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ENVIRONMENTAL PERMITS: LAND USE REGULATION AND POLICY IMPLEMENTATION IN TEXAS*

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I. INTRODUCTION

Real estate lawyers, in advising their clients on land use regulations affecting proposed developments, traditionally focused on the applicable zoning ordinances of the governing municipality. Not long ago, the inquiry was relatively simple—what is the property zoned and what uses are permitted in that zoning district? With the enactment of increasingly detailed and interrelated zoning-type regulations, the inquiry has become considerably more complex. Special use permits, site plan approvals, height limitations, buffer zones (and setbacks) based on "compatibility" standards, impervious coverage limitations, and a myriad of other regulatory programs now affect the use of property and require careful analysis.

Real estate lawyers also are familiar with applicable subdivision ordinances, which typically impose additional limitations on the use of real property. Subdivision platting was originally envisioned as a procedure to ensure orderly development of property within the jurisdic-

tion of a municipality, particularly with regard to streets, utilities, and other infrastructure improvements, so that the plat would be consistent with the municipality's "master plan" and development of nearby properties. In Texas, subdivision regulations may apply both within the boundaries of a city and within the immediately adjacent area, known as the city's extra-territorial jurisdiction or "ETJ." In the last several decades, municipalities have used their subdivision approval power to regulate not only street and utility systems, but also proposed land uses and improvements to be constructed within the subdivision.

Many local land use regulations promulgated in recent years focus on the "environment," and purport to be necessary to conserve and protect natural resources. Examples include ordinances that require an owner/developer, as a condition to obtaining development approvals, to dedicate parkland, to grant drainage and conservation easements, to limit the extent of "cut and fill," and to restrict development within flood plains and areas adjacent to waterways. The response by local governments to environmental concerns reflects our federal environmental policy, which requires the federal government, in cooperation with the states, to use "all practicable means and measures . . . to create and maintain conditions under which man and nature can exist in productive harmony."[1] Congress has, of course, enacted many federal statutes to implement this policy.

A complex network of federal and state statutes now exists that regulates the use of real property in order to protect and prevent the degradation of the environment. These statutes restrict land development and uses and impose sanctions for harming the environment and liability for the clean-up of environmental hazards. An awareness of these restrictions, sanctions, and potential liabilities has made an environmental assessment a standard checklist item, along with title and survey review, for most commercial real estate transactions. The ramifications of these statutes for the owners of real property and their lenders are beyond the scope of these materials, but have been explored in numerous articles and continuing legal education materials.[2]

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1. National Environmental Policy Act of 1969, § 101(a), 42 U.S.C.A. § 4331(a) (West 1977).

2. *See, e.g.*, Jay Gwin, et al., *Environmental Issues Affecting Financial Institutions*, in UNIV. OF TX., 24TH ANNUAL MORTGAGE LENDING INSTITUTE (1990).

Many federal, state and local environmental regulatory programs require pre-development evaluation and approvals, as well as pre-operational and operating permits. It is no longer sufficient merely to confirm or obtain appropriate zoning and subdivision approvals. Today's real estate lawyer must also deal with numerous environmental permitting schemes in advising owners and developers of real property.

The purpose of this article is to review some of the requirements imposed by, and implications of, environmental laws in the context of the permitting process applicable to land use and development. In Section II below, we describe generally the permitting system under various environmental regulations and the policy considerations that drive such regulatory mechanisms. Next, in Section III, we briefly discuss the constitutional issues that necessarily accompany any land use regulatory scheme, raising the pivotal question whether such regulations "go too far." In the remainder of the article (Sections IV-VII) we review several specific permitting systems, including section 7 and section 10(a) permits for takings of endangered species under the Endangered Species Act, section 404 permits for wetlands, National Pollutant Discharge Elimination System (NPDES) permits for storm water discharges under the Federal Water Pollution Control Act, and certain air pollution control permit regulations. Where practicable, we give examples of the experience of developers in Travis County, Texas, with these various regulatory schemes. We conclude by highlighting several problematic ambiguities in these programs that allow regulatory authorities to use them for purposes not intended by the terms of the statutes and regulations.

II. THE PERMITTING SYSTEM AS LAND USE REGULATION

A. *Policy Considerations*

Environmental laws are generally enacted for the purpose of protecting human health and welfare by safeguarding and/or restoring the quality of the environment.[3] The National Environmental Policy Act of 1969 (NEPA) declares the national environmental policy to be "productive and enjoyable harmony between man and his environ-

3. *See* National Environmental Policy Act of 1969, 42 U.S.C.A. §§ 4321 - 4370c (West 1977 & Supp. 1991).

ment"[4] and specifies that "all practicable means and measures . . . [be used] to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans."[5] In carrying out this policy, regulatory authorities are directed to "achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities."[6]

Congress therefore has recognized both the profound impact that human activities have on the environment, and the need to maintain environmental quality. This is not, however, "a mandate to pursue environmental policies to the exclusion of all others, but is rather a congressional 'reordering of priorities so that environmental costs and benefits will assume their proper place along with other considerations'."[7] In short, NEPA requires a balance between environmental costs and economic and technical benefits.

In balancing competing interests, the goal of our national environmental policy is to preserve the environment and also facilitate a high standard of living. Economic growth and development are not only desirable, but also essential to maintaining and improving our quality of life. Progress has a price in terms of altering the environmental *status quo*, and necessarily involves utilization of natural resources and alteration of natural conditions. At the same time, there must be appropriate protection of the environment so that "progress" does not result in the loss of the very amenities sought to be enjoyed. It is in this context, then, that Congress has identified some specific policy goals and enacted various "environmental" laws to implement them.

The permitting process is the primary mechanism by which national environmental policy is implemented. Simply stated, the permitting process allows activities to occur that otherwise would be prohibited. It is intended to accommodate a balancing of competing interests—environmental preservation, on the one hand, and use and development of resources on the other.

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4. *Id.* § 4321.

5. *Id.* § 4331(a).

6. *Id.* § 4331(b)(5).

7. Cape May Greene, Inc. v. Warren, 698 F.2d 179, 188 (3d Cir. 1983) (citing Calvert Cliffs' Coordinating Comm. v. Atomic Energy Comm'n, 449 F.2d 1109, 1112 (D.C. Cir. 1971)).

B. *Regulating Development—Forward-Looking Aspects of Environmental Laws*

Liability created by the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA),[8] sometimes referred to as the Superfund Act, and by similar remedial laws pertaining to environmental hazards and pollution, often dominates discussions relating to federal environmental law issues. Another network of federal environmental laws, however, dealing with prevention of pollution and environmental degradation, receives less attention. Such preventative enactments include certain provisions of NEPA,[9] the Federal Water Pollution Control Act (FWPCA; commonly called the Clean Water Act),[10] the Clean Air Act (CAA),[11] the Toxic Substances Control Act (TSCA),[12] the Coastal Zone Management Act of 1972 (CZMA),[13] the Endangered Species Act of 1973 (ESA),[14] and the Solid Waste Disposal Act.[15] These laws are supplemented by numerous state laws and local ordinances.

The governmental permitting process is thus a regulatory mechanism used to minimize environmental degradation. A permit allowing activities that might otherwise create liability under the remedial network of statutes typically prescribes standards and limitations for, as well as procedures to control and monitor, activities that may adversely affect the environment. For example, permits may be required for certain operational activities (such as sewer treatment plants or discharges of treated industrial waste), for construction of facilities, and even for some pre-development activities. Moreover, if a proposed development of land will result in the "taking" of a member of an "endangered" or "threatened" species, as those terms are defined in the ESA,[16] a permit is required from the Fish and Wildlife Service, a division of the Department of the Interior, to which enforcement of the ESA is delegated;[17] or if the proposed development

8. 42 U.S.C.A. §§ 9601-9675 (West 1983 & Supp. 1991).
9. 42 U.S.C.A. §§ 4321-4370C (West 1977 & Supp. 1991).
10. 33 U.S.C.A. §§ 1251-1387 (West 1986 & Supp. 1991).
11. 42 U.S.C.A. §§ 7401-7671 (West 1983 & Supp. 1991).
12. 15 U.S.C.A. §§ 2601-2671 (West 1982 & Supp. 1991).
13. 16 U.S.C.A. §§ 1451-1464 (West 1985 & Supp. 1991).
14. *Id.* §§ 1531-1544.
15. 42 U.S.C.A. §§ 6901-6992(k) (West 1983 & Supp. 1991).
16. 16 U.S.C.A. §§ 1531-1544 (West 1985 & Supp. 1991).
17. *Id.* § 1538.

will involve the disturbance of more than five acres of land, a storm water discharge permit is required under the NPDES regulations.[18]

Evaluation of a proposed development therefore should include an immediate review of all applicable environmental regulatory permitting requirements. Prospective applicants are much better off when they anticipate a regulatory authority's environmental concerns with respect to such a project. Common sense dictates that if time is a factor—as it almost always is in real estate development—a permit applicant should not wait and then react to agency determinations. Rather, problematic issues should be discussed by developers and their counsel early in the planning process to determine whether some can be "given up" by unquestioning compliance while others are "make or break" points that affect the development so adversely as to make compliance impracticable. Environmental requirements are not easily challenged in the current regulatory atmosphere, and developers must budget their resources and efforts and prioritize their concerns based on the burdens that will likely be placed on a project.

III. ENVIRONMENTAL REGULATIONS THAT "GO TOO FAR:" A PRELIMINARY CONSIDERATION

Although our focus is not on regulatory condemnation, the scope of the constitutional limitations on environmental laws affecting land use planning should be briefly acknowledged. In short, before entering into the regulatory process and attempting to comply with its standards, landowners must decide whether to challenge the legality of any requirements imposed by that process.

Courts and commentators continue to search for the line between valid exercises of police power and regulatory takings of property requiring just compensation.[19] Nevertheless, several general principles are apparent in U.S. Supreme Court jurisprudence. Land use regulations must be reasonably related to a public purpose and must not deny owners economically viable use of their land.[20] Zoning laws, for example, are typically viewed as permissible attempts to promote health, safety, and the general welfare.[21] On the other hand, condi-

18. 40 C.F.R. § 122.26(b)(14)(x) (1991).

19. *See generally* Wm. Terry Bray et al. *Once More, the Trilogy, in Retrospect: An Essay on the Virtues of Development Agreements in Texas*, 32 S. TEX. L. REV. 1 (1990).

20. *See* Agins v. City of Tiburon, 447 U.S. 255, 260 (1980).

21. *See* Bruce W. Burton, *Predatory Municipal Zoning Practices: Changing the Presump-*

tioning the grant of a building permit on an owner's grant of a public access easement not related to the requested permit constitutes a compensable taking.[22]

A governmental entity enacting environmental regulations is clearly exercising its police power to protect health, safety and the general welfare. These regulations, however, are sometimes challenged as confiscatory. Courts hearing such challenges recognize a "nuisance exception" that justifies governmental interference to abate injurious use of property without incurring an obligation to compensate private landowners.[23] For example, in *Lucas v. South Carolina Coastal Council*, a takings challenge to South Carolina's 1988 Beachfront Management Act (prohibiting most oceanfront construction) was successful in the lower court, but reversed by the South Carolina Supreme Court because the act "merely" regulated use and prevented "a serious public harm."[24]

Lucas, which has been heard on appeal by the U.S. Supreme Court, raises the question of whether the nuisance exception (to the duty of compensation) effectively removes environmental regulations from the scope of the takings clause.[25] The majority opinion of the South Carolina Supreme Court relies upon a characterization of the prohibition on development as nuisance prevention, but the dissenting judges point out that such an interpretation "would totally eviscerate the takings clause."[26] Significantly, the petitioner Lucas does not challenge the validity or necessity of the beachfront legislation, but only the decision that no compensable regulatory taking occurred.[27]

Failure to issue a permit required under an environmental law can also constitute a taking. In *Florida Rock Industries, Inc. v. United*

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tion of Constitutionality in the Wake of the "Takings Trilogy", 44 ARK. L. REV. 65, 85-87 (1991).

22. *See* Nollan v. California Coastal Comm'n., 483 U.S. 825, 832 (1987).

23. *See* Keystone Bituminous Coal Ass'n v. De Benedictis, 480 U.S. 470, 488-92 (1987); Penn Central Transp. Co. v. New York City, 438 U.S. 104, 144-46 (1978); Mugler v. Kansas, 123 U.S. 623, 663-69 (1887).

24. Lucas v. South Carolina Coastal Council, 404 S.E.2d 895, 899 (1991), *cert. granted*, 112 S. Ct 436 __ U.S. __ (1991).

25. For an excellent discussion of the takings controversy in the context of environmental regulation, *see* Steve France, *This Land Is Whose Land?*, THE WASHINGTON LAWYER, Sept./Oct. 1991, at 25-29.

26. *Lucas*, 404 S.E.2d at 905 (Harwell, J., dissenting).

27. *Id.*, 404 S.E.2d at 896.

