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Endangered Species Act Versus Water Resources Development: The California Experience

Sandra K. Dunn*

As the available supply of water in the arid west becomes more scarce, its value as a commodity¹ steadily grows. Surprisingly, the value of water as a vested property right² has not seen a corresponding increase. To the contrary, like the current slowly eating away at the river's edge, there has been a gradual erosion of the individual's legal right to divert and use water. This diminishing ability to exercise legitimate claims to water is, in large part, a consequence of society's desire to provide additional protection for instream uses of water.

Legal mechanisms for advancing the reallocation of water from existing to instream uses have developed in both the courts and in the legislature. One such stratagem is the public trust doctrine, applied by the California Supreme Court in *National Audubon Society v. Superior Court*³ to protect navigable waters from harm caused by the diversion of water from non-navigable tributaries.⁴ Under the principles of the public trust doctrine, no party can acquire a vested right to appropriate water in a manner harmful to public trust uses.⁵ Thus, according to the California Supreme Court, the state, through both the courts and the State Water

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1. Although water is not generally viewed as a commodity, it fits the definition. See WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY 458 (1986) (defining commodity as something of use, advantage, or value and an article of trade or commerce).

2. According to the law as it has developed in California, a right of property in water is usufructuary. *National Audubon Soc'y v. Superior Court*, 33 Cal. 3d 419, 441, 189 Cal. Rptr. 346, 361, 658 P.2d 709, 724 (1983). Therefore, one does not actually acquire an ownership in the actual molecules of water but rather, acquires a right to its use. *United States v. State Water Resources Control Bd.*, 182 Cal. App. 3d 82, 100, 227 Cal. Rptr. 161, 167-68 (1986).

3. 33 Cal. 3d 419, 189 Cal. Rptr. 346, 658 P.2d 709 (1983).

4. See *id.* at 437, 189 Cal. Rptr. at 357, 658 P.2d at 721.

5. *Id.* at 445, 189 Cal. Rptr. at 364, 658 P.2d at 727. Public trust uses have been defined by the courts to include the right to fish, hunt, bathe, swim, to use for boating and general recreational purposes, and to protect navigable waters in their natural state "so that they may serve as ecological units for scientific study, as open space, and as environments which provide food and habitat for birds and marine life and which favorably affect the scenery and climate of the area." *Id.* at 434-35, 189 Cal. Rptr. at 356, 658 P.2d at 719.

Resources Control Board (SWRCB), has the power to reconsider past allocations of water taking into account public trust values, including instream uses of water.⁶

Enforcement of water quality standards established under California's Porter-Cologne Water Quality Control Act⁷ may also be used as a mechanism to reallocate water to instream uses. Under the SWRCB's continuing duty to prevent waste or the unreasonable use of water, the California Court of Appeal in *United States v. State Water Resources Control Board*,⁸ concluded that the SWRCB has the authority to curtail current uses of water in order to maintain a required level of water quality.⁹

The ramifications of these doctrines on legitimate users of water are serious indeed, but as a practical matter, are yet to be seen. In large part, this is due to the fact that they have been over-shadowed by the much more powerful legal dictates of the Federal Endangered Species Act (ESA).¹⁰ While these other legal theories require that there be a balancing of competing interests in water,¹¹ ESA requires only that a listed species be protected, regardless of the costs associated with providing that protection.¹² Thus, with its strict legal mandates, ESA has become, by far, the most effective tool in the battle to provide instream flows. Moreover, ESA has served to federalize¹³ water rights decisions, an area traditionally left to state control.¹⁴

While many vested water right holders are sensitive to the needs of threatened and endangered species and are, in fact, willing to take *some* responsibility for the current downward trend in distribution and abundance of certain fisheries, they cannot afford, nor do they deserve, to be saddled

6. *Id.* at 447, 189 Cal. Rptr. at 364-65, 658 P.2d at 728.

7. CAL. WATER CODE §§ 13000-13908 (West 1992 & Supp. 1994).

8. 182 Cal. App. 3d 82, 227 Cal. Rptr. 161 (1986).

9. *State Water Resources Control Bd.*, 182 Cal. App. 3d at 130; 227 Cal. Rptr. at 187-88.

10. 16 U.S.C.A. §§ 1531-1544 (West 1985 & Supp. 1994).

11. In *National Audubon Society*, the California Supreme Court recognized that because the population and economy of the state depends on existing appropriations of water, the state would be required in some cases to approve appropriation of water that results in harm to public trust uses. In making those decisions, however, the state has an affirmative duty to take the public trust uses into consideration. *National Audubon Soc'y v. Superior Court*, 33 Cal. 3d 419, 446, 189 Cal. Rptr. 346, 364-65, 658 P.2d 709, 728 (1983). An element of balancing is also provided in the California Porter Cologne Water Quality Control Act. *See* CAL. WATER CODE §§ 13000-13908 (West 1992 & Supp. 1994); CAL. WATER CODE § 13241 (West 1992) (requiring that certain specified factors be considered in establishing water quality objectives).

12. *TVA v. Hill*, 437 U.S. 153, 173-74 (1978).

13. *See infra* note 87 (discussing federalization of state water rights).

14. *See California v. United States*, 438 U.S. 645, 653-63 (1978) (discussing several federal water rights decisions).

with the entire obligation of restoring population levels. However, many of the water users most affected by the ESA see the ESA, not as a means of protecting threatened and endangered species, but rather as a vehicle to effectuate the ulterior motives of many of the resource agencies and environmentalists; that is to reallocate vested water rights at no cost to them, but at significant cost to the water users.

The manner in which the ESA has been applied to water resources in California over the last five years serves as a powerful example of conflicts that result from a strict enforcement of the ESA. This Article examines the various mechanisms available under the ESA and demonstrates how they have been applied by the regulatory agencies to change the way in which water is used in California.¹⁵ By examining California's experience, one gains a full appreciation of the challenges facing the nation as it attempts to accommodate both its human and fish populations.

I. THE ENDANGERED SPECIES ACT

A. A Summary

Before exploring the specific manner in which the ESA has been applied, a basic understanding of the relevant provisions of the law is crucial. In enacting the ESA, Congress pledged to the international community that the United States would conserve to the extent practicable the various species of fish, wildlife, and plants facing extinction.¹⁶ To carry out this pledge, Congress declared its policy to be that all federal agencies shall seek to conserve endangered and threatened species.¹⁷ In particular, Congress instructed all federal agencies to cooperate with state and local agencies to resolve water resource issues in concert with conservation of endangered species.¹⁸

15. Because most of the conflicts have been between water resource development and the Federal Endangered Species Act (ESA), this Article only examines the federal statute. It should be noted, however, that the state has its own authority under California's ESA to restrict the use of water. CAL. FISH & GAME CODE §§ 2050-2098 (West Supp. 1994); see Gregory S. Weber, *The Role of Environmental Law in California Water Allocation and Use System: An Overview*, 25 PAC. L.J. 939-943 (1994) (comparing the California ESA to the Federal ESA).

