SECTION 3

OTHER ENVIRONMENTAL LAWS APPLICABLE TO TRANSPORTATION PROJECTS

A. SECTION 404 OF THE CLEAN WATER ACT*

Nearly every highway or transportation project of any significance, and many smaller ones as well, encounter wetlands or water bodies protected under Section 404 of the Federal Water Pollution Control Act. This statute, commonly known as the CWA, was enacted in 1972 and established national programs for the prevention, reduction, and elimination of water pollution.[1] The broadly stated purpose of the CWA is to restore and maintain the integrity of the nation's waters.[2] The Secretary of the Army, acting through the U.S. Army Corps of Engineers (Corps), is authorized by Section 404 to issue permits for the discharge of dredged or fill material into waters of the United States, which include wetlands.[3] Wetlands, as defined by the regulations implementing the CWA, generally include swamps, marshes, bogs, and similar areas.[4]

The Army Corps' role as an environmental regulatory agency derives from its historic role in ensuring the navigability of the nation's waterways for defense and commercial purposes. Prior to enactment of the CWA, Section 10 of the Rivers and Harbors Act of 1899 authorized the Corps to issue permits for the dredging, filling, or obstructing of "navigable waters."[5] Navigable waters include "those waters of the United States that are subject to the ebb and flow of the tide shoreward to the mean high water mark, and/or presently used, or have been used in the past, or may be susceptible to use to transport interstate or foreign commerce."[6] But with the 1972 amendments to the CWA, Congress evinced the intent to expand jurisdiction over waters of the United States to the fullest extent of the commerce clause, which, it came to be understood, encompasses wetlands.[7]

The Corps and the U.S. EPA share responsibility for administering Section 404. The Corps is authorized to issue Section 404 permits in compliance with the guidelines issued by the EPA for the selection of specific disposal sites (the "404(b)(1) Guidelines").[8] The EPA, Fish and Wildlife Service (FWS), and the National Marine Fisheries Service also play a reviewing role in assessing individual permit applications through an interagency notice and comment process and can appeal wetland fills determined to have a substantial and unacceptable impact on resources of national importance.[9] The EPA may also veto the Corps' approval of permits if the discharge will have an unacceptable adverse effect on municipal water supplies, shellfish beds and fisheries, wildlife, or recreation areas.[10]

Transportation projects involving discharges of dredged or fill material into wetlands that are subject to CWA jurisdiction will require a Section 404 permit from the Corps unless the proposed discharge qualifies for a specific statutory exemption. Filling activities may qualify for a Section 404 general permit if certain criteria are met, but otherwise require an individual Section 404 permit. General permits authorize activities on a generic basis where they are substantially similar in nature or are subject to duplicative regulatory controls and cause only minimal individual and cumulative environmental effects. These may be issued on a nationwide or regional basis. Individual permits are required for projects requiring extensive filling activities and are subject to public and interagency notice and comment.

1. Geographic Jurisdiction

a. Definition of "Waters of the United States"

The CWA defines "waters of the United States" simply as "navigable waters." This term was historically interpreted under the Rivers and Harbors Act as limited to bodies of water used to transport interstate and foreign commerce. In its implementation of the CWA, the Corps defined "waters of the United States" so as to expand its regulatory jurisdiction to the fullest extent permitted under the U.S. Constitution's Commerce Clause.[11]

The Corps' 1977 regulations asserted federal jurisdiction over three geographic types of wetlands: 1) interstate wetlands; 2) wetlands adjacent to other waters of the United States; and 3) intrastate, nonadjacent wetlands that could affect interstate or foreign commerce.[12] Although this regulatory initiative resulted in a very expansive geographic reach of jurisdiction over development of wetlands, it was upheld under the Commerce Clause in the 1985

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* This section updates, as appropriate, and relies in part upon MICHAEL C. BLUMM, HIGHWAYS AND THE ENVIRONMENT: RESOURCE PROTECTION AND THE FEDERAL HIGHWAY PROGRAM (Nat'l Cooperative Highway Research Program, Legal Research Digest No. 29, 1994).

[1] Section 3.A.5 *infra* of this report discusses water quality certification under § 401 of the CWA. Permitting for point source discharges of stormwater under § 402 of the CWA is discussed in §§ 3.B.1 and 5.B *infra*.

[2] 33 U.S.C. § 1251(a).

[3] 33 U.S.C. § 1344; 33 C.F.R. pt. 328.

[4] 40 C.F.R. § 230.3(t) and 33 C.F.R. § 328.3(b) provide, respectively, the EPA and Corps definitions of wetlands.

[5] 33 U.S.C. § 403.

[6] 33 C.F.R §§ 323.2(a), 329.

[7] MICHAEL C. BLUMM, HIGHWAYS AND THE ENVIRONMENT: RESOURCE PROTECTION AND THE FEDERAL HIGHWAY PROGRAM 8 (Nat'l Cooperative Highway Research Program, Legal Research Digest No. 29, 1994).

[8] 33 U.S.C. § 1344(b)(1); 40 C.F.R. § 230.1 *et seq*.

[9] 33 U.S.C. § 1344(m).

[10] 33 U.S.C. § 1344(c).

[11] BLUMM, *supra* note 7, at 8.

[12] 33 C.F.R. § 328.3(a).

Supreme Court decision, *United States v. Riverside Bayview Homes, Inc.*[13]

The *Riverside Bayview Homes* decision did not resolve all controversy over the Corps' ability to regulate the filling of "isolated wetlands" based on the possibility that those wetlands could affect interstate commerce. That decision did not rule on the question of whether wetlands not connected with other waters were within the jurisdictional reach of the Section 404 program.[14] However, other courts upheld Section 404 jurisdiction over isolated waters where there was demonstrated effect on interstate commerce, such as where the site was visited by out-of-state residents for recreation or study and the discharge would affect such visits.[15]

In *Hoffman Homes, Inc. v. EPA (Hoffman 1)*,[16] the Seventh Circuit initially held that the Corps could not assert its jurisdiction under the Commerce Clause to regulate isolated wetlands without showing some connection to human commercial activity. The court held that the mere presence, or the potential presence, of migratory waterfowl in an isolated wetland had no effect on interstate commerce.[17] Subsequently, in *Hoffman II*,[18] the Court granted EPA's petition for rehearing and vacated its *Hoffman I* opinion. Finally, in *Hoffman III*,[19] the Court upheld the Corps' jurisdiction and Section 404 regulation over wetlands potentially used by migratory waterfowl, but rejected the EPA's contention that the wetland area in question provided suitable bird habitat.[20]

More recently, in *United States v. Wilson,* the Fourth Circuit ruled that the CWA did not regulate isolated wetlands as a "water of the United States" if the wetland is without a direct or indirect surface connection to navigable or interstate waters.[21] The Corps and the EPA have issued guidance on *Wilson*, stating that the agencies would follow the Fourth Circuit's ruling only within states within that circuit.[22] In reviewing permit applications within these states, the guidance provides that the Corps will continue to assert jurisdiction over isolated water bodies where it can establish that there is an actual link between the water body and interstate or foreign commerce, and the use, degradation, or destruction of the isolated waters would have a substantial effect on interstate or foreign commerce.[23]

Most recently, in January 2001, the U.S. Supreme Court held by a 5-4 decision in the case of *Solid Waste Agency of Northern Cook County (SWANCC) v. United States Army Corps of Engineers* that the Corps exceeded its statutory authority by asserting CWA jurisdiction over an abandoned sand and gravel pit containing ponded water.[24] The Corps had relied upon the use of the gravel pit pond by some 121 species of birds to assert jurisdiction under its migratory bird rule under the premise that the presence of such birds had sufficient interstate commerce implications to support the exercise of federal jurisdiction over these state waters. The Court concluded, to the contrary, that the application of the rule in the context of the abandoned quarries would serve to read the term "'navigable waters' out of the statute."[25] As a result, the Court rejected the Corps' assertion of jurisdiction. The *SWANCC* case left open the extent to which jurisdiction over isolated intrastate "other waters" can be asserted based on their interstate commerce considerations other than by virtue of their use by migratory birds. Also, the Court's holding in *SWANCC* does not appear to have disturbed the basic holding under the Commerce Clause in the *Riverside Bayview* case.[26]

In *Rapanos v. United States*,[27] the Court clarified its decision in *SWANCC*, broadening its definition of "navigable waters" and "waters of the United States" to include not only actually navigable waters, but also all relatively permanent bodies of water that are not "ephemeral" or temporary.[28] Permanent waters must flow. This, like *SWANCC*, was a 5-4 plurality decision, where Justice Scalia was joined by three justices and one Justice concurred in the judgment.[29]

A 1989 memorandum of agreement between EPA and the Corps[30] states that the Corps will make most of the jurisdictional determinations under the Section 404 program, but reserves to EPA the right to determine jurisdiction in special cases involving situations where significant issues or technical difficulties are

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[13] 474 U.S. 121 (1985).

[14] 474 U.S. 121 (1985).

[15] *See, e.g.,* United States v. Byrd, 609 F.2d 1204 (7th Cir. 1979).

[16] 961 F.2d 1310 (7th Cir. 1992) *order vacated*, 975 F.2d 1554 (7th Cir. 1992).

[17] 961 F.2d at 1321.

[18] 975 F.2d 1554 (7th Cir. 1992).

[19] Hoffman Homes v. EPA Admi'r, 999 F.2d 256 (7th Cir. 1993).

[20] *Id*.

[21] United States v. Wilson, 133 F.3d 251 (4th Cir. 1997).

[22] *Guidance for Corps and EPA Field Offices Regarding the CWA Section 404 Jurisdiction over Isolated Wetlands in Light of U.S. v. James J. Wilson* (May 29, 1998). *See* 28 ENVTL. L. REP. (ENVTL. L. INST.) 35684.

[23] *Id.*

[24] 121 S. Ct. 675 (2001).

[25] *Id*. at 682.

[26] *Id*. at 682–83; U.S. EPA and USDOA Memorandum, *Guidance for Corps and EPA Field Offices Regarding Clean Water Act Section 404 Jurisdiction* (January 19, 2001) (available at http://www.epa.gov/owow/wetlands/swancc-ogc.pdf).

[27] 547 U.S. 715 (2006).

[28] *Id.* at 734.

[29] *Id.* at 718.

[30] *Memorandum of Agreement Between the Department of Army and the Environmental Protection Agency Concerning the Determination of Geographic Jurisdiction of the Section 404 Program and Application of Exemptions under § 404(f) of the Clean Water Act,* at 1-2 (Jan. 19, 1989). (*See* ENVTL. RPTR., 1 Fed. Laws 41:0551).

anticipated or exist.[31] Jurisdictional determinations by either agency bind the entire federal government.[32] Corps guidance indicates that oral determinations are not valid and that written jurisdictional determinations are valid for 3 years in most cases and 5 years with appropriation information. New information may justify or trigger revised jurisdictional determinations.[33] In addition, EPA has a program to identify and determine the extent and scope of wetlands in advance of permit application where governmental authorities are interested in particular projects.[34] This "advanced identification" process may be useful for transportation projects by identifying both wetlands that may be suitable for development and those that are unsuitable.[35]

b. Wetlands Delineation[36]

The issue of what constitutes a "wetland" has been a persistent source of controversy among governmental agencies, the environmental and regulated communities, farmers, and land developers. The EPA and the Corps regulatory definition of wetlands encompasses those 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.[37] Thus, the regulatory definition of wetlands involves a complex set of environmental or ecological criteria including soils, vegetation, and hydrology. Since wetland hydrology, soils, and vegetation vary from region to region, thereby creating potentially inconsistent delineation of wetlands parameters, the Corps published in 1987 a wetlands delineation manual, which provides that if at least one positive indicator of wetland soils, vegetation, and hydrology is present at a site it will be considered a regulated wetland.[38]

In 1989, the Corps (along with EPA, the FWS, and the Soil Conservation Service) released another wetland delineation manual. This manual provided more specificity with respect to the field indicators necessary to satisfy the wetlands delineation definitions. The 1989 manual was widely criticized by the regulated community because it appeared to increase the acreage subject to federal regulation. In 1991, the Bush Administration proposed revisions to the 1989 manual, but the controversy continued. In response to the controversy, Congress passed in 1992 the Energy and Water Development Appropriations Act, which prohibited the use of either the 1989 manual or the 1991 revisions without formal notice and comment rulemaking. Finally, a national wetlands plan proposed in 1993 by the Clinton Administration called for continued use of the 1987 delineation manual pending completion of a National Academy of Sciences study on wetland classification for regulatory purposes.[39] The 1987 Manual remains in use by both the EPA and the Corps.

Not only is it necessary to determine the geographic extent of a wetland, but it is also important to understand the ecological and other functions a particular wetland serves in order to assess whether the placement of fill is prudent or permissible and determine the nature and extent of mitigation. In 1983, FHWA published a two-volume manual known as the *Wetland Evaluation Technique* (WET), later updated, which outlined in broad-brush fashion a preliminary assessment approach to wetland evaluation based on predictors of wetland functions. Its purpose was to alert highway planners to the probability that a particular wetland performs specific functions and to provide information regarding the likely significance of those functions.[40] Although originally endorsed by the Corps and EPA, the WET approach has since been rejected as an unacceptable methodology for Section 404 purposes because it does not consider wildlife habitat corresponding to Corps concerns, is not regionally sensitive, and tends to bias reviewing agencies by implying a more quantifiable data base than actually exists.[41] Instead, the Corps, FHWA,[42] and other agencies are turning to an approach known as HGM, or the Hydrogeomorphic approach.[43] This approach assesses the wetland's geomorphic setting, water source, and hydrodynamics, and relates these to the likely function and ecological significance of the wetlands in question.[44]

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[31] *Id*. at 1–2.

[32] *Id*. at 5.6.

[33] Corps Regulatory Guidance Letter, RGL 90-06, 57 Fed. Reg. 6591 and 6592 (Feb. 26, 1992).

[34] 40 C.F.R. § 230.80.

[35] BLUMM, *supra* note 7, at 8.

[36] This discussion is taken in substantial part from BLUMM, *supra* note 7, at 8–9.

[37] 40 C.F.R. § 230.3(t) and 33 C.F.R. § 328.3(b).

[38] U.S. ARMY CORPS OF ENGINEERS, CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL (1987).

[39] See BLUMM, *supra* note 7, at 9 for an expanded version of this chronology.

[40] *Id*.

[41] U.S. ARMY CORPS OF ENGINEERS NEW ENGLAND DISTRICT, THE HIGHWAY METHODOLOGY WORKBOOK SUPPLEMENT, NAEEP-360-1-30a, at 8 (1999).

[42] Letter from Anthony R. Kane, FHWA, to Michael L. Davis, Department of the Army, Aug. 6, 1996 (The FHWA continues to support the Army Corps in the development of a regionalized functional wetlands assessment methodology and the HGM approach appears capable of meeting FHWA needs and facilitating merger of the NEPA and Section 404 processes) available at www.fhwa.dot.gov//environment/guidebook/vol1/doc14i.pdf.

[43] *See* MARK M. BRINSON, A HYDROGEOMORPHIC CLASSIFICATION FOR WETLANDS (Army Corps of Engineers Wetlands Research Program Technical Report WRP-DE-4, 1993).

[44] *Id*.

2. Jurisdiction Over Activities

a. Definition of "Discharge"

The CWA addresses water pollution by prohibiting the discharge of pollutants from a "point source." Section 301 of the CWA prohibits all discharges of pollutants from a point source without a permit.[45] Section 404 authorizes the Army Corps of Engineers to issue permits for the "discharge of dredged or fill material" into navigable waters of the United States.[46] What constitutes a discharge is not always clear. Typical "dredged or fill materials" that are regulated as a discharge of a "pollutant" from a "point source,"[47] and thereby require a permit from the Corps, include rock, silt, organic debris, topsoil, and other fill material that are placed into a federal jurisdictional wetland with the use of dump trucks, bulldozers, and other similar mechanized equipment or vehicles.[48] For example, the EPA and Corps have expressed the opinion that plowing snow into wetland areas would constitute a discharge subject to Section 404 regulation if it results in moving gravel, sand, or similar materials into the regulated area.[49] Covering, leveling, grading, and filling formerly vegetated sites and erosion from construction sites are also considered a discharge of fill material.[50]

The basis for regulation and permitting by the Corps of other activities in or affecting wetlands such as draining; placement of pilings; and land clearing involving excavation, ditching, and channelization that destroy or damage wetlands, is less than clear. For example, the Fourth Circuit Court, in *United States v. Wilson*,[51] restricted Corps jurisdiction over dredging when the dredging involves the practice of "side casting"—depositing material dredged in digging a ditch in wetlands to the side. Under the court's analysis, sidecasting is not a violation of the CWA because it does not represent an addition of a pollutant.[52]

Draining, even though it may destroy and impact significant amounts of wetlands, has generally not been considered a discharge of dredged or fill material requiring a Section 404 permit. The Fifth Circuit was directly confronted with the drainage question in *Save Our Community v. United States EPA*, where it ruled that drainage *per se* is not subject to Section 404 permit requirements.[53] Subsequent development activities on the drained wetland may require a Section 404 permit if the area, although drained, continues to satisfy the definition of wetlands because it includes areas that "under normal circumstances support a prevalence of vegetation adapted to live in saturated soil conditions."[54]

Another wetland activity of uncertain jurisdiction is the placement of pilings. A Section 404 permit is generally not required for the placement of pilings in linear projects such as bridges, elevated walkways, and powerline structures, or for piers or wharves.[55] However, when pilings are placed tightly together or closely spaced so that they effectively replace the bottom of the waterway or reduce the reach or impair the flow of jurisdictional waters, the pilings may be considered fill material, thus requiring a Section 404 permit.[56]

Finally, Corps regulation of land-clearing activities involving dredging, such as excavation, ditching, and channelization of wetlands, has been a subject of controversy and uncertainty. In *Avoyelles Sportsmen's League v. Marsh,*[57] in 1982, the Fifth Circuit ruled that the redeposit of soil taken from wetlands during mechanized land-clearing activities can be regulated under Section 404 as a discharge of fill material. In 1993, in an effort to settle a suit brought by the North Carolina Wildlife Federation,[58] the Corps and EPA issued regulations often referred to as the "Tulloch Rule." These regulations redefined "discharge of dredged material" to mean

> any addition of dredged material into, including any redeposit of dredged material within, the waters of the United States. The term includes, but is not limited to the following: (i) The addition of dredged material to a specific discharge site located in the waters of the United States, (ii) the runoff or overflow from a contained land or water disposal area and (iii) any addition, including any redeposit, of dredged material, including excavated material into waters of the United States, which is incidental to any activity, including mechanized land-clearing, ditching, channelization, or other excavation.[59]

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[45] 33 U.S.C. § 1311.

[46] 33 U.S.C. § 1344(a).

[47] "Point source" is defined in 33 U.S.C. § 1362(14) 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, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural stormwater discharges and return flows from irrigated agriculture.

[48] WILLIAM L. WANT, LAND OF WETLANDS REGULATION, (1989), at § 4:33, citing United States v. Banks, 873 F. Supp. 650, 657 (S.D. Fla. 1995).

[49] 66 Fed. Reg. 4570 (Jan. 17, 2001).

[50] WANT, *supra* note 48, at § 4:33, citing United States v. Banks at 657 and Hudson River Fisherman's Ass'n v. Arcuri, 862 F. Supp. 73, 75–76 (S.D.N.Y. 1994).

[51] United States v. Wilson, 133 F.3d 251 (4th Cir. 1997).

[52] *Id*. at 260.

[53] Save Our Comty. v. United States Envtl. Prot. Agency, 971 F.2d 1155, 1167 (5th Cir. 1992).

[54] 40 C.F.R. § 230.3(t) and 33 C.F.R. § 328.3(b).

[55] 33 C.F.R. § 323.3(c)(2).

[56] 33 C.F.R. § 323.3(c)(1).

[57] Avoyelles Sportsmen's League v. Marsh, 715 F.2d 897 (5th Cir. 1983).

[58] N.C. Wildlife Fed'n v. Tulloch, Civ. No. C90-713-CIV-5-BO (E.D.N.C. 1992).

[59] 33 C.F.R. § 323.2(d)(1)(i)-(iii) (Aug 25, 1993).

However, in 1997 the "Tulloch Rule" was challenged in litigation brought by the American Mining Congress, American Road and Transportation Builders Association, National Aggregates Association, and the American Forest and Paper Association. In their lawsuit, the plaintiffs challenged the Corps' and EPA's 1993 revision to the definition of "discharge of dredged material." In response, the U.S. District Court of the District of Columbia handed down a decision in *American Mining Congress et al. v. United States Army Corps of Engineers*[60] that held that the rule regulating incidental fallback during dredging and excavation of wetlands was outside the agencies' statutory authority. The government then filed a notice of appeal with the U.S. District Court of the District of Columbia as well as a motion for stay of the District Court's judgment. While this appeal was pending, the Corps and EPA in 1997 promulgated a joint interim guidance letter instructing Corps and EPA field personnel to "not undertake any administrative or judicial enforcement actions for Clean Water Act Section 404 violations where the only grounds for jurisdiction over the activities in question are the types of 'incidental fallback' discharges of dredged material defined by the Court…."[61] In addition, "if the Corps has issued a permit where the only basis for jurisdiction was 'incidental fallback' and the permittee is not complying with the permit terms or conditions, the Corps shall not undertake any enforcement action for such non-compliance during this interim period."[62]

In 1998, the U.S. Court of Appeals for the District of Columbia, in *National Mining Association v. U.S. Army Corps of Engineers*,[63] struck down the Tulloch Rule, thereby prohibiting the Corps from regulating activities that result in the incidental fallback of dredged material into wetlands. The court later denied a Corps petition for rehearing *en banc*.

In response to the D.C. Circuit's ruling in *National Mining Congress*, the Corps and EPA promulgated and subsequently amended a final rule[64] revising the regulatory definition of "discharge of dredged material." The final rule modifies the former Tulloch Rule as follows: the rule 1) now applies only to "redeposit of dredged materials" rather than "*any* redeposit;" 2) expressly excludes "incidental fallback" from the definition of "discharge of dredged materials;" 3) defines "incidental fallback" as "the redeposit of small volumes of dredged material that is incidental to excavation activities in waters of the United States when such material falls back to substantially the same place as the initial removal…;" and 4) establishes a rebuttable presumption that the use of mechanized earth moving equipment to conduct land clearing, ditching, channelization, or other earth moving activity in waters of the United States will result in a discharge subject to regulation.[65] Thus, the rule recognizes that some redeposits of dredged materials may constitute a discharge requiring a permit. Under the new rule, determinations whether a redeposit is subject to CWA jurisdiction will be made on a case-by-case basis.

b. Exempt Activities: Discharges Not Requiring Permits

Section 404(f) of the CWA exempts six categories of minor discharges into wetlands associated with small-scale, relatively routine activities for the following:(1) normal farming, ranching, and silvaculture (forestry or timber) activities, such as plowing, seeding, minor draining, and harvesting; 2) constructing or maintaining farm or stock ponds, irrigation ditches, or maintaining (but not constructing) drainage ditches; 3) constructing temporary sedimentation basins on construction sites that do not include the placement of fill material into waters of the United States; 4) constructing or maintaining farm, forest, or mining roads; 5) maintenance, including emergency reconstruction of recently damaged parts, of currently serviceable structures such as dikes, dams, levees, groins, riprap, breakwaters, causeways, bridge abutments or approaches, and transportation structures; and 6) any activity with respect to which a state has an approved program under Section 208(b)(4) regarding nonpoint sources of pollution and water quality management.[66] None of these exemptions is available if the discharge would change the use of the waters, impair flow or circulation, or reduce their reach, and, thus, actions with greater effects such as significant discernible alteration to water flow or circulation will require a permit.[67] The exemptions with greatest applicability to highway and other transportation projects are the maintenance of drainage ditches, maintenance of currently serviceable structures, and the construction of temporary sedimentation basins on construction sites. Federal construction projects specifically authorized by Congress are also exempt from the Section 404 permitting program. This exemption, authorized by Section 404(r), has been rarely invoked, and its legislature history indicates that the exemption is intended only for projects entirely planned, financed, and constructed by a federal agency rather than, for example, state highway projects built with federal dollars.[68]

[60] Am. Mining Congress et al. v. United States Army Corps of Eng'rs, 951 F. Supp. 267 (1997).

[61] U.S. Army Corps of Engineers/Environmental Protection Agency Guidance Regarding Regulation of Certain Activities in Light of American Mining Congress et al. v. U.S. Army Corps of Engineers 2 (Apr. 11, 1997).

[62] *Id.* at 2.

[63] 145 F.3d 1399 (D.C. Cir. 1998).

[64] 64 Fed. Reg. 25120 (May 10, 1999); 66 Fed. Reg. 4550 (Jan. 17, 2001).

[65] 33 C.F.R. § 323.2(d); 40 C.F.R. § 232.2 (July 1, 2001).

[66] 33 U.S.C. § 1344(f), 33 C.F.R. § 322.4.

[67] 33 U.S.C. § 1344(f)(2); 33 C.F.R. § 323.4(c).

[68] 33 U.S.C. § 1344(r); 33 C.F.R. § 323.4(d); *see* BLUMM, *supra* note 7, at 10 for discussion of legislative history.

3. General Permits

The 1977 CWA amendments authorized the Corps to issue general permits on a state, regional, or nationwide basis for any category of activities where the activities are similar in nature and will have only minimal individual and cumulative environmental impacts.[69] There are three types of general permits: nationwide, regional, and programmatic. These are discussed below.

a. Nationwide Permits

The nationwide permit (NWP) program that came into effect on January 21, 1992, expired on January 21, 1997. On December 13, 1996, in anticipation of the 1997 expiration date, the Corps published a Final Notice of Issuance, Reissuance, and Modification of Nationwide Permits,[70] which reissued all previously existing NWPs and conditions, adopted two new NWPs, and modified others. There are now 43 adopted NWPs in effect, authorizing discharges for a whole range of wetland activities. These permits generally expire 5 years after issuance.

