*

57. VT. STAT. ANN. tit. 10, § 1084 (Supp. 1980).

58. See note 46 *supra* and accompanying text.

59. 457 F. Supp. 118 (D.S.C. 1978).

60. *Id.* at 126. The opinion was written after denial of the defendant's motion to dismiss for failure to state a claim upon which relief could be granted. The decision, therefore, does not represent a holding that the dam construction was, in fact, a violation of the Clean Water Act, but rather that the complaint stated a claim which, if proven, would be the basis for relief under the Act. *Id.* at 121.

The court also held[61] that the plaintiff raised a valid claim that the dam would be a point source under 33 U.S.C. § 1362(14).[62] Although the increase of the water temperature of an impoundment caused by the discharge of oxygen-deficient water from a hydro dam is a problem, the principal concern of water planners in Vermont is adequate instream flow maintenance.[63]

The chief obstacle to maintenance of 7 Q 10 flows is a hydro facility's practice of restricting streamflow during certain periods in its operating cycle. It is, therefore, conceptually more difficult to regard the diminished flow as a "discharge." The problem is that a river in which the assimilative capacity is diminished by flow restrictions cannot absorb discharges which would otherwise be acceptable.

In addition to NPDES, there is one other major program administered by the Agency that could affect hydropower facilities—the water management and planning process under section 303(e) of the Clean Water Act[64] and the corresponding provision of Vermont law.[65] The "continuing planning process" under both federal and state law begins as a nonregulatory process. It should be distinguished from a program[66] in that its objective is to promote water management policies and plans that have general applicability in the region affected, generally a river basin.

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61. *Id.* at 127.

62. Clean Water Act of 1977, § 502(14), 33 U.S.C. § 1362(14) (Supp. III 1979).

63. See B. Scotch & E. Selig, *Water Quality and Water Quantity in Vermont: A Legal Analysis* (Feb. 26, 1979) (Vt. Office of the Attorney General).

64. 33 U.S.C. § 1313(e) (1976). The planning process mandated by § 303(e) is part of the larger scheme of federal regulation applied through the states under the Clean Water Act. In addition to the NPDES permit program, usually administered by a state under § 402(b) of the Act, *id.* § 1342(5), the requirement of a continuing planning process (which is essential to federal approval of a state permit program) insures that long-range compliance with federal effluent limitations and water quality standards will be maintained.

65. VT. STAT. ANN. tit. 10, § 1258(b) (Supp. 1980). *See* Op. Att'y Gen. 79-76 (1976). For a general review of the state response to the EPA mandate for planning and an insight into how the wasteload allocation procedures fit into Vermont's overall continuing planning process, *see* VT. DEP'T OF WATER RESOURCES, STATE OF VERMONT CONTINUING WATER QUALITY MANAGEMENT PLANNING PROCESS (Apr. 1978).

66. In 1976 the first plan, the Winooski River Basin Water Quality Management Plan, was adopted by the AEC pursuant to the state's Administrative Procedures Act. VT. STAT. ANN. tit. 3, §§ 801-820 (1972 & Supp. 1980).

The next stage in the continuing planning process, however, has definite regulatory implications and provides for the adoption of "wasteload allocations."[67] These wasteload allocations will be adopted as rules[68] under the Administrative Procedure Act[69] and will set the total permissible flow of effluents from each discharge point, taking into account: (1) the needs of each locality, as determined by public meetings and hearings in the immediate area and (2) the assimilative capacity of the stream in question at various locations based upon careful field data and streamflow modeling techniques.

The outcome of the wasteload allocation process will have a potentially great impact on the pattern and scope of future development in the towns served by the stream in question. Therefore, vigorous participation in the rulemaking process can be expected from the municipalities involved and affected businesses and utilities.

A potential hydro development could be affected by a wasteload allocation in a number of ways. If *South Carolina Wildlife Federation* is upheld and followed, then it is possible that hydro projects that impound to any significant degree would require discharge permits. If discharge permits are consistent with the wasteload allocated to each discharger, these discharge limits would impose on the hydro facility the "fair share" concept underlying the wasteload allocation process. The result would be that the AEC, under the NPDES program, could affect the design of a facility or its mode of operating where the design or mode of operation would affect the quality or quantity of the discharge.