16. 16 U.S.C.A. § 1531(a)(4) (West 1985 & Supp. 1994).

17. *Id.* § 1531(c)(1) (West 1985).

18. *Id.* § 1531(c)(2) (West 1985).

As a means of accomplishing its objectives, Congress charged the Secretary of the Interior¹⁹ with the responsibility for determining whether a species is endangered or threatened. A species is to be considered threatened or endangered on the basis of the following factors:

1. Its present habitat or range is threatened to be destroyed, modified or curtailed;
2. The species is over-utilized for commercial, recreational, scientific, or educational purposes;
3. The species is threatened by disease or predation;
4. There are inadequate regulatory mechanisms in existence for its protection;
5. Other natural or manmade factors affect the species continuing survival.²⁰

In making this determination the Secretary is only to rely on the best available scientific data.²¹ The Secretary is not permitted to take into consideration the economic or social impacts that will result from the decision.²²

Concurrent with making a determination as to the status of the species, the Secretary of the Interior is also required to designate any habitat that is critical to the species' continued survival.²³ Like the decision to list the species as endangered, the designation of critical habitat is also to be made on the basis of the best scientific data available.²⁴ However, the Secretary is directed to take into consideration the economic impact²⁵ of the

19. Although primary responsibility under the ESA is delegated to the Secretary of the Interior, the Secretary for Commerce is also given responsibility, through the National Marine Fisheries Service (NMFS), for certain designated species such as the winter-run salmon. *See id.* § 1532(15) (West Supp. 1994) (defining Secretary for purposes of the ESA).

20. *Id.* § 1533(a)(1) (West 1985).

21. *Id.* § 1533(b)(1)(A) (West 1985).

22. *Id.*; *see* *Northern Spotted Owl v. Hodel*, 716 F. Supp. 479, 480 (W.D. Wash. 1988).

23. 16 U.S.C.A. § 1533(a)(3) (West 1985).

24. *Id.* § 1533(b)(2) (West 1985).

25. The designation of critical habitat is one of the few areas of the ESA which allows economic considerations to be taken into account. 57 Fed. Reg. 36,627 (1992) (to be codified at 50 C.F.R. § 226). It is the author's opinion that as a practical matter, the agencies have made the analysis meaningless by manipulating the review in such a way as to underestimate the scope of the economic impact. For example, in the designation of critical habitat for the winter-run salmon, the NMFS determined that economic impacts resulted primarily from the determination to list the species as threatened. *Id.* Because economic considerations are not relevant to the listing decision, these economic impacts were also determined to be inappropriate to the analysis undertaken on the designation of critical habitat. *Id.* Consequently, the true economic impacts of species protection are grossly underestimated.

designation of critical habitat and may, after balancing the costs and benefits, exclude an area from the critical habitat designation, provided the exclusion will not result in the species' extinction.²⁶

Once a species has been listed as threatened or endangered, the ESA expressly prohibits the "taking" of any listed species.²⁷ The term "take" is defined by statute to mean "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."²⁸ The term "harm" has been further construed by regulation to include any action that would result in the destruction or adverse modification of critical habitat.²⁹

The ESA includes both civil and criminal penalties for any violation.³⁰ Upon notice, and after an opportunity for hearing, the Secretary may assess a civil penalty for any violation of the ESA.³¹ Since each violation is considered a separate offense, civil penalties can be assessed for each separate violation, even if multiple violations occurred as a single act.³² In the case of a water diversion, it is not difficult to imagine a situation where the single act of diversion results in numerous takings of a threatened and endangered species.³³ Accordingly, civil penalties may be assessed for each individual taking.³⁴

In addition to civil penalties, criminal penalties may also be imposed.³⁵ Upon conviction, a person found to have violated any provision of the ESA may be fined as much as \$50,000 or be imprisoned up to one year, or both.³⁶ Moreover, the ESA is considered to be a general intent statute.³⁷ Therefore, it is not necessary to have formed the intent to take an endangered species. It is only necessary to have formed

26. 16 U.S.C.A. § 1533(b)(2) (West 1985).

27. *Id.* § 1538(a)(1)(B) (West 1985).

28. *Id.* § 1532(19) (West 1985).

29. 50 C.F.R. § 17.3 (1992); *see Sweet Home Chapter of Communities for a Great Or. v. Lujan*, 806 F. Supp. 279, 285 (D.D.C. 1992).

30. 16 U.S.C.A. § 1540 (West 1985 & Supp. 1994).

31. *Id.* § 1540(a)(1) (West 1985).

32. *Id.*

33. For example, multiple "takes" would occur if more than one individual endangered specie, i.e., winter-run Chinook salmon, is entrained at a single time by diversion of water through a pumping facility.

34. 16 U.S.C.A. § 1540(a)(1) (West 1985 & Supp. 1994).

35. *Id.* § 1540(b)(1) (West 1985 & Supp. 1994).

36. *Id.* The criminal penalties provided for in 16 U.S.C.A. § 1540(b)(1) were increased by the Sentencing Reform Act, Pub. L. No. 98-773, 98 Stat. 1987 (1984), and the Criminal Fine Improvement Act, Pub. L. No. 100-185, 101 Stat. 1279 (1987).

37. *United States v. Billie*, 667 F. Supp. 1485, 1492-93 (S.D. Fla. 1987).

the intent to engage in the conduct that resulted in the taking of an endangered species.³⁸

Other enforcement mechanisms are also included in the ESA. Significant among these mechanisms is the authority to enjoin any person who is alleged to be in violation of the ESA.³⁹ This authority does not rest solely in the hands of the federal government. The citizen suit provision⁴⁰ authorizes any person to commence a civil suit to both enjoin a violation of the ESA and to compel the Secretary to apply the prohibitions set forth in the ESA.⁴¹

There are certain exceptions, however, to the prohibitions that may be granted by the Secretary.⁴² These exceptions have been narrowly construed, and for the most part, are an ineffective way of avoiding the restrictions of the statute.⁴³ One exception provided by the ESA is the section 10 permit⁴⁴ which may be issued only after the Secretary finds, on the basis of an application and related conservation plan, that:

1. any takings that may occur will be incidental;
2. the applicant will, to the maximum extent practicable, minimize and mitigate the impact of such takings;
3. the applicant will ensure adequate funding for the conservation plan; and
4. the takings will not "appreciably reduce the likelihood of the survival and recovery of the species"⁴⁵

In addition to the specific exceptions set forth in the ESA, the section 7 consultation process also affords some limited protection.⁴⁶ Under section 7(a)(1), all federal agencies have an affirmative duty to use their existing authority to carry out programs for the conservation of threatened

38. *Id.* at 1493.