The NWPs with the greatest potential applicability to transportation projects include:

- NWP 3, authorizing maintenance, repair, rehabilitation, or replacement of previously authorized currently serviceable fills;
- NWP 6, authorizing survey activity including soil survey and sampling;
- NWP 7, authorizing activities related to outfall structures where the effluent from the outfall is permitted under the NPDES program;
- NWP 12, authorizing backfill or bedding for utility lines; NWP 13, authorizing bank stabilization activities less than 500 ft in length to prevent erosion; NWP 14, authorizing minor road crossing fills that involve less than 1/2 acre of fill in nontidal waters and less than 1/3 acre of filled tidal waters or associated wetlands and less than 200 linear ft of fill for the roadway within wetlands;[71] NWP 15 authorizing discharges incidental to the construction of bridges across navigable waters where a Coast Guard bridge permit authorizes the discharge; NWP 18, authorizing minor discharges of less than 25 cubic yds of fill below the ordinary high water or high tide line where the discharge will cause the loss of less than one-tenth of an acre of wetlands; NWP 23, authorizing activities by other federal agencies that are categorically excluded from the EIS requirement of NEPA where the Corps concurs in the exclusion; NWP 25, authorizing discharges of material such as concrete, sand, rock, etc., into tightly sealed forms or cells to be used for standard pile-supported structures such as bridge and walkway footings; NWP 27, authorizing wetland and riparian restoration and creation controlled by federal agencies; NPW 31, authorizing the discharge of dredged or fill material for the maintenance of existing debris basins, retention or detention basins, channels, and other flood control facilities; NWP 33, authorizing temporary dewatering from construction sites employing best-management practices; NWP 39, authorizing discharges resulting in the loss of up to 1/2 acre of nontidal waters or 300 linear ft of stream bed for institutional development, including government office and public works facilities; NWP 41 authorizing discharges into nontidal waters associated with reshaping, but not moving or increasing the drainage capacity of drainage ditches; and NWP 43 authorizing discharges for the construction and maintenance of stormwater facilities.[72]

Many of these nationwide permits are subject to predischarge notification requirements, which allows the Corps and other agencies time to review the proposed activity. Activities authorized by a nationwide permit must comply with a set of general conditions, as well as the conditions specific to the particular permit in question. Corps District Engineers may add region-specific conditions to a permit.[73]

NWP 26, which formerly allowed up to 10 acres of wetland filling above the headwaters of streams and in isolated waters, is no longer in effect. It was reissued along with other NWPs in 1997, but with a reduction to 3 acres in the amount of authorized fill, and for an interim period of 2 years. This permit continued to provoke controversy, and in 1998, the Corps proposed to phase out NWP 26 entirely and replace it with several new activity-specific permits.[74] This took place in 2000, with the adoption of five new permits and the modification of several others.[75]

b. Regional Permits

Regional permits are another type of general permit issued by the Corps division and district engineers. As with the NWP program, many regional permits are also subject to predischarge notification requirements and contain specified conditions. In reissuing the nationwide permits in 1996, the Corps announced its intention to regionalize the nationwide permit program by encouraging the application of region-specific conditions, including "the revocation of certain NWPs in aquatic environments of particularly high value, and the addition of regional limitations to specifically address needs for protection of specific environmental

[69] 33 U.S.C. § 1344(e).

[70] 61 Fed. Reg. 65874 (Dec. 13, 1996); revised and additional permits announced at 65 Fed. Reg. 12818 (Mar. 9, 2000).

[71] The Corps proposed further revisions to this NWP in June 2001. *See Corps Considers Relaxation of Permits; Stream Bed Activities Prohibitions Targeted,* 32 B.N.A. ENV'T REP. 1140 (2001).

[72] 61 Fed. Reg. 65913 (Dec. 13, 1996); 65 Fed. Reg. 12818 (Mar. 9, 2000).

[73] *See* 61 Fed. Reg. 65876 (Dec. 13, 1996) (Corps has directed its districts to add region-specific conditions to all NWPs).

[74] 63 Fed. Reg. 36040 (July 1, 1998); 63 Fed. Reg. 55095 (Oct. 14, 1998).

[75] 65 Fed. Reg. 12818 (Mar. 9, 2000).

assets."[76] Transportation agencies should become familiar with the general permits available in their region, including any limitations on the use of NWPs, and the applicability of any programmatic permits.

c. Programmatic General Permits

Programmatic general permits are a type of regional permit that is intended to avoid unnecessary duplication of regulatory programs at the federal, state, or local levels.[77] For example, programmatic general permits may authorize certain amounts of fill without the need for an individual Section 404 permit, subject to conditions including the approval of the local wetlands agency under applicable state law.[78] The presumption is that for that category of fill, the state regulatory process is sufficient to ensure that the federal interests under Section 404 are protected.

4. Individual Permits[79]

When a discharge of dredged or fill material into a wetland does not qualify for any of the general permits or for an exemption, an individual permit is required. Individual permits are required before a discharge into wetlands occurs; however, "after-the-fact" discharges may also be eligible for an individual permit.[80] Project proponents seeking an individual permit must submit an application to the regional Corps district engineer, who then issues a public notice and determines whether to hold a public hearing on the application.

The review process entails comment by other agencies. For example, the Corps will consult with the EPA, FWS, and the National Marine Fisheries Service (NMFS) during review of the application to assess wildlife impact issues potentially caused by the proposed filling activity.[81] Section 404 permit applications must be reviewed pursuant to a variety of federal laws, including the Fish and Wildlife Coordination Act, Endangered Species Act, and the Marine Mammal Protection Act. Review is also required under NEPA, the NHPA, Wild and Scenic Rivers Act, Coastal Zone Management Act (CZMA), and the CWA's state water quality certification process.[82] Although the Section 404 permitting process requires interagency consultation, the Corps need not defer to the views of other agencies except in the case of state water quality certifications and coastal zone consistency findings. In order to help expedite permit application reviews, the Corps has entered into memoranda of agreement (MOAs) pursuant to CWA Section 404(q) with EPA, FWS, and the NMFS.[83] The MOAs limit the ability of these federal reviewing agencies to administratively appeal objectionable permits to the Assistant Secretary Of the Army.[84] Under the MOAs, such appeals can only be invoked where the reviewing agency believes that the proposed discharge would have a substantial and unacceptable impact on aquatic resources of national importance.[85]

a. Permit Standards

In reviewing Section 404 individual permit applications, the Corps is required to consider various policies and standards. These policies and standards include Section 404(b)(1) guidelines promulgated by the EPA and public interest review criteria as defined in 33 C.F.R § 320.4.

i. Section 404(b)(1) Guidelines.—Section 404(b)(1) of the CWA requires all Section 404 permits to be evaluated in accordance with criteria promulgated by EPA.[86] No Section 404 individual permit can be issued without complying with the guidelines. Section 404(b)(1) guidelines require that no discharge have an "unacceptable adverse impact" on wetlands or cause a significant degradation to the waters of the United States. In general, the guidelines provide that an individual permit should not be issued if: 1) practicable, environmentally superior alternatives are available, 2) the discharge would result in a violation of various environmental laws, 3) the discharge would result in significant degradation to the waters of the United States, or 4) appropriate and practicable steps have not been taken to minimize potential adverse impacts of the proposed discharge.[87]

The guidelines prohibit the filling of wetlands where there exists a practicable alternative having a less adverse impact. The guidelines define a practicable alternative as one "available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes." A practicable alternative may include consideration of other properties not owned by the applicant if the site could reasonably be obtained, used, expanded, or managed to fulfill the basic purpose of the proposed activity.[88]

For activities associated with a "special aquatic site" that are not "water dependent," the guidelines establish a rebuttable presumption that practicable alternatives

[76] 61 Fed. Reg. 65875 (December 13, 1996).

[77] BLUMM, *supra* note 7, at 11.

[78] *See, e.g.,* Programmatic General Permit, Commonwealth of Massachusetts, No. 199901470, effective Jan. 11, 2000, establishing programmatic approval of many projects that receive local approval under the state Wetlands Protection Act, MASS. GEN. LAWS ANN. c. 131, § 40 (West 1991, Supp. 2001).

[79] This subsection is based in substantial part on BLUMM, *supra* note 7, at 11.

[80] 33 C.F.R. § 326.3(e).

[81] 33 C.F.R. § 320.4(c).

[82] 33 C.F.R. § 320.3.

[83] 33 U.S.C. § 1344(q).

[84] Clean Water Act Section 404(q) Memorandum of Agreement Between the Environmental Protection Agency and the Department of the Army (Aug. 11, 1992); *See* BLUMM, *supra* note 7, at 11, n.286.

[85] *Id.* § IV.1.

[86] 33 U.S.C. § 1344(b)(1).

[87] 40 C.F.R. § 230.10(a)-(d).

[88] 40 C.F.R. § 230.10(a).

exist.[89] An applicant must show that there are no upland sites that could accommodate a project to rebut this presumption.[90] The guidelines also provide a complete prohibition of certain types of discharges, such as those discharges that would cause or contribute to a violation of applicable State water quality standards.[91] In addition, the guidelines also completely prohibit permit issuance for any discharge that would have significant adverse effects on human health or welfare, recreation, aesthetics, aquatic ecosystems, and wildlife dependent on aquatic ecosystems.[92]

The Corps has broad discretion under the guidelines in determining whether the practicable alternatives exist, and the courts will uphold findings of no practicable alternatives if supported by the administrative record.[93] Recent cases offer guidance on the extent to which the Corps must consider alternatives in the context of transportation projects. For example, in *Sierra Club v. Slater*,[94] the Sierra Club and other plaintiffs brought suit seeking to prevent the construction of an urban corridor development project known as the Buckeye Basin Greenbelt Project, which was an approximately 3.5-mi-long four-lane highway connecting downtown Toledo, Ohio, with its northern suburbs. One of the plaintiffs' claims in this case was that the Corps failed to adequately consider alternatives to the project and that the Corps could not issue the required Section 404 permit because the Ohio DOT had failed to show that no practicable alternatives existed. The court rejected this claim, finding that, although the plaintiffs may have disagreed with the substantive determination that no practicable alternatives exist, several alternatives were proposed, weighed, and rejected on the ground that they were impracticable given the project's overall purpose. Under the deferential standard of review applicable to the Corps' administrative decisions pursuant to Section 404, the court found that the Corps' decision was not arbitrary or capricious.[95]

The Corps also has broad discretion in permitting discharges only if "appropriate and practicable" mitigation measures are implemented to minimize impacts on the aquatic ecosystem.[96] Recent cases have held that it is not necessary for applicants to have a final, detailed mitigation plan prior to approval of a 404 permit and that the Corps may condition a permit on future implementation of a mitigation plan that complies with Section 404 regulations.[97]

To avoid significant degradation to wetlands as well as minimize impacts, Section 404(b)(1) guidelines require mitigation. In order to come to an agreement on mitigation, EPA and the Corps signed an MOA in 1990 that largely adopted EPA's position on mitigation, which is to advance no overall net loss of wetlands values and functions.[98]

The MOA established a new policy referred to as mitigation "sequencing." Under this concept, the Corps and EPA will prefer practicable alternatives that first avoid losses or adverse impacts to wetlands. If wetland losses or impacts are unavoidable, then these impacts must be minimized through project modifications. If project modifications still result in wetland losses or other adverse impacts, then "compensatory mitigation" such as onsite or offsite restoration or creation of wetlands is required.

ii. The Public Interest Review Criteria.—Corps regulations require all Section 404 individual permits to comply with the public interest review criteria, which attempt to balance "[t]he benefits which reasonably may be expected to accrue from the proposal…against its reasonably foreseeable detriments,"[99] including both probable and cumulative impacts of the proposed filling activities on the public interest. The Corps regulations require that the public interest review consider all relevant factors in the balancing of benefits and reasonably foreseeable detriments.[100] Among the relevant factors identified in the Corps regulations are: conservation, aesthetics, economic, land use, navigation, historic properties, floodplains, recreation, and many other factors ranging from energy needs and food and fiber production to considerations of property ownerships.[101] In addition, the Corps must consider certain general criteria in its public interest review, such as the public and private need for the project, alternative locations, and means of accomplishing the objective.[102]

The Corps has a high level of discretion in the public interest review process and the courts generally give substantial deference to the Corps' public interest review decisions. The courts will uphold findings that proposed discharges are in the public interest provided

[89] Section 230.10(a)(3).

[90] *Id*.

[91] *Id.* § 230.10(b).

[92] *Id.* § 230.10(c).

[93] *See, e.g.,* Town of Norfolk v. United States Army Corps of Engr's, 968 F.2d 1438, 1448 (1st Cir. 1992).

[94] *See, e.g.,* Sierra Club v. Slater, 120 F.3d 623 (6th Cir. 1997).

[95] *Id.* at 636.

[96] 40 C.F.R. § 230.10(d).

[97] *See* Nat'l Wildlife Fed'n v. Whistler, 27 F.3d 1341, 1346 (8th Cir. 1994); Holy Cross Wilderness Fund v. Madigan, 960 F.2d 1515, 1528 (10th Cir. 1992).

[98] Memorandum of Agreement Concerning the Determination of Mitigation Under the Clean Water Act Section 404(b)(1) Guidelines, 55 Fed. Reg. 9210-11 (Feb. 6, 1990) (404(b)(1) Mitigation MOA).

[99] 33 C.F.R. § 320.4(a).

[100] *Id.*

[101] *Id.*

[102] 33 C.F.R. § 320.4(a)(2).

the courts can find reasonable support for the findings in the administrative record.[103]

b. EPA Authority to Veto Section 404 Individual Permits

Section 404(c) authorizes EPA to veto a Corps permit decision when the EPA Administrator determines after notice and opportunity for public hearings that the discharge of materials into an area will have an "unacceptable adverse effect on municipal water supplies, shellfish beds, and fishery areas (including spawning and breeding areas), wildlife or recreation areas."[104] EPA may issue a veto based on an "unacceptable adverse effect" if the impact on an aquatic or wetland ecosystem is likely to result in "significant degradation of municipal water supplies (including surface or ground water) or significant loss of or damage to fisheries, shellfishing, or wildlife habitat or recreation areas."[105] The EPA must consult with the Corps before making a final veto decision and the Director of the EPA must make written findings regarding the reasons for any veto determination."[106] Recent court decisions have held that EPA's authority to veto a Corps permit decision is discretionary and that the EPA Administrator is authorized, rather than mandated, to overrule the Corps.[107]

The Regional Administrator begins the first step in the Section 404(c) veto process. After the Corps publishes its notice of intent to issue a permit, the Regional Administrator may notify the Corps and the applicant that it is possible he or she will find an unacceptable adverse effect. If within 15 days the applicant fails to satisfy the Regional Administrator that no such effect will occur, the Regional Administrator must publish his or her proposed determination to veto the grant of a permit. A period for public comment and an optional public hearing follows, after which the Regional Administrator either withdraws the proposed determination or submits a recommended determination to the national EPA Administrator, whose decision is to affirm, modify, or rescind the Regional Administrator's recommendation in the final determination of EPA for purposes of judicial review.[108] The EPA Administrator can delegate his or her final veto determination to the EPA Assistant Administrator for Water. Section 404(c) veto regulations also require that the EPA consult relevant sections of the Section 404(b)(1) guidelines when reviewing permit decisions and examining or assessing practicable alternatives to the proposed discharge of fill material.

Although EPA uses Section 404(c) vetoes to enforce its interpretation of the substantive requirements in the Section 404(b) guidelines, there have been relatively few Section 404(c) vetoes. In what may be the most well known veto case, the Second Circuit in *Bersani v. Robichaud*[109] upheld the EPA's veto of a permit for a mall project in Attleboro, Massachusetts. The EPA had interpreted the Section 404(b)(1) guidelines as requiring the developer to determine available, practicable alternatives in light of the sites that were available at the time the developer entered the real estate market. The court upheld this interpretation and confirmed the validity of EPA's use of the Section 404(c) veto to enforce the Section 404(b) guidelines.[110]

The Fourth Circuit, in the *James City County* case,[111] also addressed the EPA's veto authority under Section 404(c). The court concluded that an EPA veto based solely on the agency's conclusion that the project would result in environmental harms was proper. The County had insisted that EPA could not veto its water supply project unless the agency determined that there were practical alternatives available to the County for addressing local water supply needs. The Court concluded that the agency need not consider the County's need for water in making its veto decision. The court noted that "the Corps conducts a 'public interest review' which, inter alia, takes into account the public and private need for the project, whether the same result could be achieved through other means, and the 'extent and permanence' of the benefits and harms the proposed project is likely to produce."[112] The court further recognized that the EPA has broad authority to veto to protect the environment and is simply directed to veto when it finds that the discharge "will have an unacceptable adverse effect on municipal water supplies, shellfish beds and fishery areas (including spawning and breeding areas), wildlife, or recreational areas."[113] The court went on to address the sufficiency of the evidence that environmental effects would be unacceptable, and upheld the agency's decision.[114] EPA's Section 404(c) veto authority makes its support a critical factor in whether a transportation project with wetlands impacts can be completed as planned, and warrants consultation with EPA early in the planning process.

5. Water Quality Certification Under Section 401 of the Federal CWA

A federal permit (Section 404 or National Pollution Discharge Elimination System (NPDES)) involving discharge from a point source into waters requires a

[103] *See, e.g.,* Town of Norfolk v. United States Army Corps of Eng'rs, 968 F.2d 1438, 1448 (1st Cir. 1992).

[104] 33 U.S.C. § 1344(c).

[105] 40 C.F.R. § 231.2(e).

[106] 33 U.S.C. § 1344(c).

[107] Preserve Endangered Areas of Cobb's History, Inc. et al. v. United States Army Corps of Eng'rs et al., 87 F.3d 1242, 1249 (11th Cir. 1996).

[108] 40 C.F.R. § 231.3(a).

[109] 850 F.2d 36 (2d Cir. 1988), *cert. denied,* 489 U.S. 1089 (1989).

[110] 850 F.2d at 46.

[111] James City County, Va. v. Envtl. Prot. Agency et al., 12 F.3d 1330 (4th Cir. 1993), *cert. denied,* 513 U.S. 823 (1994).

[112] 12 F.3d at 1336.

[113] *Id.*

[114] 12 F.3d. at 1336–38.

water quality certification under Section 401 of the CWA.[115] Certification is based upon compliance of the proposed activity with applicable water quality standards set by the states. "A water quality standard defines the water quality goals of a water body, or portion thereof, by designating the use or uses to be made of the water and by setting criteria necessary to protect the uses."[116] States are responsible for developing water quality standards and criteria in the form of constituent concentrations, levels, or narrative statements representing the quality of water needed to support a particular use.[117] These standards and criteria are subject to approval by the EPA.[118] A state with approved water quality standards can effectively control whether a Section 404 or NPDES federal permit issues through its Section 401 certification authority. Nationwide general permits are also subject to the certification requirements, although the certification can be one time, as to the general permit itself, rather than repeatedly with respect to each individual activity that qualifies under the permit.[119]

Judicial review on substantive grounds of a state's denial of water quality certification is exclusively in the state courts, at least to the extent that the state standards are more stringent than the minimum requirements imposed by federal law.[120]

6. Mitigation and Mitigation Banking

a. Mitigation Regulatory Requirements

The authority of the Corps to issue Section 404 permits is subject to the conditions established in the Section 404(b)(1) Guidelines, including requirements for mitigation of impacts to wetlands.[121] While damage to wetlands must be minimized to the maximum extent practicable, if damage is unavoidable then compensatory mitigation must be provided. The Corps and the EPA have entered into an MOA[122] that provides guidance on the role of mitigation in the Section 404 permitting process.

Pursuant to the MOA, after the Corps has determined that a permitee has avoided potential impacts to wetlands to the maximum extent possible, then a permitee is next required to minimize any unavoidable impacts, and finally a permitee is required to compensate for lost "aquatic resource values."[123] Strict compliance with this "sequencing" approach is not required if a regulated activity is necessary to avoid environmental harm or would result in insignificant impact to the environment. The MOA establishes minimum standards for compensatory mitigation that require functional replacement, based on an assessment of functional values, rather than acreage replacement. According to the provisions of the MOA: "mitigation should provide, at a minimum, one for one functional replacement (i.e., no net loss of values) with an adequate margin of safety to reflect the expected degree of success associated with the mitigation plan."[124]

Mitigation may be accomplished through enhancing, restoring, or creating replacement wetlands either onsite or offsite. Mitigation by wetland *enhancement* improves existing wetlands. Mitigation by wetland *restoration* requires the creation of a wetland where one previously existed. Mitigation by wetland *creation* requires the creation of a wetland where one did not previously exist. The MOA establishes a preference for onsite rather than offsite mitigation, and for wetlands restoration over wetlands creation.[125]

The Corps regulations also provide for mitigation[126] and authorize the Corps to impose permit conditions to mitigate significant losses.[127] Throughout the permit application review process, the Corps considers ways to avoid, minimize, rectify, reduce, and compensate for resource losses.[128] The Corps relies on the FWS in reviewing mitigation proposals and establishing permit conditions. Impacts that cannot be avoided must be reduced to the extent practicable through project modifications.[129] If project modifications are not sufficient to avoid impacts, then compensation for losses is required.

b. Mitigation Banking

Recognizing the uncertainty in the outcome of wetland creation, the Corps and the EPA, in the MOA, accepted the concept of mitigation banking and mitigation monitoring as permit conditions.[130] Federal guidance on the establishment and use of mitigation banks was subsequently issued in 1995.[131] The overall goal of using a mitigation bank is to provide flexibility in meeting mitigation requirements, while compensating for resource losses in a way that contributes to the functioning of the watershed within which a bank is located.[132]

Mitigation banking creates or restores wetlands in advance of any permitted dredge or fill activity. The

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[115] 33 U.S.C. § 1341. *See generally* WANT, *supra* note 48, at § 6.12[2][a].

[116] 40 C.F.R. § 131.2.

[117] 33 U.S.C. § 1313; 40 C.F.R. § 131.3(b); § 131.4(a).

[118] 40 C.F.R. § 131.5(a).

[119] WANT, *supra* note 48, at § 6:54 and § 6:56.

[120] Dubois v. United States Dep't of Agriculture, 102 F.3d 1273 (1st Cir., 1996); WANT, *supra* note 48, at § 6:55.

[121] 40 C.F.R. § 230.10(d).

[122] 404(b)(1) Mitigation MOA. (*See* note 98, *supra*).

[123] *Id*. at pt. II.C.

[124] MOA at pt. III.B.

[125] MOA at pt. C.3.

[126] 33 C.F.R. § 320.4(r).

[127] 33 C.F.R. § 325.4(a)(3).

[128] 33 C.F.R. § 320.4(r).

[129] *Id*.

[130] MOA at pt. II.C.3.

[131] 60 Fed. Reg. 58,605 (Nov. 28, 1995) (hereinafter cited as Mitigation Bank Guidance).

[132] *Id*. at § II.B.1.

newly established functions of these wetlands are then quantified as "mitigation credits" that are available for use by the bank sponsor or others to compensate for adverse impacts or "debits."[133] Even with the establishment or purchase of mitigation credits from a mitigation bank, applicants must first avoid and minimize wetland impacts.

"In-lieu fee" (ILF) mitigation is an alternative form of offsite mitigation that involves the payment of fees to a natural resource management entity outside of the framework of a mitigation bank. This approach has been the subject of criticism on the ground that the payments are not necessarily directly linked to the restoration of wetlands. Federal guidance was issued in 2000 to outline circumstances in which ILF mitigation is appropriate. The guidance clarifies that funds collected should be used to replace wetlands functions and values on a one-for-one acreage basis, and not for research or public education.[134] FHWA highway funds may be used to mitigate wetlands impacts of federally-funded highway projects with in-lieu payments, provided that certain conditions are met.[135]

i. Establishment of Mitigation Banks and Mitigation Banking Instruments.—The mitigation bank must be approved by the Mitigation Bank Review Team (MBRT). The primary role of the MBRT is to facilitate establishment of mitigation banks through the creation of mitigation banking instruments. Mitigation banking instruments are prepared by the bank sponsor and describe the physical, legal, and administrative characteristics of the bank. All mitigation banks are required to have a mitigation banking instrument as documentation of agency concurrence on the objectives and administration of the bank.[136] In addition to representatives from the Corps and the EPA, other agencies that may be represented on the MBRT include the FWS, NMFS, Natural Resources Conservation Service, and state and local regulatory agencies. In addition, the public is entitled to notice and comment on mitigation bank proposals. The MBRT reviews the banking instrument and final plans for the restoration, creation, enhancement, or preservation of wetlands.[137] Some 230 wetland mitigation banks in at least 35 states have been established with some form of bank instrument as of January 2000, and if bank sites within state programs are included, the number rises close to 400.[138] A number of states have mitigation banks sponsored by highway or transportation departments.[139]

ii. Use of Mitigation Banks.—The service area of a mitigation bank, designated in the banking instrument, is delineated based on consideration of hydrological and biological criteria. Use of a mitigation bank to compensate for impacts beyond a designated service area may be authorized only on a case-by-case basis.[140] For Section 404 permits, mitigation banks may be used to satisfy requirements for mitigation if either onsite mitigation is not practicable or the use of the mitigation bank is environmentally preferable to onsite compensation.[141] Factors to consider in determining whether onsite mitigation is practicable or preferable include: the likelihood of successfully establishing a desired habitat type, the compatibility of the mitigation project with adjacent land uses, and the practicability of long-term monitoring and maintenance, as well as the relative cost of mitigation alternatives. According to the Mitigation Bank Guidance, mitigation banks may be preferable to onsite mitigation in situations in which there are numerous, minor impacts to resources, such as with linear projects or impacts authorized under nationwide permits.[142] These are often the types of impacts associated with transportation projects.

In order to achieve the functional replacement of impacted wetlands and other aquatic resources, in-kind compensation is generally required. Compensation through the enhancement, restoration, or creation of wetlands with functional values that are different than those of the impacted wetlands, or "out-of-kind" compensation, may be approved only if it is determined that such out-of-kind compensation is environmentally preferable to in-kind mitigation. Decisions on out-of-kind mitigation are made on a case-by-case basis during the permitting process.[143]

iii. Technical Feasibility of Mitigation Banks.—One of the major technical concerns with the creation of mitigation banks is the need to plan and design banks that are self-sustaining over time. In general, banks that require complex hydraulic engineering are more costly to develop, operate, and maintain and have a greater risk of failure. In selecting techniques for establishing wetlands, the restoration of historic or substantially degraded wetlands or other aquatic

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[133] *Id*. at § II.B.