Apart from a dam's discharge of oxygen-deficient water, a dam might affect the assimilative capacity of a stream by restricting instream flows through impoundment. This restriction could upset the assumptions upon which downstream wasteload allocations were originally made. To put the matter in a somewhat oversimpli-

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67. *See* VERMONT AGENCY OF ENVIRONMENTAL CONSERVATION, Wasteload Allocation Process (Nov. 28, 1978).

68. *Id.*

69. VT. STAT. ANN. tit. 3, §§ 801-820 (1972 & Supp. 1980).

fied form, the presence of a dam could reduce the acceptable amount of discharge from downstream facilities, such as sewage treatment plants, which have discharge permits based upon 7 Q 10, or higher, flows.

While the NPDES program has not generally contemplated a permit to a facility which is not itself a discharger but which might result in harm to water quality due to permits that relied upon minimum instream flow assumptions, NPDES and the Secretary of the AEC may have powers, outside of the section 248 process, to limit or review the plans of a hydro developer.[70]

Another major source of state authority to deal with applicants for federal licenses or permits is section 401 of the Clean Water Act.[71] Although it is the common impression that a section 401 statement is a "water quality statement," it is pursuant to section 303[72] that the State of Vermont has undertaken its continuing planning process.[73] If a proposed hydro project involves a dis-

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70. A bill was introduced in the 1979 Vermont General Assembly which was designed to give the Secretary of the AEC direct regulatory authority over projects that could affect minimum streamflows. H.293 (Biennial Sess. 1979). The bill established a mechanism for assigning a minimum streamflow standard to particular project applications. Thereafter an optional streamflow statement could be filed and a minimum streamflow determined by the AEC which would serve conclusively as the basis for determining whether the project as proposed allowed adequate streamflow. The bill was amended considerably, principally to eliminate the conclusive authority of the Agency Secretary, but it failed to win passage. Similar legislation is expected to be introduced in the next legislative session.

71. 33 U.S.C. § 1341(a)(1) (Supp. II 1978). This section furthers compliance with the effluent limitations and water quality standards by having a state certify that these requirements have been met as part of the state permit program before a federal license or permit for any activity is granted. The section provides:

> (a)(1) Any applicant for a Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, 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, or, if appropriate, from the interstate water pollution control agency having jurisdiction over the navigable waters at the point where the discharge originates or will originate, that any such discharge will comply with the applicable provisions of sections 1311, 1312, 1313, 1316, and 1317 of this title.

Id.

72. 33 U.S.C. § 1313(e) (1976). It should be noted that this section is among those enumerated in § 1341(a); see note 71 *supra*.

73. VT. STAT. ANN. tit. 10, § 1258(b) (Supp. 1980).

charge, then the Secretary might logically consider the effect of such discharge upon the wasteload allocation for the water quality limited segment in which the hydro project is located. Again, the problem of low instream flows resulting from impoundments by the facility is not itself "a discharge" or at least not clearly so. Therefore, it is questionable under section 401, read literally, whether the Secretary could raise the effects of the project on water quality resulting from flow restrictions. Consequently, it is not clear that the Secretary could deny a section 401 certification where the threat to the viability of the water quality management plan and wasteload allocations was not the discharge from the hydro facility but the impoundment practices of the facility.

A broader reading of section 401 is supportable, however. In *deRham v. Diamond,*[74] among other issues raised in connection with a pumped storage project proposed for the Hudson River was that of salt water intrusion. The issue was not, strictly speaking, discharge but was one of the modes of operation of the proposed facility. The Commissioner of Environmental Conservation of New York imposed certain condititions which were inserted " 'in order . . . to insure that the [facility's] operation . . . in the future will not contravene' applicable water standards."[75] The Commissioner focused on whether the *operation* of the facility would affect water quality standards, not whether the *discharge* from the facility would do so. Plainly, under the "operation" standard the Secretary of the Agency could consider the low flow impact of a proposed hydro facility on a wasteload allocation just as salt water intrusion was considered in *deRham.*[76]

To complete an enumeration of his duties, the Secretary investigates the potential effect on fish and wildlife habitats of a pro-

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74. 32 N.Y.2d 34, 295 N.E.2d 763, 343 N.Y.S. 84 (1973).