39. 16 U.S.C.A. § 1540(e)(6) (West 1985).

40. *Id.* § 1540(g) (West 1985 & Supp. 1994).

41. *Id.* § 1540(g)(1)(B) (West 1985).

42. *Id.* § 1539 (West 1985 & Supp. 1994).

43. For example, since 1982, FWS has approved less than 20 Habitat Conservation Plans as required by 16 U.S.C.A. § 1539(a) as a precondition for issuance of a § 10 permit. Michelle Desiderio, *The ESA: Facing Hard Truths and Advocating Responsible Reform*, 8 NAT. RESOURCES & ENV'T 37, 79 (1993).

44. Numerous articles have already been written on difficulties associated with obtaining a § 10 incidental take permit. See, e.g., Robert D. Thorton, *The Search for a Conservation Planning Paradigm: Section 10 of the ESA*, 8 NAT. RESOURCES & ENV'T 21 (1993).

45. 16 U.S.C.A. § 1539(a)(2)(B) (West 1985).

46. *Id.* § 1536 (West 1985 & Supp. 1994).

or endangered species.⁴⁷ Moreover, each federal agency is required to consult with the Fish and Wildlife Service to insure that any action it authorizes, funds, or carries out, "is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of habitat"⁴⁸

To facilitate the consultation, the acting agency is required to conduct a biological assessment.⁴⁹ In the biological assessment, the action agency must identify any endangered or threatened species that may be affected by the proposed action.⁵⁰ Based on the biological assessment, the Fish and Wildlife Service is required to issue an opinion "detailing how the agency action affects the species or its critical habitat."⁵¹ If the action will result in jeopardizing⁵² the listed species or will result in adverse modification of the critical habitat, the Fish and Wildlife Service must suggest reasonable and prudent alternatives to the proposed action that can be implemented by the acting agency.⁵³

The biological opinion also includes an "incidental take statement" which specifies the impact to the species of any "take" that may occur incidental to the agency's action, under the reasonable and prudent alternatives.⁵⁴ The statement must identify the measures considered necessary to minimize the impact as a result of any incidental "take."⁵⁵

B. The California Experience

Although enacted in 1973, the water using community in California was not faced with any major conflicts under the ESA until 1990 when the National Marine Fisheries Service (NMFS) listed the winter-run salmon as

47. *Id.* § 1536(a)(1) (West 1985).

48. *Id.* § 1536(a)(2) (West 1985).

49. *Id.* § 1536(c) (1985); 50 C.F.R. § 402.12 (1992).

50. 16 U.S.C.A. § 1536(c)(1) (West 1985); 50 C.F.R. § 402.12(a) (1992).

51. 16 U.S.C.A. § 1536(b)(3)(A) (West 1985).

52. As a demonstration to workability of the ESA, proponents cite to the fact that very few projects have been absolutely prohibited from going forward. By 1979, federal agencies, through the § 7 consultation process, had resolved all but four of the 4500 conflicts that had arisen between endangered species and federal projects. ZYGMUNT J.B. PLATER ET AL., ENVIRONMENTAL LAW AND POLICY: NATURE, LAW, AND SOCIETY 672 (1st ed. 1992). What is not stated, however, are the costs to those projects associated with the changes and modifications made to accommodate the ESA.

53. 16 U.S.C.A. § 1536(b)(3)(A) (West 1985).

54. *Id.* § 1536(b)(4)(B) (West Supp. 1994).

55. *Id.* § 1536(b)(4)(B)(ii) (West Supp. 1994).

threatened.⁵⁶ Then suddenly, the ESA came down on Sacramento-San Joaquin River Delta water users with a voracity no one quite expected.

1. Glenn-Colusa Irrigation District

Located in Glenn and Colusa Counties, the Glenn-Colusa Irrigation District (District) was formed in 1920 to provide irrigation water to Sacramento Valley farmers.⁵⁷ The District holds an accumulation of very senior appropriative water rights from the Sacramento River, dating back to 1883.⁵⁸ In addition, it has a water rights settlement contract with the Bureau of Reclamation (Reclamation) for supplemental water from the Central Valley Project⁵⁹ which, when combined with their pre-1914 water rights, allows them to divert a total of 794,000 acre-feet of water.⁶⁰ During the peak irrigation season, April to October, the District's diversions range from 300 cubic feet per second to 2900 cubic feet per second, with an average rate of approximately 2000 cubic feet per second.⁶¹

As it had many times in the past, the District approached the U.S. Army Corps of Engineers in December of 1989 for a permit to dredge its diversion channel.⁶² In the course of obtaining that permit, NMFS issued a biological opinion under section 7 of the ESA, concluding that the issuance of the permit would likely jeopardize the continued existence of the winter-run salmon in violation of the ESA.⁶³ The opinion included, as a reasonable and prudent alternative, that a new fish screen be constructed at the District's diversion structure.⁶⁴ With the installation of a new fish screen, the District would be able to pump water without

56. The Sacramento River winter-run Chinook salmon was originally listed by an emergency interim rule in April 1990. 55 Fed. Reg. 12,191 (1990). A final rule was subsequently issued in November 1990. 50 C.F.R. § 227.4(e) (1992).

57. *United States v. Glenn-Colusa Irrigation Dist.*, 788 F. Supp. 1126, 1129 (E.D. Cal. 1992).

58. CYNTHIA F. DAVIS, *WHERE WATER IS KING* 109 (Glenn-Colusa Irrigation Dist. 1984).

59. The Central Valley Project (CVP) is a major water resource project constructed by the United States and operated by the U.S. Bureau of Reclamation. See *United States v. Gerlach Live Stock Co.*, 339 U.S. 725, 728-34 (1950). The CVP provides water as far north as Shasta and as far south as Bakersfield. For a more complete description of the project see *Gerlach Live Stock* at 727-34.

60. DAVIS, *supra* note 58, at 114.

61. *Glenn-Colusa Irrigation Dist.*, 788 F. Supp. at 1129.

62. *Id.* at 1130.

63. *Id.*

64. *Id.*

violating the ESA and an incidental take permit would be issued allowing the District to take winter-run salmon incidental to its pumping operation.⁶⁵

Whether it was because of an on-going argument with the California Department of Fish and Game over the design and effectiveness of the existing fish screen, or because of the seniority of its water rights, or, perhaps, because of an under-estimation of the power vested in federal agencies under the ESA, the District chose not to accept the dredge permit under the conditions set forth in the biological opinion.⁶⁶ Consequently, in August 1991, the United States filed an action seeking to obtain a preliminary injunction against the District.⁶⁷ The District raised a variety of legal arguments in an attempt to persuade the court from issuing the injunction. For instance, the District argued that harm to the fish resulted, not from their pumping operations, but from the poorly designed fish screens installed by the California Department of Fish and Game.⁶⁸ In addition, the District urged that section 2 of the ESA, which provides that federal agencies should cooperate with state and local agencies to resolve water resources issues regarding the conservation of endangered species,⁶⁹ be construed to require that state water law prevail over the prohibitions of the ESA.⁷⁰ These arguments were soundly rejected by the court which concluded, in part, that neither state nor federal law excuses the District from having to comply with the provisions of the ESA.⁷¹ Thus, upon finding that the District's actions presented a danger of irreparable harm to the winter-run salmon, the court enjoined the District from pumping water from the Sacramento River during the winter-run's peak downstream migration season of July 15 through November 30 of each year.⁷²

Faced with the potential inability to divert water during the peak of its irrigation season, the District has since modified its stance by negotiating a temporary resolution to the problem.⁷³ The terms of the joint stipulation are predicated upon the District obtaining an incidental take statement,

65. *Id.* at 1130-31.