States,[28] and *Loveladies Harbor, Incorporated v. United States*,[29] the U.S. Court of Claims found denial of a permit to fill wetlands (under § 404 of the FWPCA, discussed below) to be a compensable interference with a proposed development.[30] Some specialists in environmental law view *Florida Rock* and *Loveladies Harbor* as aberrations, since carefully drafted regulations and permitting standards applicable to real estate developments are difficult to challenge. Nevertheless, some regulations will go too far. Thus, while private developers must "arguably contend with public rights to a safe and healthy environment," commentators agree that the Constitution "will continue to be a major aspect of environmental law."[31]

In the wake of the U.S. Supreme Court's recent analysis of the takings doctrine in *First English Evangelical Lutheran Church v. County of Los Angeles*[32] and *Nollan v. California Coastal Comm'n.*, Executive Order No. 12630 was issued in 1988. This executive order requires that a takings implication assessment be completed by federal agencies proposing regulations affecting land use. The assessment must set forth the risks that a compensable taking will occur and the potential financial exposure from the action.[33] Senator Symms (R-Idaho) recently introduced a bill to require the U.S. Attorney General, following any such agency action, to certify compliance with Executive Order 12630.[34] Growing awareness of the constitutional constraints on environmental regulation will narrow the issues to be addressed, and thus should help in the initial phases of today's land use planning efforts.

IV. CONSERVATION OF ENDANGERED AND THREATENED SPECIES—SECTION 7 AND SECTION 10(A) PERMITS

Following a brief discussion of the regulatory scheme protecting endangered species, we focus below on two permit systems relevant

28. 21 Cl. Ct. 161 (1990).

29. 21 Cl. Ct. 153 (1990).

30. For a discussion of *Florida Rock* and *Loveladies Harbor Cases, see Court of Claims Awards Takings Compensation for Section 404 Permit Denials*, LAND USE REGULATION NEWSLETTER (American Bar Association), Spring 1991, at 1-3.

31. T. GORDON ARBUCKLE ET AL., ENVIRONMENTAL LAW HANDBOOK 36 (11th ed. 1991).

32. 482 U.S. 304 (1987).

33. Exec. Order No. 12,630, 3 C.F.R. § 554 (1988).

34. See S. 50, 102d Cong., 1st Sess., 137 CONG. REC. 5435, 5685 (1991).

for developers of real property. We then describe, by way of illustration, the Travis County experience with federal, state, and local regulations regarding endangered species. That experience serves as a warning to developers that the impact of such permitting systems is often adverse and remains unpredictable. Even if environmental regulations are not designed to slow down or stop development, they can be used for such ends due to unintended ambiguities.

A. *Enforcement of Habitat Protection Under the Federal Endangered Species Act*

1. Generally

The ESA is premised on Congress' recognition that economic development, "untempered by adequate concern and conservation,"[35] threatened the continued existence of various species of fish, wildlife and plants. The ESA's primary purpose is to provide a program for the conservation of endangered and threatened species of plants and animals and the ecosystems upon which they depend.[36] The Fish and Wildlife Service (the service), a division of the Department of the Interior, is responsible for enforcement of the ESA and has issued joint regulations (in conjunction with the National Marine Fisheries Service) to implement it.[37]

The ESA prohibits "taking" an endangered or threatened species.[38] The term "take" means to (or to attempt to) harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect.[39] Endangered wildlife may be "harmed" or "harassed," as those terms are defined in the ESA Regulations, if behavioral patterns of the wildlife are significantly impaired or disrupted.[40] While the ESA does not specifically prohibit development in designated critical habitat, modification or degradation of critical habitat may result in significant disruption of behavioral patterns and, therefore, may constitute a taking prohibited by the ESA.[41] Many environmentalists take the position that *any* modification of habitat, including potential habitat, is prohibited. In

35. Endangered Species Act, § 2(a)(1), 16 U.S.C.A. § 1531(a)(1) (West 1985).

36. Endangered Species Act, § 2(b), 16 U.S.C.A. § 1531(b) (West 1985).

37. *See* 50 C.F.R. § 402.01 (1990). These regulations, including Department of Interior regulations in Ch. I, subch. B, are collectively referred to as the "ESA Regulations."

38. Endangered Species Act, § 9(a)(1), 16 U.S.C.A. § 1538(a)(1) (West 1985).

39. Endangered Species Act, § 3(19), 16 U.S.C.A. § 1532(19) (West 1985).

40. 50 C.F.R. § 17.3 (1990).

41. *See id.*

1981, the service disagreed with this interpretation and redefined "harm" to clarify that habitat modification alone, without further proof of death or injury to a species, is not prohibited by the ESA.[42] The service was quick to point out, however, that significant modification or destruction of specific habitat determined to be "critical" to the conservation of a species is prohibited by the ESA when an actual injury to the population of the species occurs. In *Sierra Club v. Yeutter*,[43] the Fifth Circuit upheld a finding that the U.S. Forest Service's timber management practices resulted in significant habitat modification causing and accelerating the decline of the red-cockaded woodpecker, and therefore constituted a "taking" of the species in violation of the ESA.

2. Critical Habitat

The designation of critical habitat is a central component of the ESA conservation scheme, which incorporates the competing concepts of preservation of endangered species and reasonable use of the land on which they exist. The Secretary of the Interior (the secretary) must designate critical habitat to the maximum extent prudent and determinable (as such terms are defined in the ESA regulations) at the time a species is proposed for listing as an endangered or threatened species.[44] Critical habitat must be determined on the basis of the best scientific data available, after taking into consideration the probable economic and other impacts of such a designation on proposed or ongoing activities.[45] Unless the extinction of an endangered or threatened species will result, the secretary "may exclude any portion of an area [considered for or affected by designation] from the critical habitat if the benefits of such exclusion outweigh the benefits of specifying the area as part of the critical habitat."[46]

Generally, critical habitat must be designated with the final rule listing the endangered or threatened species.[47] Although the service is

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42. 46 Fed. Reg. 54,748 (1981).

43. 926 F.2d 429, 438-39 (5th Cir. 1991).

44. Endangered Species Act, § 4(a)(3), 16 U.S.C.A. § 1533(a)(3) (West 1985); 50 C.F.R. § 424.17(b) (1990).

45. Endangered Species Act, § 4(b)(2), 16 U.S.C.A. § 1533(b)(2) (West 1985); 50 C.F.R. § 424.19 (1990).

46. Endangered Species Act, § 4(b)(2), 16 U.S.C.A. § 1533(b)(2) (West 1985); 50 C.F.R. § 424.19 (1990).

47. Endangered Species Act, § 4(a)(3), 16 U.S.C.A. § 1533(a)(3) (West 1985); Therefore,

authorized to defer designation of critical habitat for up to twelve months following the final listing if it finds that the critical habitat is not determinable at the time of the listing,[48] it is not relieved of this obligation simply because determining critical habitat is difficult. In *Northern Spotted Owl v. Lujan*,[49] the court ruled that the deferral provision does not allow an automatic extension of the time for designation.[50] The administrative record did not show that the service had made adequate inquiry regarding the habitat of the northern spotted owl prior to listing it as an endangered species, and therefore did not substantiate the claim that the critical habitat was not determinable. The service thus abused its discretion.[51]

While the designation of critical habitat is pending, development of potential habitat is virtually halted because of the uncertainty of whether the ESA applies and the substantial penalties for violating it. The *Northern Spotted Owl* case suggests that the service should expedite the designation of critical habitat and avoid unnecessary delays and impediments. Significantly, the response by the service to that decision continues widespread constraints on land use.[52]

3. Private "Takings"—Section 10(a) Permits

If certain criteria are met, a private landowner may obtain a permit from the service under section 10(a) of the ESA for activities that result in an "incidental taking" of an endangered species.[53] Following application, the service considers "the anticipated duration and geographic scope of the applicant's planned activities, including the amount of listed species habitat that is involved and the degree to which listed species and their habitats are affected."[54] The area designated by the secretary as critical habitat may therefore play an impor-

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a final rule designating critical habitat is usually published with the final rule listing the endangered or threatened species. 50 C.F.R. § 424.17(b) (1990)..

48. Endangered Species Act, § 4(b)(6)(C), 16 U.S.C.A. § 1533(b)(6)(C) (West 1985); 50 C.F.R. § 424.12(a) (1990).

49. Northern Spotted Owl v. Lujan, 758 F. Supp. 621, 629 (W.D. Wash. 1991).

50. *Id.* at 626-27.

51. *Id.* at 629.

52. The service designated 6.88 million acres of land in three states as critical habitat for the northern spotted owl on January 9, 1992. 57 Fed. Reg. 3,753 (1992). The critical habitat initially proposed covered 11,638,195 acres in three states. 56 Fed. Reg. 20,820 (1991) (to be codified at 50 C.F.R. pt. 17).

53. Endangered Species Act, § 10(a)(1), 16 U.S.C.A. § 1539(a)(1)(B) (West 1985).

54. 50 C.F.R. § 17.22(b)(2) (1990).

tant role in the ultimate determination of whether a permit for an incidental taking is appropriate.

A section 10(a) permit application must be on an official form provided by the service and must include a written conservation plan specifying (i) the likely impact of the proposed activity, (ii) steps that will be taken to minimize and mitigate the impact, (iii) funding for such actions, (iv) alternative actions that were considered, and (v) "other matters as required by the Secretary."[55] If, after notice and a thirty-day comment period, the secretary determines that the taking will be incidental to an otherwise lawful activity, that the activity will not appreciably reduce the likelihood of the survival and recovery of the species in the wild, and that the applicant will take the actions set forth in the applicant's conservation plan, then the permit for the incidental taking will be issued.[56] The permit will specify terms and conditions as determined by the secretary.[57]

In accordance with the ESA regulations, a notice of application for a section 10(a) permit must be published in the Federal Register. The ESA regulations, however, do not specify the period in which such notice must be published[58] or when the service must decide whether to grant a permit. This lack of certainty in the permitting process is obviously troubling to those involved in the development of real property.

4. Public "Takings"—Section 7 Permits

Section 7 of the ESA provides that, prior to issuance by a federal agency of any license or permit that is likely to jeopardize the continued existence of any endangered or threatened species (or result in the destruction or adverse modification of critical habitat), the issuing agency must consult with the secretary.[59] An applicant for a federal license or permit (such as a municipality proposing to construct a road, or a property owner required to obtain a section 404 permit for development of wetlands) which believes that its proposed action may adversely affect an endangered or threatened species or its habitat

55. *Id.* § 17.22(b)(1).

56. 50 C.F.R. § 17.22(b)(2) (1990).

57. *Id.* § 17.22(b)(3).

58. *See generally* 50 C.F.R. § 17.22 (1990) (no time period for publishing notice in Federal Register).

59. Endangered Species Act, § 7(a)(4), 16 U.S.C.A. § 1536(a)(4) (West 1985).

may ask the issuing agency to enter into early consultation with the service.[60] The issuing agency must then file a written request to initiate the consultation[61] and provide the service with the best scientific and commercial data available on the effects of the proposed action.[62] At the conclusion of this informal consultation, the service will issue a preliminary statement as to whether or not the proposed action is likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of critical habitat. Within forty-five days of a request by the issuing agency, the service must either confirm the preliminary biological opinion, in which event formal consultation is not required, or request that the issuing agency initiate formal consultation.[63]

Formal consultation is required whenever the proposed action is likely to affect adversely any listed species or critical habitat.[64] Following consultation, the service will issue a biological opinion.[65] If the service determines that the proposed action will result in an incidental taking, the service will also provide a statement concerning the incidental taking.[66] The statement will specify, among other matters, terms and conditions (including reporting requirements) to minimize the impact on the affected species.[67] An incidental taking in compliance with the terms and conditions of a biological opinion is not a prohibited taking under the ESA.[68]

If the issuing agency determines that it cannot comply with the requirements of section 7, the agency or the applicant may apply for an exemption, which must be processed within prescribed time lim-

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60. Endangered Species Act, § 7(a)(3), 16 U.S.C.A. § 1536(a)(3) (West 1985); 50 C.F.R. § 402.11(b) (1990).

61. 50 C.F.R. § 402.11(c) (1990).

62. *Id.* § 402.11(d) (referencing § 402.14(c)).

63. 50 C.F.R. § 402.11(f) (1990).

64. *Id.* § 402.14(b). Formal consultation must conclude within ninety days after its initiation, unless extended as provided in the ESA regulations. Formal consultation cannot be extended, however, for a period of more than sixty days without the consent of the applicant. *Id.* § 402.14(e).

65. The service must issue its biological opinion within forty-five days after the conclusion of formal consultation and deliver it to the issuing agency and to the applicant. 50 C.F.R. § 402.14(e) (1990). This forty-five-day period will be automatically extended for ten days if the issuing agency submits comments to the service regarding the draft of the opinion provided by the service. *Id.* § 402.14 (g)(5).

66. 50 C.F.R. § 402.14(i) (1990).

67. *Id.* Compliance may be required of the issuing agency and/or the applicant.