[134] Federal Guidance on the Use of In-Lieu Fee Arrangements for Compensatory Mitigation under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. 65 Fed. Reg. 66913 (Nov. 7, 2000). *See* PAUL SCODARI & LEONARD SHABMAN, INSTITUTE FOR WATER RESOURCES REVIEW AND ANALYSIS OF IN-LIEU FEE MITIGATION IN THE CWA SECTION 404 PERMIT PROGRAM (2000).

[135] 65 Fed. Reg. 82921 (Dec. 29, 2000); 23 C.F.R. § 777.9(c).

[136] Mitigation Bank Guidance at § II.C.

[137] *Id*.

[138] INSTITUTE FOR WATER RESOURCES, U.S. ARMY CORPS OF ENGINEERS EXISTING WETLAND MITIGATION BANK INVENTORY (2000), available at http://www.iwr.usace.army.mil/iwr/regulatory/banks.pdf. (IWR Inventory).

[139] *Id*. States identified as having such programs include Pennsylvania, Virginia, North Carolina, South Carolina, Alabama, Mississippi, Georgia, Florida, Arkansas, Louisiana, Texas, Wyoming, South Dakota, North Dakota, Washington, Idaho, Colorado, Nevada, and California.

[140] Mitigation Bank Guidance at § II.D.3.

[141] *Id*. at § II.D.2.

[142] *Id*. at § II.D.4.

[143] *Id*. at § II.D.5.

resources is considered to be the technique that has proven most successful.[144] Among the problems associated with wetlands mitigation projects are: difficulty in establishing correct hydrological conditions, soils that are not appropriate for wetlands vegetation, wetland edges and shorelines that are too steep or regular, and projects that are not constructed as permitted. A study undertaken by the Army Corps Institute for Water Resources notes that success is particularly difficult at locations where an artificial hydrology mechanism is required in order to maintain wetland functions.[145]

iv. Evaluation of Past Wetland Mitigation Projects.— Recent studies have reported the results of evaluation of the ongoing functions of various wetland mitigation projects.[146] These studies report varying success in mitigation projects and confirm the importance of a dependable water source, as well as suitable hydric soils, to the creation of functioning wetland plant communities.

Of those reports reviewed, the study of mitigation projects with the highest degree of success in avoiding wetlands losses reported an average replacement ratio of 1.26 acres of wetlands created for every acre of wetland lost.[147] In its report, the Ohio EPA summarized the results of an evaluation of 10 wetland mitigation projects in Ohio. The projects were classified as restoration or creation projects based on the following criteria: if hydric soils were present at the site, it was classified as a *restoration* project; if the project site had nonhydric soils and hydric inclusions, it was classified as a *restoration/creation* project; and, if the site had only nonhydric soils, it was classified as a *creation* project. Of the 10 projects, 6 were classified as creation/restoration projects; 2 were classified as restoration projects, and the remaining 2 projects were classified as creation projects.[148]

Despite the reported success in creating a net gain in acreage of wetlands, the function of these mitigation wetlands in Ohio, at least in the short term, was not equal to that of naturally functioning wetlands. The results of the evaluation methodology showed that the mitigation wetlands were not functionally equivalent to the reference wetlands, used for comparison purposes, in terms of flood water retention, water quality improvement, and habitat provision.[149] The construction dates for the mitigation projects ranged from 1991 to 1994. Thus, as the Ohio EPA Final Report indicates, the mitigation wetlands may improve functionally over time, but short-term temporary losses of wetland function are difficult to avoid.[150]

In 1992, the FWS issued a report that presented an evaluation of 17 projects by the Pennsylvania Department of Transportation (PennDOT). According to the FWS Report, these projects resulted in the destruction of 42 acres of wetlands. There were 30 mitigation sites for these 17 projects that were designed to create 61.3 acres of replacement wetlands, but actually resulted in a net loss of 15.5 acres. The FWS Report concludes that a reliable water source, such as spring seeps or groundwater, was the most critical factor to the success of mitigation projects. Sites experiencing problems due to lack of reliable water source included: sites dependent on intermittent streams, sites dependent on highway runoff due to extreme fluctuations, and sites dependent on overflow of flood waters.[151] Other problems experienced at mitigation sites included excavation that exposed nutrient-poor soils; plant mortality due to deer, insects, and vandalism; nursery grown stock that did not survive after planting; and the planting of nonnative species for erosion control purposes that prevented the colonization of native species.[152]

Another report, the San Francisco Bay Report, presents the results of an evaluation of past wetlands restoration projects in San Francisco Bay. Of the 11 tidal marsh restoration projects evaluated, 5 of the sites had major substrate alterations. All of the projects evaluated experienced some problem, such as high soil salinities, improper slopes or tidal elevations, incomplete vegetative establishment, channel erosion and sedimentation, or poor tidal circulation, and none of the projects evaluated were, at the time of the report, considered successful restoration projects.[153]

The 1998 Institute for Water Resources Report reviewed 8 mitigation banks, representing a total of 10 sites, that had been identified as having technical difficulties in 1992 case studies. Of those eight sites, only four were described as successful by their sponsors as of 1998. Problems included inadequate hydrology due to improper site selection, inadequate baseline elevations, and lack of enforceable monitoring provisions and contingency plans.[154]

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[144] *Id.* at § II.B.3.

[145] FARI TABATABAI & ROBERT BRUMBAUGH, INSTITUTE FOR WATER RESOURCES NATIONAL WETLAND MITIGATION BANKING STUDY: THE EARLY MITIGATION BANKS; A FOLLOW-UP REVIEW, IWR Report 98-WMB-Working Paper 21 (1998). Available at http://www.iwr.usace.army.mil/iwr/pdf/wmb_wp_Jan98.pdf (hereinafter cited as IWR Report).

[146] *Id.*; OHIO EPA, A FUNCTIONAL ASSESSMENT OF MITIGATION WETLANDS IN OHIO: COMPARISONS WITH NATURAL SYSTEMS (1997) (Ohio EPA Final Report); U.S. FWS, AN EVALUATION OF 30 WETLAND MITIGATION SITES CONSTRUCTED BY THE PA DEPARTMENT OF TRANSPORTATION BETWEEN 1983 AND 1990 (Special Project Report No. 92-3, 1992) (FWS Report); Margaret Seluk Race, *Critique of Present Wetlands Mitigation Policies in the United States Based on an Analysis of Past Restoration Projects in San Francisco Bay*, ENVTL. MGMT., Vol. 9, No. 1 (1985) (San Francisco Bay Report).

[147] Ohio EPA Final Report at 1.

[148] *Id.* at 6.

[149] *Id.* at ii.

[150] *Id.* at iii.

[151] *Id.* at 9.

[152] FWS Report at i.

[153] San Francisco Bay Report at 76.

[154] IWR Report at 22–23.

v. Potential Benefits of Offsite Mitigation and Mitigation Banking.—Although there are technical problems that may need to be overcome in the design and construction of offsite mitigation wetlands, offsite mitigation and mitigation banking also offer the potential to avoid certain problems and constraints associated with onsite mitigation. Permitted construction activities may reduce the wetland base on a particular site and have the potential to degrade wetlands. With offsite mitigation there is an opportunity to select a mitigation site that can produce a functioning replacement wetland. Mitigation banks can be successfully located on former or degraded wetland sites that have the essential hydrological and soils characteristics. Mitigation banking can provide an opportunity to avoid short-term losses in functional values, if advance mitigation is required by a mitigation banking program. Offsite mitigation can also be designed to meet regional goals for resource protection within a watershed. This can lead to the creation of larger mitigation wetland systems that are generally more self-sustaining and that can be more efficiently monitored.[155] Mitigation banking programs can be designed to capitalize on these potential benefits and ensure that the technical problems often associated with mitigation wetlands in practice are avoided. They can provide an effective means for transportation agencies to meet project mitigation requirements.

B. NPDES

1. NPDES Permit Requirements

Under the CWA, the "discharge" of any "pollutant" from any "point source" to "navigable waters" is unlawful, unless the discharge is in compliance with a NPDES permit.[156]

The scope of each of these terms, and therefore the NPDES program, is quite broad. Through the CWA, regulations promulgated by EPA, and various court decisions, the term "pollutant" has been essentially defined to include any waste material, whether natural or man-made. "Pollutant" also includes heat.[157] "Discharge" and "point source" are broadly defined to encompass any addition of pollutants to regulated waters through a pipe, ditch, container, drainage swale, or other means of collecting, channeling, or conveying. A discharge may be active (e.g., pumping), or passive (e.g., through gravity). A discharge need not be intentional (e.g., a leak from a tank, or seepage from a retention pond).[158]

The CWA defines "navigable waters" as "the waters of the United States." Through EPA regulations and court decisions, "waters of the United States" has itself been broadly defined to include such water bodies as marine waters, lakes, ponds, and rivers, but also other water bodies not usually thought of by the average citizen as "navigable." These include small streams, intermittent/seasonal streams, drainage ditches, detention ponds and other man-made conveyances and impoundments, mudflats, and wetlands.[159] (See Section 4.A for a discussion of wetlands protection under the CWA).

In general, there are few water bodies that fall outside the NPDES program. These exceptional cases include certain isolated wetlands. Whether and when the NPDES program covers discharges to groundwater has been the subject of recent litigation. Only a few federal district courts have ruled on the issue, and have each held that discharges to groundwater are not subject to NPDES permitting.[160] Such discharges may be subject to regulation under other provisions of law, however.[161] Discharges to publicly-owned wastewater treatment plants (also known as "publicly owned treatment works," or POTWs) are also not subject to NPDES permitting. However, such discharges can be subject to permitting or other regulation under "pretreatment" programs administered by EPA, or by state or local governments. Discharges that are exempt from federal NPDES permitting may still be subject to permitting under programs independently developed by a state or local government.

States can be authorized, or "delegated," to implement the federal NPDES program. A state can achieve delegation by developing state laws, regulations, and related programs that are consistent with and no less stringent than the NPDES program.[162] After review and approval of the program by EPA, the state is delegated to administer and enforce the NPDES program directly.[163] At present, all but seven states are

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[155] Robert Brumbaugh & Richard Reppert, INSTITUTE FOR WATER RESOURCES, NATIONAL WETLAND MITIGATION BANKING STUDY FIRST PHASE REPORT 28, Wetland Mitigation Banking, IWR Report 94-WMB-4 (1994).

[156] 33 U.S.C. § 1311(a); 33 U.S.C. § 1342.

[157] 33 U.S.C. § 1362(6); 40 C.F.R. § 122.2 (definitions of "pollutant").

[158] 33 U.S.C. §§ 1362(12), (14); 40 C.F.R. § 122.2 (definitions of "discharge" and "point source"). Federal court decisions considering broad applications of these terms include Trustees for Alaska v. Envtl. Prot. Agency, 749 F.2d 549 (9th Cir. 1984); Umatilla Water Quality Protective Ass'n, Inc. v. Smith Frozen Foods, 962 F. Supp. 1312 (D. Or. 1997); Beartooth Alliance v. Crown Butte Mines, 904 F. Supp. 1168 (D. Mont. 1995).

[159] *See generally* 40 C.F.R. § 122.2 (definition of "waters of the United States"); United States v. Riverside Bayview Homes, Inc., 474 U.S. 121; 106 S. Ct. 455; 88 L. Ed. 2d 419 (1985) (extending definition of "waters of the United States" to wetlands associated with navigable waters).

[160] *See, e.g.,* Umatilla Water Quality Protective Ass'n, Inc. v. Smith Frozen Foods, Inc., 962 F. Supp. 1312 (D. Or. 1997).

[161] *See, e.g*., 40 C.F.R. pt. 144, setting forth the underground injection control program under the Safe Drinking Water Act, 42 U.S.C. § 300f *et seq*.

[162] 33 U.S.C. § 1342(c).

[163] 33 U.S.C. § 1342(b).

delegated to implement some or all of the federal NPDES program.[164] Because of varying degrees of delegation and the constantly changing status of state delegations, state environmental authorities or the regional EPA office should be consulted for the delegation status of a specific state.

NPDES permit conditions and limitations are based on "effluent limitation guidelines" developed by EPA, which establish technology-based treatment standards on an industry-by-industry basis. In addition, when specific chemicals in a discharge cannot be identified, or when the permitting authority wants to reinforce technology-based treatment standards, a discharge permit may also include water-quality-based limits. These limits address the discharge as a whole, rather than specific substances or characteristics. Water quality limits are set and compliance monitored using the whole effluent toxicity (WET) method, which is based on survival rates of certain small organisms (typically minnows and water fleas) when placed in a discharge sample from the permitted source.[165] The use of WET limits and testing is part of a growing regulatory trend towards a less pollutant-specific and more holistic approach to regulating discharges.[166]

2. NPDES Permitting for Stormwater Discharges

Section 402(p) of the CWA establishes a framework for addressing stormwater runoff discharges under the NPDES program and has potential applicability to the construction and operation of transportation facilities.[167] Stormwater permitting under the NPDES program has been implemented on a phased basis, beginning with Phase I regulations adopted in 1990.[168] These regulations established permit requirements for "stormwater discharge associated with industrial activity" and defined 11 categories of industrial activity that were subject to permitting. Six of the categories were defined by reference to Standard Industrial Classification (SIC) code, with the other five categories defined by narrative descriptions of the regulated activity.

Two categories in particular are most relevant to transportation agencies and projects.[169] Category viii of the definition encompasses facilities classified as SIC 40 (railroad transportation), SIC 41 (local passenger transportation), SIC 42 (trucking and warehousing), SIC 44 (water transportation), and SIC 45 (transportation by air). The definition indicates that subject facilities are those that have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations, and that only those portions of the facility that are involved with vehicle maintenance (rehabilitation, repairs, painting, fueling and lubrication); cleaning operations; or deicing operations are considered to be "associated with industrial activity" for purposes of this category.[170] Other industry categories may also be pertinent to a transportation agency, such as Category iii of the definition, covering the mineral industry, including crushed stone, sand, and gravel operations, and Category ii, encompassing asphalt manufacture. Stormwater discharge associated with such industrial activity usually may be authorized under a Multi-Sector General Permit (MSGP) which sets forth industry specific requirements for best management practices pertaining to specific industrial activities and requires the submittal of a Notice of Intent to invoke the MSGP and the preparation of an stormwater pollution prevention plan (SWPPP).[171] Uses that do not qualify for the MSGP need to receive an individual permit.

A third category of the Phase I requirements that frequently affects transportation projects is Category x, which encompasses clearing, grading, excavation, and other construction activity that disturbs 5 acres or more of total land area. EPA has developed a general permit for stormwater discharge associated with industrial activity that entails preparing an SWPPP and completing and filing a Notice of Intent Form with EPA with the permit effective 2 days after its postmark date.[172] States delegated to implement the NPDES stormwater program may have additional or different coverage requirements and limitations.[173]

Phase II stormwater requirements extend permit requirements to cover discharge associated with "small construction activity," defined as including sites from 1 to 5 acres in size. Construction sites may be excluded from the Phase II permit requirement based on a lack of potential impact from rainfall erosion, or where controls are not needed to preserve water quality. Conversely, construction sites smaller than 1 acre may be regulated based on a potential for contribution to a violation of

[164] The EPA Web site at http://www.epa.gov/owm/faq.htm identifies Alaska, Idaho, Arizona, New Mexico, Maine, New Hampshire, and Massachusetts as not having delegated status.

[165] 40 C.F.R. pt. 136; *See* Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing, U.S. EPA, July 2000.

[166] *See, e.g.,* 64 Fed. Reg. 46012 (Aug. 23, 1999), amending EPA water quality planning regulations at 40 C.F.R. pt. 130 to "revise, clarify, and strengthen" requirements for establishing Total Maximum Daily Loads (TMDL) to restore the quality of impaired waters.

[167] 33 U.S.C. § 1342(p).

[168] 55 Fed. Reg. 47990 (Nov. 16, 1990).

[169] 40 C.F.R. § 122.26.

[170] 40 C.F.R. § 122.26(b)(14)(viii).

[171] 65 Fed. Reg. 64746 (Oct. 30, 2000); 66 Fed Reg. 1675 (Jan. 9, 2001) (corrections); 66 Fed Reg. 16233 (Mar. 23, 2001) (corrections).

[172] 63 Fed. Reg. 7858 (Feb. 17, 1998).

[173] Alaska, Arizona, District of Columbia, Florida, Idaho, Maine, Massachusetts, New Hampshire, and New Mexico do not have delegated authority to issue storm water NPDES permits. Colorado, Delaware, Oklahoma, Oregon, Texas, Vermont, and Washington are not delegated to issue permits for federal facilities. *NPDES Storm Water Program Contacts* at http://www.epa.gov/owm/sw/contacts/#MA.

water quality standards or potential for significant contribution of pollutants.[174] Discharges from construction sites associated with small construction activity required authorization by March 10, 2003.[175] EPA has indicated its intent to use general permits for all discharges newly regulated under Phase II to reduce the administrative burden associated with permitting, although individual permits may be used in specific circumstances.[176]

Section 6.B addresses federal stormwater permitting in more detail.

C. CONSIDERATION OF CERCLA AND RCRA IN TRANSPORTATION PLANNING*

In acquiring property for right-of-way and other facilities, transportation agencies must expect to encounter contaminated soils or groundwater or other hazardous wastes. Because such encounters may impose liability upon the transportation agencies under CERCLA[177] and RCRA,[178] transportation officials should be prepared to anticipate and address the issues posed by such wastes. Many states have regulatory analogs to CERCLA and RCRA that may expand the bases for liability. This section briefly addresses the liability of transportation agencies for hazardous wastes, and methods transportation agencies may use to avoid or reduce the risk of incurring such liability.[179]

1. Basis For Liability—Generally

CERCLA, commonly referred to as "Superfund," was enacted by Congress in 1980 and amended several times since. Its impetus was the realization that inactive hazardous waste sites presented substantial potential risks to public health, as evidenced by the Love Canal tragedy. Existing laws did not adequately regulate such sites and require their remediation. CERCLA intended to distribute the clean-up costs among the parties who had generated such hazardous wastes.[180]

One critical component of CERCLA is the creation of the Hazardous Substances Superfund to be used by the EPA to remediate such sites. The Superfund was created by taxes imposed on the petroleum and chemical industries, as well as by an environmental tax on corporations.[181] It is from this fund that CERCLA earned its "Superfund" nickname. The Superfund is used to pay for remediation and enforcement costs expended by the EPA.[182] The money can be used only at sites listed on the National Priority List (NPL) of the sites scoring highest on a numerical hazard ranking system.[183] However, the Superfund may not be used to reimburse a federal agency for the remediation of federal facilities.[184]

Liability under CERCLA is imposed under two basic provisions. The first provision permits EPA and private parties to recover from responsible parties the costs of remediation and other environmental response activities such as investigation and enforcement.[185] A site need not be on the NPL for such expenditures to be recovered from responsible parties. The second provision permits the EPA to seek judicial orders requiring a responsible party to abate a condition that endangers public health, welfare, or the environment.[186] In addition, entities identified as potentially responsible parties (PRP) and charged with costs incurred in cleaning up a release or abating a threat of release may seek contribution from other PRPs.[187]

RCRA[188] is designed to provide "cradle-to-grave" control of hazardous wastes by imposing requirements on persons who transport, store, or dispose of hazardous wastes. The regulatory design encourages source reduction, high technology treatment, and secure disposal of hazardous wastes.[189] Unlike CERCLA, RCRA is focused on and applies mainly to active facilities, rather than the equally serious problem of abandoned and inactive sites.

Liability under RCRA may be imposed by EPA issuing administrative orders and civil and criminal penalties. Additionally, the citizen suit provision allows

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[174] 40 CF.R. § 122.26(b)(15); § 122.26(c).; *See* OFFICE OF WATER, U.S. EPA, FACT SHEET 3.0, STORM WATER PHASE II FINAL RULE, SMALL CONSTRUCTION PROGRAM OVERVIEW (2000).

[175] 40 CF.R. § 122.26(e)(8).

[176] 64 Fed. Reg. 68722, 68737 (Dec. 8, 1999).

[*] This section updates, as appropriate, and relies in part upon DEBORAH L. CADE, TRANSPORTATION AGENCIES AS POTENTIALLY RESPONSIBLE PARTIES AT HAZARDOUS WASTE SITES (Nat'l Cooperative Highway Research Program, Legal Research Digest No. 34, 1995); and G. MARIN COLE & CHRISTINE M. BOOKBANK, STRATEGIES TO MINIMIZE LIABILITY UNDER FEDERAL AND STATE ENVIRONMENTAL LAWS (Transp. Research Board, Legal Research Digest No. 9, 1998).

[177] 42 U.S.C. § 9601 *et seq*.

[178] 42 U.S.C. § 6901 *et seq*.

[179] Section 4.A.4 *infra* addresses strategic consideration of potential liability concerns at the time of site acquisition, including the potential for using prospective purchaser agreements.

[180] *See* SUSAN M. COOKE, *THE LAW OF HAZARDOUS WASTE* (1987), at ch. 12 for a thorough discussion of CERCLA's legislative history and impetus. *See also* DEBORAH L. CADE, TRANSPORTATION AGENCIES AS POTENTIALLY RESPONSIBLE PARTIES AT HAZARDOUS WASTE SITES 5 (Nat'l Cooperative Highway Research Program, Legal Research Digest No. 34, 1995).

[181] *See* COOKE, *supra* note 180, at § 12.02[3].

[182] 42 U.S.C. §§ 9611, 9612.

[183] 42 U.S.C. § 9605(a)(8)(B).

[184] 42 U.S.C. § 9611(e)(3).

[185] 42 U.S.C. § 9607.

[186] 42 U.S.C. § 9606.

[187] 42 U.S.C. § 9613(f)(1).

[188] 42 U.S.C. § 6901 *et seq*.

[189] EPA regulations implementing RCRA are codified at 40 C.F.R. pt. 260 *et seq*.

any person to bring a civil action against any alleged violator of RCRA requirements, or against the EPA administration for a failure to perform a nondiscretionary duty. RCRA is discussed in more detail in Section 6.C. The remainder of this section primarily addresses considerations under CERCLA.

a. Liability Imposed Retroactively [190]

In contrast to other statutes setting standards for the management and disposal of wastes and other pollutants, CERCLA deals explicitly with the subject of cleaning up sites where wastes may have been released or disposed of long in the past. Congress sought to create not just standards defining liability for the future, but to ensure that parties linked to the waste sites left by industry in the past could be held financially responsible for their clean up. As a result, parties may be found liable for disposal actions they undertook long before CERCLA was enacted, and EPA takes an expansive view of defining and pursuing PRPs.[191]

b. Liability Imposed on Several Classes of Persons

A liable party under CERCLA may be viewed as any entity having involvement with the creation, handling, transporting, or disposing of hazardous substances at a site. Four categories of liable parties are named:

- Current owners and operators of contaminated sites;
- Former owners and operators who owned and/or operated the sites at the time when hazardous substances were disposed of at the site;
- Persons who arranged for disposal or treatment of hazardous substances; and
- Persons who transported hazardous substances for disposal or treatment.[192]

In CERCLA jargon, these categories are referred to, respectively, as owners and operators, former owners and operators, generators or arrangers, and transporters.

Transportation agencies may be, and often are, involved on both sides of CERCLA litigation and liability, as either parties from whom response costs are sought or as plaintiffs seeking recovery of their own response costs from other responsible parties. Transportation agencies are potentially exposed to CERCLA liability both in acquiring and operating contaminated right-of-way or other facilities, and in the disposition of wastes generated in transportation system operations, including the disposal of potentially contaminated excavation from right-of-way and facility construction.[193]

c. Liability is Strict, Joint, and Several

Liability under CERCLA is strict, joint, and several.[194] CERCLA's strict liability scheme has been generally upheld by the courts. The basis for CERCLA's strict liability is found in its requirement that "liability" be imposed in accordance with the liability standard of Section 311 of the CWA. As courts have imposed strict liability under Section 311, they have willingly reached similar results under CERCLA.[195] Arguments that a party was not careless or negligent, or that its activities were consistent with standard industry practices, are no defense to liability.

Courts have imposed joint and several liability upon responsible parties even though CERCLA contains no statutory mandate concerning such liability. In fact, Congress deleted provisions imposing joint and several liability from CERCLA before its enactment. Nevertheless, courts have imposed joint and several liability whenever there is evidence of commingling of hazardous wastes.[196] The deletion of the joint and several liability provision from CERCLA has been interpreted as preventing automatic imposition of joint and several liability in all cases, but not precluding the imposition of such liability on a case-by-case basis.[197]

This concept of joint and several liability significantly strengthens EPA's ability to encourage settlement as opposed to protracted litigation. As a result of joint and several liability under CERCLA, the EPA may sue a few PRPs at a Superfund site and obtain judicial decisions that each party is responsible for the entire cost of remediation at the site. EPA's ability to hold a few PRPs responsible for an entire site burdens the PRPs not only with the entire remediation costs but

[190] This subsection and the subsections that follow introduce liability under CERCLA, a subject that is discussed in greater detail in § 5. Liability under RCRA is discussed in § 6.C *infra*.

[191] G. MARIN COLE & CHRISTINE M. BROOKBANK, STRATEGIES TO MINIMIZE LIABILITY UNDER FEDERAL AND STATE ENVIRONMENTAL LAWS 3 (Transp. Research Board, Legal Research Digest No. 9, 1998).

[192] 42 U.S.C. § 9607.

[193] *See* COLE & BROOKBANK, *supra* note 191, at 4.

[194] On May 4, 2009, the United States Supreme Court reversed and remanded the 9th Circuit Court of Appeals ruling in U.S. v Burlington & Santa Fe, 520 F.3d 781 (9th Cir. 2007) that pesticide supplier and the agricultural chemical distributor (the site owner) were jointly and severally liable under CERCLA for the remediation costs. After first noting that "not all harms are capable of apportionment, however, and CERCLA defendants seeking to avoid joint and several liability bear the burden of proving that a reasonable basis for apportionment exists," the United States Supreme Court held that apportionment of the owner's liability was warranted since fewer spills occurred on the owner's property, and the owner's liability was capable of apportionment based on the size of the parcel leased to the distributor, the duration of the lease, and the types of contamination. Burlington Northern & Santa Fe Ry. v. United States, 129 S. Ct. 1870 (U.S. 2009).