66. *Id.* at 1131.

67. *Id.* at 1128.

68. *Id.* at 1133.

69. 16 U.S.C.A § 1531(c)(2) (West 1985) (declaring that federal and state agencies must cooperate in the resolution of water issues arising in concert with conservation of endangered species).

70. *Glenn-Colusa Irrigation Dist.*, 788 F. Supp. at 1134.

71. *Id.* at 1135.

72. *Id.*

73. A Joint Stipulation between the parties was approved by the court on July 12, 1993. *See* 1993 Joint Stipulation of Parties and Order Thereon, *United States v. Glenn-Colusa Irrigation Dist.*, 788 F. Supp. 1126 (E.D. Cal. 1992) (No. 91-1074) [hereinafter Joint Stipulation] (copy on file with the *Pacific Law Journal*).

either by applying for a section 10 permit⁷⁴ or having Reclamation complete a section 7 consultation⁷⁵ which would include operation of the District's diversion facility on the Sacramento River.⁷⁶ The joint stipulation also requires the District to commit its resources to arrive at long-term conservation measures for the protection of winter-run Chinook salmon.⁷⁷ Specifically, the District must ensure full funding of all necessary environmental analysis, selection, design and construction activities.⁷⁸ To show its good faith intention to pursue a long term solution, the District also agreed to provide to the United States no less than 5.5 million dollars, no later than December 31, 1995.⁷⁹

Until a long-term solution is found, the District must operate its facilities according to the terms and conditions set forth in the joint stipulation. These conditions include, in part, the establishment of certain bypass flows during August 1 through November 30 of each year,⁸⁰ the maintenance of certain approach velocities at the fish screens,⁸¹ the installation and operation of live traps to monitor the number of Chinook salmon in the diversion channel,⁸² and, if necessary, a cessation of diversions until corrective measures can be taken to prevent the unnecessary taking of winter-run salmon.⁸³ Furthermore, while not directly related to the operations of the pumps, the District must report to NMFS the amount of water diverted by the District into its irrigation system,⁸⁴ the amount of drain water recovered,⁸⁵ and such other information normally collected by the District that shows the pattern of water use within the District,⁸⁶ including the number of acres irrigated.⁸⁷

74. See 16 U.S.C.A. § 1539(a) (West 1985) (allowing permits for enumerated prohibited acts).

75. See 16 U.S.C.A. § 1536(a)(2) (1985) (discussing § 7 consultations). Section 7 consultations have been determined to be an appropriate mechanism for obtaining an incidental take statement for the District's operations, because under the provisions of the Central Valley Project Improvement Act, Pub. L. No. 102-575, § 3406(b)(20) (1992), the Department of the Interior is required to participate in mitigating the fishery impacts associated with the District's diversions by providing 75% of the cost as a nonreimbursable federal expenditure. Joint Stipulation, *supra* note 73, at 3-4. Therefore, to ensure that the action Reclamation is funding will not result in jeopardy, consultation is required. 16 U.S.C.A. § 1536(a)(2) (West 1985).

76. Joint Stipulation, *supra* note 73, at 2.

77. *Id.* at 4.

78. *Id.* at 5.

79. *Id.* at 13-14.

80. *Id.* at 7.

81. *Id.* at 9.

82. *Id.* at 10-11.

83. *Id.* at 11.

84. *Id.* at 15-16.

85. *Id.* at 17.

86. *Id.*

Thus, there is no doubt that the ESA has become a significant factor in the District's day-to-day operations.

2. *The Anderson-Cottonwood Irrigation District*

Like the Glenn-Colusa Irrigation District, the Anderson-Cottonwood Irrigation District (ACID) directly diverts water from the Sacramento River under pre-1914 water rights for irrigation purposes. In September 1991, the California Department of Fish and Game filed a complaint for injunction and temporary restraining order against ACID under the California ESA⁸⁸ for taking migrating winter-run Chinook salmon through its pumping operations.⁸⁹ Although the trial court denied the Department's request,⁹⁰ NMFS stepped in using its own authority under the federal ESA, to assess civil penalties against ACID.⁹¹ NMFS determined that during the peak migration season of 1991, ACID had pumped a total of twenty-eight days.⁹² Accordingly, NMFS fined ACID \$25,000 per day for violating the taking provisions of the ESA, for a total of \$700,000,⁹³ quite a significant amount of money for a district whose annual budget is only approximately \$600,000.⁹⁴

The experience of the Glenn-Colusa Irrigation District and the Anderson-Cottonwood Irrigation District was an effective wake-up call for many California water users previously unfamiliar with the ESA. For those already aware of the ESA's autocratic authority to prohibit otherwise lawful activities, the episode confirmed the importance of attempting to work within the structure of the ESA through, for example, the section

87. *Id.* The informational requirements of the Joint Stipulation are a perfect example of the ESA being used to federalize state water rights. The requirement that the District provide information on its water use does not directly relate to NMFS' duty to protect winter-run salmon. It does, however, indicate a desire on the part of the federal regulatory agencies to oversee the District's daily use of water.

88. See CAL. FISH & GAME CODE §§ 2050-2098 (West Supp. 1994) (constituting the California ESA).

89. Department of Fish & Game v. Anderson-Cottonwood Irrigation Dist., 8 Cal. App. 4th 1554, 1560, 11 Cal. Rptr. 2d 222, 225 (1992).

90. *Id.*

91. Jim Mayer, *Irrigators in Shasta Fined for Killing Fish*, THE SACRAMENTO BEE, Jan. 3, 1992, at B1 [hereinafter *Irrigators Fined*]; see 16 U.S.C.A. § 1540(a)(1) (West 1985) (granting authority to NMFS to levy civil penalties).

92. *Irrigators Fined*, *supra* note 91, at B1.

93. *Id.*

94. Letter from William H. Baber, Partner, Minasian, Minasian, Spruance, Baber, Meith & Soares, to Lisa L. Kaplan, Staff Attorney, U.S. Dept. of Commerce, NOAA 1-2 (Jan. 27, 1992) (copy on file with the *Pacific Law Journal*).