75. *Id.* at 51, 295 N.E.2d at 771, 343 N.Y.S. at 95.

76. The procedure for obtaining a § 401 certification is found in the Vermont Water Pollution Control Permit Regulations. The regulations provide for an application, public notice, and public hearings. Among the conditions that the Agency may impose is "a statement of any conditions which the certifying agency deems necessary or desirable with respect to the discharge or the activity." Agency of Environmental Conservation, Vermont Water Pollution Control Permit Regulations, Rule 13.11(g)(4) (1977).

posed hydro project and certifies the results to the PSB.[77] The construction of a hydro dam can affect the migration of anadromous fish and can block the migration of local fish species. Anadromous fish, such as salmon, some trout, and shad, travel upstream in order to spawn. The Department of Fish and Game, acting through the Secretary's authority under section 1084, may request construction of fish ladders, passageways, or other modes of aiding migration such as trap and truck operations. Provision for the passage of fish migrating downstream may also be necessary. Other steps may be required to minimize the effects of turbine mortality. In order to make these determinations, the Fish and Game Department will require information on species inhabiting the river and on proposed turbine design.

Unlike its powers under NPDES, the Agency has no authority to require such matters as installation of particular structures or design specifications, which are ultimately considered and determined by FERC.[78] Nevertheless, the PSB and FERC can be expected to give considerable weight to the Agency's views in this area, and few hydropower developers will proceed without consultation with the Agency's Fish and Game Department.

2. Historic Preservation Considerations

Section 248(a) provides for notice to be given to the historic sites board.[79] The Director of the Division for Historic Preservation, like the Secretary of the AEC, participates in the section 248 proceedings but cannot overrule the PSB on issues of historic preservation. Although the definition of historic property is quite broad[80] and the statute specifically covers underwater historic property,[81] the major authority of the Division is advisory and not mandatory.[82] There is provision for recovering and preserving "sci-

77. VT. STAT. ANN. tit. 10, § 1084 (Supp. 1980).

78. 16 U.S.C. § 797 (1976). *See, e.g.*, Hudson River Fisherman's Ass'n v. F.P.C., 498 F.2d 827, 832 (2d Cir. 1974).

79. *See* VT. STAT. ANN. tit. 22, § 721 (1978).

80. *See id.* § 701(6).

81. *Id.* §§ 781-782.

82. *See, e.g., id.* § 742(a)(7).

entific, historical, or archeological data," in relation to any state-related project, activity, or program,[83] but this authority does not include the power to reject the project on the grounds that such data would be threatened. The PSB, in addition to its duty of review under section 248, has a further duty to "take into account the effect of the undertaking on any historic property that is included in the state register of historic places."[84] Since the state register of historic places does not include the total potential area of historic concern, section 742 will have relatively little impact on most proposed hydro facilities.

The Director of the Division for Historic Preservation actually has more effective authority under federal law than under state law. To comply with the National Historic Preservation Act of 1966[85] and the Advisory Council Procedures for Protection of Historic and Cultural Properties[86] a hydro developer should consult with the division to identify historic or archeological properties that are listed in or may be eligible for listing in the National Register of Historic Places. By including in the analysis properties that *may* be eligible for listing, the federal law is broader than section 742.[87] The National Historic Preservation Act of 1966 does not, however, transfer the licensing decision on lands involving an historic site from the authority of FERC. It is *consultation* only which is mandated.

3. Municipal and Regional Planning and Zoning Considerations

Section 248 also requires notice to "municipal and regional planning commissions and the municipal legislative body for each town and city in which the proposed facility will be located not less than 30 days prior to the hearing."[88] The statute appears to prom-

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83. *Id.* § 767(1).

84. *Id.* § 742(a)(7).