[195] *See, e.g.,* United States v. Chem Dyne Corp., 572 F. Supp. 802 (S.D. Ohio 1983); N.Y. v. Shore Realty Corp., 759 F.2d 1032 (2d Cir. 1985).

[196] *See, e.g.,* O'Neil v. Picillo, 682 F. Supp. 706 (D.R.I. 1988).

[197] United States v. Chem-Dyne Corp., 572 F. Supp. 802 (S.D. Ohio 1993).

also with the prospect of pursuing expensive contribution actions against the parties EPA chose not to sue. A transportation agency may be particularly vulnerable to this policy since it is easily found, and as a government agency may be construed as having financial resources not available to private parties.[198]

The standard of causation under CERCLA is minimal and liability is "very difficult to avoid for a party that is connected with a particular site or hazardous substance deposited there."[199] In cost recovery actions brought by a private party, the only causal link required is whether a release or a threatened release of hazardous substances has caused the suing party to incur response costs.[200] At multi-party sites, this minimal requirement has been interpreted by some courts in such a way that it does not matter whether a defendant's own waste was released or threatened to have been released as long as some hazardous substance at the site has been discharged.[201]

d. Limited Statutory Defenses

CERCLA contains limited statutory defenses for a PRP. These defenses include showing that the release of a hazardous substance was caused *solely* by an act of God, an act of war, or by the act of an unrelated third party.[202] Each defense is narrowly written and has been narrowly construed by the courts.

There is little case law concerning the act of God and act of war defense. For the act of God defense, exceptional events, rather than mere natural occurrences, are required.[203] For the act of war defense, it remains unclear whether the release or threatened release must occur as a result of actual combat, or whether the defense extends to hazardous substances from increased production demands resulting from war.[204]

The third party defense is available only when the third party alone caused the release or threatened release. Any involvement, however slight, by the PRP asserting the defense, in contributing to the release or threatened release, renders the defense unavailable.[205] For transportation agencies the third party defense may succeed where the agency acquires property that was contaminated by a third party prior to the agency acquisition. The agency must show that the contamination was caused by a third party with which no "contractual relationship" existed. While the transfer of property would ordinarily entail such a contractual relationship, the term "contractual relationship" has been defined in the statute to exclude the purchase or condemnation of land through the use of eminent domain authority.[206] This "condemnation defense" is potentially a valuable one for a transportation agency.[207]

e. Liability Imposed for Response Costs Consistent with the National Contingency Plan

The National Contingency Plan (NCP) sets forth the procedures that the EPA and private parties must follow in selecting and conducting CERCLA response actions. The statutory requirement is that response costs incurred by private parties be "consistent" with the NCP, and that response costs incurred by the EPA be "not inconsistent" with the NCP.[208] Since its first promulgation in 1973, the NCP has been updated several times. The current version of the NCP was promulgated in 1990 and it is more comprehensive than any of its predecessors.[209]

2. Evaluating Potential Environmental Risk in Transportation Planning[210]

The evaluation of potential contamination should be completed as early as possible in the transportation planning process. Early evaluation permits the possibility of changing the design to avoid badly contaminated property or to mitigate the effects of its use for transportation purposes. Ideally, evaluation should occur no later than during preparation of the EIS or other environmental documents that precede final design. Properties to be acquired in fee for right-of-way and other facilities, as well as properties in which lesser interests will be acquired, such as slope easements or temporary easements, should all be evaluated for contamination issues.[211]

EPA maintains a list of potentially contaminated properties called the CERCLA Information System or CERCLIS. State and local environmental agencies may maintain similar lists of potentially contaminated properties and release incidents. These lists should be examined to determine whether properties to use for highway construction have been identified as potentially contaminated. Depending upon the project

[198] *See* CADE, *supra* note 180, at 6.

[199] COOKE, *supra* note 180, at § 13.01[5][c][iii].

[200] *See* Dedham Water Co. v. Cumberland Farms, Inc., 689 F. Supp. 1223, 1224 (D. Mass. 1988), *reversed on other grounds*, 889 F.2d 1146, 1151–54 (1st Cir. 1989).

[201] *See, e.g.,* United States v. S.C. Recycling & Disposal, Inc., 653 F. Supp. 984, 992 (D.S.C. 1984).

[202] 42 U.S.C. § 9607(b); United States v. Stringfellow, 661 F. Supp. 1053, 1060 (C.D. Cal. 1987).

[203] *Stringfellow*, 661 F. Supp. at 1061 (finding that heavy rains were foreseeable based on local climactic conditions).

[204] *See* United States v. Shell Oil Co., 841 F. Supp. 962, 971–72 (C.D. Cal. 1993) (refusing to extend "act of war" defense to production of petroleum for government contracts under wartime controls).

[205] *See, e.g.,* Westfarm Assoc. v. Wash. Suburban Sanitary Comm'n, 66 F.3d 669, 682–83 (4th Cir. 1995). *cert. denied,* 517 U.S. 1103 (1996).

[206] 42 U.S.C. § 9601(35)(A)(iii).

[207] *See* CADE, *supra* note 180, at 6–7.

[208] 42 U.S.C. § 9607(a)(4)(A), (B).

[209] The NCP is codified at 40 C.F.R. pt. 300 (July 1, 2001).

[210] This discussion is substantially based on the thorough and thoughtful treatment of the subject in CADE, *supra* note 180, at 13–14.

[211] Acquisition of an interest less than fee ownership may be a way to avoid "owner" liability. *See* § 4.C.2.b. and CADE, *supra* note 180, at 13.

purposes, it may not be possible or prudent to attempt to avoid contaminated property altogether. Indeed, many jurisdictions encourage "brownfields" redevelopment of industrial areas for transportation and other purposes in preference to "greenfields" development of undeveloped areas.

If environmental risk is not evaluated early in the planning process, and contamination issues are later discovered, substantial expense and delay in the project may result. Fully addressing these issues at an early stage may increase the chance of completing a project on time and within budget.

a. Perform Evaluation of Potential Contamination of a Site

i. Initial "Phase 1" Investigation.—The initial evaluation of the environmental status of a property is called a "Phase I" investigation. A phase I involves a review of all available records and a visual and olfactory examination of the property in issue. A site examination for a Phase I investigation is noninvasive and does not involve sampling soil or ground water. The examiner looks for oil or chemical stains on the soil, discolored surface water, petroleum or chemical odors, drums, tanks, or pipelines as evidence of potential contamination. A Phase I investigation is necessary because a site with a current innocuous use could historically have been, for example, the site of an industry involving solvents and other degreasers, underground storage tanks, or another use that frequently correlates with site contamination.

Record review may be quite extensive and involve records on the local, as well as the state, level. The state environmental agency, as well as the state health department, are typically good sources for information. Local health departments, the local fire department, local newspapers, or interviews of current and prior owners are also sources of information as to site use and significant events that occurred at the site. Chain of title reports will also provide information as to former uses of the site. Sanborn insurance maps found in local libraries and aerial photographs may also be reviewed.[212]

Usually the transportation agency will not have acquired the site at the time of a Phase I investigation. The transportation agency may therefore need to obtain permission from the current owner to access the site. The transportation agency should consider whether it has statutory authority to access private property for the purpose of performing surveys and appraisals or whether contractual agreement is required. Statutory authority rarely addresses environmental investigations explicitly, but condemnation authority may be sufficiently broad to allow for a visual and olfactory inspection of the site.[213]

ii. "Phase II" Investigation.—Where potential contamination is disclosed by a Phase I investigation, a transportation agency still interested in acquiring the site should proceed to a Phase II study. A phase II investigation may involve taking soil samples and surface water samples, installing monitoring wells for ground water samples, and analyzing such samples for the presence of contaminants of interest.

As is the case for a Phase I investigation, the agency should seek the voluntary consent of the property owner to access the property for the phase II study. If only a portion of the property is needed by the transportation agency and the owner intends to sell the remainder of his or her property, it may be to the owner's advantage to have the investigation completed at the agency's expense. Some owners may agree to temporary access for a fee that allows the environmental investigation to be completed. If the owner will not consent to access for a Phase II investigation, the agency has two potential avenues for obtaining access. First, as mentioned with respect to a Phase I investigation, an agency often has statutory authority to enter private property for purposes of performing surveys and appraisals. This statutory authority may be broad enough to encompass soil and ground water sampling. To learn the scope of this authority, the particular statute must be examined. Second, the transportation agency may invoke its eminent domain powers to condemn a limited interest in land. When a limited interest is condemned, such as a temporary easement, as opposed to a full fee interest, the Phase II study may be conducted without the agency becoming exposed to responsibility for site remediation.[214] The owner's refusal to consent to access must be well documented to support a petition to condemn and a court order of access. Contemporaneous notes or diaries of an owner's refusal to permit access should be kept, because they may be used to support the petition for condemnation of a limited interest.[215]

b. Avoidance of Contaminated Property—Realignment of a Highway Project

The best means of addressing the issues posed by badly contaminated property may simply be to avoid it by design changes. If the potential for environmental contamination is evaluated early in the planning process, and there exist alternatives meeting project goals that pose less environmental concern, realignment of a right-of-way or relocation of a transportation facility may be possible.

If it is not possible to avoid the contaminated property altogether, a transportation agency may

[212] The American Society of Testing and Materials (ASTM) has established a "Standard Practice" for a Phase 1 investigation, published as E1527-00, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process,* ASTM, 2000.

[213] *See, e.g.,* WASH. REV. CODE § 47.01.170.

[214] *But see* United States v. CDMG Realty Co., 96 F.3d 706 (3d Cir. 1996) (CERCLA liability may ensue where a site investigation is conducted negligently and contamination results or is dispersed).

[215] CADE, *supra* note 180, at 13.

consider acquiring an interest in the property short of fee ownership. Acquisition of an easement across a contaminated parcel or acquisition of an airspace easement, rather than a fee interest, may limit an agency's exposure to liability. Although acquiring interests of this type is unusual, at least one court has held that the holder of an easement across a contaminated site was not an "owner" under CERCLA, and was not liable where the holder's use was not the cause of contamination.[216]

D. OTHER ENVIRONMENTAL LAWS APPLICABLE TO TRANSPORTATION PROJECTS*

1. Endangered Species Act (ESA) and Other Fish and Wildlife Law

Concern for preserving the habitat of threatened and endangered plant and animal species has become a paramount planning consideration in many parts of the country. Endangered species issues can represent a significant constraint on both public and private development projects in areas where human occupancy potentially would threaten designated species' survival. Such issues manifest themselves in a variety of federal regulatory programs, through the requirements for consultation with the FWS and NMFS under the ESA in connection with federal actions.

a. Federal ESA[217]

The first Federal ESA, called the Endangered Species Preservation Act, was passed in 1966. This law allowed the listing of only native animal species as endangered and provided limited means for the protection of species so listed. This Act was amended by the ESA Act of 1973. Principal provisions of the ESA of 1973 included:

1. U.S. and foreign species lists were combined, with uniform provisions applied to both.
2. Categories of "endangered" and "threatened" were defined.
3. Plants and all classes of invertebrates were eligible for protection.
4. All federal agencies were required to undertake programs for the conservation of endangered and threatened species, and were prohibited from authorizing, funding, or carrying out any action that would jeopardize a listed species or destroy or modify its "critical habitat."
5. Broad "taking" prohibitions were applied to all endangered animal species and could be applied to threatened animals by special regulation.
6. Matching federal funds were made available for states with cooperative agreements.
7. Authority was given to acquire land to protect listed animals and plants.[218]

Significant amendments to the Act were enacted in 1978, 1982, and 1988; however, the overall framework of the ESA has remained essentially unchanged.[219] Section 4 requires the identification and listing of at risk species and their critical habitat.[220] Section 7, which is most relevant to transportation projects, prohibits agency actions from jeopardizing listed species or adversely modifying designated critical habitat and requires agencies to undertake affirmative protection and restoration programs to conserve listed species.[221] Section 9 prohibits all persons, including all federal, state and local governments, from "taking" listed species of fish and wildlife.[222]

i. Administration of the ESA.—The FWS in the Department of the Interior and the NMFS in the Department of Commerce share responsibility for administration of the ESA. Generally, NMFS deals with those species occurring in marine environments and anadromous fish, while the FWS is responsible for territorial and freshwater species and migratory birds. Additionally, the Animal and Plant Health Inspection Service of the Department of Agriculture oversees importation and exportation of listed terrestrial plants.

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[216] Long Beach Unified Sch. Dist. v. Dorothy B. Goodwin Cal. Living Trust, 32 F.3d 1364 (9th Cir. 1994).

* This section updates, as appropriate, and relies in part upon MICHAEL C. BLUMM, HIGHWAYS AND THE ENVIRONMENT: RESOURCE PROTECTION AND THE FEDERAL HIGHWAY PROGRAM (Nat'l Coop. Highway Research Program, Legal Research Digest No. 29, 1994).

[217] Pub. L. No. 93–205 (Dec. 28, 1973), 87 Stat. 884 as amended, 16 U.S.C. 1531 *et seq*.

[218] U.S. FWS, A SUMMARY OF ESA AND IMPLEMENTATION ACTIVITIES (1996) ("FWS ESA Summary"), available at http://endangered.fws.gov/esasum.html.

[219] *Id*.

[220] 16 U.S.C. § 1533.

[221] 16 U.S.C. § 1536. On December 11, 2008, the Department of the Interior amended the rules implementing Sections 4(d) and 7 to allow federal agencies to make their own determinations as to whether their proposed actions would harm endangered species. U.S. Dep't of Int., Talking Points as Prepared for Delivery, http://www.doi.gov/secretary/speeches/121108_ speech.html. This rulemaking was immediately challenged judicially, and as of this writing, the new regulations have not taken effect.

[222] 16 U.S.C. § 1538(1)(B).

ii. Endangered Species Listing Process.—The procedures and substantive criteria for the listing of threatened and endangered species are established in Section 4 of the ESA. A species is considered to be endangered if it is in "danger of extinction within the foreseeable future throughout all or a significant portion of its range."[223] A "threatened" classification is provided to those animals and plants "likely to become endangered within the foreseeable future throughout all or a significant portion of their ranges."[224] A species includes any species or subspecies of fish, wildlife, or plant; any variety of plant; and any distinct population segment of any invertebrate species that interbreeds when mature.[225] The Act allows the Secretaries of the Interior and Commerce to list "distinct population segments" of species or "distinct vertebrate populations," even if the species itself is abundant in other ranges, but does not allow listing of distinct population segments of subspecies.[226] Upon listing, provisions of the ESA require designation of critical habitat, agency consultation to avoid jeopardy, limitations on takings, and preparation of habitat conservation and recovery plans.[227]

Species are selected for listing by the FWS or NMFS as threatened or endangered from a list of candidate species. To become a candidate species, the FWS or NMFS relies on petitions, wildlife surveys, and other field studies and reports. The public is offered an opportunity to comment and the proposed listing is either finalized or withdrawn. Anyone may petition the FWS or NMFS to have a species listed, reclassified as endangered or threatened, or removed from the list. Within 90 days of receiving a petition, the FWS or NMFS must make findings as to whether the petition presents substantial biological data to indicate that the petitioned action may be warranted.[228] Within 1 year of receipt of a petition, the FWS or NMFS issues a finding stating whether the listing is either warranted or not warranted. A finding of "warranted" requires an immediate (i.e., less than 30 days) proposed listing within the *Federal Register*. The FWS or NMFS can also make a finding of "warranted but precluded," which results in a delayed proposed listing.[229]

In general, species to be listed in a given year are selected from among those recognized as candidates in accordance with the FWS or NMFS listing priority system. Under the priority system, species facing the greatest threat are assigned the highest priority. Lists are made "solely on the basis of the best scientific and commercial data available," and economic costs are not a permissible basis for refusing to list a species.[230] A species is only determined to be an endangered or a threatened species because of any one or more of the following factors:

1. The present or threatened destruction, modification, or curtailment of its habitat or range.
2. Overutilization for commercial, recreational, scientific, or education purposes.
3. Disease or predation.
4. The inadequacy of existing regulatory mechanisms.
5. Other natural or man-made factors affecting its continued existence.[231]

iii. Designating Critical Habitat—In addition to listing of species pursuant to Section 4(b)(2) of the ESA, the FWS or NMFS may also designate critical habitat for a threatened or endangered species. Critical habitat means:

1. The specific areas within the geographical area occupied by the species at the time it is listed, on which are found those physical or biological features essential to the conservation of the species and which may require special management considerations or protection.
2. The specific areas outside the geographic area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.[232]

Except in those circumstances determined by the FWS or NMFS, critical habitat generally does not include the entire geographical area occupied by the threatened or endangered species.[233]

In contrast to species listing decisions, the ESA requires that the FWS or NMFS designate critical habitat based not only on the best scientific data available but also on economic and other relevant impacts.[234] If the FWS or NMFS determines that designation of an area as critical habitat is not necessary to prevent extinction and that the benefits of omitting the area outweigh the benefits of including it as part of the critical habitat, areas otherwise meeting the basic definition of critical habitat may be excluded from this status.[235] In determining whether designation of critical habitat would increase the likelihood of taking of threatened or endangered species, the FWS must compare the risks of such designation to the benefits, considering all relevant factors.[236]

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[223] 16 U.S.C. § 1532(6).

[224] 16 U.S.C. § 1532(20).

[225] 16 U.S.C. § 1532(16).

[226] Sw. Ctr. for Biological Diversity v. Babbitt, 980 F. Supp. 1080 (D. Ariz. 1997).

[227] 16 U.S.C. § 1533, 1536, 1538, 1539.

[228] 16 U.S.C. § 1533(b)(3)(A).

[229] 16 U.S.C. § 1533(b)(3)(B).

[230] 16 U.S.C. § 1533(b)(1)(A).

[231] 16 U.S.C. § 1533(a)(1)(A)–(E).

[232] 16 U.S.C. § 1532(5)(A) (This is a paraphrase of the Statutory provision).

[233] 16 U.S.C. § 1532(5)(C).

[234] 16 U.S.C. § 1533(b)(2).

[235] *Id*.

[236] Conservation Council of Haw. v. Babbitt, 2 F. Supp. 2d 1280 (D. Haw. 1998).

The ESA prohibits federal actions that modify or destroy a species' habitat.[237] Chapter 7 of the ESA also requires consultation with the FWS whenever action taken by a federal agency is "likely to jeopardize the continued existence of any endangered species…or result in the destruction or adverse modification of habitat of such species."[238]

Under the regulations, destruction or adverse modification of critical habitat occurs only when the alteration "appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species."[239] The Fifth and Ninth Circuits recently invalidated these regulations.[240] These courts concluded that, by requiring Chapter 7 consultations only where a destruction-or-adverse-modification action affects both the recovery *and* survival of a species, the regulations fail to provide protection of habitat when necessary only for conservation of the species. The Ninth Circuit explained:

> Congress, by its own language, viewed conservation and survival as distinct, though complementary, goals, and the requirement to preserve critical habitat is designed to promote both conservation and survival. Congress said that "destruction or adverse modification" could occur when sufficient critical habitat is lost so as to threaten a species' recovery even if there remains sufficient critical habitat for the species' survival. The regulation, by contrast, finds that adverse modification to critical habitat can only occur when there is so much critical habitat lost that a species' very survival is threatened. The agency's interpretation would drastically narrow the scope of protection commanded by Congress under the ESA.[241]

The Fifth Circuit provided a similar explanation:

> The ESA defines "critical habitat" as areas which are "essential to the conservation" of listed species. "Conservation" is a much broader concept than mere survival. The ESA's definition of "conservation" speaks to the recovery of a threatened or endangered species. Indeed, in a different section of the ESA, the statute distinguishes between "conservation" and "survival." Requiring consultation only where an action affects the value of critical habitat to both the recovery and survival of a species imposes a higher threshold than the statutory language permits.[242]

The Tenth Circuit, in *New Mexico Cattle Growers v. United States Fish & Wildlife Service,*[243] took another approach. The FWS in that case had designated critical habitat after determining that the designation resulted in no economic impacts. In reaching its no-economic-impact result, the FWS used a baseline approach in the context of its functional equivalence theory. In other words, the FWS moved all economic impacts attributable to listing to below the baseline, leaving no above-the-baseline economic impacts attributable to critical habitat designation.[244] Challenging the FWS's approach, the plaintiffs argued for an approach that "would take into account all of the economic impact of the [critical habitat designation], regardless of whether those impacts [were] caused co-extensively by any other agency action (such as listing) and even if those impacts would remain in the absence of the [critical habitat designation]."[245] Recognizing that the FWS's baseline approach, as used in that case, rendered all but meaningless Congress's command that economic impacts be considered when designating critical habitat, the court concluded that "Congress intended that the FWS conduct a full analysis of all of the economic impacts of a critical habitat designation, regardless of whether those impacts are attributable co-extensively to other causes."[246]

Other courts have since declined to follow the Tenth Circuit's coextensive approach.[247] The *Arizona Cattle Growers* court explained:

> As a result of *Gifford Pinchot*, the problem that the Tenth Circuit confronted—the functional equivalence of the jeopardy standard and the adverse modification standard—was eliminated. Reflecting on the Tenth Circuit's reasoning, the *Cape Hatteras* court wrote, "[a]pparently hamstrung by its inability to consider the validity of *50 C.F.R. § 402.02*, the Tenth Circuit found another way to require the Service to perform a more rigorous economic analysis. This is an instance of a hard case making bad law." *344 F. Supp. 2d at 130*. This Court agrees. With the revitalized definition of "adverse modification," the Service must consider recovery when consulting on critical habitat, distinguishing those consultations initiated pursuant to the jeopardy standard. Accordingly, additional economic impacts will be associated with Section 7 consultations concerning critical habitat, and the two can no longer be considered functionally equivalent.
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[237] 16 U.S.C. § 1536(a)(2).

[238] *Id.*

[239] 50 C.F.R. § 402.02.

[240] 50 C.F.R. § 402.02; See Gifford Pinchot Task Force v. United States Fish & Wildlife Serv., 378 F.3d 1059 (9th Cir. 2004); Sierra Club v. United States Fish & Wildlife Serv., 245 F.3d 434 (5th Cir. 2001); *See also* Fisher v. Salazar, 656 F. Supp. 1357 (N.D. Fla. 2009).

[241] *Gifford Pinchot,* 378 F.3d at 1070.

[242] *Sierra Club,* 245 F.3d at 441-42.

[243] 248 F.3d 1277 (10th Cir. 2001).

[244] *Id.* at 1283.

[245] *Id.*

[246] *Id.* at 1285.

[247] See Ariz. Cattle Growers' Asso. v. Kempthorne, 534 F. Supp. 2d 1013, 1035 (D. Ariz. 2008) (finding the Tenth Circuit's co-extensive approach inconsistent with the ESA because, among other things, it permits consideration of impacts that are not a but-for result of the designation decision); Ctr. for Biological Diversity v. Bureau of Land Mgmt., 422 F. Supp. 2d 1115, 1152 (N.D. Cal. 2006) (finding the baseline approach a reasonable method for assessing the actual costs of a particular habitat designation); Cape Hatteras Access Preservation Alliance v. United States Dep't of Interior, 344 F. Supp. 2d 108, 129–30 (D.D.C. 204) (declining to follow the Tenth Circuit in its rejection of the baseline approach).

> …[T]o determine the economic impacts of a critical habitat designation, the Service must examine those impacts solely attributable to that decision. As stated by the D.C. District Court, "[t]o find the true cost of a designation, the world with the designation must be compared to the world without it." *Cape Hatteras, 344 F. Supp. 2d at 130*. The economic impact created by a critical habitat designation is naturally the mathematical difference between those two worlds. Where a coextensive approach is taken, the Service goes beyond the command of the ESA by examining impacts that exist independent of the critical habitat designation. This only inhibits the resolution of the ultimate question—whether economic impacts suggest that exclusion of certain areas outweighs the benefits of inclusion—and confuses the real costs of making the designation.[248]

The *Fisher* court agreed with *Cape Hatteras*, *Arizona Cattle*, and *Center for Biological Diversity*, and held that "the baseline approach is a reasonable method, consistent with the language and purpose of the ESA, for assessing the actual costs of a particular critical habitat designation." [249]

The question of whether NEPA applies to designations of critical habitat remains unclear. In 1995, the Ninth Circuit first ruled on this issue in *Douglas v. Babbitt*.[250] The court held that NEPA did not apply to critical habitat area designation based on a three-part analysis in which the court found that: 1) the procedures for designation of critical habitat had displaced the NEPA requirement, 2) an EIS is not required for proposed federal actions that do not alter the natural physical environment, and 3) ESA furthers the goals of NEPA without requiring an EIS.[251] In 1996, less than a year after the Ninth Circuit's ruling in *Douglas*, the Tenth Circuit, in *Board of Commissioners of Catron County v. FWS*, ruled that NEPA did apply to critical habitat area designations.[252] Although the Tenth Circuit conceded that ESA requirements partially fulfill NEPA requirements, the court held that partial fulfillment is not enough to justify an exemption from NEPA.[253] Thus, until Congress amends ESA to explicitly address the issue, or the Supreme Court rules on the issue, the determination of whether NEPA applies to the designation of critical area habitat may vary by federal circuit.

iv. ESA Restrictions and Prohibitions.—Section 9 of the ESA applies once a species is listed. According to the provisions of Section 9, it is unlawful for any person, defined broadly to include federal and state agencies,[254] to:

> (A) import any such species into or export any such species from the United States, (B) take any such species within the United States or the territorial sea of the United States, (C) take any species upon the high seas, (D) possess, sell, deliver, carry, transport, or ship, by any means, whatsoever, any such species…, (E) deliver, receive, carry, transport, or ship in interstate or foreign commerce, by any means whatsoever and in the course of a commercial activity, any such species, (F) sell or offer for sale in interstate or foreign commerce any such species or (G) violate any regulation pertaining to such species or to any threatened species of fish or wildlife listed….[255]

The prohibitions most pertinent to transportation agencies are those forbidding the "taking" of listed species.

v. The Taking Prohibition.—The Act defines "take" to include "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or to attempt to engage in any such conduct."[256] The term "harass" has been defined by regulation as "an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include but are not limited to, breeding, feeding or sheltering."[257] "Harm" means "an act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation, where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering."[258] Thus, the potential for takings claims arises in connection with actions related to the construction of highways or other transportation projects that may destroy wildlife habitat and result in the impairment of "normal behavioral patterns."

vi. Judicial Decisions on the Definition and Interpretation of "Taking" of an Endangered Species.—*Babbit v. Sweet Home Chapter of Communities for Greater Oregon*[259] is the definitive case to date regarding the definition of take. In *Sweet Home*, the U.S. Supreme Court upheld the Secretary of the Interior's interpretation of the term "take" to include significant habitat degradation. According to the Syllabus of the Supreme Court's opinion:

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[248] *Ariz. Cattle Growers' Ass'n,* 534 F. Supp. 2d at 1035.