10⁹⁵ or section 7⁹⁶ process, to lessen the ESA's impacts rather than trying to challenge the regulatory framework itself.

3. Operations of the Central Valley Project and State Water Project Winter-run Salmon

Since the listing of winter-run salmon, the operations of the Central Valley Project (CVP) and the State Water Project (SWP)⁹⁷ have become virtually intertwined in a continuing section 7 consultation process.⁹⁸ In order to meet contractual obligations to supply water without running afoul of the ESA, Reclamation began formal consultation with NMFS in April 1991.⁹⁹ Originally, the consultation was to cover long-term CVP operations under a range of hydrologic and storage conditions.¹⁰⁰ In late 1991, it became apparent that information needed for a long-term biological opinion was not going to be developed in sufficient time.¹⁰¹ Accordingly, the decision was made to issue a separate one-year opinion for 1992 operations, to be followed by a long-term opinion.¹⁰² Because of the coordination in operations between the CVP and the SWP, the Department of Water Resources has also been a participant in the section 7 consultations.¹⁰³

The long-term biological opinion issued by NMFS on February 12, 1993, concluded that the operations of both the CVP and SWP will result in jeopardy to the winter-run salmon.¹⁰⁴ Consequently, NMFS, in accordance with the ESA,¹⁰⁵ established certain reasonable and prudent

95. See 16 U.S.C.A. § 1539 (West 1985) (creating exceptions to prohibited acts).

96. See *id.* § 1536 (West 1985) (requiring interagency cooperation).

97. CAL. WATER CODE § 12930 (West 1991). The State Water Project is the second largest water project in the State of California, next to the CVP. It is operated by the Department of Water Resources. Water stored at Oroville Dam is released to the Sacramento-San Joaquin Delta where it is pumped into the California Aqueduct for primary service to the southern California area. *United States v. State Water Resources Control Bd.*, 182 Cal. App. 3d 82, 100, 227 Cal. Rptr. 162, 167 (1987).

98. That the § 7 consultation process has greater applicability within the state of California is a direct result of the CVP. Not only is the CVP a federal reclamation project operated by the Bureau of Reclamation, it is the largest water project within the state.

99. NATIONAL MARINE FISHERIES SERVICE, BIOLOGICAL OPINION FOR THE OPERATION OF THE FEDERAL CENTRAL VALLEY PROJECT AND THE CALIFORNIA STATE WATER PROJECT 1 (February 1993) [hereinafter WINTER-RUN BIOLOGICAL OPINION] (copy on file with the *Pacific Law Journal*).

100. *Id.* at 1.

101. *Id.* at 2.

102. *Id.*

103. *Id.* at 9.

104. *Id.* at 49.

105. See 16 U.S.C.A. § 1536(b)(3)(A) (West 1985) (requiring the Secretary to establish reasonable and prudent alternatives).

alternatives which, if implemented, would allow the projects to continue to operate without being held in violation of the ESA.¹⁰⁶ Primarily, these alternatives pertain to three areas of the projects' operations. First, Reclamation must maintain a minimum of 1.9 million acre-feet carryover-storage in Shasta Reservoir at the end of the water year so that there is sufficient water available for release in the following year to meet the temperature objectives set by NMFS in the upper Sacramento River.¹⁰⁷ Under the second alternative, the gates at Red Bluff Diversion Dam have been determined to be a major obstacle to the migration of winter-run salmon.¹⁰⁸ Therefore, NMFS required that the gates of Red Bluff Diversion Dam be raised beginning in November 1993 and remain open until at least April 30, 1994, to permit passage of the fish.¹⁰⁹ On September 15 of each year, commencing in 1994, the gates must be raised through the period September 15 to at least May 14.¹¹⁰ The third alternative would reduce the percentage of winter-run Chinook salmon that are diverted from the mainstream of the Sacramento River into the Central Delta by requiring Reclamation to maintain the Delta Cross Channel Gates in a closed position from February 1 through April 30.¹¹¹ In addition, the projects are required to meet certain QWEST standards¹¹² by either releasing additional water from storage or by reducing exports for the period February 1 through April 30, to eliminate reverse flows in the western Delta.¹¹³ During the period November 1 through January 31, some reverse flows¹¹⁴ will be allowed.¹¹⁵ However, the projects are still required to achieve flows in the western Delta greater than negative 2,000 cubic feet per second.¹¹⁶

106. WINTER-RUN BIOLOGICAL OPINION, *supra* note 99, at 51.

107. *Id.*

108. *Id.* at 54.

109. *Id.*

110. *Id.*

111. *Id.* at 55.

112. QWEST stands for flow to the west. *Id.* at 517. It is a mathematical calculation generated by the California Department of Water Resources' Dayflow Model that represents net flow from the central Delta to the western Delta. *Id.*

113. *Id.* at 57.

114. The phrase "reverse flow" is used to characterize a situation that occurs in the Delta when water is drawn upstream into the San Joaquin River by the SWP and CVP pumping facilities. DEPARTMENT OF WATER RESOURCES, DRAFT ENVIRONMENTAL IMPACT STATEMENT, ENVIRONMENTAL IMPACT REPORT FOR THE NORTH DELTA PROGRAM 25 (1990) (copy on file with the *Pacific Law Journal*). Reverse flow is believed to disorient migratory fish species, inhibiting their migration through the Delta. *Id.*

115. WINTER-RUN BIOLOGICAL OPINION, *supra* note 99, at 57.

116. *Id.*

The incidental take statement issued in the biological opinion applies to all of the activities of Reclamation and the Department of Water Resources related to the operations of the CVP and SWP.¹¹⁷ The incidental take statement does not provide protection to individuals or irrigation districts that receive water from the projects.¹¹⁸ The total level of take at the Delta pumping facilities cannot exceed one percent of the estimated winter-run Chinook salmon entering the Delta for the current year.¹¹⁹ The opinion estimated that 270,000 salmon would enter the Delta in 1993.¹²⁰ For the 1994 water year, the incidental take limit is only 905 winter-run salmon.¹²¹

While there probably is no dispute between water users and biologists as to the need to protect winter-run salmon, the enforcement efforts of NMFS have not been without controversy. Much of the debate has focused on the poor scientific information used to support some of the requirements in the reasonable and prudent alternatives. For instance, QWEST is used in the biological opinion as a regulatory parameter to control entrainment of winter-run salmon at the federal and state pumping plants.¹²² QWEST had its genesis, however, as a proposed interim water quality standard for the Bay-Delta in Decision 1630 by the SWRCB (D1630).¹²³ In the context of the comments to the SWRCB on draft Decision 1630, QWEST was severely criticized as being an oversimplification of Delta flows and not being an appropriate indicator of entrainment of fish at the pumping plants of the CVP and SWP.¹²⁴ Furthermore, evidence was presented by the Central Valley Project Water Association and Department of Water Resources demonstrating potentially significant water supply impacts to the CVP and SWP resulting from

117. *Id.* at 65.