85. 16 U.S.C. §§ 461-470 (1976 & Supp. III 1979).

86. 36 C.F.R. § 800 (1979). These procedures were established pursuant to regulations under the Federal Power Act, 18 C.F.R. §§ 4.40-.51 (1980). See especially, 18 C.F.R. §§ 4.40(k), 4.41(v), 4.51(f)(4) (1980).

87. VT. STAT. ANN. tit. 22, § 742 (1978 & Supp. 1980).

88. *Id.* tit. 30, § 248(a) (Supp. 1980).

ise more than it delivers, however. It is clear that local plans and zoning ordinances have no more preemptive authority in the face of a FERC license than does the state PSB certificate of public good. Municipalities can zone with respect to public utilities only as to "size, height, bulk, yards, courts, setbacks, density of buildings, off-street parking and loading facilities and landscaping or screening requirements."[89] The court in *City of South Burlington v. Vermont Electric Power Co.*,[90] held that a utility is not required to secure a zoning permit from a city for a facility covered by a certificate of public good issued under section 248.

Following the decision in *City of South Burlington*, the Vermont General Assembly required that construction plans be submitted to the local and regional planning commissions before a certificate is issued.[91] The amendment does not alter the rule of preemption enunciated in *City of South Burlington* but does provide for forty-five days prior notice to municipal and regional planning commissions of an intention to apply for a certificate of public good under section 248.[92] The 1977 amendment gives the municipal and regional planning commissions a head start in scrutinizing a potential hydro development. At the same time it strengthens the hand of the PSB where local zoning is concerned since the legislature could have altered the result in *City of South Burlington* but settled for a less drastic remedy.

B. *Miscellaneous State Authority*

Vermont is a signatory to the New England Interstate Water Pollution Control Compact, an agreement to engage in cooperative efforts to control water pollution in New England.[93] In light of the uniform Federal Clean Water Act, possibilities that differences in standards or philosophy concerning the management of interstate waters will occur should be diminished. Since state agencies do not have the authority to deny a FERC license in any case, the exis-

89. *Id.* tit. 24, § 4409(a) (1975).
90. 133 Vt. 438, 344 A.2d 19 (1975).
91. VT. STAT. ANN. tit. 30, § 248(b)(5), (d), (e) (Supp. 1980).
92. *Id.* § 248(d).
93. *Id.* tit. 10, §§ 1331-1342 (1973).

tence of the compact should not play a major role in hydro facility licensing.

The Lake Champlain Basin Compact,[94] an agreement between Vermont and New York to cooperate in the development of the Lake Champlain Basin, has a broader scope of authority than the New England Compact but covers only the Lake Champlain watershed. The watershed management mandates of the Lake Champlain Basin established under the Compact could have considerable relevance to a major hydro project in the basin but probably less direct relevance to any specific low-head hydro project. Nevertheless, the planning mandate in section 6.3 of Article 6[95] of the Compact might well be read to affect even small projects taken cumulatively. In addition, the Compact Commission could be of considerable technical assistance to the PSB or to utilities or intervenors.

Additional areas that might affect some projects are soil conservation and watershed protection. The State of Vermont has established a state Natural Resources Conservation Council under its Soil Conservation Act.[96] The main function of the Natural Resources Conservation Districts is to adopt district-wide regulation tending to prevent erosion. The districts are permitted to form supervisory unions for administrative purposes.[97] Neither the districts nor the supervisory unions have any mandatory authority in hydroelectric development matters, but hydro developers may want to coordinate with the districts in cases where erosion may become an issue. It may well be that the districts can provide guidance and assistance in conforming plans for a hydro development to district standards and avoid conflicts and controversies that could hurt the project in the FERC licensing stage.

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94. *Id.* §§ 171-205.

95. *Id.* § 187.

96. *Id.* §§ 701-723 (1973). *See also id.* § 1083(a) (Supp. 1980).

97. *Id.* §§ 801-807 (1973).