[249] Fisher v. Salazar*,* 656 F. Supp. 2d at 1371.

[250] Douglas v. Babbitt, 48 F.3d 1495, 1502 (9th Cir. 1995), *cert. denied*, 516 U.S. 1042 (1996).

[251] *Id.* at 1502–06.

[252] Catron County Bd. of Comm'rs v. FWS, 75 F.3d 1429 (10th Cir. 1996).

[253] *Id.* at 1437.

[254] 16 U.S.C. § 1532(13). *See also* Tenn. Valley Auth. v. Hill, 437 U.S. 153, 184 (1978).

[255] 16 U.S.C. §§ 1538 (a)(1)(A)–(G).

[256] 16 U.S.C. § 1532(19).

[257] 50 C.F.R. § 17.3.

[258] *Id*.

[259] Babbit v. Sweet Home Chapter of Cmtys. for Greater Or., 515 U.S. 687 (1995).

> The [FWS] reasonably construed Congress' intent when [it] defined 'harm' to include habitat modification. (a) The Act provides three reasons for preferring the [FWS's] interpretation. First, the ordinary meaning of 'harm' naturally encompasses habitat modification that results in actual injury or death to members of an endangered or threatened species. Unless 'harm' encompasses indirect as well as direct injuries, the word has no meaning that does not duplicate that of other words that Section 3 uses to define 'take.' Second, the Endangered Species Act broad purpose of providing comprehensive protection for endangered and threatened species supports the reasonableness of the [FWS's] definition. Respondents advance strong arguments that activities causing minimal or unforeseeable harm will not violate the Act as construed in the regulation, but their facial challenge would require that the [FWS's] understanding of harm be invalidated in every circumstance. Third, the fact that Congress in 1982 authorized the [FWS] to issue permits for takings that [Section 9] would otherwise prohibit, 'if such taking is incidental to, and not for the purpose of, the carrying out of an otherwise lawful activity,' [Section 10(a)(1)(B)], strongly suggests that Congress understood [Section 9] to prohibit indirect as well as deliberate takings. No one could seriously request an 'incidental' take permit to avert Section 9 liability for direct, deliberate action against a member of an endangered or threatened species….[260]

This broad definition of the term "take," to include activities that may result in the incidental and indirect taking of endangered and threatened species through habitat modification, has major implications for highway and other transportation projects. For example, in *Strahan v. Coxe*, the Court observed that "take" under the Act was to be construed to include every conceivable way in which a person can take or attempt to take any fish or wildlife.[261] In *Marbled Murrelet v. Babbitt,*[262] a habitat modification that significantly impaired the breeding and sheltering of a protected species was found to constitute harm under the Act.

vii. ESA and Federal Actions.—All federal agencies must consult with either the Secretary of the Interior or the Secretary of Commerce when any agency action or activity is permitted, funded, carried out, or conducted that may affect a listed species or designated critical habitat, or is likely to jeopardize proposed species or adversely modify proposed critical habitat.[263]

Section 7 limits federal agencies in two respects. First, Section 7(a)(2) requires interagency consultation with the FWS or NMFS to ensure that agency action "is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat."[264] Second, federal agencies must, pursuant to Section 7(a)(1) and in consultation with the FWS or NMFS, "utilize their authorities in furtherance of the purposes of the Endangered Species Act by carrying out programs for the conservation of endangered species and threatened species."[265]

viii. Federal Agency Actions Subject to Consultation.—The consultation requirements of Section 7(a)(2) explicitly include all federal agencies and any action authorized, funded, or carried out by a federal agency. The FWS and NMFS regulations define "action" to include, "(1) activities intended to conserve listed species or their habitat; (2) promulgation of regulations; (3) granting of licenses, contracts, leases, easements, rights-of-way, permits, or grants-in-aid; or (4) actions directly or indirectly causing modification to the land, water, or air."[266] Moreover, Section 7 also applies to nonfederal activities that require federal agency authorization or assistance, such as a Section 404 individual permit or funding support for a highway or other transportation improvement.

Agencies considering actions subject to Section 7 must request from the FWS or NMFS information relevant to the presence of listed or proposed species in the action area under consideration, and if such species are or may be present, the development agency is required to conduct and prepare a biological assessment to identify species likely to be affected by the federal action.[267]

The FWS and the NMFS use four main types of consultations.[268] "Early consultations" are held before a federal permit application is actually filed with a federal agency to determine at an early planning stage what effect a proposed action may have on a species or critical habitat and what modifications may be needed to remove or minimize those effects. Early consultations must be completed within 90 days of initiation and delivered within 45 days of completion, unless an

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[260] *See* syllabus, 515 U.S. at 687.

[261] Strahan v. Coxe, 127 F.3d 155, 162 (1st Cir. 1997), *cert. denied*, 525 U.S. 830 (1998). *See also* United States v. Town of Plymouth, 6 F. Supp. 2d 81 (D. Mass. 1998).

[262] Marbled Murrelet v. Babbitt, 83 F.3d 1060 (9th Cir. 1996), *amended on denial of rehearing, cert. denied*, 117 S. Ct. 942.

[263] 16 U.S.C. § 1536(a)(2).

[264] *Id.*

[265] 16 U.S.C. § 1536(a)(1).

[266] 50 C.F.R. § 402.2. *See also* U.S. FISH AND WILDLIFE SERVICE & NATIONAL MARINE FISHERIES SERVICE, ENDANGERED SPECIES CONSULTATION HANDBOOK (1998) (hereinafter cited as "ESA Consultation Handbook").

[267] 16 U.S.C. § 1536(c).

[268] In addition, in the event of a natural disaster or other calamity, regulations implementing the ESA contemplate "emergency consultation." *See* 50 C.F.R. § 402.05. In Wash. Toxics Coalition v. United States Dep't of the Interior, 457 F. Supp 2d 1158 (W.D. Wash. 2006), a federal district court in the Western District of Washington vacated Section 402.05, finding it inconsistent with the consultation requirement contained in Section 7 of the ESA in the context of a claim under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). Cf. Defenders of Wildlife v. Kempthorne, 2006 U.S. Dist. LEXIS 71137 (D.D.C. Sept. 29, 2006).

extension is mutually agreed to by the agency and applicants.[269]

"Informal consultation" is optional and contains no disclosure requirements. For these reasons, it is the preferred method of communication. Moreover, nearly 90 percent of all consultations or communications are disposed of routinely and informally, and without controversy or public awareness.[270] Informal consultation may be requested by the federal agency, a federal permit applicant, or a designated nonfederal representative. Discussions during this phase may include whether and which species may occur in the proposed action area and what effect the action may have on listed species or critical habitats. Informal consultations often conclude with the FWS's or NMFS's written concurrence with the federal agency's determination that its action is not likely to adversely affect listed species or their critical habitat.

"Formal consultation" is conducted when the federal agency determines that its action is likely to adversely affect a listed species or its critical habitat and submits a written request to initiate formal consultation.[271] These consultations follow statutory and regulatory time frames and procedures and result in a written "biological opinion" (different from biological assessments, which are discussed below) of whether the proposed action is likely to result in jeopardy to a listed species or adverse modification of designated critical habitat. An incidental take statement is also provided. Formal consultations must be completed within 90 days of initiation unless an extension is mutually agreed to by the agency and applicants.

During the process, the consulting agency reviews all relevant information; evaluates the current status of the listed species or critical habitat; examines the effects of the proposed federal action, including cumulative effects on both listed species and critical habitat; and formulates a biological opinion.[272] The opinion includes a summary of the information forming the basis of the opinion, a detailed discussion of the action's effects on the species or its critical habitat, and its opinion as to whether the action is likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of its critical habitat.[273] Thus, the consulting agency's biological opinion presents one of two opinions: 1) a "no jeopardy" or "no adverse modification" opinion that states that the proposed action is not likely to jeopardize the continued habitat existence of listed species and will not result in the destruction or adverse modification of critical habitat, or 2) a statement that the proposed action will result in jeopardy or adverse modification.[274]

If the consulting agency opines that the action will result in jeopardy, the opinion must recommend alternative or other measures to minimize or avoid adverse impacts.[275] The development agency is authorized to decide if and how to proceed in the face of this advice or opinion by the consulting agency. A departure from the consulting agency's opinion and recommendations does not violate the Act, if the "agency takes alternative, reasonably adequate steps to ensure the continued existence of listed species."[276] In addition, agencies are not necessarily required to choose the first proposed reasonable and prudent alternative; rather, they need only have adopted a final reasonable and prudent alternative that complies with the "jeopardy" standard and that can be implemented.[277]

A fourth type of interagency consultation is the "conference" required in the event that a proposed agency action is likely to jeopardize proposed species or adversely impact proposed critical habitat. Such a conference addresses the impact of the action on such species or habitat and develops recommendations to minimize or avoid the adverse impacts. Such a conference may be conducted under the procedures for a formal consultation.[278]

Identification of and agreement on the "action area" are important and necessary outcomes of the consultation process. Determining the boundaries of the action area is first the responsibility of the federal agency proposing the action. The accurate identification of the action area is critical both for protection of species and for compliance with the ESA. An action area contains all areas that may be affected directly or indirectly by the federal action and not merely the immediate area involved in the action. The agency proposing the action must also take into account the cumulative effects of future state or private actions that are reasonably certain to occur within the action area.[279] If the consulting agency disagrees with the scope or definition of the action area, the two agencies will attempt to negotiate a resolution, but "the consulting agency cannot require the development agency to enter into consultation if the development agency refuses to do so on the basis of the limited scope of the action area."[280]

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[269] *See* 50 C.F.R. § 402.11. The early consultation process is discussed in ch. 7 of the ESA Consultation Handbook.

[270] BLUMM, *supra* note 216, at 23. *See* 50 C.F.R. § 402.13. The informal consultation process is discussed in ch. 3 of the ESA Consultation Handbook (available at the FWS Web site).

[271] *See* 50 C.F.R. § 402.14. The formal consultation process is discussed in ch. 4 of the ESA Consultation Handbook.

[272] 50 C.F.R. §§ 402.14(g)(1)–(8).

[273] 50 C.F.R. § 402.14(h)(1)–(3).

[274] *See* ESA Consultation Handbook, *supra* note 256, at 4-2.

[275] 16 U.S.C. § 1536(b)(3)(A) and 50 C.F.R. § 402.14(h)(2)(3).

[276] Tribal Village of Akutan v. Hodel, 859 F.2d 651, 660 (9th Cir. 1988), *cert. denied.* 493 U.S. 873 (1989).

[277] Sw. Ctr. for Biological Diversity v. United States Bureau of Reclamation, 143 F.3d 515 (9th Cir. 1998).

[278] 50 C.F.R. § 402.02 (definition of "conference") and 50 C.F.R. § 402.10.

[279] 50 C.F.R. § 402.02; *see* BLUMM, *supra* note 216, at 23.

[280] *See* BLUMM, *supra* note 216, at 23.

ix. Biological Assessment.—If a sponsoring federal agency's action is in an area of a listed species, a biological assessment may be required. The development agency must prepare a biological assessment if listed species are likely to be present in an action area and a federal "major construction activity" is proposed.[281] Major construction activity is defined in the regulations as "a construction project (or other undertaking having similar physical impacts), which is a major federal action significantly affecting the quality of the human environment…."[282] This definition implicitly contemplates coordination of such assessment with the agency's NEPA obligations.[283]

A biological assessment is "the information prepared by or under the direction of the [development agency] concerning listed and proposed species and designated and proposed critical habitat that may be present in the action area, and an evaluation [of] the potential effects on such species and habitat."[284] Its purpose is to assist agencies in evaluating the impact of the proposed project on endangered species and their critical habitat, and to determine whether formal consultation or a conference is required.[285] Although the development agency has considerable discretion as to the issues or information to discuss in the biological assessment, it must include: 1) results of any onsite inspections; 2) views of recognized experts; 3) literature reviews; and 4) analysis of the effects of the proposed action, and alternative courses of action.[286]

When a development agency finds potential jeopardy to endangered species or critical habitat, it must either: 1) contact the consulting agency to inquire whether any listed or proposed species or critical habitat may be present within the action area, or 2) provide the consulting agency with written notification of any listed or proposed species or critical habitat that it believes are present within the action area.[287] The consulting agency must provide a species list where requested within 30 days or concur in or revise the species list provided by the development agency.[288] During this process, the development agency is prohibited from making any irreversible or irretrievable commitment of resources.[289]

x. The Exemption Clause.—In addition to the formal consultation process, Section 7 of the Act establishes a process to exempt a federal agency from complying with the Act. Section 7(e)(1) of the Act establishes an Endangered Species Committee to review applications for exemptions from agency obligations. The seven member committee includes: the Secretaries of Agriculture, Army, and the Interior; the Chairperson of the Council of Economic Advisors; the Administrators of the EPA and the National Oceanic and Atmospheric Administration (NOAA); and a Presidential appointment to represent each of the states affected by a particular exemption application. The Secretary of the Interior chairs the committee.[290]

A federal agency, state governor, or permit or license applicant may apply for an exemption from the Act if, after consultation, the Secretary's opinion indicates that an agency action would violate the Act. Exemption applications must include descriptions of the consultation process between the sponsoring or development agency and the Secretary, and why the agency action cannot be modified or altered. They must be submitted no more than 90 days after completion of consultation or no more than 90 days after the agency takes final action on the permit or license application. The governor of the affected state is to be notified, and notice of the exemption application will be published in the *Federal Register*.[291] As of 1998, there had been only seven requests for exemption under this provision—two were granted, two were denied, and three were withdrawn before agency action.[292]

xi. Section 10 Incidental Taking Permit and Habitat Conservation Planning for Nonfederal Projects.—Section 10 of the ESA was passed in 1988 as a means for allowing nonfederal projects that might result in the "taking" of listed species to be permitted to proceed under carefully prescribed conditions.[293] Incidental take permits "also provide a means to balance, or integrate, orderly economic development with endangered species conservation."[294] However "the purpose of the habitat conservation process and subsequent issuance of incidental take permits is to authorize the incidental take of a listed species, not to authorize the underlying activities that result in take."[295]

An application for an incidental take permit is subject to a number of requirements, most particularly that a Habitat Conservation Plan (HCP) be prepared by the

[281] 16 U.S.C. § 1536(c).

[282] 50 C.F.R. § 402.02.

[283] *See* BLUMM, *supra* note 216, at 23.

[284] 50 C.F.R. § 402.02.

[285] 50 C.F.R. §§ 402.02, 402.12; *see* BLUMM, *supra* note 216, at 24.

[286] 50 C.F.R. § 402.12(f).

[287] 50 C.F.R. § 402.12(c).

[288] 50 C.F.R. § 402.12(d); *see* BLUMM, *supra* note 216, at 24.

[289] 16 U.S.C. § 1536(d).

[290] 16 U.S.C. § 1536(e).

[291] 16 U.S.C. §§ 1536(g)(1)–(2).

[292] ESA Consultation Handbook, *supra* note 266, at App. G.

[293] FWS ESA Summary, *supra* note 218.

[294] *Id.*; *See* City of Las Vegas v. Lujan, 891 F.2d 927, 929 (D.C. Cir. 1989) (Plaintiffs allege that designation of desert tortoise as an endangered species will bring construction activity in southern Nevada to a standstill).

[295] U.S. DEP'T OF THE INTERIOR AND FISH & WILDLIFE SERVICE, HABITAT CONSERVATION PLANNING AND INCIDENTAL TAKE PERMIT PROCESSING HANDBOOK 1-1 (HCP Handbook) (1996), available at http://endangered.fws.gov/hcp.

applicant and approved by FWS or NMFS. An HCP is supposed to "ensure that there is adequate minimizing and mitigating of the effects of the authorized incidental take."[296] An HCP must address a variety of factors, including the impact likely to result from the proposed taking; measures the applicant will undertake to monitor, minimize, and mitigate such impacts; the funding that will be made available to undertake such measures and the procedures to deal with unforeseen circumstances; alternatives that would not result in a take and the reasons why such alternatives are not being pursued; and other measures that the agencies may require as necessary or appropriate, such as an implementing agreement to outline the roles and responsibilities of involved parties and terms for monitoring the plan's effectiveness.[297] HCPs frequently address the protection and conservation of unlisted wildlife species. This is encouraged by FWS because it results in an ecosystem-based approach to conservation planning, may protect candidate species prior to listing and preclude the need to list them as endangered, and can simplify the permit amendment process if an unlisted species addressed in the HCP is later listed.[298]

HCPs can cover an area as small as a few acres or as large as hundreds of thousands of acres. As of September 1998, there were approximately 200 HCPs in various stages of development, including 1 covering over a million acres, 4 more in excess of half a million acres, and 10 covering between 100,000 and 500,000 acres. Earlier HCPs, by contrast, were generally under 1,000 acres in size.[299] As of February 2001, 341 HCPs had been approved, covering approximately 30 million acres in total.[300] Given these statistics, it is obvious that HCPs, which may limit or set conditions on development of all types, can have a significant impact on transportation projects and transportation planning in a covered area, and that the potential for encountering such a plan is increasing. While the FWS solicits comment on the HCP and any accompanying NEPA documentation after an application for HCP approval is made, most large-scale regional HCPs include extensive opportunity for comment and involvement during the preapplication plan development process.[301] Potentially affected transportation agencies would be well advised to keep track of, or ideally participate actively in, such processes.

In issuing an incidental take permit, FWS or NMFS must comply with NEPA. Because an incidental take permit can only authorize otherwise lawful activity, compliance of the permit activity with other federal laws and any applicable state or local environmental and planning laws is also required.[302] Take permits and their associated HCPs may be categorically excluded from NEPA, require an EA, or, rarely, an EIS. Although the FWS or NMFS is responsible for NEPA compliance, the agency may permit the applicant to prepare draft EA documentation, subject to agency guidance, as a way to expedite the application process and permit issuance, and encourages the preparation of joint HCP and EA documentation.[303]

Incidental take permits will be issued only if the statutory criteria are satisfied. The taking must be incidental, the applicant must minimize and mitigate the impacts of the taking to the maximum extent practicable, and the applicant must ensure that adequate funding and the means to deal with unforeseen circumstances will be provided. In addition, the taking must not appreciably reduce the likelihood of the survival and recovery of the species in the wild, and the applicant must ensure that other measures required by the reviewing agency will be provided.[304]

The growing importance of the incidental take and habitat conservation plan process for local planning and development in many parts of the country reflects the increasing impact of the ESA as economic expansion encroaches on species habitat. Transportation agencies will do well to give careful forethought to species protection issues under both the ESA and other federal and state wildlife and species protection laws, the principal ones of which are discussed below, when planning needed improvements.

b. The Fish and Wildlife Coordination Act[305]

The Fish and Wildlife Coordination Act requires federal decision makers to give equal consideration to and coordinate wildlife conservation with "other features of water resource development…."[306] The Act has as its stated purpose the recognition of "the vital contribution of our wildlife resources to the Nation" and the increasing public interest and significance of such resources.[307] Under Section 662(a) of the Coordination Act:

> [W]henever the waters of any stream or other body of water are proposed or authorized to be impounded, diverted, the channel deepened or…otherwise controlled or modified for any purpose whatever…by any

[296] U.S. FISH & WILDLIFE SERVICE, HABITAT CONSERVATION PLANS AND THE INCIDENTAL TAKE PERMITTING (undated) (FWS HCP Guidance) available at http://endangered.fws.gov/hcp/hcpplan.html.

[297] 16 U.S.C. § 1539(a)(2)(A)(i)–(v).

[298] FWS ESA Summary, *supra* note 218; HCP Handbook, *supra* note 295, at 1-2 and 4-1 to 4-2.

[299] FWS HCP Guidance, *supra* note 296.

[300] *Endangered Species and Conservation Planning,* at http://endangered.fws.gov/hcp/index.html.

[301] *Id*.

[302] HCP Handbook, *supra* note 295, at 1-5.

[303] FWS HCP Guidance, *supra* note 296; HCP Handbook, *supra* note 295, at ch. 5.

[304] 16 U.S.C. § 1539(a)(2)(B)(i)-(v); Friends of Endangered Species, Inc. v. Jantzen, 760 F.2d 976, 982 (9th Cir. 1985).

[305] This discussion is taken in substantial part from BLUMM, *supra* note 216, at 20–21.

[306] 16 U.S.C. § 661 (1991).

[307] *Id*.

> department or agency of the United States, or by any public or private agency under Federal permit or license, such department or agency shall first consult with the United States Fish and Wildlife Service, Department of the Interior, and with the head of the agency exercising administration over the wildlife resources of the particular State…with a view to the conservation of wildlife resources…as well as providing for the development and improvement thereof.…[308]

The consultation process may result in 1) alteration of water projects to reduce adverse effects on fish and wildlife, 2) mitigation measures to compensate for unavoidable adverse effects, or 3) studies designed to determine the extent of adverse effects and the best means of compensating for them.[309]

The Coordination Act requires consultation early in the planning process with the FWS or the NMFS (where marine species are involved), as well as the head of the appropriate state wildlife agency for projects that come within the scope of the Act. Impoundments of water resulting in less than 10 acres of maximum surface area and land management activities by federal agencies with respect to federal lands are exempt from the Coordination Act's consultation requirement.[310] Consultation requires some form of response to the fish and wildlife agency's analysis of the project, but "does not require that an agency's decision correspond to the view of the FWS."[311] Instead the Act requires only that the wildlife agency views be given serious consideration.[312] Furthermore, the procedural requirements of the Coordination Act are "automatically" fulfilled by compliance with NEPA in the general consideration of wildlife impacts.[313]

Coordination Act consultation may justify expenditures of project funds for the study and mitigation of negative wildlife impacts of highway construction involving the modification of a water body.[314] Conservation measures adopted as a result of the consultation process may be included in project costs, except for the operation of wildlife facilities.[315]

c. The Migratory Bird Treaty Act [316]

The Migratory Bird Treaty Act (MBTA)[317] has important potential implications for transportation projects because of its "take" restrictions.[318] The MBTA provides that "except as permitted by regulations…it shall be unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture or kill…any migratory bird…nest, or egg of any such bird….[319] Not only endangered bird species and waterfowl, but birds usually thought to be common such as crows, sparrows, chickadees, jays, and robins, are listed as protected under the MBTA.[320]

Courts in at least three cases have interpreted the MBTA's language to apply to any activity that can kill or otherwise "take" birds, even if there is no intent to do so.[321] Under that theory, the MBTA could conceivably be applied where a transportation project resulted in the death of protected birds or destruction of nests or eggs, for example by construction equipment or by hazardous substances released during construction. It has been suggested that because the MBTA is a strict liability criminal statute, permits should be sought by transportation agencies even when there is a mere possibility of a project causing a "take" in this regard.[322] However, other courts, in the context of federal timber sales, have held that the MBTA is intended only to apply to activities such as poaching and hunting and not to activities such as habitat modification that will incidentally result in bird deaths.[323]

Although there is no citizen's suit provision under the MBTA, it has been suggested that the Coordination Act may allow injunctions against actions that would produce violations of the MBTA.[324] A recent Executive Order invoking the MBTA makes it the responsibility of all federal agencies that take actions likely to have a measurable negative impact on migratory bird populations to adopt a Memoranda of Understanding with the FWS to promote the conservation of migratory birds.[325]

d. State Endangered Species Laws

Most states have both imposed some form of protection for species considered to be endangered or threatened under federal law and have established

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[308] 16 U.S.C. § 662(a).

[309] BLUMM, *supra* note 216, at 21.

[310] 16 U.S.C. § 662(h).

[311] County of Bergan v. Dole, 620 F. Supp 1009, 1063 (D.N.J. 1985) *aff'd*. 800 F.2d 1130 (3d Cir. 1986).

[312] *Id*.

[313] *Id*. at 1064.

[314] BLUMM, *supra* note 216, at 21.

[315] BLUMM, *supra* note 216, at 21; 16 U.S.C. § 662(d).

[316] This discussion is an update of the discussion in BLUMM, *supra* note 216, at 21.

[317] 16 U.S.C. §§ 703–12.

[318] 16 U.S.C. § 703. *See* BLUMM, *supra* note 216, at 21.

[319] 16 U.S.C. § 703.

[320] *See* Mahler v. United States Forest Serv., 927 F. Supp. 1559, 1576 (S.D. Ind. 1996).

[321] United States v. F.M.C. Corp., 572 F.2d 902 (2d Cir. 1978); United States v. Corbin Farm Serv., 444 F. Supp. 510 (E.D. Cal. 1978); Sierra Club v. Martin, 933 F. Supp. 1559 (N.D. Ga. 1996), *reversed*, 110 F.3d 1551, 1555–56 (11th Cir. 1997) (on grounds that the Federal Government is not a "person" against which the MBTA can be applied), *on remand*, 992 F. Supp. 1448 (N.D. Ga. 1998).

[322] BLUMM, *supra* note 216, at 21.

[323] Citizens Interested in Bull Run, Inc. v. Edrington, 781 F. Supp. 1502, 1509–10 (D. Or. 1991); Seattle Audubon Soc'y v. Evans, 952 F.2d 297, 302 (9th Cir. 1991); *Mahler*, 927 F. Supp. at 1579 (The MBTA does not apply to activities other than those intended to harm or exploit harm to birds even if they result in unintended deaths of migratory birds).

[324] *See* BLUMM, *supra* note 216, at 21, n.664.