118. *Id.*

119. *Id.* at 69-70.

120. *Id.* at 70.

121. Memorandum from Robert G. Potter, Chief Deputy Director, Department of Water Resources to David N. Kennedy, Director, Department of Water Resources 1 (Jan. 5, 1994) [hereinafter Potter Memorandum] (copy on file with the *Pacific Law Journal*).

122. WINTER-RUN BIOLOGICAL OPINION, *supra* note 99, at 57.

123. State Water Resources Control Board, State of California, Draft Water Right Decision 1630, San Francisco Bay/Sacramento-San Joaquin Delta Estuary 48 (Apr. 1993) (copy on file with the *Pacific Law Journal*).

124. Central Valley Project Water Association, Comments on Decision 1630, 4 (Feb. 16, 1993) (copy on file with the *Pacific Law Journal*).

compliance with the requirement.¹²⁵ Operation studies prepared by the Department of Water Resources to analyze the impacts of D1630 indicate that the SWP and CVP could potentially experience an average annual reduction in pumping capability ranging from 281,000 acre feet in wet years to as much as 1,422,000 acre feet in dry years. The maximum single year delivery reduction over the seventy-one years of the Study was 2,015,000 acre feet.¹²⁶

Although D1630 was later rescinded by the SWRCB, QWEST was still made a condition of the projects under the ESA, despite questions raised as to its effectiveness as a criterion.¹²⁷ This is allowed to occur under the ESA primarily because the resource agencies are permitted to rely on the "best" scientific data available,¹²⁸ no matter how "soft" or inclusive the information actually is. For those agricultural users faced with a future of continual water shortages, QWEST epitomizes a significant failing in the ESA.¹²⁹

The method of identifying winter-run salmon for purposes of implementing the incidental take limit has also raised serious concerns. The number of fish "taken" at the pumps is not an actual number but rather a calculation made using factors developed by the fishery agencies and applying them to salmon observed at the fish salvage facilities.¹³⁰ The observed fish are identified as winter-run salmon based solely upon their size.¹³¹ During 1993, there were thought to be ninety-seven winter-run salmon salvaged at the project pumps.¹³² Based upon the ninety-seven winter-run salmon, the calculated "take" was determined to be

125. *Id.* at 12, 15; see Department of Water Resources, Comments of the Department of Water Resources on SWRCB Draft Decision 1630, 12 (Feb. 16, 1993) [hereinafter Comments of the Department of Water Resources] (copy on file with the *Pacific Law Journal*).

126. *Id.* at 52-53.

127. WINTER-RUN BIOLOGICAL OPINION, *supra* note 99, at 57.

128. See 50 C.F.R. § 402.14(g)(8) (1992).

129. It is true that the QWEST standard can be judicially challenged. See 5 U.S.C.A. § 706(2)(A) (West 1985). However, it is also true that the legal standard applied by the court is whether NMFS acted in an arbitrary and capricious manner by including QWEST in the biological opinion. See *Pyramid Lake Paiute Tribe of Indians v. United States Dep't of the Navy*, 898 F.2d 1410, 1414 (9th Cir. 1990) (articulating the standard of review for an agency decision). Since the court is not a technical expert, it must give deference to the agency's decision. *Id.* Given this nearly impossible judicial burden to sustain, it is not surprising that there has been little litigation over the implementation of the ESA with regards to the CVP and SWP. The lack of balance in the ESA, combined with a limited ability to obtain judicial relief, has helped to create an emotionally charged atmosphere within the water using community.

130. WINTER-RUN BIOLOGICAL OPINION, *supra* note 99, at 61.

131. *Id.*

132. Potter Memorandum, *supra* note 121, at 1.

1,915; however, further analysis belies that number.¹³³ Of the ninety-seven winter-run sized smolts salvaged at the project pumps, only nineteen could be positively identified.¹³⁴ None of the nineteen fish were winter-run salmon.¹³⁵ Despite the misidentification of twenty percent of the winter-run salmon used to determine the calculated "take," the remaining fish were nevertheless assumed to be winter-run.¹³⁶

Because of the tremendous amount of precipitation in the 1993 water year, the impacts of the projects were able to divert additional quantities of water later in the season to make up for the previous reductions in pumping, thereby mitigating the impacts resulting from the ESA requirements on the two projects. This may not be the case, however, in future years. As of December 29, 1993, the combined, observed salvage at the two pumping plants totaled four fish.¹³⁷ This results in a calculated take of winter-run salmon of 110, approximately twelve percent of the total permitted take for 1994.¹³⁸ Given the current rate of take, it is not inconceivable that both the CVP and SWP will need to terminate all exports, at least for a portion of this water year to avoid the incidental take limit. Moreover, forecasts made by Reclamation declare that this year may be the fourth driest year of record.¹³⁹ In the case of both QWEST and the incidental take limit, it is not a situation of the water users simply opposing regulation. It is true, however, that the water users expect some scientific justification for the regulations sought to be imposed, particularly in light of the potentially severe cutbacks¹⁴⁰ in water.¹⁴¹

In addition to the problems expressed as to the adequacy of the scientific methods used, there is concern that the enforcement efforts are being focused only on the water resources projects and water use. Water users, such as the Westlands Water District, have specifically requested that NMFS also enforce the ESA by more stringently regulating actions taken by others that also jeopardize the continued existence of winter-run

133. *Id.*

134. *Id.*

135. *Id.*

136. *Id.*

137. *Id.*

138. *Id.*

139. BUREAU OF RECLAMATION, THE BUREAU OF RECLAMATION'S CENTRAL VALLEY PROJECT WATER SUPPLY FOR 1994 (Mar. 15, 1994) (copy on file with the *Pacific Law Journal*).

140. *See id.* (noting that the Bureau of Reclamation anticipates being able to deliver a 35% water supply to its agricultural contractors during the 1994 water year).

141. CENTRAL VALLEY PROJECT WATER ASSOCIATION, CENTRAL VALLEY PROJECT, OUTLINE OF ISSUES (Jan. 1994) (copy on file with the *Pacific Law Journal*).

salmon.¹⁴² For instance, it has been estimated that the annual ocean harvest of salmon “takes” between thirty-four and thirty-six percent of the adult winter-run Chinook salmon population.¹⁴³ Regulation of ocean salmon fishing, therefore, also needs to be examined as a means of protecting winter-run salmon. In addition, exposure to municipal and industrial pollution from the discharge of treated and untreated wastewater must also be curtailed.¹⁴⁴ Furthermore, there is a significant cumulative impact resulting from the unscreened diversions in the Delta which needs to be addressed.¹⁴⁵

While the Secretaries of the Interior and Commerce have broad authority to issue any such regulation deemed necessary and advisable to provide for the conservation of a listed species pursuant to section 4(d) of the ESA,¹⁴⁶ NMFS has sought only to investigate the possibility of regulating unscreened diversions.¹⁴⁷ On October 18, 1993, NMFS published an advance notice of a proposed rule indicating that it was considering whether or not it should propose regulations requiring screens on water diversions along the Sacramento River and Delta.¹⁴⁸ No other regulations are currently proposed.