III. Additional Federal Statutory Authority

A. *Clean Water Act, Section 404*

The construction of a proposed facility may involve section 404 of the Clean Water Act,[98] which regulates the discharge of dredged or fill materials into the waters of the United States and adjacent wetlands. Although the Army Corps of Engineers has been principally responsible for protecting the navigable waters of the United States since enactment of the Rivers and Harbors Appropriations Act of 1899,[99] currently section 404 is administered by both the Corps of Army Engineers and the Environmental Protection Agency. The Corps has primary responsibility for the permit program, which is the heart of the regulatory scheme.

One of the principal concerns of section 404 is the protection of wetlands, recently recognized as essential to the biological purification of drinking water, as breeding grounds for many species of fish and wildlife, and as integral to the protection of food for humans and wildlife.[100]

Under its permit issuing authority the Corps must approve all discharges of dredged or fill material in the waters of the United States.[101] Where a state has assumed certain responsibilities under

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98. 33 U.S.C. § 1344 (Supp. III 1979).

99. *Id.* §§ 401-467 (1976 & Supp. III 1979).

100. An excellent introduction to the § 404 program is offered in "A Guide to the Dredge or Fill Permit Program." U.S.E.P.A. Public Information Center (PM-215), 401 M St., S.W., Washington, D.C. 20460. The guide summarizes in one brief paragraph the growing recognition of the value of wetlands:

> Over the past two decades, the valuable functions of wetlands and aquatic ecosystems have come to be recognized by the public. Wetlands, estuaries, and open waters provide habitat and breeding, spawning, and nursery grounds for various aquatic and terrestrial organisms, most notably waterfowl, shellfish, and fish. Wetlands are highly productive of nutrients, certain agricultural and silvicultural products, and gravel, peat, and other mineral products. The ability of wetlands to store and gradually release water can abate much erosion and flood damage. Water purification and, in some cases, groundwater recharge are other services wetlands perform. In addition, aesthetic, recreational, scientific, and educational values are furthered by these natural aquatic areas.

Id. at 3.

101. 33 U.S.C. § 1344(e) (Supp. III 1979). Hydro developers should note that a signifi-

section 404, its own jurisdiction is narrowed to cover only navigable waters and their adjacent wetlands.[102] For a permit to be approved, it must comply with the guidelines of the Corps developed under section 404(b)(1)[103] by the Environmental Protection Agency (EPA) in conjunction with the Corps.[104]

The Corps regulations divide regulated waters into three phases. Phase I includes waters previously regulated by the Corps plus all wetlands adjacent to those waters; Phase II includes primary tributaries to Phase I waters and lakes with a surface area greater than five acres plus adjacent wetlands; and Phase III includes all waters of the United States.[105]

A contention that the Federal Power Commission (now FERC) had sole licensing power over hydro projects and that section 404 applied only to discharges resulting from the dredging of ship channels in navigable waters was rejected in *Scenic Hudson Preservation Conference v. Callaway.*[106] In holding that section 404 applied to hydro facilities, the court stressed the uniformity of the scheme of regulation provided in the 1972 amendments and the absence of any particular exceptions for projects under the licensing authority of the FPC.[107] Con Edison, an intervenor, had made the obverse argument that there was no applicable exception in the Power Act to the exclusive authority of the FPC.

An analogous issue was raised in *Colorado Public Interest Research Group, Inc. v. Train,*[108] where the plaintiffs sought to compel EPA to control discharges of radioactive materials into navigable waters. The court of appeals relied on *Scenic Hudson* in holding that the Federal Water Pollution Control Act (FWPCA),

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cant alteration in water quality need not be demonstrated before the addition of a particular substance to the navigable waters may be classified as a discharge of pollutants for the purposes of § 404. *See* Minnehaha Creek Watershed Dist. v. Hoffman, 597 F.2d 617 (8th Cir. 1979).

102. 33 U.S.C. § 1344(g)(1) (Supp. III 1979).

103. *Id.* § 1344(b).

104. 40 C.F.R. § 230 (1980). These guidelines are currently being revised.

105. *See* 33 C.F.R. § 323.3 (1980).

106. 370 F. Supp. 162 (S.D.N.Y. 1973), *aff'd per curiam* 499 F.2d 127 (2d Cir. 1974).