68. *Id.* § 402.14(i)(5).

its.[69] The Endangered Species Committee will issue an order granting an exemption if:

> (1.) [The Committee] determines that . . .
>
> (i) There are no reasonable and prudent alternatives to the proposed action;
>
> (ii) The benefits of such action clearly outweigh the benefits of alternative courses of action consistent with conserving the species or its critical habitat, and such action is in the public interest;
>
> (iii) The action is of regional or national significance; and
>
> (iv) Neither the [issuing] agency concerned nor the exemption applicant made any irreversible or irretrievable commitment of resources prohibited by [the ESA]; and
>
> (2.) [The Committee] establishes such reasonable mitigation and enhancement measures, including, but not limited to, live propagation, transplantation, and habitat acquisition and improvement, as are necessary and appropriate to minimize the adverse effects of the proposed action.[70]

The section 7 permitting process requires a significant commitment of time and resources. Unlike the section 10 process, the ESA section 7 regulations ensure that a determination will be made within specified time frames and that, if appropriate, the proposed development may proceed. Because of the relative certainty, developers frequently attempt to couple proposed development with the issuance of a federal permit or license so that the section 7 process will be available.

5. The Travis County Experience

On May 4, 1990, the service exercised its emergency authority and made a determination that the golden-cheeked warbler, a small bird that nests in mature oak-juniper trees in the central Texas area, is an endangered species.[71] Following this emergency listing, the service

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69. *See id.* § 402.15(c). The exemption application must be filed with the service within ninety days after termination of formal consultation. *Id.* § 451.02(d). Within twenty days after receipt of an exemption application, the secretary must determine whether the issuing agency and the applicant have complied with all regulatory requirements relating to consultation, and, if so, within 140 days thereafter, the secretary must submit to the Endangered Species Committee a report relating to the proposed action. *Id.* §§ 452.03(a), 452.08(b). The Endangered Species Committee must determine whether to grant the requested exemption within thiry days after receiving the report of the secretary. *Id.* § 453.03(a).

70. 50 C.F.R. § 453.03(a) (1990).

71. 55 Fed. Reg. 18,844 (1990) (to be codified at 50 C.F.R. § 17.11).

issued a memorandum providing guidance concerning activities that may affect the golden-cheeked warbler or the black-capped vireo, another endangered species of bird whose habitat includes portions of Travis County, Texas. The memorandum allowed a landowner to request the service to indicate whether a particular activity would affect the golden-cheeked warbler.[72]

The final rule to list the golden-cheeked warbler as an endangered species was published in the Federal Register on December 27, 1990.[73] The rule specifies that the critical habitat for the golden-cheeked warbler was not then determinable, and makes no critical habitat designation.[74] Uncertainty, therefore, remains with respect to undeveloped properties with "potential" habitat.

The discovery and listing of endangered species has provided a mechanism for environmental and "no-growth" groups to challenge several proposed highway projects, the expansion of existing industrial facilities, and the approval of several commercial and residential developments in the Austin metropolitan area. Some now assert that these projects would result in a "taking" under the ESA, and the threat of ESA enforcement has resulted in a *de facto* moratorium on development in western Travis County.

In recognition of the impending collision between continued economic growth and the development and preservation of endangered species, an ad hoc group composed of representatives of various governmental entities (Texas General Land Office, Texas Parks and Wildlife Department, Lower Colorado River Authority, Travis County, and City of Austin), citizens' groups (Texas Nature Conservancy, Sierra Club, Earth First!, and the National and Travis County Audubon Societies), and landowners was formed to consider a regional approach to the endangered species problem. As an outgrowth

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72. FISH AND WILDLIFE SERV., DEP'T OF THE INTERIOR, GUIDANCE CONCERNING GOLDEN-CHEEKED WARBLER (1990). A response from the service indicating no effect, commonly referred to as a "clearance letter," provides some comfort to the landowner or prospective buyer that no "incidental taking" permit will be required for development of the land. A clearance letter expressly states, however, that it is based on the information provided by the requesting party. In the event the service may later find that development resulted in a prohibited taking, it is unlikely that a clearance letter would be sufficient to bar the service from enforcing the provisions of the ESA against the landowner. It is unclear whether the service will continue to provide clearance letters since the species has now been permanently listed.

73. 55 Fed. Reg. 53,153 (1990) (to be codified at 50 C.F.R. § 17).

74. *Id.* at 53159. The service is now funding a study to determine minimum habitat patch size for this species.

of this effort, a regional conservation plan (the Balcones Canyonlands Habitat Conservation Plan, or the BCHCP) has been prepared for the study area, which comprises more than 500,000 acres in central Texas.

The BCHCP is being formulated to obtain a section 10(a) permit with respect to the golden-cheeked warbler, the black-capped vireo, several species of cave invertebrates, and several species of plants. Upon issuance of the permit, development of individual sites within the BCHCP area that contain protected species or habitat may proceed in accordance with the BCHCP conservation plan without a separate section 10(a) permit or any other consultation with the service.

The regional approach of the BCHCP is perceived to have the double benefit of facilitating development in sensitive areas and protecting large areas of habitat to ensure the survival and recovery of the species. While such an overall solution to the problem seems to be a logical and reasonable approach, and is strongly favored by the service, it is a formidable undertaking. The task of completing the necessary technical information, formulating the regional conservation plan, receiving approval of the plan from the service, and obtaining necessary funding is extremely difficult and will require substantial time. Austin has been involved in this process for over three years, and it is contemplated that it may be another year or more before the BCHCP is approved and funded.

The BCHCP has mapped the potential habitat for the listed species in the planning area, and the proposed preserve system as presently drawn includes more than sixty thousand acres of habitat. About one-half of the preserve area will be acquired by Federal authorities and operated as a national wildlife refuge. The remaining preserve areas will be managed by state and local authorities. BCHCP consultants estimate that the cost to purchase the necessary private lands in these areas will exceed $48 million, and annual costs to operate and maintain them will be approximately $1 million. Funding of these costs will be provided through a combination of mitigation fees payable by property owners and users, state and local public contributions, private donations, and user fees. Although the regional plan concept has broad support from the individuals and organizations involved in the planning process, neither the national wildlife refuge nor the BCHCP, or funding for either of them, has been finally approved. Moreover, growing federal, state and local budget pressures will undoubtedly make final approval difficult to obtain.

In deciding whether to approve a section 10(a) permit for the BCHCP, the service must comply with NEPA environmental review requirements. An environmental impact statement, rather than an environmental assessment, is now contemplated, and will have to be prepared and reviewed. Even if the service issues a section 10(a) permit for the BCHCP, environmental groups may challenge it and seek an injunction to stop any habitat modification pending a final adjudication. Thus, many years may pass before a truly "final" permit exists for the BCHCP.

Unfortunately, owners of undeveloped and partially developed properties in the planning area that contain actual or potential habitat are unable to develop their property without risk of violating the ESA and are unsure of what action to take. The BCHCP process has created a classic, bureaucratic "Catch 22." Because the BCHCP is under development, the service has indicated that it prefers not to issue individual section 10(a) permits until the plan is complete. In the meantime, an affected owner has no permit and cannot get one, and development is stymied, perhaps for years.

Central Texas landowners are left with few options, none being particularly appealing. First, a landowner could defer development until the BCHCP is implemented. This alternative will likely involve substantial delay, since it is uncertain when final approval will occur. Alternatively, a landowner could choose to proceed with development without seeking any clearance under the ESA. The ESA does not prohibit modification or destruction of habitat *per se,* and there may be no ESA violation if the development only modifies a small amount of potential habitat and does not actually harm a protected species. A landowner electing this course, however, might run a substantial risk in view of the hefty penalties under the ESA, and any significant development in an area containing potential habitat would probably be challenged by either the service or environmental groups or both.

Another option is to apply for an individual section 10(a) permit for the proposed development. This process, both expensive and time-consuming, runs counter to the stated preference of the service that no individual section 10(a) permit be issued pending final approval of a regional plan. Nevertheless, this option furnishes several advantages to the landowner: control over the permitting process, direct and continuing access to service officials, and the right to obtain some decision by the service following submission of the permit application. Furthermore, if the permit is denied or contains restrictive

conditions, the applicant may challenge the agency's action.[75]

Finally, recall that a takings implication assessment, mentioned in section III above, must (i) set forth whether, and to what extent, a proposed agency action risks the taking of private property, and (ii) estimate the potential financial exposure of the proposed action. It may be possible for a landowner to require that an assessment be completed in connection with the denial or restricted issuance of an individual section 10(a) permit, which in turn may provide a basis for negotiating an acceptable permit or for bringing an inverse condemnation action.

6. Weighing Economic Impact

In designating critical habitat, the service must take into account the probable economic and other impacts.[76] Unless the exclusion of an area as critical habitat will result in the extinction of a protected species, the secretary may exclude any area if the benefits of exclusion outweigh the benefits of specifying the area as critical habitat.[77] The secretary may not, however, take into account economic concerns or non-biological factors in determining whether to *list* a species,[78] and a protected species cannot be "taken" (except pursuant to a permit) regardless of its location within or outside designated critical habitat. Therefore, the consideration of economic impacts in designating critical habitat does not alleviate the uncertainty or the potentially severe economic impact arising by reason of the ESA.

B. *State and Local Regulations Relating to Endangered Species*

Protecting endangered and threatened species is still largely the responsibility of federal agencies. Many state acts, however, such as the Texas Endangered Species Statute,[79] also regulate activities affecting endangered or threatened species. The Texas statute does not prohibit habitat modification or destruction, but does authorize Texas counties and cities to (i) participate in the development of regional habitat conservation plans, (ii) enforce any plan approved by the ser-

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75. For instance, by filing an inverse condemnation (regulatory taking) suit.

76. 50 C.F.R. § 424.19 (1990).

77. Endangered Species Act, § 4(b)(2), 16 U.S.C.A. § 1533(b)(2) (West 1985); 50 C.F.R. § 424.19 (1990).

78. 50 C.F.R. § 424.11(b) (1990).

79. TEX. PARKS & WILD. CODE ANN. §§ 68.001-68.021 (Vernon 1976 & Supp. 1991).

vice, (iii) allow credits, modifications and waivers of other regulations to mitigate problems caused by protecting threatened or endangered species, and (iv) purchase land or execute leases and easements to protect habitat.[80] Local governments are also active in this area. The city of Austin, for example, passed an ordinance that requires, for certain properties, submission of a habitat survey with any subdivision or site development application.[81] Under this ordinance, the city notifies several entities, including the service, upon receipt of any such survey.[82]

V. PROTECTING WETLANDS: THE SECTION 404 PERMIT

The discharge of dredged or fill material into the waters of the United States is prohibited without a permit issued by the United States Army Corps of Engineers (the corps) under section 404 of the Federal Water Pollution Control Act (the FWPCA).[83] The term "discharge of dredged or fill material" means any addition to the waters of the United States of material that is excavated, dredged or used for replacing an aquatic area with dry land or changing the bottom elevation of a waterbody.[84] As discussed below, "waters of the United States" has been broadly defined by regulation and by the courts to include a wide variety of lands affected by water—including, in the vernacular, "wetlands."

Following a brief survey of the history of wetlands protection, we focus below on the problematic definition of "wetlands" and the current protective regulatory scheme, including section 404 permits and the criteria for their issuance. Developers of real property should be aware of the potentially "nation-wide zoning" feature of this often ambiguous federal scheme.

A. *Historical Perspective*

1. Rivers and Harbors Act

The Rivers and Harbors Act of 1899 (the RHA) regulates activities

80. *Id.* § 83.006.

81. AUSTIN, TEX., ORDINANCE 890817-H (August 17, 1989); AUSTIN, TEX., LAND DEVELOPMENT CODE [*hereinafter* cited as LDC], Ch. 13-7, art. IV (1990).

82. LDC § 13-7-80.

83. 33 U.S.C.A. § 1344(a) (West 1986). Section § 404(a) was added as part of the Federal Water Pollution Control Act Amendments of 1972, Pub.L. 92-500, 86 Stat. 816, 884.

84. 33 C.F.R. § 323.2(d),(e) & (f) (1990).

in the navigable waters of the United States through the corps, and section 10 requires a permit for dredging, filling or obstructing navigable waters.[85] The term "navigable waters" includes only waters used for interstate commerce and waters below the high-tide mark.[86] Many "wetlands" are therefore not affected by the permitting requirements of section 10.

2. Consideration of Environmental Issues

In processing RHA permits, the corps was not required to consider environmental protection or conservation of wildlife resources until the enactment in 1958 of the Fish and Wildlife Coordination Act. This act requires that a federal agency taking any action that affects water resources (including issuance of an RHA section 10 permit) coordinate its activities with both state and federal fish and wildlife agencies.[87]

Enactment of the National Environmental Policy Act in 1969 reflected a continued heightening of national concern regarding environmental issues. NEPA expressly acknowledges the importance of environmental protection,[88] and requires all federal agencies, including the corps, to give appropriate consideration to environmental amenities and values in their decisions.[89]

3. Protecting Wetlands

In times past, wetlands were considered wasted lands that should, to the greatest extent practicable, be converted to usable dry land.[90] This traditional attitude toward wetlands resulted in the elimination of more than half of the estimated 215 million acres of wetlands that existed in the United States in the mid-eighteenth century.[91]

As noted above, activities affecting wetlands are now regulated

85. 33 U.S.C.A. § 403 (West 1986 & Supp. 1991).

86. 33 C.F.R. § 329.4 (1990).

87. 16 U.S.C.A. § 662(a) (West 1985).