4. *Delta Smelt*

While the listing of winter-run salmon may have resulted in the first major clash between water users in California and the ESA, it certainly was not the last. On March 5, 1993, the Fish and Wildlife Service promulgated a final rule listing the Delta Smelt as a threatened species.¹⁴⁹ Even before it was listed, the status of Delta Smelt as a threatened or endangered species had been fraught with controversy.

As an initial matter, there are substantial gaps and questions regarding the data collected on Delta Smelt. Information on the population of Delta Smelt has been obtained through several surveys done to sample specific

142. Letter from Jerald R. Butchert, General Manager, Westlands Water District, to Honorable Ronald Brown, Secretary of Commerce, Honorable Bruce Babbitt, Secretary of the Interior, Dr. Nancy Foster, Acting Assistant Administrator for Fisheries, NMFS 2 (Aug. 2, 1993) (copy on file with the *Pacific Law Journal*).

143. *Id.* at 3.

144. *Id.*

145. *Id.*

146. 16 U.S.C.A. § 1533(d) (West 1985).

147. 58 Fed. Reg. 53,703 (1993) (to be codified at 50 C.F.R. §§ 222, 227). Again, legitimate users of water are the targets for ESA compliance.

148. *Id.*

149. *Id.* at 12,854 (to be codified in 50 C.F.R. § 17).

species such as striped bass or salmon.¹⁵⁰ The information gathered on Delta Smelt was incidental to the surveys' other purposes.¹⁵¹ There is, consequently, a substantial disagreement among scientists about the sufficiency and adequacy of the data and whether or not it supports the listing decision.

Federal and state water contractors argued, in their comments to the proposed listing, that the data from at least one of the surveys relied upon by the Fish and Wildlife Service demonstrates that since 1985, the trend in population is upward.¹⁵² The Fish and Wildlife Service, on the other hand, rejected water users' comments, concluding that the recent high population values are a result of the fact that the Delta Smelt population is restricted to a smaller geographic area, and accordingly, the surveys capture a greater concentration of fish.¹⁵³

In addition to criticizing the scientific data used as the basis for listing, the process itself was condemned as being biased.¹⁵⁴ As revealed by the State Water Contractors, the four-person status review panel, formed to make recommendations to the Fish and Wildlife Service regarding the appropriateness of listing the Delta Smelt, included individuals with close professional ties to the petitioner.¹⁵⁵ The State Water Contractors therefore argued that the panel was not objective in its analysis of evidence.¹⁵⁶ Because of circumstances surrounding the listing, the listing decision continues to be viewed by the water using community as a guise to exert federal control over the state water allocation decisions.¹⁵⁷ Further substantiation for this supposition is being provided through the

150. CALIFORNIA DEPARTMENT OF WATER RESOURCES & U.S. BUREAU OF RECLAMATION, EFFECTS OF THE CENTRAL VALLEY PROJECT AND STATE WATER PROJECT ON DELTA SMELT 7 (1993) (Biological Assessment) [hereinafter Biological Assessment] (copy on file with the *Pacific Law Journal*).

151. *Id.* For example, since 1956, Department of Fish and Game has been conducting a tow-net survey each summer primarily to provide an abundance index for young striped bass. *Id.* Although this survey is primarily for striped bass, data on Delta Smelt has also been collected. *Id.*

152. Letter from Jason Peltier, Manager, Central Valley Project Water Association, to Wayne White, Field Supervisor, U.S. Fish and Wildlife Service 6 (Jan. 30, 1992) (copy on file with the *Pacific Law Journal*); State Water Contractors, Comments of the State Water Contractors on the October 3, 1991 Proposal of the U.S. Fish and Wildlife Service to List the Delta Smelt as a Threatened Species 14 (Jan. 30, 1992) [hereinafter State Water Contractor Comments] (copy on file with the *Pacific Law Journal*).

153. 58 Fed. Reg. 12,856 (1993).

154. *Id.* at 12,857-58.

155. STATE WATER CONTRACTOR COMMENTS, *supra* note 152, at 61-63.

156. *Id.*

157. The water users view, that the species is not threatened, is further substantiated by the recent results of the Fall Midwater Trawl Survey for 1993. The September index alone is higher than the annual index for all years in the past decade, with the exception of 1991. Biological Assessment, *supra* note 150, at 12. In addition, the Survey indicated that the population was broadly distributed, thus refuting the Fish and Wildlife Service's conclusion that high population values are a result of a restricted geographic area. *Id.*

current section 7 consultation process for effects of the CVP and SWP on the Delta Smelt.¹⁵⁸

The Fish and Wildlife Service is presently in the process of developing a biological opinion for water year 1994.¹⁵⁹ Although, this biological opinion will only be in place for one year, it will, in all likelihood, serve as the framework for a long-term biological opinion. What is expected to appear in the biological opinion, and what is of great concern to the water contractors, is that the opinion will include reasonable and prudent alternatives that will have the effect of implementing at least a portion of the water quality standards proposed by the Environmental Protection Agency (EPA).¹⁶⁰

In proposing water quality standards for the Sacramento-San Joaquin River Delta pursuant to the Clean Water Act (CWA),¹⁶¹ EPA recognizes the limitation imposed on its authority under section 101(g). Section 101(g) expressly states that the CWA shall not be construed to supersede or abrogate rights to quantities of water established under state law.¹⁶² Thus, to the extent that the EPA has proposed water quality standards that can only be met by the release of stored water, limitations on diversions, or both, the EPA is relying on the SWRCB to implement the standards pursuant to its water right authority.¹⁶³

Implementation through the SWRCB process necessarily includes a water rights hearing, thus guaranteeing some kind of due process.¹⁶⁴ Moreover, it requires that there be a balancing of the competing uses of water.¹⁶⁵ If, however, the proposed EPA water quality standards become reasonable and prudent alternatives in the biological opinion, Fish and Wildlife Service will have effectively usurped the state's authority to make water allocation decisions.¹⁶⁶ In addition, it will have circumvented all

158. Similar to the situation with winter-run salmon, Reclamation and the Department of Water Resources have initiated a § 7 consultation with FWS on the effects of the operations of the SWP and the CVP on the Delta Smelt.

159. BIOLOGICAL ASSESSMENT, *supra* note 150, at 1.

160. 59 Fed. Reg. 810 (1994) (to be codified in 40 C.F.R. § 131).

161. 33 U.S.C.A. § 1313 (West 1985 & Supp. 1994).