107. *Id.* at 169.

108. 507 F.2d 743 (10th Cir. 1974).

now the Clean Water Act, compelled the EPA Administrator to regulate such discharges.[109] Although the Supreme Court reversed *COPIRG*,[110] that decision is based on the Atomic Energy Act of 1954. It does not appear to weaken the holding in *Scenic Hudson* concerning section 404, since it deals almost exclusively with the scope of the definition of pollutants in the FWPCA and not with the broader issues of preemption.

B. *Coastal Zone Management Act*

There are several other federal statutes and regulations that touch on environmental concerns for the low-head hydro developer. The Coastal Zone Mangagement Act of 1976[111] states that an applicant for any federal license, including a license from FERC, "to conduct an activity affecting land or water uses in the coastal zone of that state shall provide in the application to the licensing or permitting agency a certification that the proposed activity complies with the state's approved program and that such activity will be conducted in a manner consistent with the program."[112] The "approved program" refers to a state coastal zone management program approved under section 306[113] of the Act, for example.[114] Such a program may include a comprehensive statement in words, maps, illustrations, and the like adopted by the state in conformity with the statute.[115] The management program sets forth objectives, policies, and standards to guide public and private use of land and waters in the coastal zone.[116] The state has six months within which to comment on the proposed certification after which the state will be presumed to concur.[117]

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109. *Id.* at 749.
110. 426 U.S. 1 (1976).
111. 16 U.S.C. §§ 1451-1464 (1976 & Supp. III 1979).
112. 16 U.S.C. § 1456(c)(3)(A) (1976).
113. *Id.* § 1454.
114. *See id.* § 1455 (1976).
115. *Id.* § 1453(11) (1976).
116. *Id.* § 1454(b).
117. *Id.* § 1456(c)(3)(A).

C. *Wild and Scenic Rivers Act*

The Wild and Scenic Rivers Act[118] contains provisions that could apply to some low-head hydro projects. The Act provides that FERC shall not license the construction of a hydro project "directly affecting any river which is designated in Section 1274 . . . as a component of the national wild and scenic rivers system or which is hereafter designated for inclusion in that system."[119] Other departments or agencies of government assisting in projects that would affect designated rivers must consult with the Secretary of Interior or Agriculture in writing and advise Congress of any adverse effects.[120] The Act provides that FERC and other federal agencies shall not license or assist projects on rivers designated for potential addition to the system under 16 U.S.C. § 1276(a) if such a project "would have a direct and adverse effect on the values for which such river might be designated as determined by the Secretary responsible for its study or approval" during the period specified in section 1278(b).[121]

Due to the considerable differences in hydro systems and differences among wild river areas, scenic river areas, and recreational river areas,[122] it is difficult to state flatly that all low-head hydro projects or that no low-head hydro projects will be affected by the Wild and Scenic River Act. The section of the Act dealing with administration provides that "primary emphasis shall be given to protecting [a river's] esthetic, scenic, historic, archeologic and scientific features."[123] Management plans for any such feature may establish varying degrees of intensity for its protection and development, based on the special attributes of the area. Not only will various river reaches differ in physical characteristics, but the aesthetic implications of the proposals will necessarily vary considerably.

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118. *Id.* §§ 1271-1287 (1976 & Supp. III 1979).
119. *Id.* § 1278(a) (1976).
120. *Id.*
121. *Id.* § 1278(b).
122. *See id.* § 1273(b)(1), (2), (3).
123. *Id.* § 1281(a).