[325] Executive Order No. 13186, 66 Fed. Reg. 3853, Jan. 17, 2001.

their own list of additional species specifically protected by the state.[326] Such requirements should be consulted early in the planning process by planners responsible for transportation improvements, with particular attention to those requirements that designate significant habitat for special treatment. The alteration of endangered species habitat or other actions that could result in a "taking" of a species protected under state law may pose an obstacle to the intended completion of a project.

Some states require that all activities of a particular nature be reviewed for their impact on species habitat. For example, California and Maine require that a state agency or municipality may not permit, license, or fund projects that will significantly alter identified endangered species habitat, jeopardize the species, or violate wildlife protection guidelines.[327] In Massachusetts, no alteration of a designated significant habitat may take place without a written permit issued by the state natural resources agency.[328] In Maryland, state agencies must take any action necessary to ensure that activities authorized, carried out, or funded by them do not jeopardize endangered or threatened species or destroy or modify critical habitat.[329] Even projects that avoid identified or designated habitat may trigger obligations under local endangered species legislation if construction activity or facility operations will have an actual impact on a designated species under provisions that prohibit the "taking" of endangered wildlife.[330] As under the federal ESA, species addressed by such state laws may include plant life in addition to endangered animals.[331] Some states have particular statutes addressed at specific species that must be considered in addition to requirements addressed at endangered species generally.[332] Some have provisions expressly addressed at transportation agencies or projects.[333]

2. Swampbuster and Wetland Reserve Program Provisions of the Food Security Act (FSA)[334]

The wetland conservation provisions of the FSA may impact transportation projects by making it more likely that wetlands will be encountered. The FSA of 1985 (the 1985 Farm Bill), as amended by the Food, Agriculture, Conservation and Trade Act of 1990 (the 1990 Farm Bill) and the Federal Agriculture Improvement and Reform Act of 1996 (the 1996 Farm Bill),[335] includes several provisions, including financial disincentives, to prevent the conversion of erodible lands and wetlands to agricultural use. These "swampbuster" provisions, as they are called, promote the conservation of wetlands on agricultural lands and the protection of wildlife habitat and water quality.[336]

In addition, the Wetlands Reserve Program (WRP), added in the 1990 Farm Bill, authorizes the Secretary of Agriculture to purchase permanent or 30-year conservation easements on 975,000 acres of converted and farmed wetlands for preservation and restoration purposes.[337] The WRP program gives priority to wetlands that enhance habitat for migratory birds and other wildlife, and the FWS assesses the eligibility of each offered property and must approve the restoration and management plans for each easement area.[338] Transportation projects encountering wetlands subject to federal conservation easements under WRP may have to satisfy Section 4(f) because such easements constitute a form of public ownership and WRP land is administered in part as migratory bird and wildlife habitat.[339]

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[326] R.S. MUSGRAVE & M.A. STEIN, STATE WILDLIFE LAWS HANDBOOK 16–17 (1993).

[327] *Id*. at 775; CAL. FISH & GAME CODE § 2050 *et seq.*; 12 ME. S.R.A. § 7755-A.

[328] MASS. GEN. L. ch. 131A, § 5; no species habitat requiring a permit for alteration has been designated as yet, and the provision of the Massachusetts act with the most practical impact on transportation and other projects in that state is the requirement that state agencies take all practical measures to avoid or minimize harm to designated species when they conduct, find, or permit projects, MASS. GEN. L. ch. 131A, § 4. In Wisconsin, *see also* WIS. STAT. § 29.604.

[329] MD. CODE ANN. NAT. RES. § 10-2A-04.

[330] *See, e.g.,* 520 ILL. COMP. STAT. 10/11 (Pre-action consultation of state and local governments with state wildlife agency deemed to satisfy obligation on such agencies not to take any action that will jeopardize listed species or destroy their habitat, provided that the action does not in fact result in the killing of or injury to any listed animal).

[331] *See, e.g.,* 520 ILL. COMP. STAT. 10/6 (plants and animals); CAL. FISH & GAME CODE § 2062 (plants and animals), LA. REV. STAT. 56-1902 (vertebrates and invertebrate animals).

[332] *See, e.g.,* FLA. STAT. § 370.12, addressed at protecting marine turtles.

[333] Texas Stat. Trans. § 201.606 (addressing acquisition of land within endangered species habitat); CAL. GOV'T CODE § 65081.3 (requiring consideration of state and federal endangered species act concerns before a regional transportation planning agency can designate a corridor for acquisition).

[334] This discussion is based in part on BLUMM, *supra* note 216, at 13.

[335] 16 U.S.C. §§ 3801–62.

[336] 16 U.S.C. § 3821(c). The Corps, EPA, and Soil Conservation Service entered into a memorandum of agreement on January 9, 1994, addressing the delineation of wetlands located on or surrounded by agricultural lands, for purposes of the "swampbuster" provisions. Internal FHWA guidance provides that state highway agencies should contact SCS rather than the Corps to establish procedures for delineating wetlands in agricultural areas for Section 404 purposes. *Information on Major Wetlands Issues*, Mar. 25, 1994, available at www.fhwa.dot.gov/environment/guidebook/vol1/doc14q.pdf.

[337] 16 U.S.C.A. § 3837–37f.

[338] *See* JOHN GOLDSTEIN, IMPACT OF FEDERAL PROGRAMS ON WETLANDS, ch. 3 (1996).

[339] FHWA Memorandum: Applicability of Section 4(f) to Wetlands Under Easement to the U.S. Fish and Wildlife Service (May 3, 1983). *See also* BLUMM, *supra* note 216, at 14.

3. Other Wetlands Law

a. The Wetlands Executive Order and DOT Order 5660.1A

The Wetlands Executive Order[340] and the DOT Order,[341] issued to ensure compliance with the Executive Order, impose substantive constraints on federal actions involving wetlands such as funding activities, licensing and permitting decisions, and acquisition and disposal of federal lands that may restrict transportation projects.[342]

i. The Wetlands Executive Order.—On May 24, 1977, President Carter signed Executive Order No. 11990 (Protection of Wetlands), stating that "the nation's coastal and inland wetlands are vital natural resources of critical importance to the people of this country…The unwise use and development of wetlands will destroy many of their special qualities and important natural functions."[343] This order was issued pursuant to and in furtherance of the NEPA of 1969 and sets forth a more exacting standard for agency action than NEPA.[344] The Executive Order has "the force and effect of law."[345] It imposes a nondiscretionary duty on the heads of agencies to "take action to minimize the destruction, loss or degradation of wetlands."[346] In addition, the Wetlands Executive Order is subject to judicial review under the Administrative Procedures Act,[347] and has the force and effect of a statute enacted by Congress.[348] However, "agencies are not required to prepare a separate document that explicitly illustrates compliance with Executive Order 11990…."[349]

The Executive Order is directed at all wetlands (not just publicly owned lands). It applies to direct transportation project activities such as construction and funding of highway projects in wetlands, as well as actions of other federal agencies involving the disposing of federally owned wetlands or granting easements or rights-of-way. All federal agencies are subject to and must comply with the Executive Order. The heart of the Executive Order is as follows:

> [E]ach agency, to the extent permitted by law, shall avoid undertaking or providing assistance for new construction located in wetlands unless the head of the agency finds (1) that there is no practicable alternative, and (2) that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use. In making this finding the head of the agency may take into account economic, environmental and other pertinent factors.[350]

The Executive Order requires that each agency provide for early and timely public review of projects involving wetlands, even if the project's potential environmental effects are not significant enough to require the preparation of an EIS under NEPA.[351]

The requirements of the Executive Order are generally less restrictive than the Section 4(f) restrictions.[352] For example, in *National Wildlife Federation v. Adams*[353] and *Ashwood Manor Civic Association v. Dole*,[354] federal courts ruled that the Executive Order's "no practicable alternative" standard is less restrictive than the Section 4(f) requirement of "no feasible and prudent alternative." As defined in *Adams,* an alternative is "practicable" if "it is capable of attainment within relevant existing constraints."[355]

The Executive Order also requires that federal agencies

> consider the factors relevant to a proposal's effect on the survival and quality of wetlands. Among these factors are: (a) public health, safety, and welfare including water supplies, water quality, recharge and discharge, pollution, flood and storm hazards, and sediment and erosion; (b) maintenance of natural systems, including conservation and long-term preservation of existing flora and fauna, species, and habitat diversity and stability, hydrologic utility, fish, wildlife, timber, and food and fiber resources; and (c) other uses of wetlands in the public interest, including recreational, scientific, and cultural uses.[356]

Finally, the Executive Order requires that when federal lands containing wetlands are proposed for lease, easement, right-of-way, or disposal to nonfederal public or private parties, the agency identify applicable use restrictions in the conveying documentation or else withhold the property from disposal altogether.[357]

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[340] Exec. Order No. 11990, 42 Fed. Reg. 26,961 (May 24, 1977).

[341] DOT Order No. 5660.1A (Aug. 24, 1978), 43 Fed. Reg. 45, 285.

[342] BLUMM, *supra* note 216, at 14.

[343] Exec. Order No. 11990, 42 Fed. Reg. 26,961 (May 24, 1977).

[344] Surfrider Found. v. John Dalton et al., 989 F. Supp. 1309, 82 (S.D. Ca. 1998). Nat'l Wildlife Fed'n v. Adams, 629 F.2d 587, 591 (9th Cir. 1980).

[345] Nat'l Wildlife Fed'n v. Babbitt, 1993 U.S. Dist., LEXIS 10689 (D.C.D.C. 1993).

[346] Exec. Order No. 11990, at § 1(a), 42 Fed Reg. 26,961 (May 24, 1977).

[347] Nat'l Wildlife Fed'n v. Adams, 629 F.2d at 591–92.

[348] Eatmon v. Bristol Steel & Iron Works, Inc., 769 F.2d 1503 (11th Cir. 1985).

[349] Surfrider Found. v. John Dalton et al., 989 F. Supp. 1309, 82 (S.D. Ca. 1998).

[350] Exec. Order No. 11990, at § 2, 42 Fed. Reg. 26,961 and 26,962 (May 24, 1977).

[351] *Id.* at § 2(b), 42 Fed. Reg. 26,961 and 26,962.

[352] 49 U.S.C. § 303(c); BLUMM, *supra* note 216, at 14.

[353] Nat'l Wildlife Fed'n v. Adams, 629 F.2d at 591–92.

[354] Ashwood Manor Civic Ass'n v. Dole, 619 F. Supp. 52, 84–85 (E.D. Pa. 1985), *aff'd*, 779 F.2d 41 (3d Cir. 1985); *cert. denied,* 475 U.S. 1082 (1986).

[355] Nat'l Wildlife Fed'n v. Adams, 629 F.2d at 591–92.

[356] Exec. Order No. 11990, at § 5, 42 Fed Reg. 26,963 (May 24, 1977).

[357] *Id.* § 4.

ii. USDOT Order 5660.1A–USDOT Order 5660.1A,[358] issued pursuant to the Wetlands Executive Order and other federal environmental and transportation laws, implements the requirements of the Wetlands Executive Order by providing definitions and specific procedures for applying the Wetlands Executive Order to transportation projects located in or having an impact on wetlands. The USDOT order limits transportation agencies' reliance upon economic factors in making determinations of "practicable alternatives" under the Executive Order. While costs may be taken into account in concluding that there is no practicable alternative to impacting wetlands, "[s]ome additional cost alone will not necessarily render alternatives or minimization measures impractical since additional cost would normally be recognized as necessary and justified to meet national wetland policy objectives."[359] Insufficient financial resources to implement alternatives or mitigation "cannot be used as the sole, or even the major determinant to a finding of impracticability."[360]

The USDOT Order also includes a number of procedural requirements that must be followed by FHWA. For example, appropriate opportunity for early review of proposals for new construction in wetlands should be provided to the public and to agencies with special interest in wetlands. This may include early public involvement approaches.[361] Another important procedural requirement involves preparation of an EIS. Under Section 7c of the USDOT Order, "Any project which will have a significant impact on wetlands will require preparation of an EIS. Prior to the preparation of an EIS, agencies with jurisdiction and expertise concerning wetland impacts…should be consulted for advice and assistance concerning the proposed undertaking."[362]

b. Limitations of the Wetlands Executive Order and USDOT Order 5660.1A

> The Wetlands Executive Order and the DOT Order apply only to federal activities, including funding assistance for construction. As stated by the Tenth Circuit Court of Appeals in *Village of Los Ranchos De Albuquerque et al. v. Barnhart et al*.,
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> …[E]xecutive Order 11990 only imposes obligations upon an executive agency in carrying out its *responsibilities* for land use planning…. Because the state declined to seek such [federal] funding, it was free to reject whatever federal location advice was offered in connection with the preparation of the EIS. Thus, the district court correctly concluded that the [federal government's] limited involvement in the [bridge] project is insufficient federal action to trigger the requirements of Executive Order 11990.[363]

4. The Rivers and Harbors Act (RHA) of 1899[364]

Although originally enacted in 1899 to protect navigation and commerce, since the 1960s the RHA has been interpreted to require consideration of environmental impacts.

a. Sections 9 and 10 Permit Requirements

Sections 9 and 10 of RHA apply to construction across navigable waters and to obstructions of navigable waters.[365] Such projects will usually involve discharges of dredged or fill material into navigable waters subject to permitting under Section 404 of the CWA. However, these sections of RHA may apply even if a CWA permit is not needed or where the CWA requirements are met by a nationwide permit.

Section 10 prohibits "any obstruction not affirmatively authorized by Congress to the navigable capacity of any of the waters of the United States" without a permit from the Army Corps of Engineers. The Section 10 permit requirements apply to structures that affect navigable waters, as well as those in navigable waters. For example, a tunnel under a navigable waterway requires a Section 10 permit.[366] Utility lines across a river or other navigable waters require a permit under this section.[367] Bridge or pier supports and bank stabilization projects are among the other types of projects requiring approval under Section 10.[368]

Section 9 of the RHA is specifically addressed at the construction of any "bridge, causeway, dam or dike over or in" the navigable waters.[369] It requires the approval of the Secretary of Transportation over plans for the construction of bridges and causeways, and this authority has been delegated to the Coast Guard.[370] The Secretary of the Army and Chief of Engineers must approve the construction of dams or dikes.[371]

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[358] DOT Order No. 5660.1A, 43 Fed. Reg. 45,285 (Aug. 24, 1978).

[359] DOT Order No. 5660.1A, at § 5, 43 Fed. Reg. 45,286 (Aug. 24, 1978).

[360] *Id*.

[361] DOT Order No. 5660.1A, at § 7b, 43 Fed. Reg. 45,286 (Aug. 24, 1978).

[362] DOT Order No. 5660.1A, at § 7c, 43 Fed. Reg. 45,286 (Aug. 24, 1978).

[363] Village of Los Ranchos de Alburquerque v. Barnhart, 906 F.2d 1477, 1485 (emphasis in original) (10th Cir. 1990) *cert. denied*, 498 U.S. 1109 (1991); *see* BLUMM, *supra* note 216, at 14.

[364] This discussion is taken in substantial part from BLUMM, *supra* note 216, at 15.

[365] 33 U.S.C. §§ 401, 403 (1991).

[366] 33 C.F.R. § 322.3(a).

[367] 33 C.F.R. § 322.5(i).

[368] BLUMM, *supra* note 216, at 15.

[369] 33 U.S.C. § 401.

[370] 33 C.F.R. § 114.01(c).

[371] 33 U.S.C. § 401. *See* BLUMM, *supra* note 216, at n.417.

b. Relationship of RHA with Section 404 Permitting Program of the CWA

The general policies and procedural regulations that apply to Section 404 permits apply to requirements for a Section 9 or 10 permit. However, Sections 9 and 10 permits do not require compliance with EPA's Section 404(b) guidelines unless a Section 404 permit is also required. Projects under Sections 9 and 10 of RHA must undergo the Corps' public interest review process though.[372] This review involves balancing the benefits and detriments of the project, including the relative extent of the need for the proposed structure, the practicability of using alternative locations and methods, and the duration and extent of both beneficial and detrimental project effects.[373] In many instances, exemptions from permit requirements under Section 404 of the CWA also exempt projects from the requirement of a separate permit under Section 10. Activities permitted by a state-administered Section 404 program are authorized by a nationwide Section 10 permit.[374]

c. RHA Applicability to Bridges and Causeways

Coast Guard review of bridges and causeways under RHA Section 9 focuses primarily on navigational impacts, although it also involves verifying compliance with applicable laws, regulations, and orders.[375] FHWA conducts environmental impact review, including locational studies, with respect to floodplain impacts.[376] This allows for early public review and comment as part of the NEPA process when projects involve floodplain encroachments. Review under FHWA regulations is not as broad as the public interest review required of Corps-regulated projects. Causeways and approach fills still require individual Section 404 permits and the attendant Corps review, and bridges that ordinarily qualify for a nationwide Section 404 permit may become subject to this review if the Corps determines that they involve more than minimal adverse environmental effects or may be detrimental to the public interest.[377]

5. Floodplains Law[378]

Several federal laws, programs, and executive orders regulate floodplains and variously define floodplains. The definition used for most floodplains regulatory and management purposes is based on the frequency of flooding in an area. For example, the Floodplains Executive Order[379] defines floodplains as "lowland and relatively flat areas adjoining inland and coastal waters, including flood prone areas of offshore islands, that are subject to a one percent or greater chance of flooding in any given year." This so-called "100-year flood plain" or "base flood" is used by the Federal Emergency Management Agency (FEMA) to establish floodplain management and regulatory criteria in connection with the National Flood Insurance Program (NFIP), and other regulatory agencies use similar definitions.[380]

Floodplains provide many useful ecological as well as cultural values and functions. Transportation projects that are inadequately planned, designed, constructed, or maintained can adversely affect floodplain resources due to 1) increased runoff from vegetation clearing and removal, wetlands destruction, dune removal, and other development activities like paving; 2) interruption of surface groundwater movement; and 3) increased pollution.[381]

a. The National Flood Insurance Program and the Unified National Program for Floodplain Management

The NFIP provides subsidized flood insurance for owners of homes and businesses located in flood-prone areas, promotes planning to avoid future flood damage, and requires communities to "adopt adequate floodplain ordinances with effective enforcement provisions consistent with Federal standards to reduce or avoid future flood losses."[382] As part of the legislation establishing the NFIP, Congress also endorsed the creation of a Unified National Program for Floodplain Management as a planning tool to encourage state and local government to consider floodplain management issues in land use decisions.[383]

In order to implement the NFIP, FEMA publishes information regarding all floodplains, including coastal areas, that have "special flood hazards," which are defined as areas that would be inundated by the occurrence of a 100-year flood.[384] Once a community notifies FEMA that it is in a flood-prone area and prepares preliminary maps of the floodplain, the community must then adopt a floodplain management ordinance or regulation before FEMA will make subsidized insurance available to homeowners and businesses within the community.[385] FEMA also requires communities to designate floodways. A floodway includes the river channel and portions of the adjacent floodplain that must be left unobstructed in

[372] 33 C.F.R. § 320.4(a). *See* § 3.A.4.a.ii.

[373] 33 C.F.R. § 320.4(a)(2).

[374] Nationwide Permit No. 24, 61 Fed. Reg. 65874, 65916 (Dec. 13, 1996).

[375] 33 C.F.R. § 115.60; BLUMM, *supra* note 216, at 15.

[376] 23 C.F.R. § 650.101–650.117.

[377] BLUMM, *supra* note 216, at 15.

[378] This discussion is taken in substantial part from BLUMM, *supra* note 216, at 16–7.

[379] Exec. Order No. 11988 § 6[c], 42 Fed. Reg. 26,951 (May 24, 1977).

[380] 44 C.F.R. § 59.1 (definition of "base flood"); *see also* 44 Fed. Reg. 24679 (Apr. 26, 1979) (DOT Order No. 5650.2).

[381] BLUMM, *supra* note 216, at 16.

[382] 42 U.S.C. § 4002(b); *see generally* 42 U.S.C. §§ 4001–4128.

[383] 42 U.S.C. § 4001(c); *see* BLUMM, *supra* note 216, at 16–7.

[384] 42 U.S.C. § 4101(a) and 44 C.F.R. § 59.1.

[385] 44 C.F.R. § 59.22.

order to discharge floodwaters without increasing upstream flood levels by more than 1 ft. Within the designated floodway, a community must prohibit any development that would cause a rise in flood levels.[386]

The Floodplain Executive Order issued in 1977 requires all federal agencies to evaluate the potential impact of their actions on floodplains.[387] By virtue of the Executive Order, agencies are directed to avoid actions impacting the base floodplain area that would be impacted by a 100-year flood unless the proposed location is the only practicable alternative.[388] USDOT Order No. 5650.2 applies the Floodplain Executive Order to all USDOT agency actions, planning programs, and budget requests, but leaves to each agency the option of issuing its own implementing policies and procedures.[389]

Floodplain planning and zoning requirements under NFIP have a direct impact on transportation project design and location. For example, FHWA regulations implementing the Floodplains Executive Order and USDOT Order prohibit new highway projects that cause a "significant encroachment" on floodplains unless there is no practicable alternative. A "no practicable alternative" finding by the FHWA must be supported by the reasons why the proposed action must be located in the floodplain, the alternatives considered and why they were not practicable, and a statement indicating whether the action conforms to applicable state or local floodplain protection standards.[390] If a floodplain encroachment by a highway project is unavoidable, the preferred design must be supported by analyses of design alternatives and a finding that the action conforms to applicable FEMA, state, and local floodplain protection standards adopted with respect to NFIP.[391]

6. Coastal Zone Law

a. The CZMA

The CZMA of 1972, comprehensively amended in 1996,[392] proclaims a national interest in and federal policy for the management of 1) coastal zones, 2) water resource areas bordering the Great Lakes, and 3) the oceans. It creates an extensive federal grant program to encourage coastal states to develop and administer coastal zone management programs. The CZMA also establishes a national estuarine research reserve system.[393]

State "coastal consistency certifications" are required when seeking permits or approvals under the CWA or other federal laws.[394] For transportation projects within or affecting the coastal zone, consistency with a state approved Coastal Zone Management Program must be addressed in the final EIS or finding of no significant impact.[395] Each state is authorized to develop its own coastal consistency review process, and in the absence of an exemption such as where the Secretary finds that the project 1) is consistent with the purposes of CZMA, or 2) is necessary in the interest of national security, a state's objections will be determinative.[396] These exceptions are rarely used, with the "consistent with the purposes of the CZMA" exception requiring that there be no reasonable alternative.[397]

b. State Coastal Zone Management (CZM) Programs

State CZM programs are subject to approval by the Assistant Administrator for Ocean Services and Coastal Zone Management of NOAA. NOAA regulations at 15 C.F.R. Part 923 set forth the requirements for approval of state programs.[398] All of the coastal states, which include states contiguous to the Atlantic or Pacific Oceans, the Gulf of Mexico, or any of the Great Lakes, have approved programs with two exceptions: Indiana received conditional approval for its program in early 2008 and Illinois is not participating.[399]

A state has great flexibility under the CZMA in the design and implementation of a CZM program subject to certain requirements. A program "must provide for the management of those land and water uses having a direct and significant impact on coastal waters and those geographic areas which are likely to be affected by or vulnerable to sea level rise."[400] The state must define the boundaries within which it will implement its program.[401] For example, California administers its program within only a 1000-yd inland strip adjacent to its coastal waters, while Florida includes the entire state within its zone.[402] The state must identify the

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[386] 44 C.F.R. § 60.3(d)(3).

[387] Exec. Order No. 11988, 42 Fed. Reg. 26,951 (May 24, 1977).

[388] *See* DOT Order No. 5650.2 at 44 Fed. Reg. 24678 (Apr. 6, 1979).

[389] *Id*.

[390] 23 C.F.R. § 650.113.

[391] 23 C.F.R. § 650.113(a)(3); 23 C.F.R. § 650.115(a); *See* BLUMM, *supra* note 216, at 17.

[392] 16 U.S.C. §§ 1451–65.

[393] 16 U.S.C. § 1461.

[394] 16 U.S.C. § 1456(c).

[395] BLUMM, *supra* note 216, at 20, citing 23 C.F.R. § 771.133; *see also* 49 C.F.R. § 622.101 (cross-reference to FHWA requirements in FTA regulations).

[396] 15 C.F.R. §§ 930.1, 930.94, 930.97–98 and 930.120 (Jan. 1, 2001).

[397] BLUMM, *supra* note 216, at 20.

[398] 15 C.F.R. pt. 923.

[399] Findings for the Indiana Coastal Nonpoint Program, http://coastalmanagement.noaa.gov/nonpoint/docs/6217in_fnl.pdf.

[400] 15 C.F.R. § 923.3(b).

[401] 15 C.F.R. pt. 923, subpt. D.

[402] Oliver A. Houck & Michael Rolland, *Symposium: Environmental Federalism: Federalism in Wetlands Regulation: A Consideration of Delegation of Clean Water Act,* 54 MD. L. REV. 1242, 1294 (1995).

authorities and organizational structure on which it will rely to administer its program, including all relevant laws, regulations, judicial decisions, and constitutional provisions.[403] The program may embody any one or a combination of the techniques set forth in Section 306(d)(11) of the CZM Act to control land use.[404] The three general forms of control techniques include the establishment by the state of criteria and standards for local implementation, consisting of enforceable policies to which local implementation programs must adhere, and which if not followed can be directly enforced by the state; direct state land and water use planning and regulation; or state review on a case by case basis of actions affecting land and water use.[405] For example, Connecticut and Louisiana enacted specific coastal management programs, while New York and Florida incorporated existing regulations and laws into their programs.[406]

c. The Coastal Barrier Resources Act (CBRA)

The CBRA is another important federal law affecting development in coastal areas.[407] The law prevents most federal assistance for activity affecting undeveloped coastal barrier landforms such as barrier islands, spits, mangrove fringes, dunes, or beaches located along the Atlantic and Gulf coasts and the Great Lakes.[408] Areas subject to CBRA have been identified and mapped as part of the Coastal Barrier Resource System.[409] It behooves a transportation agency to consult these maps and coordinate with the FWS regional director early in the process of planning for a transportation project in a coastal barrier area.[410] Specific prohibitions include assistance for:

> (1) the construction or purchase of any structure, appurtenance, facility, or related infrastructure; (2) the construction or purchase of any road, airport, boat landing facility, or other facility on, or bridge or causeway to, any System unit; and (3) the carrying out of any project to prevent the erosion of, or to otherwise stabilize, any inlet, shoreline, or inshore area….[411] The Act is not clear as to whether it precludes federal assistance for projects located outside the barrier system that might tend to encourage construction within it, such as roads and bridges opening up previously inaccessible areas.