162. *Id.* § 1251(g) (West 1985) (to be codified in 40 C.F.R. § 131).

163. 59 Fed. Reg. 813 (1994).

164. CAL. WATER CODE § 1394(b) (West Supp. 1994).

165. *United States v. State Water Resources Control Bd.*, 182 Cal. App. 3d 82, 116, 227 Cal. Rptr. 161, 178 (1986).

166. Although EPA is required by § 101(g) of the CWA to accommodate the state's interest in water allocation, the ESA does not include any such limitation of authority. Accordingly, the Fish and Wildlife Service need not reconcile any of its decisions with state established water rights.

of the due process protections provided under state law to vested water right holders.

C. Future Regulatory Actions Under Endangered Species Act

1. Development of Recovery Plans

For water users faced with potential water shortages resulting from ESA regulation, the hope is that greater emphasis will be placed on the agencies' duty under the ESA to develop and implement recovery plans in future years. Section 4(f) specifically directs the Secretary to prepare plans for the conservation and survival of endangered species giving priority to those species most likely to benefit, and those that are in conflict with ongoing economic activities.¹⁶⁷

To date, recovery efforts have been negligible. Recovery plans have been developed for only an estimated fifty-five percent of the species listed.¹⁶⁸ Of those, only a handful have been actually implemented. In testimony presented by the Fish and Wildlife Service in *Sierra Club v. Lujan*,¹⁶⁹ the Service estimated that \$4.6 billion is needed to implement recovery measures for those species with current plans.¹⁷⁰ The annual budget for the agency's recovery effort is, however, only twenty million dollars.¹⁷¹ Unless there is a dramatic shift in priorities, including budgetary priorities, section 4(f) does not appear to provide any immediate opportunity to eliminate the growing number of conflicts between water resources development interests and endangered species protection.¹⁷²

167. 15 U.S.C.A. § 1533(f) (West Supp. 1994).

168. J.B. Ruhl, *Section 4 of the ESA — The Cornerstone of Species Protest Law*, 8 NAT. RESOURCES & ENV'T'L 70 (1993).

169. 1993 U.S. Dist. LEXIS 3361 (W.D. Tex. Feb. 1, 1993).

170. Ruhl, *supra* note 168, at 70.

171. *Id.*

172. Fish and Wildlife Service recently proposed listing the Sacramento River winter-run Chinook salmon as an endangered species. 59 Fed Reg. 440 (1994) (to be codified at 50 C.F.R. §§ 222, 227). In addition, other species, such as the spring-run Chinook salmon, the San Joaquin fall-run Chinook salmon, and the green sturgeon are the subject of a proposed cluster listing made to Fish and Wildlife Service by the Natural Heritage Institute. Natural Heritage Institute, *Petition for Listing Under the Endangered Species Act 3-7* (Nov. 5, 1992) (copy on file with the *Pacific Law Journal*). Accordingly, there will be new and additional regulatory requirements imposed as the resource agencies seek to protect newly listed species.

2. *Cooperative Ecosystem Management*

Much attention has recently been given to the ecosystem management approach adopted for the California gnatcatcher. Under section 4(d) of the ESA,¹⁷³ Fish and Wildlife Service has adopted a rule that recognizes California's Natural Community Conservation Planning (NCCP) Act of 1991.¹⁷⁴ Rather than take a species-by-species approach, the NCCP intends to provide a systematic evaluation and restoration of habitat for the benefit of an entire ecosystem¹⁷⁵ with the added goal that further listings will be avoided.

Under the adopted regulation, the Fish and Wildlife Service will permit the incidental take of a gnatcatcher provided that: 1) The take occurs in an area within a local governmental jurisdiction enrolled in the natural community conservation planning process; 2) the Fish and Wildlife Service has concurred with certain guidelines prepared by the Scientific Review Panel and adopted by the California Department of Fish and Game; 3) total loss of the coastal sage scrub habitat does not exceed the restrictions defined by the Scientific Review Panel/California Department of Fish and Game guidelines; and 4) the Fish and Wildlife Service reviews and approves the guidelines every six months.¹⁷⁶ Activities that do not fall within the planning process will continue to be subject to the prohibitions of the ESA.

While hopes are high that the NCCP approach will be successful and, furthermore, that it can be applied as a model to other situations, such as water resource development, there are those who remain skeptical. Ecosystem management will not avoid regulation. Moreover, if the NCCP is not considered sufficiently protective, the requirements of the ESA must continue to be met.

3. *Legislative Reform*

Responsible legislative reforms to the ESA might also serve to diffuse the conflicts which have arisen between water development in California and threatened and endangered species. One area of reform where there is significant agreement is in the development of economic incentives for

173. 16 U.S.C.A. § 1533(d) (West 1985).

174. 58 Fed. Reg. 65,088 (1993) (to be codified at 50 C.F.R. § 17).

175. *Id.* at 16758.

176. *Id.* at 16759.

resource protections.¹⁷⁷ These incentives could take the form of tax credits for habitat maintenance and improvement or tax deductions for revenues from lands managed to support endangered species.¹⁷⁸ Other proposals include a buy-out program for lands affected by ESA restrictions.¹⁷⁹

Changes to the substantive provisions of the ESA might also provide some flexibility and balance. Arguments over the credibility of the scientific data upon which decisions are made under the ESA would be diminished if peer review of the scientific and commercial data were required. In addition, the scientific data used should be verified by field testing.

There should be a legislative priority created for the development of recovery plans by establishing a time limit for the completion of each plan. Priorities for the development of the recovery plans should also be provided. Priorities should include situations where one or more species is listed or where there is conflict between an endangered or threatened species and economic development. Furthermore, the recovery team should include representatives of the affected parties as members.

The section 10 permitting process must be made more workable. One way to accomplish that goal would be to adopt an approach similar to the section 7 consultation except that it would apply to non-federal actions.

CONCLUSION

California water users' experience during the last five years reveals certain important lessons concerning the ESA. First, the ESA has the potential to affect any individual rightholder regardless of the seniority of the right or the quantity of water diverted. Second, the ESA's power to change the nature of an individual's water rights is seemingly absolute. The ESA can influence not only the amount of water that an individual can continue to divert but can also influence the method of diversion and the timing of diversions. Third, there is little opportunity to completely avoid the restrictions imposed in carrying out the Secretary's responsibilities under the ESA. Fourth, there is little to be gained and much to be lost by attempting to ignore or directly challenge the Secretary's authority. Finally,

177. Paul Ciampoli, *Species Act: Admin Prefers Alternative Tools, Incentives*, AMERICAN POLITICAL NETWORK, INC., GREENWIRE, Dec. 3, 1993, available in LEXIS, ENVRN Library, GREENWIRE File.

178. *Id.*

179. *Id.*

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unless and until there are changes made in the ESA, section 7 or section 10 offer the only opportunity for reducing the impacts associated with the ESA.