D. *Endangered Species Act*

Although it is unlikely that any low-head hydro project will be great enough in scope to involve the Endangered Species Act,[124] that Act may have some application in particular circumstances. The Act essentially requires that federal agencies insure that their actions do not jeopardize the continued existence of any endangered species or result in destruction or modification of habitat of such species.[125]

E. *Fish and Wildlife Coordination Act*

Under the Fish and Wildlife Coordination Act,[126] a hydro developer must consult with the United States Fish and Wildlife Service, Department of Interior, and with the head of the state agency involved "whenever the waters of any stream or other body of water are proposed or authorized to be impounded, diverted, the channel deepened, or the stream or other body of water otherwise controlled or modified for any purpose whatever."[127] Due to the broad language of section 662(a),[128] a threshold question will almost always be whether the hydro facility would divert a stream or control or modify it for any purpose whatever. Since consultation with the head of the state agency exercising administration over the state wildlife resources will be required in the event section 662(a) applies, consultation on the informal level at the outset of planning would appear to be a sensible step in analyzing the threshold issues under section 662. In Vermont, the Fish and Game Department is a party with standing before the PSB in the section 248 proceedings. Any hydro developer, large or small, would be well advised to discuss the outcome of the project with the Fish and Game Department at an early stage of planning.

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124. *Id.* §§ 1531-1543 (1976 & Supp. III 1979).

125. *See id.* § 1536 (Supp. III 1979).

126. *Id.* §§ 661-668 (1976 & Supp. III 1979).

127. *Id.* § 662(a) (Supp. III 1979).

128. *Id.*

F. *Public Utility Regulatory Policies Act of 1978*

PURPA[129] established a short form or minor license application for all hydro projects of 1,500 kW capacity or less and simplified procedures for applications for major projects of more than 500 kW that use existing dams.[130] FERC has promulgated regulations[131] implementing the National Environmental Policy Act of 1969[132] which provide that the licensing of a minor waterpower project (not more than 2,000 horsepower or 1.5 megawatts of installed capacity) requires only an environmental assessment and not an environmental impact statement.[133] Section 4.50 also requires an environmental assessment for the licensing of major waterpower projects for existing dams.[134] Now only construction of new major waterpower projects, that is, projects other than minor projects or major projects for existing dams, require the preparation and filing of an environmental impact statement under NEPA.

The regulations under PURPA do not exempt any hydro developer from meeting the requirements of state environmental laws, although they do exempt certain qualifying facilities from state laws respecting rates and financial and organizational regulation.[135]

Conclusion

The balance between state and federal authority in the regulation of hydroelectric power project licensing continues to be uncertain. Even after the enactment of PURPA and despite the broad language of *First Iowa*, state utility regulation has continued to be

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129. Public Utility Regulatory Policies Act of 1978, Pub. L. No. 95-617, 92 Stat. 3117 (codified in scattered sections of 15, 16, 26, 30, 42, 43 U.S.C.).

130. 16 U.S.C. § 2705 (Supp. III 1979). *See also* 18 C.F.R. § 4.60 (minor) and § 4.50 (major) (1980); Debevoise, *The Role of the Federal Energy Regulatory Commission in Licensing Small Hydroelectric Projects*, 5 Vt. L. Rev. 279 (1980).

131. 44 Fed. Reg. 50,052-62 (1979) (to be codified in 18 C.F.R. §§ 3d.1-.21).

132. 42 U.S.C. §§ 4321-4361 (1976).

133. 44 Fed. Reg. 50,056 (1979) (to be codified in 18 C.F.R. § 3d.10).

134. 18 C.F.R. § 4.50 (1980).

135. *Id.* §§ 292.601-.602.

treated with respect beyond the areas conferred to the states by the Federal Power Act.

In Vermont the Public Service Board considers, by statute, *all* proposed electric generating facilities, including hydropower facilities. Although the Vermont Supreme Court has reflected on the preemptive force of *First Iowa*, the state retains an important role in hydropower licensing. Except in pollutant discharge cases the Vermont Agency of Environmental Conservation and other state and local agencies are, however, limited to an advisory and technical role. Nonetheless, with renewed emphasis on small hydropower development and broader expressions of support for a greater state presence in federal-state cooperative programs generally, it appears unlikely that FERC will seek to eliminate state review altogether, at least where there is no attempt to encroach on federal authority.

Although numerous federal environmental statutes affect hydropower development generally, early consultation with agency officials will minimize possible conflicts and administrative delays. A comprehensive, cooperative state and federal effort to develop waterpower will prove to be the best approach to a dependable and environmentally acceptable hydroelectric system.