88. 42 U.S.C.A. § 4331(a) (West 1977).

89. *Id.* § 4332(B).

90. GERALD PAULSON & CAMERON DAVIS, WETLANDS AND WATER QUALITY: A CITIZEN'S HANDBOOK FOR PROTECTING WETLANDS 5 (1990); WILLIAM L. WANT, LAW OF WETLANDS REGULATION § 2.02[1], at 2-6 (1991).

91. WILLIAM L. WANT, LAW OF WETLANDS REGULATION § 2.01[4], at 2-4; Thomas E. Dahl, *Wetlands Loss Since the Revolution*, NATIONAL WETLANDS NEWSLETTER, Nov./Dec. 1990.

under section 404 of the FWPCA. The FWPCA amendments of 1972 (the 1972 amendments) define navigable waters as "the waters of the United States, including the territorial seas."[92] Although wetlands are not navigable waters as traditionally defined by the corps, they may be considered to be "waters of the United States" covered by the 1972 amendments. Even after the 1972 amendments, however, the corps did not attempt to use its section 404 regulatory authority to protect wetlands; permits were required only for activities affecting tidally-influenced waters, waters below the mean highwater mark, waters used for interstate commerce, and water bodies.[93] In 1975, a federal district court required the corps to publish final regulations clearly recognizing the full regulatory mandate of the FWPCA, including permitting with regard to wetlands.[94]

Executive Order No. 11990, entitled "Protection of Wetlands,"[95] was promulgated two years later (1977) and states as its purposes "to avoid to the extent possible the long and short term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative."[96] This broad policy statement would seem finally to make clear the national policy regarding wetlands losses. The same year, Congress amended section 404 to exempt normal agricultural, forestry, and ranching operations.[97]

4. The "No Net Loss" Policy

Studies completed since the mid-1970s demonstrate the environmental significance of wetlands and the rapid rate at which they are being converted.[98] In 1988, the National Wetlands Policy Forum,

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92. 33 U.S.C.A. § 1362(7) (West 1986).

93. 33 C.F.R. § 328.4(b), (c) (1990).

94. Natural Resources Defense Council, Inc. v. Callaway, 392 F. Supp. 685, 686 (D.D.C. 1975).

95. 42 Fed. Reg. 26,961 (1977), *reprinted in* 42 U.S.C.A. § 4321 (West Supp. 1991) (as amended by Exec. Order No. 12608, 52 Fed. Reg. 34,617 (1987)).

96. *Id.*

97. 33 U.S.C.A. § 1344(f)(1)(A) (West 1986).

98. Steven L. Dickerson, *The Evolving Federal Wetland Program*, 44 SW. L.J. 1473, 1473 (1991) (citing generally SECRETARY OF THE INTERIOR, THE IMPACT OF FEDERAL PROGRAMS ON WETLANDS VOLUME I: THE LOWER MISSISSIPPI ALLUVIAL PLAIN AND THE PRAIRIE POTHOLE REGION (1988) (government study of the effects of past federal programs on wetlands)); UNITED STATES GENERAL ACCOUNTING OFFICE, WETLANDS—THE CORPS OF ENGINEERS' ADMINISTRATION OF THE § 404 PROGRAM (1988) (review of Corps' use of § 404 and its impact on wetlands); THE CONSERVATION FOUNDATION: PROTECTING AMERICA'S

formed at the request of the Environmental Protection Agency (the EPA), made its recommendations for reducing wetlands losses,[99] and President Bush announced a national goal of "no net loss" of wetlands.[100] The Domestic Policy Council's Task Force on Wetlands solicited and received comments and public input on how to implement this goal. The comments, recently published in the Federal Register, indicate a general dissatisfaction with the current regulatory process, including complaints about lack of clear requirements for acquiring a permit, delays, inconsistencies among corps offices, lack of coordination and agreement among federal agencies and enforcement personnel, inadequate personnel training, and most of all, lack of a clear definition of wetlands and their values.[101]

Dissatisfaction with the implementation of wetlands protection under section 10 of the RHA and section 404 of the FWPCA should not be surprising. Neither the RHA nor section 404 were drafted specifically to protect wetlands. To implement the "no net loss" policy in an effective manner, significant new legislation will be required to institute an integrated and workable federal wetlands program.[102]

B. *Wetlands—What They Are and Why They Are Important*

One of the stated purposes of the FWPCA is "to restore and maintain the chemical, physical, and biological integrity of the nation's waters,"[103] and wetlands are a critical element of aquatic ecosystems. To further the underlying policies of the FWPCA, courts and regulators have interpreted section 404 permitting requirements broadly and applied them to protect wetlands.

WETLANDS: AN ACTION AGENDA, THE FINAL REPORT OF THE NATIONAL WETLANDS POLICY FORUM (1988).

99. THE CONSERVATION FOUNDATION, PROTECTING AMERICA'S WETLANDS, AN ACTION AGENDA, THE FINAL REPORT OF THE NATIONAL WETLANDS POLICY FORUM (1988).

100. *Candidates Outline Environmental Issues, Seek Air, Hazardous Waste, Wetlands Reforms*, 19 ENV'T REP. (BNA) 982, 983 (Sept. 16, 1988).

101. 56 Fed. Reg. 8,560-8,576 (1991).

102. It appears at this time that amendments reauthorizing the FWPCA will not include specific provisions for protection of wetlands. 21 ENVTL. L. REP. (Envtl. L. Inst.) 10280 (1991). Rep. Hayes (D-La.) has introduced separate legislation (H.R. 1330, 102d Cong., 1st Sess. (1991)) that would amend the FWPCA and establish a comprehensive program for conserving and managing wetlands. 137 Cong. Rec. H1472 (daily ed. March 7, 1991).

103. 33 U.S.C.A. § 1251(a) (West Supp. 1991).

1. Defining the Terms

As noted above, the term "navigable waters" is defined in the 1972 Amendments to mean "all waters of the United States."[104] The term "all waters of the United States," however, is not defined. Regulations clarify that "waters of the United States" include "intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce."[105] Wetlands bordering or contiguous with navigable waters, which include wetlands separated from other waters of the United States by artificial dikes or barriers, natural river berms, beach dunes, and the like, are also navigable waters for purposes of section 404[106] and are subject to the corps' permitting jurisdiction.

The National Wetlands Policy Forum estimated that federal agencies define the term "wetlands" at least fifty different ways.[107] The most important definition specifies the jurisdiction of the corps under the FWPCA, and describes wetlands as "[t]hose areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas."[108] Courts have expanded the definition specifically to include, in traditional terminology, "man-made" wetlands.[109]

The Fish and Wildlife Service promulgated an even broader definition of "wetlands" for the purpose of preparing a national wetland

104. 33 U.S.C.A. § 1362(7) (West 1986).

105. 40 C.F.R. § 230.3(S)(3) (1990); 33 C.F.R. § 328.3(a)(3) (1990).

106. 33 C.F.R. § 328.3(a)(7),(c) (1990).

107. Steven L. Dickerson, *The Evolving Federal Wetland Program*, 44 SW. L.J. 1473, 1482 (1991) (citing THE CONSERVATION FOUNDATION, PROTECTING AMERICA'S WETLANDS: AN ACTION AGENDA, THE FINAL REPORT OF THE NATIONAL WETLANDS POLICY FORUM 36 (1988)). For a review of the definition of "wetlands" as used by several federal agencies, see U.S. ARMY CORPS OF ENGINEERS, U.S. ENVIRONMENTAL PROTECTION AGENCY, U.S. FISH AND WILDLIFE SERV. & U.S.D.A. SOIL CONSERVATION SERVICE, FEDERAL MANUAL FOR IDENTIFYING AND DELINEATING JURISDICTIONAL WETLANDS (1989).

108. 40 C.F.R. § 230.3(t) (1991); 33 C.F.R. § 328.3(b) (1990).

109. Leslie Salt Co. v. United States, 896 F.2d 354, 358 (9th Cir. 1990), *cert. denied*, — U.S. —, 111 S. Ct. 1089 (1991); United States v. Ciampatti, 583 F. Supp. 483, 494 (D.N.J. 1984).

inventory and map system, which includes certain lands without vegetation, such as mud-flats, sandflats, rocky shores and sand bars.[110] In 1989, in an attempt to reduce the confusion relating to wetlands, the EPA, the service, the Department of the Army, and the Soil Conservation Service jointly adopted the Federal Manual for Identifying and Delineating Jurisdictional Wetlands, which sets forth criteria for identifying and delineating wetlands subject to federal agency jurisdiction. Hydrology, soil type and vegetation are the three characteristics used for this identification. Consequently, wetlands have been identified in many areas that would not immediately come to mind, such as wet weather creeks far removed from shorelines or large bodies of water.

2. Benefits of Wetlands

Wetlands serve several important functions. The dollar value of wetlands is difficult to quantify, but the long term economic impact of the loss of wetlands is likely to be significant.[111] Wetlands play an important role in flood water storage, retention of incoming sediments, nutrient removal and improvement of downstream water quality, chemical detoxification, local groundwater recharge, reduction of shoreline erosion, aquatic food chain support, and fish and wildlife habitat maintenance.[112] Wetlands also have educational and research value, as well as aesthetic value.[113] Destruction of wetlands may ultimately result in reduced water quality, loss of recreation areas (particularly along shorelines that are disappearing because of the lack of sediment rebuilding), and loss of many endangered species of plants and animals.[114]

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110. U.S. ARMY CORPS OF ENGINEERS, U.S. ENVIRONMENTAL PROTECTION AGENCY, U.S. FISH AND WILDLIFE SERV. & U.S.D.A. SOIL CONSERVATION SERVICE, FEDERAL MANUAL FOR IDENTIFYING AND DELINEATING JURISDICTIONAL WETLANDS 3 (1989).

111. Steven L. Dickerson, *The Evolving Federal Wetland Program*, 44 SW. L.J. 1473, 1475 (1991).

112. GERALD PAULSON & CAMERON DAVIS, WETLANDS AND WATER QUALITY: A CITIZEN'S HANDBOOK FOR PROTECTING WETLANDS 28-32 (1990); Steven L. Dickerson, *The Evolving Federal Wetland Program*, 44 SW. L.J. 1473, 1475 (1991).

113. Steven L. Dickerson, *The Evolving Federal Wetland Program*, 44 SW. L.J. 1473, 1475 (1991).

114. Approximately twenty percent of all endangered species depend on wetland environments for food or habitat. WILLIAM L. WANT, LAW OF WETLANDS REGULATION § 2.01[3], at 2-3 (1991).

C. *The Current Regulatory Scheme*

1. Corps and EPA Authority

Activities affecting wetlands are regulated by the corps and the EPA, which are the primary agencies responsible for the wetlands program under section 404 of the FWPCA. The corps makes the initial decision to grant or deny a permit under section 404.[115] The authority of the corps to issue such permits has, for the most part, been delegated to the thirty-six district engineers and eleven division engineers.[116] There is no mechanism for administrative appeal of permitting decisions made by district or division engineers.[117]

Under section 404(b)(1) of the FWPCA, the EPA has issued guidelines (which the corps must apply in making permitting decisions) for specifying disposal sites for dredged or fill material.[118] The EPA can prohibit or restrict disposal of dredged and fill material at any site, and even if the discharge or disposal has been approved by the corps,[119] the EPA can overrule the corps. This has happened eleven times,[120] and as recently as January 2, 1991, in connection with the Two Forks Dam in Colorado.[121] The EPA can also "pre-identify" sites as unsuitable for fill *before* development is proposed to protect special wetland environments, but has not yet done so.

2. State Programs

The FWPCA authorizes each state to administer its own permit program if such a program meets certain requirements and is approved by the administrator of the EPA.[122] Only one state, Michigan, has received approval.[123] Under related authority, states can also regulate activities within the state affecting water quality. Section 401 of

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115. 33 U.S.C.A. § 1344(a) (West 1986).

116. 33 C.F.R. § 320.1(a)(2) (1990).

117. *Id.*

118. *See* 40 C.F.R. § 230 (1991).

119. 33 U.S.C.A. § 1344(c) (West 1986); 40 C.F.R. § 231(a) (1991).

120. Larry W. Nettles & Kimberly Z. Lesniak, *Introduction to Wetlands*, in CLE INTERNATIONAL, WETLANDS 16 (February, 1991).

121. 56 Fed. Reg. 1, 76 (1991). (notice of final determination). More recently, the EPA modified the designation of a disposal site to limit temporarily the geographic area for disposal of fine materials to the eastern half of the Charleston Harbor Deepening Project. 56 Fed. Reg. 43, 9,178 (1991).

122. 33 U.S.C.A. § 1344(g)(1) (West 1988).

123. 40 C.F.R. § 233.60 (1991).

the FWPCA, for example, requires that the state agency responsible for water quality issue a certification of compliance with state water quality standards before the corps can issue a section 404 permit.[124] In Texas, the Texas Water Commission issues water quality certifications.