Certain exemptions to the scope of CBRA are relevant to transportation agencies. In particular, assistance may be provided for the "maintenance, replacement, reconstruction, or repair, but not the expansion, of publicly owned or publicly operated roads, structures, or facilities that are essential links in a larger network or system."[412] In addition, the "maintenance, replacement, reconstruction, or repair, but not the expansion (except with respect to United States route 1 in the Florida Keys), of publicly owned or publicly operated roads, structures, and facilities" may take place if consistent with the purposes of the Act.[413]

7. Public Land Management Law[414]

a. National Wildlife Refuge System Administration Act (Refuge Act)

The Secretary of the Interior, through the FWS, is responsible for the conservation of fish and wildlife resources. For the purpose of consolidating the various statutes, regulations, and other authorities relating to the protection, management, and conservation of fish and wildlife, including species that are threatened with extinction, all lands, waters, and interests administered by the FWS as either wildlife refuges, areas for the protection and conservation of fish and wildlife that are threatened with extinction, wildlife ranges, game ranges, wildlife management areas, or waterfowl production areas are designated as the "National Wildlife Refuge System" (the System).[415] "The mission of the System is to administer a national network of land and waters for the conservation, management and where appropriate, restoration of fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans."[416]

The Refuge Act has significant implications for highways or other transportation corridors or projects that may involve proposed routes through a portion of the System. This is because the Refuge Act places severe restrictions on the alienation of lands or interests in lands administered under the System.[417] For example, except by exchange for other public lands or lands to be acquired, no transfer or disposal of refuge land can occur, unless the Secretary of the Interior determines (with the approval of the Migratory Bird Conservation Commission) "that such lands are no

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[403] 15 C.F.R. § 923.40, 923.41 (Jan. 1, 2001).

[404] 16 U.S.C. § 1455(d)(11).

[405] 15 C.F.R. §§ 923.43, 923.44, and 923.45.

[406] Houck & Rolland, *supra* note 388, at 1294.

[407] 16 U.S.C. §§ 3501–10.

[408] *USFWS Coastal Barrier Fact Sheet*, available at http://www.fws.gov/cep/cbrfact.html.

[409] 16 U.S.C. § 3503; Although the term "undeveloped coastal barriers" is defined, the map designation is the controlling factor for determining whether an area is subject to the limitations on federal assistance. *See* BLUMM, *supra* note 216, at 20, citing Bostic v. United States, 753 F.2d, 1292, 1294 (4th Cir. 1985).

[410] *See* FEDERAL HIGHWAY ADMINISTRATION, ENVIRONMENTAL GUIDEBOOK, SUMMARY OF LEGISLATION AFFECTING TRANSPORTATION (1996) ("FHWA Environmental Guidebook"), at Tab 6.

[411] 16 U.S.C. § 3504(a).

[412] 16 U.S.C. § 3505(a)(3).

[413] 16 U.S.C. § 3505(a)(6)(F). Highways in Michigan in existence in 1990 are also exempted. 16 U.S.C. § 3505(c).

[414] This discussion is based in substantial part on BLUMM, *supra* note 216, at 25–27.

[415] 16 U.S.C. § 668dd(a)(1).

[416] 16 U.S.C. § 668dd(a)(2).

[417] BLUMM, *supra* note 216, at 25.

longer needed for the purposes for which the System was established."[418]

The Secretary of the Interior may permit, for a lump sum fee or annual rental payments, or for other suitable compensation, the use of the System, or grant right-of-way easements in, over, across, upon, through, or under any areas within the System for purposes such as but not limited to, the construction, operation, and maintenance of power lines, telephone lines, canals, ditches, pipelines, and roads. Such easements may only be granted, however, upon a determination that the proposed use is "compatible" with the purpose for which the refuge was established.[419]

Congress amended the Refuge Act on October 9, 1997,[420] to require the FWS to prepare a mission statement for the System, as well as to institute new planning goals and objectives for each refuge. The 1997 Refuge Act amendments also clarify the standards and procedures used to regulate recreational and commercial uses. By virtue of these amendments:

> The Secretary shall not initiate or permit a new use of a refuge or expand, renew or extend an existing use of a refuge, unless the Secretary has determined that the use is a compatible use and that the use is not inconsistent with public safety. The Secretary may make these determinations for a refuge concurrently with the development of a conservation plan.[421]

These amendments codify, in part, Executive Order No. 12996, issued by President Clinton on March 25, 1996.[422] Executive Order No. 12996 establishes a mission statement for the National Wildlife Refuge System, adopts four guiding principles for the management and use of national wildlife refuges,[423] and directs the Secretary of the Interior to undertake certain actions to provide for expanded public uses of refuges while ensuring the biological integrity and environmental health of refuges.

The 1997 amendments also established a national policy relevant to the System. Thus, it is the policy of the United States relevant to the conservation of fish and wildlife resources that: 1) refuges be managed to implement and support the mission of the System; 2) compatible wildlife-dependent recreation is a legitimate and appropriate general public use of the System that fosters refuge management and through which the American people can develop an appreciation for fish and wildlife; 3) compatible wildlife-dependent recreational uses are given priority consideration in refuge planning and management and; 4) a compatible wildlife-dependent recreational use within a refuge should be facilitated but subject to such restrictions or regulations as may be necessary, reasonable, and appropriate[424] to protect, conserve, and manage fish and wildlife resources.

The 1997 amendments to the Refuge Act also directed the FWS to adopt regulations establishing the process for determining whether a proposed refuge use is compatible use.[425] One aspect of these regulations that provoked the concern of FHWA was the decision to no longer allow compensatory mitigation as a way to make a proposed use compatible. The regulations, however, did not change the policy, consistent with the statute, of allowing exchanges of interests in land as a way to accommodate FHWA projects.[426] The preamble to these regulations also contained the ominous note by the FWS that "while the Congressional intent is that the Act itself not change, restrict or eliminate existing right-of-ways, it is also clear that Congress did not alter our authority to do so if warranted on compatibility or other grounds." In addition to Refuge Act requirements, construction of federal-aid highways within the Refuge System also implicates wildlife, recreation, and in some cases possibly historic values and therefore triggers Section 4(f) of the USDOT Act.[427]

b. Wild and Scenic Rivers Act

The Wild and Scenic Rivers Act authorizes Congress, or a state legislature with the approval of the Secretary of the Interior, to designate rivers of remarkable wild, scenic, or recreational value as part of the wild and scenic river system.[428] The act establishes a policy: 1) to preserve selected national rivers and their immediate environments, which possess outstanding scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, in free-flowing condition; 2) to protect these rivers and their immediate environments for the benefit and enjoyment of present and future generations; and 3) to complement the national policy of dam and other construction on U.S. rivers with a policy that preserves other selected rivers in their free-flowing condition to protect water quality and fulfill other vital national conservation purposes.[429] Although all federal agencies must evaluate their proposed projects and ongoing activities, and collaborate with applicable agencies to ensure their decisions or actions will not adversely affect designated wild and scenic rivers, the Act primarily impacts water development projects, mining and mineral leasing on federal lands, and disposition of publicly owned lands.

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[418] 16 U.S.C. § 668dd(a)(2)(A); § 668dd(b)(3) (1994).

[419] 16 U.S.C. § 668dd(d)(1)(B).

[420] P.L. No. 105-57 (Oct. 9, 1997), 111 Stat. 1252.

[421] 16 U.S.C.A. § 668dd(d)(3)(A)(i) (West 2000).

[422] 61 Fed. Reg. 13647 (Mar. 28, 1996).

[423] These principles include: encouraging public recreational use of refuges; protecting fish and wildlife habitat; establishing partnerships between governmental agencies and various sportsmen, conservation, and Native American organizations; and involving the public in the management and protection of refuges. 61 Fed. Reg. 13647.

[424] 16 U.S.C. § 668dd(a)(3)(A)-(3)(D).

[425] 16 U.S.C. § 668dd(d)(3)(B).

[426] 65 Fed. Reg. 62469-70 (Oct. 18, 2000).

[427] *See* § 2B *supra*.

[428] 16 U.S.C. §§ 1271–87. Pub. L. No. 90-542 (Oct. 2, 1968), 82 Stat. 906. *See* BLUMM, *supra* note 216, at 25.

[429] 16 U.S.C. §§ 1271 and 1272.

Where a transportation project involves a proposed crossing of a designated river or other effect on a designated river or its environment, however, the requirements of the Wild and Scenic Rivers Act must be taken into account. Road construction is specifically identified as an activity that "might be contrary to the purposes of "the Act.[430] In addition, federally aided road construction affecting a wild and scenic river designated for its historic, recreational, and wildlife values will likely also raise obligations under Section 4(f) of the DOT Act.[431]

Three levels of protection and classification are given to rivers included in the System: 1) wild, 2) scenic, or 3) recreational. To be included in the System, a wild, scenic, or recreational river area must be a free-flowing stream and the related adjacent land area must possess scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values.[432]

Upon designation of a river as part of the System, the applicable federal agency with jurisdiction over the river segment must prepare and implement a land use management plan for the river based on this classification. The land use management plan must be specifically designed to protect and enhance the values that caused the particular river segment to be included in the system.[433] Although the land use management plan and the federal agencies implementing the plan must give protection of river values primary emphasis, the plan must also allow other uses that do not substantially interfere with public use and enjoyment of these values.[434] Once a river or river segment is designated and added to the System, all federal agencies are prohibited from assisting in the development of water resources projects (such as dams) that would have a direct and adverse effect on river values, such as fish and wildlife values. The Act permits such developments above or below a listed river segment as long as the development and related activities do not intrude into the designated area or unreasonably impair its values.[435] The head of any federal department or agency having jurisdiction over lands that include, border upon, or are adjacent to any river that has been designated or proposed for the System "shall take such action respecting management policies, regulations, contracts [and] plans affecting such lands…as may be necessary to protect such rivers" in accordance with the Act.[436]

c. National Forest Management Act (NFMA)

The NFMA is the principal federal statute governing the administration, management, use, and protection of national forests.[437] It requires that the Secretary of Agriculture, who acts through the U.S. Forest Service, assess federal forest land and develop and implement a resource management program based on multiple-use, sustained-yield principles for each unit of the National Forest System.[438] Although the principal purpose and goal of NFMA is sound timber management practices and the production of wood products from our national forests, NFMA also requires that the U.S. Forest Service, the agency responsible for implementing the NMFA, ensure that the resource management plans comply with NEPA as well as protect wildlife, water quality, and other ecological and societal values provided by wetlands and floodplains. These values can be affected when a highway use is proposed within a national forest. In addition, if forest system land encompasses a public park, recreation lands, or wildlife and waterfowl refuges or has historical value, Section 4(f) will apply and the Secretary of Transportation can authorize federal funding for the road only if there is no prudent and feasible alternative to using the land and the project includes all possible planning to minimize harm to such values.[439]

The national forest transportation system, as outlined in Section 1608 of the NFMA, must be installed to meet anticipated needs on an economical and environmentally sound basis.[440] Unless there is a need for a permanent highway identified in the forest development road system plan, any road constructed within a national forest in connection with a timber contract or other permit or lease must be designed to be temporary, with the goal of reestablishing vegetative cover on the roadway and other related areas disturbed by construction of the road within 10 years from the termination of their use.[441] Where a temporary forest road is under the jurisdiction of a state or local government agency and open to public travel, or there is an agreement to keep the road open to public travel once improvements are made; provides a connection between a safe public road and the renewable resources of the forest that are essential to the local, regional, or national economy; and serves other local needs, such as schools, mail delivery, relief from traffic generated by use of the national forest, or access to private property within the national forest,[442] it may be made a permanent forest highway by FHWA after consultation with the Forest Service and the state highway department.[443] A permanent highway through forest system lands can only be established or agreed upon if it has been the subject of review under NEPA and conforms to NFMA regulations.

[430] 16 U.S.C. § 1283(a).

[431] *See* § 3B *supra*.

[432] 16 U.S.C. § 1273(b).

[433] 16 U.S.C. § 1281(a).

[434] 16 U.S.C. § 1281(a).

[435] 16 U.S.C. §§ 1278(a) and (b).

[436] 16 U.S.C. § 1283(a).

[437] 16 U.S.C. §§ 1600–14.

[438] 16 U.S.C. §§1601–04.

[439] 49 U.S.C. § 303(c). *See* § 3.B *supra*.

[440] 16 U.S.C. § 1608.

[441] 16 U.S.C. § 1608(b).

[442] 23 C.F.R. § 660.105(d).

[443] 23 C.F.R. § 660.105(c).

d. Federal Land Policy and Management Act (FLPMA)

The FLPMA[444] requires the Secretary of the Interior through the Bureau of Land Management (BLM) to develop and maintain land-use plans for federal public lands and to manage such lands to protect water resources, wildlife habitat, and other wetland and floodplain associated resources.[445] Although most BLM lands are managed for multiple uses, certain areas are designated as "areas of critical environmental concern" where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values; fish and wildlife resources; or other natural systems or processes; or to protect life and safety from natural hazards.[446] To the extent that such lands are managed to protect historic, recreation, or wildlife assets, their use for a transportation project would trigger Section 4(f) requirements.[447]

FLPMA authorizes either the Secretary of the Interior or the Secretary of Agriculture, when national forests managed by the U.S. Forest Service are involved, to grant, issue, or renew rights-of-way over, upon, under, or through such federal lands as which are in the public interest. FLPMA enumerates seven land uses or activities for which BLM and/or the Forest Service may grant or renew rights-of-way, including but not limited to various transportation systems.[448] A highway right-of-way proposed on public lands must submit extensive information and all applicable facts and details about the right-of-way use, including its potential impact on water quality, wildlife habitat, aesthetic values and other environmental values, and proposed mitigation and conservation measures. A right-of-way permittee must also comply with air and water quality standards under state and federal law and also with other state standards for public health and safety and environmental protection. The right-of-way must be located along a route that will cause the least damage to the environment, taking into consideration feasibility and other relevant factors.[449] The right-of-way permit may be conditioned to protect federal and other affected interests.[450] Permit terms and conditions shall also ensure that the right-of-way complies with state standards for construction, operation, and maintenance of the right-of-way if those are stricter than applicable federal standards.[451]

e. The Wilderness Act

To ensure that an increasing human population, with attendant development, expanding settlement, and mechanization, does not leave the United States with no lands preserved and protected in their natural condition, the United States Congress in 1964 adopted the Wilderness Act to secure for present and future generations the benefits of an enduring resource of wilderness.[452] The Wilderness Preservation System created under the Act is composed of federally owned lands designated as "wilderness areas," retaining their primeval character and influence, without permanent improvements or human habitation, and protected and managed so as to preserve their natural conditions.[453] Once Congress establishes existing federal lands as a wilderness area, there shall be no commercial enterprise and no permanent road within any designated wilderness area.[454] In order to establish a highway through a designated wilderness area, it would be necessary to apply to the Secretary of the Interior or Agriculture for a modification or adjustment of the wilderness boundary.[455] Thus, as one commentator has noted, "because the building of permanent roads is inconsistent with the objectives of the Wilderness Act, highway development is severely limited [and] Section 4(f) of the DOT Act will apply when public lands containing wildlife, recreation, or historic values are involved."[456] The Wilderness Act required the Secretary of the Interior or Agriculture to assess every roadless area of 5,000 acres or more and every roadless island within the national wildlife refuge, national forest lands, and national park systems for possible inclusion in the Wilderness System.[457] Over 100 million acres have been included in the National Wilderness Preservation System so far.[458]

f. Land and Water Conservation Act

The Land and Water Conservation Act creates a program of federal financial assistance for state acquisition and development of land and water areas and facilities for recreational resources.[459] In order for states to qualify for federal funds via the Land and Water Conservation Fund for the development of outdoor recreational uses and facilities, a state must first adopt a comprehensive statewide outdoor recreation plan. The comprehensive outdoor recreation plan must identify the state agency that will represent the state in dealing with the Secretary of the Interior to

[444] 43 U.S.C. §§ 1701–84.

[445] 43 U.S.C. §§ 1712(a), 1701(a)(8); BLUMM, *supra* note 216, at 26.

[446] 43 U.S.C. § 1702(a); BLUMM *supra* note 216, at 4, 26.

[447] *See* BLUMM, *supra* note 216, at 5.

[448] 43 U.S.C. § 1761(a).

[449] 43 U.S.C. §§ 1765(a)(iii), (a)(iv), and (b)(v); BLUMM, *supra* note 216, at 26.

[450] 42 U.S.C. §§ 1765(b)(i); 1764(c).

[451] 16 U.S.C. § 1765(a)(iv).

[452] 16 U.S.C. §§ 1131–36.

[453] 16 U.S.C. §§ 1131(c).

[454] 16 U.S.C. §§ 1133(c).

[455] FHWA Environmental Guidebook, *supra* note 410, at Tab 6.

[456] *Blumm, supra* note 216, at 27.

[457] 16 U.S.C. § 1132(c).

[458] RUTH MUSGRAVE & JUDY FLYNN-O'BRIAN, FEDERAL WILDLIFE LAWS HANDBOOK WITH RELATED LAWS 536 (1998).

[459] 16 U.S.C. § 460l-4.

implement the comprehensive outdoor recreation plan; evaluate the demand for and supply of outdoor recreation resources and facilities in the state; set forth a program for the implementation of the plan; and contain other necessary information to support the comprehensive outdoor recreation plan, including the consideration of wetlands as important outdoor recreational resources.[460]

Under Section 6(f) of the Conservation Act, land acquired or developed with federal funding provided under the Act may not be used for nonrecreational purposes without a finding by the Secretary of the Interior that conversion is consistent with a comprehensive state plan. The state must also offset the lost resource with recreational properties of "reasonable equivalent usefulness and location."[461] These requirements apply in addition to Section 4(f) of the DOT Act when recreational land acquired or developed with Conservation Act funding will be affected by a transportation project. The obligation to seek approval under Section 6(f) arises at the time that the conversion takes place or when an application to convert is filed. Mere planning activities do not trigger a Section 6(f) obligation.[462]

g. Water Bank Act

The Water Bank Act[463] "promotes the preservation of wetlands by authorizing the Secretary of Agriculture to enter into land-restriction agreements with owners and operators in return for annual federal payments."[464] These restrictions amount to leases of farmland in an effort to protect wetlands during critical times of the year. For example, a 10-year renewable lease is entered into between a landowner and the Department of Agriculture that restricts the landowner (or lessee) from farming, draining, filling, burning, or otherwise disturbing wetlands, and in exchange for agreeing to these restrictions imposed on the use of the land, the landowner receives financial compensation in the form of annual payments from the Department of Agriculture.[465] Farming activities and operations that do not disturb or impact wetlands at other times of the year are typically allowed and permitted by the lease agreement. The Water Bank Act also requires that these wetland conservation efforts be coordinated with the Department of the Interior, state and local officials, and private conservation organizations**,** and that the Secretary of Agriculture formulate and carry out a program to prevent the serious loss of wetlands and to preserve, restore, and improve these lands.[466] Because the Water Bank Act, through enforceable lease agreements, creates publicly owned interests in lands containing various environmental values such as wetland and wildlife values, Section 4(f) of the DOT Act is implicated by a transportation project through wetlands located in a protected and restricted water bank area.[467]

E. HISTORIC PRESERVATION LAW

1. NHPA*

a. Section 106

i. Federal Agency Duty.—The NHPA seeks to preserve the historical and cultural foundations of the Nation and to increase the role of the federal government in historic preservation programs and activities.[468] To this end, the NHPA requires that before authorizing the expenditure of funds or issuing an approval for a federal "undertaking," a federal agency must "take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register."[469] This accounting takes place through a procedure, entailing consultation with state historic preservation officials, known as the Section 106 review process. Many, if not most, transportation projects receiving federal funding or requiring a federal license or permit under the Section 404 NPDES or other environmental program will have the potential to impact structures or places considered to have historical value, and therefore will entail NHPA review. This subsection will examine the responsibilities of the federal agency under NHPA, discuss how the courts have interpreted and applied NHPA, and draw comparisons between NHPA and the NEPA.

ii. "Undertaking" Trigger.—In order for the NHPA review process to be activated there must be a federal "undertaking." The statute defines "undertaking" as:

> a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including (A) those carried out by or on behalf of the agency; (B) those carried out with Federal financial assistance; (C) those requiring a Federal permit, license, or approval; and (D) those subject to State or local regulation administered pursuant to a delegation or approval by a Federal agency.[470]

The definition in the regulations of the Advisory Council on Historic Preservation (Council) is identical to the statutory definition.[471]

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[460] 16 U.S.C. § 460l-8(d).

[461] 16 U.S.C. § 460l-8(f)(3); *see* BLUMM, *supra* note 216, at 27.

[462] Md. Conservation Council, Inc. v. Gilchrist, 808 F.2d 1039, 1043 (4th Cir. 1986).

[463] 16 U.S.C. §§ 1301–11.

[464] MUSGRAVE & FLYNN-O'BRIAN, *supra* note 458, at 508.

[465] 16 U.S.C. §§ 1302, 1303, and 1304.

[466] 16 U.S.C. §§ 1301, 1309.

[467] *See* § 3B and BLUMM, *supra* note 216, at 27.

[*] This section was prepared with the assistance of Kenneth C. Baldwin, Esq., of Robinson & Cole LLP.

[468] 16 U.S.C. §§ 470(b)(2), (7).

[469] 16 U.S.C. § 470f.

[470] 16 U.S.C. § 470 W(7).

[471] 36 C.F.R. § 800.16.

The Council has revised the definition of "undertaking" on two occasions. In 1992, the statutory definition of "undertaking" was amended to include "[projects, activities, and programs] subject to State or local regulation administered pursuant to a delegation or approval by a Federal agency."[472] On January 11, 2001, additional revisions to the rules became effective.[473] The new rules clarified the definition of "undertaking" "to better state the premise of the rule that only an undertaking that presents a type of activity that has the potential to affect historic properties requires review."[474] Under the 2001 revision, the analysis to determine if there is an undertaking is whether the type of undertaking has the potential to affect historic properties, rather than whether the circumstances of each particular undertaking have the potential to affect historic properties.[475] At this stage of inquiry, the presence of historic properties must be assumed.[476]

Prior to the amendments, courts were on their own to interpret the meaning of an "undertaking." For example, in *Weintraub v. Rural Electrification Administration, U.S. Department of Agriculture,*[477] the Federal District Court in Pennsylvania held that Congress had intended an undertaking to mean situations where "federal spending for actions or projects…would otherwise destroy buildings on the National Register."[478] The court in *Weintraub* arrived at this strict interpretation of the statute in reviewing a situation where the Department of Agriculture had lent money to a co-op for building residences, but not for building a parking lot that would require the destruction of a historic building. The court noted that because the government had not lent money specifically for the purpose of constructing parking, the activity was not a federal undertaking under the NHPA.[479]

Other courts, such as the District Court for the District of Columbia,[480] interpreted "undertaking" to mean that the federal agency must have a direct involvement, including such examples as "projects directly undertaken by the agency, projects supported by federal loans or contracts, projects licensed by the agency or projects proposed by the agency for congressional funding or authorization." The court concluded that the regulations require that "the federal agency be substantially involved in the local project, either with its initiation, its funding, or its authorization, before a local project is transformed into a federal undertaking."[481]

State, local, and tribal government action that does not also entail federal funding or approval does not trigger NHPA. This point is well illustrated in *Ringsred v. City of Duluth.*[482] In *Ringsred*, a warehouse was purchased with the assistance of federal funds, but the parking ramp, to be constructed on city-owned land adjacent to the warehouse, was city-funded. While a part of the same project, the fact that federal funds were not used for the parking ramp construction meant that application of NHPA (or NEPA) was not required.[483]

An issue of continuing controversy between the FHWA and the Council is FHWA's responsibility for material "borrow" sources. In earth moving construction, borrow fill material is "the fill acquired from a source outside the required cut area."[484] FHWA treats the use of borrow material as a product, rather than a site-specific resource, and therefore believes that Section 106 is not triggered. The case exemplifying this controversy emanates from the Holbrook Interchange project in Arizona. FHWA was to provide funding to the Arizona Department of Transportation (ADOT) for the project. ADOT contracted with a private company to obtain the fill material from a private commercial (non-governmental) source near Woodruff Butte. Woodruff Butte is a geological formation and a traditional cultural property for the Navajo, Hopi, and Zuni Tribes, and is eligible for inclusion on the National Register. The Council and the Tribes believed that the removal of construction fill materials from Woodruff Butte had a damaging effect on the site. The Hopi Tribe brought an action to enjoin the construction of the Holbrook Interchange project.[485] The court issued a temporary injunction forbidding FHWA from distributing funds to ADOT. The project went forward without federal involvement. Since federal funding was not being used, the project was no longer a federal "undertaking" and was therefore beyond the scope of Section 106. The Council and the court in the Hopi case found that the use of material "borrow" sources can contribute to the loss of historic resources.[486] Later, the Council issued a formal policy statement on the issue of material borrow sources and the applicability of Section 106. In a letter, the Council advised that even where the location of borrow and disposal sites cannot be reasonably

[472] Pub. L. No. 102–575, 65 Fed. Reg. 77699 (Dec. 12, 2000).

[473] *Id.* at 77698.

[474] *Id.* at 77700, para. 4.

[475] *Id.*

[476] ACHP, Section 106 Regulations; Section by Section Questions and Answers, www.achp.gov/106q&a.html.

[477] Weintraub v. Rural Electrification Admin., U.S. Dep't of Agriculture, 457 F. Supp. 78 (M.D. Pa. 1978).

[478] *Id.* at 91.

[479] *Id.*

[480] Techworld Dev. Corp. v. D.C. Pres. League, 648 F. Supp. 106 (D.D.C. 1986).

[481] *Id.* at 120.

[482] Ringsred v. City of Duluth, 828 F.2d 1305 (8th Cir. 1987).