3. Related Authority

Provisions of several other state and federal acts affect the section 404 permitting process, including NEPA, the ESA, the Fish and Wildlife Coordination Act,[125] the National Historic Preservation Act,[126] the CZMA, and the FWPCA.[127] The corps may not issue a section 404 permit without first ensuring compliance with these acts. For example, with regard to endangered species, the corps must consult with the Fish and Wildlife Service or the National Marine Fisheries Service, as appropriate, regarding any section 404 applications.[128]

CZMA policies include protection of wetlands and are implemented by state regulations, which often contain provisions specifically relating to wetlands.[129] Texas does not have a coastal zone program administered under the CZMA. Certain coastal dune and wetland areas, however, are protected to some degree under the Texas Natural Resources Code.[130]

D. *Exemptions under Section 404*

Certain activities are exempted from section 404 permitting requirements, including (i) normal farming, silviculture and ranching activities; (ii) maintenance of currently serviceable structures such as dams, levees, and bridges; (iii) maintenance or construction of farm or

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124. 33 U.S.C.A. § 1341(a)(l) (West 1988).

125. 16 U.S.C.A. §§ 661-668ee (West 1985 & Supp. 1991).

126. *Id.* §§ 470-470W-6.

127. *See generally* 33 C.F.R. § 320.3 (1990) (listing these and other federal acts that affect permitting process).

128. *Id.* §§ 320.3(c), 320.4(c).

129. *See* 16 U.S.C.A. § 1452(2) (West Supp. 1991).

130. *See* TEX. NAT. RES. CODE ANN. §§ 63.001-.181 (Vernon 1978 & Supp. 1991); TEX. NAT. RES. CODE ANN. § 63.011 (Vernon 1978 & Supp. 1991) (providing for the establishment of a dune protection line for protecting barrier islands and peninsulas); TEX. NAT. RES. CODE ANN. §§ 33.231-.328 (Vernon Supp. 1991) (providing for the ranking of coastal wetlands for acquisition purposes); *see also* 31 TEX. ADMIN. CODE §§ 15.41-.46 (West 1989) (providing for the protection of coastal dune areas adjacent to the Gulf of Mexico and essential to the protection of state-owned property).

stock ponds or irrigation ditches or the maintenance of drainage ditches; (iv) construction of temporary sedimentation basins on a construction site; (v) construction or maintenance of certain farm, forest, or temporary mining roads; and (vi) discharges permitted under an approved state program.[131] These exemptions have been narrowly construed.[132] For example, the Fifth Circuit Court of Appeals held in *Avoyelles Sportsmen's League, Incorporated v. Marsh* that activities undertaken in connection with initiating an exempt activity such as farming or silviculture are not exempt.[133]

While a section 404 permit is required for the discharge of dredged or fill material into waters of the United States, a permit is not expressly required for draining wetlands or clearing activities. A federal district court has held, however, that "under the Clean Water Act, its regulations, and relevant case law, draining is indeed a regulated activity under § 404(b) and requires a permit where such activity presents the threat of significant alteration or destruction of a wetland."[134] The Fifth Circuit has held that the removal and redepositing of wetlands vegetation onto adjacent wetlands requires a section 404 permit, but did not determine whether vegetation removal alone would require a permit.[135]

E. *Obtaining a Section 404 Permit*

The Secretary of the Army may issue a section 404 permit after notice and opportunity for public hearing.[136] An activity requiring a section 404 permit may be carried out under an individual permit or under a general permit.[137]

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131. 33 U.S.C.A. § 1344(f)(1) (West 1986); 33 C.F.R. § 323.4 (1990).

132. GERALD PAULSON & CAMERON DAVIS, WETLANDS AND WATER QUALITY: A CITIZEN'S HANDBOOK FOR PROTECTING WETLANDS 12 (1990) (citing United States v. Heubner, 752 F.2d 1235 (7th Cir. 1985), United States v. Akers, 785 F.2d 814 (9th Cir. 1986), and Riverside Irrigation Dist. v. Andrews, 758 F.2d 508 (10th Cir. 1985)).

133. Avoyelles Sportmen's League, Inc. v. Marsh, 715 F.2d 987, 925-27 (5th cir. 1983); *see also* United States v. Larkins, 852 F.2d 189, 192 (6th Cir. 1988). For the proposition that activities that reduce the amount of wetland acreage constitute a discharge of dredged or fill material and require a permit, see United States v. Huebner, 752 F.2d 1235 (7th Cir. 1985).

134. Save Our Community v. Environmental Protection Agency, 741 F. Supp. 605, 611 (N.D. Tex. 1990).

135. *Avoyelles Sportsmen's League*, 715 F.2d at 923.

136. 33 U.S.C.A. § 1344(a) (West 1986); 33 C.F.R. § 325.2(a)(2), (3) & (5) (1990); 40 C.F.R. § 232.3(b) (1990).

137. 33 C.F.R. § 323.3(a) (1990).

1. General Permits

General permits may be either nationwide or regional.[138] Twenty-six nationwide permits have been issued and are described in the Code of Federal Regulations. Regional permits are issued by district or division engineers, and cover a district or division.[139] Letters of permission[140] (issued pursuant to an abbreviated application processing procedure) and programmatic permits[141] (issued under existing federal, state or local programs) are alternative procedures under which a section 404 permit may be granted.

The most controversial of the nationwide permits is permit number 26.[142] It allows the discharge of dredged or fill material into non-tidal rivers and streams, their lakes and impoundments (including adjacent wetlands that are located above the headwaters), and other non-tidal waters (including adjacent wetlands that are not part of a surface tributary system for interstate waters or navigable waters, i.e., isolated waters), so long as the discharge affects less than ten acres of land.[143] Prior notice to the district engineer is required.[144]

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138. *Id.* §§ 323.2(h), 325.2(e)(2).

139. *Id.* § 325.2(e)(2).

140. *Id.* § 325.2(e)(1).

141. *Id.* § 325.5(c)(3).

142. WILLIAM L. WANT, LAW OF WETLANDS REGULATION § 5.03[3][a] at 5-9 (1991).

143. 33 C.F.R. § 330.5(a)(26) (1990). The corps is currently seeking public comment on thirteen proposed new nationwide permits and changes to existing general permits, including revising nationwide permit 26 to reduce the area of wetlands that may be filled. 56 Fed. Reg. 14,598 (1991).

144. 33 C.F.R. § 330.5(a)(26) (1990). Other nationwide permits authorize certain surveying activities (permit number 6); construction of certain exploration, production, and transportation facilities (permit number 8); discharge of fill material as backfill or bedding for utility lines, incidental to construction of bridges, or associated with small hydropower projects (permits numbered 12, 15 and 17); discharge of up to ten yards of fill into any waters, except wetlands (permit number 18); dredging of up to ten yards of material from navigable waters (permit number 19); and minor road crossing fills (permit number 14). *Id.* § 330.5(a). Nationwide permits are valid only if certain conditions are met. *Id.* § 330.5(b). The discharge must (i) not occur in the proximity of a public water supply intake or in areas of concentrated shellfish production; (ii) not jeopardize or harm a threatened or endangered species or significantly disrupt the movement of aquatic life indigenous to the affected waterbody; (iii) not be toxic; (iv) not occur in a component of the National Wild and Scenic River System, or in a river under study to become a part of such system; (v) not occur in an historic site listed on or eligible for the listing on the National Register of Historic Places (such activity may be undertaken after notice to, and approval by, the district engineer); (vi) not impair reserved tribal rights; and (vii) comply with any applicable state regulations and any applicable conditions that may have been imposed by the division engineer. *Id.* Any structure or fill must also be properly maintained, and certain management practices must be followed to the maximum

2. Individual Permits—The Process

The application for an individual permit must include a complete description of the proposed activity, including its location, purpose, necessity, and time schedule.[145] Information regarding surrounding property, including the names and addresses of adjoining property owners and the location and dimension of adjacent improvements, must be submitted with the application.[146] District or division engineers may request additional information on a case-by-case basis.[147] A final decision may be delayed for a lengthy period because of the time necessary to hold a public hearing, if requested, as well as to ensure compliance with other related authority, such as NEPA, the ESA, or section 401 of the FWPCA.[148]

F. *Criteria for Issuance of a Permit*

1. Public Interest Review

The corps' regulations apply to both RHA section 10 permits and section 404 permits,[149] and require an evaluation of the impact of the proposed activity on the public interest.[150] The corps employs a balancing test weighing the expected benefits of the proposed activity

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extent practicable. *Id.* Prior notice to the district engineer is required only under nationwide permits 7, 17, 21 and 26. *Id.*

145. 33 C.F.R. § 325.1(c), (d) (1990).

146. *Id.*

147. *Id.* Application fees for an individual permit are $10 for non-commercial projects and $100 for commercial projects. *Id.* § 325.1(f). The district engineer must determine whether the application is complete within fifteen days after receipt, and, if complete, issue a public notice of the application. *Id.* § 325.2(a)(2), (d)(1). The period for comment stated in the public notice may not be less than fifteen days, nor more than thirty days. *Id.* § 325.2(d)(2). The comment period may be extended for an additional thirty days. If the application is not complete, the district engineer must notify the applicant within such fifteen-day period of any necessary additional information needed to complete the application. *Id.* § 325(a)(1),(2). Generally, the district engineer must complete his consideration of any application and make a final decision within sixty days after receipt of the completed application. *Id.* § 325.2 (d)(3). If the comment period is extended or other circumstances exist that prevent a final decision from being made within such sixty-day period, the sixty-day period will be tolled or suspended during the time such condition exists. *Id.*

148. Completion of an Environmental Impact Statement, if required under NEPA, may take years, and there are no time limitations for review and approval or rejection of a § 10 permit under the ESA. *See generally* 16 U.S.C.A. § 1539 (West 1985 & Supp. 1991); 50 C.F.R. §§ 451.01 - 453.06 (1990). FWPCA § 401 requires that an applicant for a federal license provide a water qualify certificate from the affected state.

149. 33 C.F.R. § 320.2(b), (f) (1990).

150. *Id.* § 320.4(a)(1).

against the reasonably foreseeable detriments.[151] Factors to be considered include conservation, economics, aesthetics, and various environmental concerns.[152] The corps also considers the need for the structure or work, practicable alternatives, and the extent and permanence of the effects of the proposed activity.[153] No permit may allow alteration of wetlands deemed important to the public interest, as described in the regulations.[154]

2. EPA Guidelines

Under the EPA regulations,[155] a section 404 permit will not be issued "if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences."[156] The term "practicable" is defined as "available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes."[157] In making its determination, the corps may consider property which the applicant does not own but which could reasonably be obtained.[158]

A section 404 permit also will not be issued if the proposed discharge will (i) violate certain laws or regulations, including applicable state water quality standards and section 307 of the FWPCA; (ii) jeopardize the continued existence or adversely affect the critical habitat of an endangered or threatened species; or (iii) cause or contribute to the significant degradation of the waters of the United States.[159] The loss of fish or wildlife habitat or the loss of a wetland's capacity to assimilate nutrients, purify water, or reduce wave energy is deemed to be an effect contributing to significant degradation.[160]

Practicable steps must be taken in every case to minimize potential adverse impacts of the discharge on the aquatic ecosystem. This

151. *Id.*
152. *Id.*
153. *Id.* § 320.4(a)(2).
154. *Id.* § 320.4(b).
155. 45 Fed. Reg. 85,344 (1980) (codified at 40 C.F.R. § 230.1 (1990)).
156. 40 C.F.R. § 230.10(a) (1990).
157. *Id.* § 230.10(a)(2).
158. *Id.*
159. *Id.* § 230.10(b).
160. 40 C.F.R. § 230.10(c) (1990).

"mitigation" may include prohibiting the action altogether, limiting the size or scope of the proposed activity, or requiring rehabilitation or restoration of the affected environment, preservation and maintenance operations, or substitute resources or environments.[161]

3. Memorandum of Agreement

Until *National Wildlife Federation v. Marsh*,[162] the corps did not implement the section 404 regulations issued by the EPA. Even after the case was settled, disagreements between the corps and the EPA continued, particularly as regards mitigation requirements. The Memorandum of Agreement (MOA)[163] reached between the EPA and the corps on this issue states the common goal of no net loss of wetlands functions and values, and provides guidance to the corps in its exercise of discretion under the EPA guidelines.

The MOA requires that mitigation result in a one-to-one functional replacement of wetland values and an adequate margin of safety to ensure meaningful compensation.[164] The amount of wetlands acreage required for compensatory mitigation will likely exceed the wetlands acreage proposed to be destroyed because the creation or enhancement of wetlands usually is not one hundred percent successful. Further, the corps is not likely to accept the contribution or set aside of existing wetlands as sufficient compensatory mitigation because such an action would not be consistent with the "no net loss" policy.

Compensatory mitigation may be accomplished using "mitigation banking."[165] Although not defined in the MOA, the concept of mitigation banking generally means that if an appropriate accounting of acreage is established, excess wetlands created for mitigation purposes can be used as credit against future compensatory mitigation requirements.[166] This system allows anyone facing continuing mitigation requirements to establish a mitigation plan covering multiple projects.

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161. *Id.* § 230.10(d). *See generally* James B. Blackburn, *Negotiating Wetlands Developments and Acquisitions*, in CLE INTERNATIONAL, WETLANDS ¶ II(B)(1), at 11 (1991); *see also* 40 C.F.R. § 1508.20 (1990).

162. 14 ENVTL. L. REP. (Envtl. L. Inst.) 20262 (D.D.C. 1984).

163. Memorandum of Agreement Between the Environmental Protection Agency and the Department of the Army Concerning the Determination of Mitigation Under the Clean Water Act § 404(b)(1) Guidelines, 55 Fed. Reg. 9,210 (1990).

164. *Id.* at 9212.

165. *Id.*

166. *See* James B. Blackburn, Jr., *Negotiating Wetlands Development and Acquistions*, in CLE INTERNATIONAL, WETLANDS ¶ II(B)(1), at 17 (1991).

4. Issuance of the Permit

When a section 404 permit is issued, the division engineer must make a written statement with respect to the probable effect of the proposed activity and the factual determinations under the EPA section 404(b)(1) guidelines.[167] The factual determinations must include findings relating to the nature and degree of affect the activity will have on (i) the physical substrate, (ii) water patterns and circulation including downstream flows and normal fluctuation, (iii) the suspended particulate concentration and turbidity in the vicinity of the site, (iv) the level of contaminates, and (v) the structure and function of the aquatic ecosystem and functions.[168] The permit issued by the Corps may also include conditions necessary to ensure that the requirements of section 404 and related statutes are met.[169]

Individual section 404 permits are valid until they expire or are modified,[170] and typically are in effect for a period of three years. The corps may grant a permit for a longer period, however, if completion of the proposed activity will require more time. Regional permits may not be issued for a period exceeding five years.[171]

G. *Property Rights and Wetlands Regulation*

The corps regulations recognize the right to reasonable use of property.[172] Nevertheless, in the view of some, section 404 (as it relates to the regulation of wetlands) has "become the equivalent of a national zoning law."[173] A section 404 permit is now required for many activities that seem to bear little direct relation to the FWPCA, which purportedly is intended to deal with water pollution. The permitting process generally is lengthy, costly, and causes significant delay in development. There is no question that section 404 has become an effective system for land use regulation, and as pointed out in section III above, denial of a section 404 permit has been challenged successfully as a regulatory "taking" that requires compensation.

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167. 40 C.F.R. § 230.11 (1990).
168. *Id.*
169. 33 C.F.R. § 325.4(a) (1990).
170. *Id.* § 325.6(a).
171. 33 C.F.R. § 325.2(e)(2) (1990).
172. *Id.* § 320.4(g)(1).
173. *See* Marianne Lavelle, *Wetlands: The New Battle Cry in Washington*, NAT'L L.J., July 23, 1990, at 24 (quoting William L. Want, author of LAW OF WETLANDS REGULATION (1990)).

VI. CLEAN WATER: NPDES PERMITS, WATERSHED PROTECTION, AND REGULATION OF UNDERGROUND STORAGE TANKS

Developers must be attentive to federal regulations governing discharge of *pollutants* into water systems both during construction and thereafter. In Travis County, Texas, watershed protection is also the subject of state and local regulatory schemes. Finally, special rules apply to those developments that include underground storage tanks.

A. *Protecting Water Quality: NPDES Permits*

Since 1972, the FWPCA has prohibited the discharge of any pollutant into navigable waters of the United States from a point source unless the discharge is authorized by a NPDES permit issued by the EPA. The stated objective of the FWPCA is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters."[174] The basic goal is to make all waters "fishable" and "swimmable," and the regulatory scheme to achieve that goal has relied on technological standards and methodology applied to specific "point sources" of discharge.[175]

Although the language of the FWPCA is sufficiently broad to include storm water runoff, the EPA regulations initially focused on industrial wastewater and municipal sewerage discharges, since these were the primary contributors to the degradation of water quality. Urban runoff, while covered by the FWPCA, was not given significant attention. It has become increasingly apparent, however, that pollution from urban runoff and other "nonpoint" sources significantly contributes to water quality impairment. The EPA has funded several studies[176] and has issued various reports concluding that uncontrolled urban runoff has a substantial effect on water quality in rivers, streams and lakes.[177]

The Water Quality Act of 1987[178] amended the FWPCA to address

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174. 33 U.S.C.A. § 1251(a) (West 1986).

175. Point source means any discernible, confined and discrete conveyance from which pollutants are or may be discharged. 33 U.S.C.A § 1362(14) (West 1986); 40 C.F.R. § 122.2 (1990).

176. The Nationwide Urban Runoff Program, for example.

177. U.S. Environmental Protection Agency, America's Clean Water—The States Nonpoint Source Assessment (1985); Office of Water Regulations and Standards, U.S. Environmental Protection Agency, National Water Quality Inventory: Report to Congress (1988).

178. The Water Quality Act of 1987, Pub. L. No. 100-4, 101 Stat. 7.

specifically urban runoff controls, and added to the goals of the FWPCA that controls of nonpoint sources of pollution be developed and implemented in an expeditious manner.[179] Urban runoff and nonpoint source discharges are not readily managed by the same "end of the pipe" technological standards and methodology applied to traditional point sources. Nevertheless, "best management practices" continue to be the cornerstone of nonpoint source management programs contemplated under the amendments.[180]

Although the amendments specify that an NPDES permit generally will not be required until October 1, 1992, a permit is now required for certain storm water discharges, including discharges "associated with industrial activity" and discharges from municipal separate storm water systems serving populations in excess of 100,000 persons.[181] In early 1989, the EPA issued a proposed rule to implement the provisions of the amendments relating to storm water runoff, and received 450 sets of comments comprising 3,200 pages from a number of industries, trade associations, municipalities, federal and state agencies, environmental groups, and private citizens. The EPA issued its final rule in November 1990.[182]

In the final rule, storm water is defined broadly, and somewhat vaguely, to mean "storm water runoff, snow melt runoff, and surface runoff and drainage."[183] The commentary on the final rule makes it clear that the objective is to control pollutants that enter the receiving water from storm water conveyances. Only storm water discharges from point sources, however, as opposed to "sheet flow," are regulated under the rule.[184] "Point source" is very broadly defined as "any discernible, confined and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from

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179. 33 U.S.C.A. § 1251(a)(7) (West 1986). Nonpoint source is not defined in the statute or the regulations, but is interpreted to include all sources that are not point sources, including urban stormwater runoff.

180. *See* 33 U.S.C.A. § 1329 (West 1986).

181. Pub. L. 100-4, Title IV, §§ 401-404(a), (d), 405, 101 Stat. 65-67, 69 (current version at 33 U.S.C.A. § 1342 (p)(3) (West Supp. 1991)).

182. 55 Fed. Reg. 47,990-48,091 (1990) (to be codified at 48 C.F.R. § 122-24).

183. 40 C.F.R. § 122.26(b)(13) (1990). A more specific definition in the proposed regulations, which included street wash waters, infiltration, drainage related to storm events, or other discharges, was modified after receiving numerous comments to the proposed definition.

184. 55 Fed. Reg. 47,996-997 (1990) (to be codified at 48 C.F.R. § 122-24).

which pollutants are or may be discharged."[185] The commentary indicates that the EPA intends "to embrace the broadest possible definition of point source consistent with the legislative intent of the FWPCA and court interpretations to include any identifiable conveyance from which pollutants might enter the waters of the United States.[186]

Under the final rule, five general categories of storm water discharges require permits: discharges for which a permit was issued prior to February 4, 1987; discharges associated with industrial activities; discharges from large municipal separate storm water discharge systems serving populations of 250,000 or more persons;[187] discharges from medium municipal separate storm water discharge systems serving populations between 100,000 and 250,000 persons;[188] and discharges determined by the EPA to contribute to a violation of a water quality standard or to be a significant contributor of pollutants to waters of the United States. Of primary concern to the private sector and individual property owners are the regulations applicable to discharges associated with industrial activities.

"Discharges associated with industrial activities" include storm water discharges from construction operations that result in the disturbance of five or more acres of land regardless of land use.[189] Consequently, development construction for industrial, commercial, retail, and even residential uses will in many instances require an NPDES permit. The permit application must be filed ninety days prior to the commencement of construction.[190] The regulations contemplate that the general contractor will have primary responsibility for obtaining the permit because of its control of, and familiarity with,

185. 33 U.S.C.A. § 1362(14) (West 1986); 40 C.F.R. § 122.2 (1990).

186. 55 Fed. Reg. 47,997 (1990). By way of emphasis, the commentary cites Sierra Club v. Abston Construction Co., 620 F.2d 41 (5th Cir. 1980) for the proposition that changing the surface of land or establishing grading patterns will result in a point source. *See* O'Leary v. Moyer's Landfill, Inc., 523 F. Supp. 642 (D.C. Pa. 1981). Even dump trucks and bulldozers dumping and spreading fill material have been held to be "point sources." United States v. Weisman, 489 F.Supp. 1331 (D.C. Fla. 1980).

187. 40 C.F.R. pt. 122 app. F (1991). (Applicable to the Texas cities of Austin, Dallas, El Paso, Fort Worth, Houston, and San Antonio).

188. *Id.* (Texas, Amarillo, Arlington, Beaumont, Corpus Christi, Garland, Irving, Lubbock, Pasadena, and Waco are included).

189. 40 C.F.R. § 122.26(b)(14)(x) (1991).

190. 40 C.F.R. § 122.21(c)(1) (1991).

the construction site operations.[191] The kinds and number of construction activities requiring NPDES permits are extensive. Part of the reluctance of the EPA to require permits for *all* storm water discharges has been the recognition that any such program would generate large numbers of applications that, practically speaking, could not be reviewed. Accordingly, the final rule specifies phasing and priorities based on a four tier permitting strategy.[192]

The first tier is the development of a preliminary or baseline permit category requiring "general permits." First tier permits cover the majority of storm water discharges associated with industrial activity, including construction.[193] This is intended to be an interim phase, the scope of which would be curtailed over time as subsequent tiers are implemented. The second tier will focus on specific watersheds. Permits under this tier will incorporate appropriate revisions (to the compliance standards of general permits) that respond to specific watershed water quality issues. The third tier will target specific industries. Permits issued in this tier will impose additional requirements tailored to discharges created by designated classes of industries. The final tier will address specific facilities for which individual permits will be required.

The EPA intends to issue general permits to cover activities in states such as Texas that do not have an EPA-approved NPDES program,[194] and has issued proposed rules and a draft general permit.[195] The comment period on the proposed rules expired October 15, 1991, but the EPA has not yet promulgated the final rules and general permit for states without an approved NPDES program. General permits will establish minimum standards and controls for storm water

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191. 55 Fed. Reg. 48,034 (1990) (discussing the rationale behind the permit application requirements for construction activities). The "operator," which includes a general contractor, is generally responsible for submitting the permit application. 40 C.F.R. § 122.21(b) (1991).

192. 55 Fed. Reg. 48,002-003 (1990).

193. *Id.* A permit will be required for discharges from construction activities to a separate storm water system operated by a municipal or non-municipal entity, even if that system is itself permitted. *Id.*

194. 55 Fed. Reg. 48,003 (1990). In addition to avoiding the administrative "log-jam" that would result if individual permits were required for all discharges, the information and monitoring results submitted pursuant to the general permitting system will supply the basis for formulating standards for best management practices or pollution prevention practices, and ultimately for maximum numeric and/or toxicity effluent limitations and pollutant threshold concentrations.

195. 55 Fed. Reg. 40,948 (1990).

discharges using structural and non-structural methods, and will also serve as models for general permits contemplated under approved state programs. Once a general permit is issued, an individual discharge is covered by the general permit if an appropriate notice of intent (NOI) to comply with the requirements of the general permit is filed.[196] A review of the NOI will allow the EPA to determine whether an *individual* permit should be required and will provide the basis for developing additional standards for specific watersheds and specific industries.

The new regulations adopt a similar evolutionary permitting process for municipal storm water systems.[197] Part 1 of the permit application for such systems will identify sources of pollutants by requiring an inventory of existing storm water discharge facilities.[198] Part 2 of the application envisions a comprehensive program of structural and non-structural measures to control pollutant discharges to the maximum extent practicable.[199] Field screening and sampling will determine whether program modifications are needed, and will aid in developing standards for permissible pollutant loading. Annual reports will be required to allow the EPA to evaluate compliance and, where appropriate, to modify the requirements of permits.[200]

Under the regulations, individual permit applications for industrial discharges must be submitted one year after the promulgation of the final rule, that is, by November 18, 1991.[201] The EPA has extended the deadline for submission of individual permits to October 1, 1992.[202] This date is inconsistent with the statute, which requires promulgation of permit application procedure requirements by February 4, 1989, and submission of permit applications by February 4, 1990. Although promulgating the regulations obviously was a considerable administrative task, the EPA did not meet the statutory deadlines and cannot waive these dates. Consequently the EPA has alerted property owners and general contractors covered by the regulations to submit a permit application as expeditiously as possible.[203] Although EPA

196. *Id.*
197. *See generally* 55 Fed. Reg. 48,036-052 (1990).
198. *Id.* at 48,044, 48,068-071.
199. *Id.* at 48,045.
200. *Id.* at 48,059.
201. *Id.* at 48,059, 48,071.
202. 56 Fed. Reg. 56,548 (1991).
203. *See* 55 Fed. Reg. 48,060-061 (1991).

sanctions for failure to apply by the dates specified in the statute may be unlikely, there remains the possibility of private suits by concerned citizens and environmental groups.

B. *Watershed Protection Through State and Local Regulation*

The state and local regulations in effect in central Texas provide an example of a multi-level environmental permitting system into which real estate developers and their attorneys must enter. We include details of several regulatory schemes to illustrate the types of inquiries that real estate attorneys must make of their developer clients.

1. Texas Water Commission Rules Concerning the Edwards Aquifer

The Texas environmental policy with respect to water quality is broadly stated in the Texas Water Code (the code): "to maintain the quality of water in the state consistent with the public health and enjoyment, the propagation and protection of terrestrial and aquatic life, the operation of existing industries, and the economic development of the state."[204] This policy echoes the national environmental policy and recognizes the need to balance the competing interests of the conservation and protection of natural resources, and the continuation of existing commercial activities and future economic development.

The code directs the Texas Water Commission (TWC) to "establish the level of quality to be maintained in, and . . . control the quality of, the water in this state,"[205] and delegates to the TWC "the sole and exclusive authority to set water quality standards for all water in the state."[206] The Texas regulatory scheme in large measure follows the federal system and is intended to facilitate delegation of EPA regulatory authority to the TWC[207] and to qualify Texas for federal financial assistance.

The code prohibits the discharge of waste into or adjacent to any water in the state and any other activity which by itself or in conjunc-

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204. TEX. WATER CODE ANN. § 26.003 (Vernon 1988).

205. *Id.* § 26.011.

206. *Id.* § 26.023.

207. The Code includes various "alternative" provisions that will become effective upon EPA delegation of NPDES authority to the TWC. Until such NPDES delegation, a dual regulatory scheme will exist under the FWPCP (administered by the EPA) and under the Code (administered by the TWC).

tion with another activity will cause pollution of the water in the state.[208] With respect to storm water runoff, the code requires every city in Texas having a population in excess of 5,000 persons to establish a water pollution control and abatement program for the city and empowers TWC to adopt rules and regulations.[209]

The TWC has recognized that special regulations are required for specific watersheds and water resources. The Edwards Aquifer, which is the sole source of drinking water for several central Texas communities, has been identified as requiring specific regulations. To regulate activities that might pollute the aquifer, and pursuant to authority granted in the code, the TWC adopted the Edwards Aquifer Rules.[210]

The Edwards Aquifer Rules regulate all construction activities within the aquifer recharge zone[211] except clearing a path up to ten feet wide for surveying; agricultural activities; installation of utility lines which are not for the purpose of conveying pollutants, storm water runoff or sewage effluent; activities associated with the exploration and production of oil and gas; and routine maintenance of existing structures where there is little or no potential for contaminating groundwater.[212] Single family residential developments with a minimum lot size of five acres are also exempt.

Before any regulated construction related activity may be commenced, a Water Pollution Abatement Plan (a WPAP) must be submitted to, and approved by, the TWC, and notice of the WPAP must be filed of record.[213] The Edwards Aquifer Rules specify a maximum 150-day period for the TWC's consideration of a WPAP. Notice must also be provided to the TWC when any activity under an approved WPAP is commenced, and of any significant recharge features

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208. TEX. WATER CODE ANN. § 26.121 (Vernon 1988)

209. *Id.* § 26.177. The TWC has not yet adopted rules and regulations under this section, but has begun to formulate them.

210. Tex. Water Comm'n, 31 TEX. ADMIN. CODE §§ 313.1-313.15 (West Supp. Apr. 1, 1991).

211. *Id.* The recharge zone is defined as "[g]enerally, that area where the stratigraphic units constituting the Edwards Aquifer crop out. . . . The recharge zone is identified as that area designated as such on official maps located in the offices of the Texas Water Commission and the appropriate underground water conservation district." *Id.* § 313.1.

212. *Id.*

213. Tex. Water Comm'n, 31 TEX. ADMIN. CODE § 313.4(d) (West Supp. Apr. 1, 1991).

encountered during construction.[214]

2. LCRA Lake Travis Nonpoint Source Pollution Control Ordinance

The Lower Colorado River Authority (the LCRA) was created by the Texas Legislature in 1934,[215] and its enabling statute, as amended in 1975, authorizes "the study, correcting and control of both artificial and natural pollution."[216] Pursuant to this authority, in 1989 the LCRA board adopted the LCRA ordinance to ensure that increases in the pollutant levels associated with development of property in Lake Travis Watershed in Travis County, Texas, were controlled. Performance standards are specified, and as long as they are met, land use decisions are left to local governments and developers. To the extent that a land development or use cannot meet the standards, the development must be modified.

a. Pollution Sources Addressed

The LCRA Ordinance addresses nonpoint source pollution including trash, debris, sediment, nutrients, and toxic substances. Urban storm water runoff and its effect on the Highland Lakes, particularly Lake Travis, were of primary concern, since nonpoint sources are estimated to generate more than ninety-eight percent of the fecal and total coliform bacteria, ninety percent of the sediment, eighty percent of the nitrogen, and fifty percent of the phosphorus entering waterways.[217] Performance standards are established for three target indicators—total suspended solids, total phosphorus, and oil and grease. The LCRA ordinance assumes that a reduction in these target indicators will indicate that other pollutants such as nitrogen, bacteria, metals and pesticides are also being reduced.[218] Control of

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214. *Id.* § 313.4(d). Significant recharge features are defined as sinkholes, caverns, faults, and other geological features where rapid infiltration to the subsurface may occur. *Id.* § 313.2.

215. Act of Nov. 13, 1934, 43rd Leg., 4th C.S., ch. 7, 1934 Tex. Gen. Laws, Local and Special 19 (amended in 1975).

216. Act of April 28, 1975, 64th Leg., ch. 74, 1975 Tex. Gen. Laws.

217. Lower Colorado River Authority, Tex., Lake Travis Nonpoint Source Pollution Control Ordinance preamble (1989) (citing a report by the EPA) [*hereinafter* cited as LCRA Ordinance]. The LCRA is considering extending the regulations to other nearby Highland Lakes and has held a series of public meetings on a proposed LCRA Highland Lakes Nonpoint Source Pollution Control Ordinance.

218. Lower Colorado River Authority, Tex., Lake Travis Nonpoint Source Pollution Control Ordinance, Technical Manual, § 1.1 at 2 (1989).

streambank erosion, by limiting storm runoff to predevelopment amounts, is also required.[219]

b. Activities Covered

The LCRA ordinance applies to all land development activity, including clearing, filling, grading, and construction of improvements,[220] and requires a permit prior to any such activity.[221] The ordinance exempts maintenance activities, agricultural activities, construction of a single family residence, existing development, and development of a site for which a final subdivision plat was approved prior to February 1, 1990.[222] The ordinance does not apply to properties within a municipal jurisdiction if the municipality adopts the LCRA ordinance or a similar ordinance requiring pollution controls at least as stringent as the LCRA ordinance.[223]

c. Permit Procedure

The period for technical review of the application for a nonpoint source pollution control permit is thirty days after acceptance of the permit application by the LCRA.[224] The LCRA may request any additional information needed to complete the technical review, which must be submitted within thirty days.[225]

Public notice and opportunity for hearing are required if requested by any party. The LCRA will issue the permit if the applicant demonstrates that the proposed activity will comply with the provisions of the ordinance. The conditions set forth in the LCRA ordinance, including a requirement that development not begin until fourteen days after issuance of the permit, are part of the permit requirements.[226]

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219. *Id.*

220. *Id.* § 3.

221. *Id.* § 4.

222. Lower Colorado River Authority, Tex., Lake Travis Nonpoint Source Pollution Control Ordinance § 4 (1989).

223. *Id.*

224. *Id.* § 6(b)(2).

225. *Id.* § 6(b)(3). If such a request is made, the technical review period may be extended up to fifteen days. The time for review of the application may also be extended if the number of permits processed in the current calendar quarter exceeds by at least fifteen percent the number of permits processed in the same calendar quarter for the previous year, or if delay is caused by another entity. *Id.* § 6(c).

226. Lower Colorado River Authority, Tex., Lake Travis Nonpoint Source Pollution control Ordinance §§ 6, 7(a) (1989).

The permit expires automatically if the applicant does not commence the proposed development activity within three years.[227]

3. Austin Ordinances

a. Environmental Protection Ordinances

The city of Austin aggressively uses its regulatory authority to enact measures purportedly designed to protect natural resources. In 1988, Austin consolidated its zoning, subdivision, and related development ordinances in a Land Development Code (the LDC) which applies to all development activities within the city limits and its extraterritorial jurisdiction.[228]

Austin's approach to protecting water quality is primarily to regulate and limit the uses and development intensities of land. The LDC defines a series of "water quality zones" paralleling waterways within Austin's jurisdiction, with widths determined by the size of the drainage area of the particular waterway. The "critical water quality zone" is generally the one-hundred-year flood plain, and must remain free of virtually all development.[229] The "water quality buffer zone" extends from the critical water quality zone one hundred to three hundred feet, depending on the size of the waterway, and only limited amounts of impervious cover (with a maximum of thirty percent) are permitted.[230] All property not included in critical or water quality buffer zones is classified as "upland zone," where the maximum density or impervious cover limit is sixty-five percent for commercial uses.[231]

The LDC also restricts development in the vicinity of "critical environmental features," defined as any feature "determined to be of critical importance to the protection of one or more environmental resources, including without limitation bluffs, springs, canyon rimrocks, caves, sinkholes and wetlands."[232] The LDC does not define

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227. *Id.* § 7(c).

228. AUSTIN, TEX., CODE chs. 13.1-13.8 (1981 as supplemented). Development of property in the various watersheds is regulated primarily by chapter 13-7 and the water quality section (article V) of chapter 13-2.

229. *Id.* §§ 13-2-522, 542, 562, & 13-7-23.

230. *Id.* §§ 13-2-522, 523, 542, 543, & 13-1-562, 563.

231. *Id.* §§ 13-2-524, 544, 564. The LDC also limits construction of improvements on sloping land. On slopes exceeding fifteen percent, impervious cover cannot exceed ten percent, terracing is required, and other conditions are imposed. *Id.* § 13-2-580.

232. AUSTIN, TEX., CODE § 13-7-3 (1981 as suplemented). Development activities are generally prohibited within 150 feet, and are absolutely prohibited within 50 feet of a critical environmental feature. *Id.* § 13-7-21(a). Construction of hiking trails for educational pur-

"wetlands." Additional restrictions and requirements, ostensibly for the purpose of protecting water and environmental quality, include erosion and sedimentation controls,[233] structural controls,[234] and protection of certain trees and natural areas.[235]

b. Regulations for the Barton Springs Contributing Zone

Following heated public debate regarding proposed projects in the Barton Creek Watershed,[236] which contributes to the Edwards Aquifer, Austin adopted "interim" regulations aimed at assuring "zero" degradation of the water in the creek and the aquifer and affecting property within the so-called "Barton Springs Contributing Zone."[237] These interim regulations dramatically reduced impervious cover allowances on the "upland" portion of properties within the affected areas, and in some cases arguably permitted no economically viable uses. Within the areas that are identified as contributing to recharge of the Edwards Aquifer, impervious cover was limited to twenty percent for residential (including multifamily) development and eighteen percent for commercial uses. In non-recharge areas, the impervious cover limit was thirty-five percent for residential uses and thirty percent for commercial development.[238]

Development in water quality buffer zones, referred to in the interim ordinance as "water quality transition zones", also was severely restricted. No development was permitted in the part of any such zone which contributes to recharge of the aquifer.[239] In other loca-

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poses as designated by the Parks and Recreation Department is permitted within the 50 foot buffer zone. *Id.*

233. *Id.* § 13-7-14.

234. *Id.* § 13-7-19.

235. *Id.* ch. 13-7, art. II.

236. After public outcry, on June 6, 1990, the Austin City Council denied a planned unit development covering 3,786 acres in the city's extraterritorial jurisdiction adjacent to Barton Creek.

237. AUSTIN, TEX., ORDINANCE 910221-E (Feb. 21, 1991) (amending chapter 13-2 (Land Development), article V (Water Quality Related Development Intensities), and chapter 13-7 (Environmental Protection and Management)). "Barton Springs Contributing Zone" is defined as all watersheds that contribute to the recharge of Barton Springs, including portions of at least six watersheds. *Id.* The interim ordinance references the Edwards Aquifer Recharge Zone, which covers a very large area in Williamson, Hays, and Travis Counties, Texas. *See* AUSTIN, TEX. CODE § 13-7-3 (1981 as supplemented) (including a definition and referencing maps of the Edwards Aquifer Recharge Zone).

238. AUSTIN, TEX., ORDINANCE 910221-E (Feb. 21, 1991). *Id.* § 13-2-584.

239. *Id.* § 13-2-583(b).

tions, only development permitted in a critical water quality zone was allowed—streets, minor drainage facilities (excluding wastewater irrigation), one and two-family residential housing units with a maximum impervious cover of eight percent and a minimum lot size of three acres, and buffer zones.[240]

After an unprecedented series of public hearings, the interim ordinance was replaced by "permanent" regulations.[241] As a result of considerable testimony from property owners and business and developer representatives, the Austin City Council recognized that the interim ordinance precluded as a practical matter many valid economic uses of the affected properties. It was generally acknowledged that commercial development in these areas was not economically feasible under the interim ordinance, a result perhaps intended (and in fact supported) by much of the environmental community.

The new permanent regulations, viewed as a compromise between protecting the environment and allowing reasonable development, relaxed some of the more restrictive provisions of the interim ordinance. Many of the exemptions for projects that were in process, which had been eliminated by the interim ordinance, were restored.[242] The previous impervious cover allowances[243] were also restored.

In an attempt to provide "performance" standards to minimize degradation of the environment, development in the Barton Creek Watershed, which is subject to the permanent regulations, requires installation of water quality controls aimed at reducing post-development pollution loads to background stormwater concentrations.[244] Developers must provide fiscal security to ensure that the required water quality controls are functioning properly, maintenance of the controls is mandated, and annual operating permits are required for commercial and multi-family developments.[245] The city may inspect

240. *Id.* § 13-2-583; Development permitted in a critical water quality zone is limited to certain street crossings. *Id.* § 13-7-23.

241. AUSTIN, TEX., ORDINANCE 911017-B (October 27, 1991) (permanent ordinance).

242. *See id.* part 2(3), LDC § 13-2-502(o).

243. *See supra* notes 231 and 232.

244. Permanent Ordinance part 3(17), LDC § 13-7-34(a). "Background" stormwater concentrations are established by reference to a United State geological survey gauging station on Barton Creek over the period from February 1979 to January 1991. Required percentage reductions and maximum discharge concentrations are established for four pollutants (total suspended solids, total phosphorous, total nitrogen, and total organic carbon). *Id.* pt. 3(17), 13-7-34(b).

245. *Id.* pt. 3(6), LDC § 13-7-7. Controls for single family and duplex residential proper-

control facilities and must establish a monitoring program to determine compliance of controls with the pollutant discharge standards.[246] The regulations specify strict erosion and sedimentation controls for construction activities, as well as operational measures designed to reduce pollutant concentrations.[247] Even though many of the more onerous provisions of the interim ordinance were eliminated, the permanent regulations are still very restrictive. They cannot be viewed merely as minor environmental supplements, but instead clearly are stringent land use controls.

C. *Underground Storage Tanks*

Regulations adopted under the Hazardous and Solid Waste Amendments of 1984[248] apply to any proposed development that includes installation of an underground storage tank.[249] All tanks that are ten percent or more below ground and that contain a regulated substance are subject to these regulations.[250] Excluded from regulation are farm or residential tanks with a capacity of 1,100 gallons or less that are used for storing motor fuel for noncommercial purposes; tanks used for storing heating oil for consumption on the premises; septic tanks; surface impoundments; stormwater or wastewater collection systems; flow-through process tanks; tanks and other facilities used in connection with the exploration, development or production of oil, gas, or geothermal resources; and storage tanks located in an underground area if the storage tank is located on or above the surface of the floor.[251] Regulated substances include substances listed under CERCLA and not regulated as a hazardous waste under the

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ties are maintained by the city and controls for multi-family and commercial developments are maintained by the property owner. *Id.* pt. 3(7), LDC § 13-7-9.

246. *Id.* pt. 3(8), LDC § 13-7-11; *Id.* pt. 3(19), LDC § 13-7-36(a).

247. *Id.* pts. 3(9), 3(17), LDC §§ 13-7-14, 13-7-34(h) & (i).

248. Pub. L. No. 98-616, 98 Stat. 3221 (1984) (codified in scattered sections of 42 U.S.C) (amending the Solid Waste Disposal Act of 1965 (originally enacted as Pub. L. No. 89-272, 70 Stat. 997 (1965))).

249. For an overview of underground storage tank regulations in Texas, *see generally* Eddie Vassallo & Karl H. Moeller, *Underground Storage Tanks*, STATE BAR OF TEXAS, ADVANCED REAL ESTATE LAW COURSE (1990). The Texas legislature enacted significant amendments to the state regulatory program in 1991. *See generally* TEX. WATER CODE ANN. § 26.341 *et seq.* (Vernon 1988).

250. 40 C.F.R. § 280.12 (1990); Tex. Water Com'n; 31 TEX. ADMIN. CODE § 334.2 (West Supp. Apr. 1, 1991).

251. 40 C.F.R. § 280.12 (1990); Tex. Water Comm'n, 31 TEX. ADMIN. CODE § 334.3(a) (West Supp. Apr. 1, 1991). The Texas regulations also apply to above-ground storage tanks

Solid Waste Disposal Act, as well as petroleum and petroleum products.[252]

The regulations require notice of construction activities (including installation of a regulated UST) and registration of any new or existing unregistered UST.[253] New USTs must meet certain technical construction criteria that include design and construction standards, corrosion protection, release detection and spill and overspill safeguards, and existing USTs generally must be upgraded within specified times. In Texas, USTs must be installed by a properly licensed contractor,[254] and the owner and the contractor must certify that the tank was installed in accordance with applicable regulations.[255]

Texas has submitted an underground storage tank program for approval by the EPA. The Texas program has not yet been approved, and at this time a UST must comply with both the federal and the Texas regulations.

VII. AIR POLLUTION PREVENTION AND CONTROL

A brief review of some of the regulations to prevent air pollution is also important in the context of environmental permits for land developers. We consider construction activities generally, as well as notice of asbestos removal and issuance of construction and operating permits in Texas.

Under the Clean Air Act, each state must adopt a plan that provides for implementation, maintenance and enforcement[256] of each national ambient air quality standard (NAAQS) for each quality control region within the state.[257] After approval of a state program by the EPA, the state also will administer, implement, and enforce the National Emission Standards for Hazardous Air Pollutants

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used for storing petroleum products that may be used as fuel. *See* Tex. Water Comm'n, 31 TEX. ADMIN. CODE §§ 334.121-334.132 (West Supp. Apr. 1, 1991).

252. 40 C.F.R. § 280.12 (1990); Tex. Water Comm'n, 31 TEX. ADMIN. CODE § 334.2 (West Supp. Apr. 1, 1991).

253. *See generally* Eddie Vassallo & Karl H. Moeller, *Underground Storage Tanks*, STATE BAR OF TEXAS, ADVANCED REAL ESTATE LAW COURSE (1990).

254. Tex. Water Comm'n, 31 TEX. ADMIN. CODE § 334.46(h)(1)(B) (West Supp. Apr. 1, 1991).

255. *Id.* § 334.46(h)(2).

256. These plans are referred to as state implementation plans, or SIPs. CAA § 110, 42 U.S.C.A. § 7410 (West 1983) [hereinafter CAA].

257. CAA § 110, 42 U.S.C.A. § 7410 (West 1982).

(NESHAPs).[258] The Texas Air Control Board (TACB) administers the Texas Clean Air Act, the state program for implementation, maintenance and enforcement of the NAAQS,[259] and has been approved by the EPA to administer the NESHAPs in Texas.[260]

A. *Development Activities*

Owners and developers undertaking construction activities must be cognizant of the federal and Texas clean air laws. NAAQS have been established for several air pollutants, including particulate matter.[261] The Texas Clean Air Act defines "air contaminant" as any "particulate matter, radioactive material, dust, fumes, gas, mist, smoke, vapor or odor, [or] any combination of those items, produced by processes other than natural."[262] Any construction project therefore should include steps necessary to ensure that land clearing and construction activities do not result in a violation of the NAAQS and are in compliance with the federal and state clean air laws.

B. *Asbestos Removal*

The CAA and the NESHAPs impose additional restrictions and requirements on emissions of hazardous air pollutants, including asbestos.[263] Prior to any emission, notice must be given to the agency administering the NESHAPs (the TACB in Texas), and the administering agency will specify requirements relating to removal, handling and disposal of asbestos containing materials. A developer considering demolition or redevelopment of improvements with materials containing asbestos must ensure that the NESHAPs asbestos requirements are met.

C. *Construction and Operating Permits*

If proposed development includes a new stationary source of air pollutants, a construction permit must be obtained from the

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258. CAA § 112 (d), 42 U.S.C.A. § 7412(d) (West 1983).

259. TEX. HEALTH & SAFETY CODE ANN. § 382.001-.115 (Vernon 1990).

260. 40 C.F.R. § 52.2270 (1990).

261. 40 C.F.R. § 50.6 (1990). NAAQS are established by the EPA pursuant to authority granted under CAA § 109. The particulate matter NAAQS standard is 150 micrograms per cubic meter, 24-hour average concentration. *Id.*

262. TEX. HEALTH & SAFETY CODE ANN. § 381.001 (Vernon 1990).

263. *See generally* 40 C.F.R. §§ 61.01-.19, 61.140-.156 (1990).

TACB.[264] A construction permit is not required for mines, quarries or roads, and there also are several standard exemptions for facilities with emissions below the maximum allowable emission established by the TACB, which are described on the standard exemption list adopted by the TACB. The construction permit process can be lengthy and arduous, and therefore must be considered early in development planning.

D. *Clean Air Act Amendments*

The Clean Air Act Amendments of 1990,[265] enacted on November 15, 1990, call for stringent new air quality permitting regulations affecting many businesses for which operational permits were not previously required. The Clean Air Act amendments further tighten controls on emissions from mobile and stationary sources and on toxic chemical emissions by industry and small businesses. The implementation of the amendments will be phased in over the next fifteen years. The NAAQS will continue to be implemented by the states under state implementation plans approved by the EPA,[266] although a permit setting out conditions for operations will now also be required. The effect of these amendments and the supporting EPA regulations on property being considered for development should be reviewed during development planning.

VIII. CONCLUSION

> Until recently, environmentalists seemed to have the upper hand in the debate over wetlands. . . .
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> But even some environmentalists concede that federal wetlands enforcers may occasionally have overstepped the bounds of common

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264. TEX. HEALTH & SAFETY CODE ANN. § 382.051 (Vernon 1990); Tex. Air Control Bd., 31 TEX. ADMIN. CODE § 116.1 (Aug. 28, 1985). The owner or operator of any regulated facility must apply to the TACB for an operating permit within sixty days after the facility begins operations. A construction permit may be issued only after public notice and opportunity for comment. The TACB must review a construction permit application and notify the applicant whether the application is complete (and if additional information is required) within ninety days of the filing date. Action on the application is required within one hundred eighty days of receipt of a completed application and a public hearing must be held if requested by any affected party. No hearing is required if the request is deemed to be unreasonable by the TACB. TEX. HEALTH & SAFETY CODE ANN. § 382.056(d) (Vernon 1990).

265. Pub. L. No. 101-549, 104 Stat. 2399 (1990).

266. The EPA must determine the minimum criteria for state implementation plans by August 15, 1991, and the states will then have three years to adopt an appropriate plan.

sense.[267]

The growing and popular attention to the destruction of our natural environment is justifiable from any perspective. Legislators and judges have responded, and continue to respond, positively to this national sentiment. While landowners are nowadays quite familiar with remedial legislation such as the Superfund Act, real estate developers must be attentive to the permitting processes that accompany existing and proposed preventative regulation at the federal, state, and local levels. An initial question is whether such regulation (or the denial of a permit thereunder) constitutes a taking without compensation. Beyond that question lies a series of technical inquiries—what permits are required, and when?—as well as economic questions—what is the cost of compliance, including the inevitable delays? Ambiguities persist for the developer seeking unequivocal answers from its legal counsel.

For example, the difficulties of identifying and locating protected endangered species can become a tool for no-growth or slow-growth advocates in local city council chambers. Threats of enforcement actions by environmentalists, uncertainty on the part of developers, and the failure to consider economic impacts together create a *de facto* moratorium on development activities. Concerns over water pollution can also effectively halt development where building in certain "critical zones" is prohibited irrespective of a developer's efforts and ability to protect water quality. Moreover, the controversial definition of "wetlands" is now receiving national attention as the White House considers proposals that would moderate wetlands protection by deregulating "low-value" wetlands.[268] Developers and their attorneys must navigate their way through the shifting field of laws protecting wildlife,[269] wetlands, and water quality, not to mention air pollution regulations.

We have suggested that contemporary land use law requires that

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267. John Lancaster, *Lobby Gains Ground in Effort to Add "Balance" to Wetland Laws*, THE WASHINGTON POST, May 15, 1991, at A-17 (discussing National Wetlands Coalition proposal to narrow the definition of a wetland and thereby open up acreage for development).

268. *See id.* ("Environmentalists have ridiculed the [Comprehensive Wetlands Conservation and Management Act] as the 'Wetlands Destruction Act'.")

269. *See* Steven Pressman, *Gnatural Defenses*, CAL. LAWYER, August 1991, at 19 (controversy over listing the California gnatcatcher, a bird, as an endangered species, which listing developers claim could halt development in three counties and cause billions of dollars in losses).

attorneys focus at the outset of any real estate development not only on zoning and subdivision regulations, but also on environmental law and policy, specifically the permitting processes now in place. Legal advice will necessarily include, in addition to the recommendation to obtain the permits clearly required, an analysis of the statutory ambiguities and of the potentially costly proceedings and delays that may result.