[483] *Id.*

[484] MEANS ILLUSTRATED CONSTRUCTION DICTIONARY 61 (1985).

[485] Hopi Tribe v. FHWA, Civ. No. 98-1061 (U.S. Dist. Ariz. 1998).

[486] ACHP Web site, "Arizona: Construction of Holbrook Interchange (Woodruff Butte)," http://www.achp.gov/casearchive/cases4-99AZ.html (Apr. 1999).

foreseen, the Federal agency must consider the effects to historic properties at the site.[487]

iii. The Section 106 Process: Procedural Obligations.—The timing of the Section 106 process is one that can be most disruptive for a transportation agency unless the process is initiated early.[488] The NHPA requires that the process be initiated "prior to the expenditure of any Federal funds or prior to the issuance of any license."[489] If the project involves "ground disturbing activities," the Section 106 process needs to be completed before the project begins.[490] Thus, a development project could be delayed while the Federal agency completes the Section 106 process.

Not all undertakings trigger the procedural obligations of Section 106. The Council has acknowledged that if an undertaking has no potential to affect historic properties it does not trigger Section 106 obligations. Where the undertaking does trigger Section 106, the regulations set forth the specific steps in the process. The specific steps include the initial determination of whether there has been a federal agency "undertaking," research as to the existence of historic resources within the project's area of potential impact, an indepth consultation process with the State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO), and the final determination of whether there will be an effect on the historic property. If the effect is adverse, the regulations describe how to deal with the potential impact through further proceedings intended to culminate in an MOA between the parties.

The initial step in the Section 106 process involves the determination of whether there has been a federal agency undertaking as defined by the regulations and as described above.[491] The determination of whether an "undertaking" exists is one for the agency official to make. It is not one to be made by the Council. However, the Council may render advice on the subject.[492] If the action is an undertaking, the next step is to determine whether there will be an effect on a place of historic significance. This involves an extensive literature search as well as consultations with state and tribal authorities.

If a federal undertaking exists and it affects a place of historic significance, the Section 106 review process requires a determination of whether the place or object of historic significance is one that is listed or eligible for inclusion on the National Register of Historic Places (National Register). Archeological sites, as well as more traditional historic and cultural places, must also meet the eligibility criteria for the National Register in order to lead to further obligations under the Section 106 process. In cases where archeological sites and sites that are the location of a prehistoric or historic event "cannot be conclusively determined because no other cultural materials were present or survive, documentation must be carefully evaluated to determine whether the traditionally recognized or identified site is accurate."[493]

Once the properties of historic or cultural significance that are on, or would be eligible to be on, the National Register, are identified, the next step is to determine whether the proposed activity will result in adverse effects to those historic or cultural properties. If the type of activity is one that will have no potential adverse effects on historic properties, then the agency has fulfilled its Section 106 requirements. If, however, there is potential to cause adverse effect, the agency must undertake the remainder of the Section 106 review process. This includes consultations with the SHPO/THPO to explore alternatives to the proposed project. The Council may be invited to comment during this procedure and may step in to resolve conflicts between the agency and SHPO/THPO.

Like NEPA, the Section 106 process is procedural, requiring the agency to look at all alternatives when making a decision. The agency must be able to support its decision with the record, but the NHPA, like NEPA, does not impose a substantive decision-making burden on the agency. Under Section 106, an agency, when making a final decision about the undertaking, must consider whether that decision will affect places or objects of historic and cultural significance. The agency needs to identify places or objects, examine their significance, and look at alternatives to the proposed project. However, courts have held that the agency need not choose the alternative determined by the Council to have the least amount of impact on the historic object or place.[494] For example, in *Concerned Citizens Alliance v. Slater*, the Third Circuit held that the fact that the Council and the Department of Transportation did not agree on the alternative that posed the least harm to an historic district did not mean that the DOT's decision was arbitrary and capricious.[495]

The agency is not limited to the NHPA program, as described in the regulations, in formatting its Section 106 review. In fact, the NHPA regulations encourage coordination with other review programs such as NEPA, the Native American Graves Protection and Repatriation Act, American Indian Religious Freedom Act, the Archaeological Resources Protection Act, and

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[487] Letter from Advisory Council of Historic Preservation to Emily Wadhams, Jan. 25, 2002, *available at* http://www.achp.gov/offsite_borrow_and_disposal.pdf.

[488] Walter E. Stern & Lynn H. Slade, *Effects of Historic and Cultural Resources and Indian Religious Freedom on Public Lands Development: A Practical Primer*, 35 NAT. RESOURCES. J. 133, at 145 (1995).

[489] 16 U.S.C. § 470f (emphasis added).

[490] Stern & Slade, *supra* note 488, at 146.

[491] 36 C.F.R. § 800.3(a).

[492] 65 Fed. Reg. 77718.

[493] ADVISORY COUNCIL ON HISTORIC PRESERVATION, HOW TO APPLY THE NATIONAL REGISTER CRITERIA FOR EVALUATION (1995).

[494] *See, e.g.,* Concerned Citizens Alliance, Inc. v. Slater, 176 F.3d 686 (3d Cir. 1999).

[495] *Id.* at 690–91.

agency-specific legislation, such as Section 4(f) of the Department of Transportation Act.[496] The preparation of only one document to fulfill statutory environmental requirements can make the process more streamlined and cost-effective. In order to further streamline the process, the agency official conducting the review may use information gathered and developed for other reviews in formulating the NHPA review.[497]

The NHPA Section 106 process is outlined in more detail below.

iv. Research and Initial Consultation.—The first step in the Section 106 process involves a literature search and consultation with the SHPO/THPO and other interested parties in order to identify historic places and potential effects of a project or activity. The initial consultation process is intended to determine the area of a project's potential effect; identify the historic properties; and evaluate the significance of those properties.[498] Section 800.4 was amended to assert that determinations in this subsection are made unilaterally by the Agency Official, after consultation with the SHPO/THPO. Some had misunderstood the previous version as providing for consensus determinations.[499]

(1) Consult with SHPO.—There are several key players involved in a Section 106 review process, including the federal agency official responsible for compliance with Section 106, SHPO/THPO, Council, and individuals or organizations with an interest in the effects of the proposed project. The agency head must consult with the SHPO/THPO for the geographic area where the project is located. The federal agency may, by notice to the SHPO/THPO, authorize an applicant or group of applicants (such as a state department of transportation) to initiate consultation; however, the federal agency remains legally responsible for all resulting findings and determinations.[500] In the event that a project will involve more than one state, the SHPO will appoint a lead officer for the project.[501] The agency must also invite other interested individuals and organizations to participate in the process as consultants.

(2) Literature and Information Research.—The agency is obligated to conduct a literature and information search on already identified historic and cultural properties and properties that might have historic or cultural significance.[502]

(3) Consult with Local Governments, Tribes, or Organizations.—The consultation process requires the agency to seek information from consulting parties or other individuals or organizations likely to have knowledge of, or concerns with, cultural or historic properties in the area.[503] The agency must also gather information from native tribes or Hawaiian organizations if applicable, to determine which properties have cultural or religious significance.[504]

v. Inventory and Eligibility of Historic Properties.—In order to trigger the remainder of the Section 106 process after the initial consultation and literature review, the properties identified must meet the criteria of eligibility for the National Register of Historic Places. The agency official must make a "reasonable and good faith effort to carry out appropriate identification efforts," [505] and must apply the National Register criteria to determine their eligibility.[506] Appropriate identification efforts may include "background research, consultation, oral history interviews, sample field investigation[s], and field survey[s]."[507]

The criteria for National Register eligibility are:

> The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and
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> that are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> that are associated with the lives of persons significant in our past; or
>
> that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> that have yielded, or may be likely to yield, information important in prehistory or history.[508]

Generally, sites that are less than 50 years old are not eligible for National Register status unless they are an integral part of a district or meet other specific criteria.[509]

(1) "Reasonable and Good Faith Effort."—When identifying historic properties, the agency official must "make a reasonable and good faith effort to carry out appropriate identification efforts."[510] The effort will vary depending on the scope of the search needed. The regulations do not provide a clear standard for what is meant by a "reasonable and good faith effort." However, the regulations provide examples and guidance on what is included in such an effort. For example, the agency may undertake "background research, consultation,

[496] 36 C.F.R. § 800.3(b).

[497] *Id.*

[498] 36 C.F.R. §§ 800.4(a), (b), and (c).

[499] 65 Fed. Reg. 77698, 77700.

[500] 36 C.F.R. § 800.2(c)(4); *See* Memorandum from Gloria M. Shepherd to FHWA Division Administrators, Jan. 10, 2001, at http://wwwcf.fhwa.dot.gov/environment/sec106.htm.

[501] 36 C.F.R. § 800.3(c)(2).

[502] 36 C.F.R. § 800.4(a)(2).

[503] 36 C.F.R. §§ 800.4(a)(3).

[504] 36 C.F.R. § 800.4(a)(4).

[505] 36 C.F.R. §§ 800.4(b)(1).

[506] 36 C.F.R. §§ 800.4(c)(1).

[507] 36 C.F.R. § 800.4(b)(1).

[508] 36 C.F.R. § 60.4.

[509] *Id.*

[510] 36 C.F.R. § 800.4(b)(1).

oral history interviews, sample field investigation[s], and field survey[s]"[511] to assist it in determining whether there are historic properties that would be affected. The Council advises agencies to undertake identification efforts in good faith and with "an honest effort to meet the objectives of Section 106."[512]

In *Pueblo of Sandia v. United States*,[513] the Tenth Circuit Court of Appeal found that "a mere request for information is not necessarily sufficient to constitute the 'reasonable effort' Section 106 requires."[514] The Tenth Circuit found that the information provided to the Forest Service by the tribes was sufficient to require the Forest Service to conduct further investigations and fulfill the "good faith effort" requirement.[515] The court also held that the agency must share its findings with the SHPO/THPO. The Forest Service needed to provide the SHPO with copies of the affidavits and other information it received prior to the consultation. The court noted that without access to the available information, the SHPO is denied the opportunity to give an informed opinion.[516] "Thus, 'consultation'…mandates an informed consultation."[517]

The case of *Pueblo of Sandia v. United States* can be compared with *Enola v. United States Forest Service.*[518] In *Enola*, the court held that the Forest Service had made a "reasonable and good faith effort" to identify traditional cultural properties[519] when it used "field inventories to identify sites that had been traditionally used by Native Americans, reviewed existing historic data, sought comments from the interested public, assembled a committee to determine whether historic properties existed on Enola Hill, and documented numerous communications with the Oregon State Historic Preservation Officer."[520]

vi. Assessment of "Effect."—After determining which properties will be affected, the agency official must apply the criteria of "adverse effect" to the historic properties in consultation with the SHPO or THPO.[521] Once the criteria for adverse effect have been applied, the agency official will determine if there will be an adverse effect. If there is a finding of no adverse effect, the agency official will notify all parties and provide documentation of the finding.[522] If the SHPO/THPO agrees with the finding, the agency may proceed with its undertaking.[523] If the SHPO/THPO or any other consulting parties disagree with the finding, the agency shall either consult with that party to resolve the disagreement or the agency may request that the council review the findings.[524]

(1) Criteria for Determination of Adverse Effect.—The regulations provide the criteria for determination of adverse effect. "An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association."[525] Adverse effects may include reasonably foreseeable effects that occur later in time or may be more distant or cumulative.[526] The regulations also provide examples of the types of undertakings that would result in an adverse effect. According to the regulations, adverse effects can result from physical destruction or alteration of a property (including restorations, rehabilitation, repair, maintenance, and other activity that is not consistent with the Secretary of the Interior's standards); removal of the property from its historic location; change in the character of the property's use or of physical features within the setting that contribute to historic significance; introduction of visual or audible elements; neglect; and transfer of lease or sale of property out of federal control without preservation restrictions.[527]

vii. Resolution of Adverse Effect.—If an adverse effect is found, the regulations require further consultation between the agency official and the interested parties. Ideally, an agreement is reached and the parties enter into an MOA. If no agreement is reached, the Council is invited to comment and those comments are to be taken into account by the agency official in reaching his or her final determination. The process for this consultation and review is laid out in the sections below.

viii. Consultation with Advisory Council and SHPO.—In order to resolve a situation where the agency undertaking will result in adverse effect to the

[511] *Id.*

[512] ACHP Web site, Section 106 Regulations, Section-by-Section Questions and Answers, http://www.achp.gov/106q&a.html.

[513] Pueblo of Sandia v. United States, 50 F.3d 856 (10th Cir. 1995).

[514] *Id.* at 860.

[515] *Id. See* Branford J. White, *Historic Preservation and Architectural Control Laws*, URB. LAW. 879, 880 (1996).

[516] *Id.*

[517] *Id.*

[518] 832 F. Supp. 297 (D. Or. 1993), *vacated for mootness*, 60 F.3d 645 (9th Cir. 1995).

[519] 60 F.3d 645, *see* White, *supra* note 515, at 881.

[520] *Id.*

[521] 36 C.F.R. § 800.5.

[522] 36 C.F.R. § 800.5(c).

[523] 36 C.F.R. § 800.5(c)(1).

[524] 36 C.F.R. § 800.5(c)(2).

[525] 36 C.F.R. § 800.5(a)(1).

[526] *Id.*

[527] 36 C.F.R. §§ 800.5(a)(2)(i)–(vii).

historic property, the agency official shall first consult with the SHPO/THPO "to develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize or mitigate adverse effects on historic properties."[528] The agency official must notify the Council of the adverse effect finding. Other individuals and organizations may be invited as consulting parties to offer their comments.

ix. Public Comment.—The process to resolve adverse effects is a relatively open one. The agency official is required to make all relevant information available to the public. Members of the public are afforded an opportunity to make comments and "express their views on resolving adverse effects of the undertaking."[529]

x. Memorandum of Agreement.—If the agency official and the SHPO/THPO agree on a resolution of the adverse effects, they will enter into an MOA outlining the resolution. A copy of the MOA is then submitted to the Council. The submittal needs to occur before the agency approves the undertaking. If the agency official and the SHPO/THPO fail to agree on a way to resolve the adverse effects, or the SHPO/THPO terminates the consultation for failure to come to an agreement, the agency official shall request that the Council join the consultation and may enter into an MOA with the Council. The regulations leave to the Council's discretion whether to join the consultation regardless of whether the SHPO/THPO and agency official have come to an agreement. If the Council decides not to join, it will notify the agency official and offer comments.[530] The agency official must take these comments into account when reaching its final decision on the undertaking and must report that decision to the Council.[531]

On September 18, 2001, the Federal District Court for the District of Columbia invalidated portions of two subsections of the Section 106 regulations insofar as they allowed the Council to reverse a Federal agency's findings of "No Historic Properties Affected" (previous Sec. 800.4(d)(2)) and "No Adverse Effects" (previous Sec. 800.5(c)(3)). [532]

Prior to the district court decision, an objection by the Council or SHPO/THPO to a "No Historic Properties Affected" finding required the Federal agency to proceed to the next step in the process, where it would assess whether the effects were adverse. A Council objection to a "No Adverse Effect" finding required the Federal agency to proceed to the next step in the process, where it would attempt to resolve the adverse effects.

On appeal by the National Mining Association, the D.C. Circuit Court of Appeals ("D.C. Circuit") ruled that Section 106 does not apply to undertakings that are merely subject to State or local regulation administered pursuant to a delegation or approval by a Federal agency, and remanded the case to the district court.[533] On September 4, 2003, the district court issued an order declaring sections 800.3(a) and 800.16(y) invalid to the extent that they applied Section 106 to the mentioned undertakings, and remanding the matter to the Council.[534]

The amendments to the invalidated regulations make it clear that Council opinions on these effect findings are advisory and do not require Federal agencies to reverse their findings.[535] The final amendments still require a Federal agency that makes an effect finding and receives a timely objection to submit it to the Council for a specified review period. Within that period, the Council will then be able to give its opinion on the matter to the agency official and, if it believes the issues warrant it, to the head of the agency. The agency official, or the head of the agency, as appropriate, would take into account the opinion and provide the Council with a summary of the final decision that contains the rationale for the decision and evidence of consideration of the Council's opinion. However, the Federal agency would not be required to abide by the Council's opinion on the matter.[536]

Whether or not the resolution involves the Council or the SHPO/THPO, the end product of the resolution is an MOA.

xi. Advisory Council on Historic Preservation Review and Comment.—If the Council joins the consultation, the resolution is documented in an MOA. The MOA serves as evidence of the agency's compliance with Section 106.[537] The MOA is considered an agreement with the Council for the purposes of NHPA Section 110(1).[538] Section 800.6(c)(2) was rewritten to remove confusion about the ability of the Federal agency to invite other parties to become formal signatories to an MOA and to clarify their rights and responsibilities as invited signatories.[539]

b. Judicial Review of NHPA Compliance

"Highways and historic districts mix like oil and water, and when a new highway must go through an historic area, historic preservationists and federal and state highway officials are likely to clash over the preferred route."[540] Notwithstanding the extensive regulatory procedures required by Section 106, the Section 106 review, like NEPA, is purely procedural.

[528] 36 C.F.R. § 800.6(a).

[529] 36 C.F.R. § 800.6(a)(4).

[530] 36 C.F.R § 800.6(b).

[531] 36 C.F.R. § 800.7(c)(4).

[532] *See* Nat'l Mining Ass'n v. Slater, 167 F. Supp. 2d 265 (D.D.C. 2001) (order clarifying extent of original order regarding § 800.4(d)(2) of the § 106 regulations).

[533] Nat'l Mining Ass'n v. Fowler, 324 F.3d 752 (D.C. Cir. 2003).

[534] *Id.*

[535] 69 Fed. Reg. 40544, 40554.

[536] *Id.*

[537] 36 C.F.R. § 800.6(c).

[538] *Id.*

[539] 65 Fed. Reg. 77698, 77700.

[540] Concerned Citizens Alliance, Inc. v. Slater, 176 F.3d 686, 690 (3d Cir. 1999).

The procedure requires that the agency put together an administrative record supporting its decision. As illustrated by judicial review of compliance with NHPA, the statute has very little substantive bite.

It is important to take into consideration those situations in which the NHPA is applicable to highway, bridge, and other transportation projects, and those situations in which it is not applicable. The NHPA has been applied to highway and other construction projects, without elaboration as to how it applies, in cases from the Second Circuit,[541] Third Circuit,[542] Fourth Circuit,[543] Fifth Circuit,[544] Sixth Circuit,[545] and Ninth Circuit.[546] Some more elaborate explanations were provided for the application of NHPA to highway and other construction projects in *Thompson v. Fugate.*[547] In *Thompson*, the District Court for the Eastern District of Virginia held that the NHPA was applicable to the construction of a state highway through a site included in the National Register. The District Court for the Eastern District of Virginia enjoined the Secretary of Transportation and the state highway authority from taking steps leading to the construction of the highway. The court noted that the highway has been considered in segments when seeking federal approval for its location, but for the purposes of NHPA the highway needed to be reviewed in its entirety and could not be segmented.

In a more recent case, *The City of Alexandria, Va. v. Slater*,[548] the D.C. Circuit Court of Appeals held that FHWA had fulfilled its NHPA requirement to ascertain the existence of all the historic properties on or eligible for inclusion on the National Register that might be affected by a proposed 12-lane bridge to be constructed near such properties.[549] The NHPA applied to FHWA in this situation and required that FHWA perform the Section 106 analysis and comply with the USDOT's requirement to do all possible planning to minimize harm to the protected properties. The case was initially brought in District Court for the District of Columbia. The City of Alexandria and FHWA settled their case with a compromise regarding the volume of traffic that would be initially permitted to use the bridge (capacity for 12 lanes of traffic, initially marked for only 10). Intervenors in the suit, including local organizations and the National Trust for Historic Preservation, however, continued the case. In April of 1999 the District Court for the District of Columbia held that FHWA failed to complete its identification of the historic properties under NHPA. Because this failure occurred prior to the issuance of the record of decision (ROD) required by NEPA, the court held that FHWA could not have undertaken all planning to minimize harm as required by Section 4(f) of the Department of Transportation Act. This opinion, that all reasonably foreseeable properties and impacts must be identified prior to a final decision by the agency, had "troubling implications for programmatic and process-oriented agreements that have been routinely executed by the Council."[550]

The D.C. Circuit Court of Appeals reversed this decision, upholding the MOA and allowing the project to go forward. The MOA was in controversy because it allowed for a phased approach to identifying the impacts in the project's area of potential effects, while deferring the identification of a small number of ancillary activities until such time as prerequisite engineering work could be carried out during the process of final design. The D.C. Circuit Court of Appeals overruled the district court in holding that the FHWA "did not postpone the identification of these properties 'merely to avoid having to complete its 4(f) [DOT] and 106 analyses,'…the precise identification of these sites requires 'substantial engineering work' that is not conducted until the design stage of the project."[551] The Circuit Court further noted that the "Council regulations explicitly encouraged flexible, stages planning in the section 106 process."[552]

In contrast to *Thompson* and *The City of Alexandria*, the NHPA has been held inapplicable to other undertakings involving highway and other construction. For example, in *Town of Hingham v. Slater*, the NHPA did not apply to a commuter rail line, which was one of six alternatives proposed and analyzed in an environmental study, when no federal funding had ever been applied for or collected.[553] Another case involving the rerouting of a railroad held that where an action is undertaken by private actors and there is no ongoing federal involvement, the court is not required to order a federal agency to undertake

[541] Cobble Hill Ass'n v. Adams, 470 F. Supp. 1077 (E.D.N.Y. 1979).

[542] Phila. Council of Neighborhood Orgs. v. Coleman, 437 F. Supp 1341, *motion denied,* 451 F. Supp. 114, *and aff'd without op.,* 578 F.2d 1375 (3d Cir. 1977).

[543] Coalition for Responsible Reg'l Dev. v. Coleman, 555 F.2d 398 (4th Cir. 1977).

[544] Inman Park Restoration, Inc. v. Urban Mass Transp. Admin., 414 F. Supp. 99 (N.D. Ga. 1975), *aff'd,* 576 F.2d 575 (5th Cir. 1975).

[545] Nashvillians Against I-440 v. Lewis, 524 F. Supp. 962 (M.D. Tenn. 1981).

[546] Benton Franklin Riverfront Trailway & Bridge Comm. v. Lewis, 529 F. Supp. 101 (E.D. Wash. 1981), *aff'd in part and rev'd in part on other grounds,* 701 F.2d 784 (9th Cir. 1981).

[547] 347 F. Supp. 120 (E.D. Va. 1972).

[548] City of Alexandria, Va. v. Slater, 46 F. Supp. 2d 35 (D.D.C. 1999), *rev'd,* 198 F.3d 862, *cert. denied by* Alexandria Historical Restoration and Pres. Comm'n v. FHWA, 531 U.S. 820, 121 S. Ct. 61, 148 L. Ed. 2d 27 (2000).

[549] 198 F.3d at 873.

[550] ACHP, Archive of Prominent Section 106 Cases: Virginia-Maryland: Replacement of the Woodrow Wilson Bridge, www.achp.gov/casearchive/cases3-00VA-MD.html (Mar. 2000).

[551] *City of Alexandria*, 198 F.3d at 873.

[552] *Id.*

[553] Town of Hingham v. Slater, 98 F. Supp. 2d 131 (D. Mass. 2000).

the Section 106 review process.[554] In *James River v. Richmond Metropolitan Authority,*[555] the District Court for the District of Virginia held that indirect federal funding was not sufficient to make Section 106 applicable to the construction of an Interstate expressway as part of an Interstate network. The fact that federal funds had been used to finance other expressways in the system did not make the project at issue fall within the purview of Section 106. In *Citizens for Scenic Severn River Bridge, Inc. v. Skinner*, the Fourth Circuit Court of Appeals held that NHPA does not apply when the construction of a new bridge would damage an old bridge that, during the planning process was not, and never had been, recognized as protected under the National Register.[556] In another case, the construction of a local bridge, which was not under the direct or indirect jurisdiction of FHWA, did not require FHWA's compliance with Section 106 even though FHWA participated in and approved the EIS.[557] The court noted that the project was not under the "direct or indirect jurisdiction" of FHWA.[558]

When there is a federal undertaking to which the NHPA applies, the court will examine whether the federal agency has complied with the requirements of Section 106. The statute requires the preparation of an administrative record on which the agency bases its decision. A case that illustrates the successful use of an administrative record to support an agency decision is *Concerned Citizens Alliance v. Slater*.[559] In this case, the administrative record supported the finding of FHWA that the selected bridge replacement alternative, involving an underpass along a street through a historic district as opposed to continuing to route traffic along the main commercial street, would minimize harm to a historic neighborhood district. The alternative chosen eliminated the traffic through the most beautiful and historically important intersection in the district. The Secretary of Transportation took into account all the factors involved, including benefits to the alternative historic street, and that the alternative would not abate traffic problems on either street. Noise, exhaust, and vibration were taken into consideration, as was the fact that one historic structure would need to be destroyed under each alternative.

In *Concerned Citizens Alliance, Inc. v. Slater*, the Third Circuit also addressed the question of the level of deference owed to the Council's comments under Section 106. The citizens group opposed the placement of the bridge, which directed traffic through a historic district, and sued FHWA and PennDOT alleging that the defendants failed to take into account the comments of the Council and that its decision was arbitrary and capricious.[560] The Court held that although the agency must take into consideration the comments of the Council under Section 106, those comments are advisory only and the agency is not bound by the comments when making its decision.[561] The agency must make it clear in the record that the comments were taken into consideration and were "taken seriously,"[562] but the agency need not agree with the Council's determination of what constitutes the "least harm alternative."[563]

Courts have also addressed the method of obtaining information and resulting consent from interested parties. The Morongo Band of Mission Indians claimed that the FAA was required to obtain the Tribe's consent prior to implementing its proposed arrival enhancement project for the Los Angeles airport.[564] The Ninth Circuit held that consent of the Tribe was not required where the federal agency found no adverse effects of the project.[565] The court distinguished *Pueblo of Sandia v. United States*, discussed above, which held that a reasonable effort to identify properties required more than a mere request for information. As in *Pueblo*, in *Morongo Band of Mission Indians* the FAA had requested information and then not followed up with further inquiry and research.[566] However, the *Morongo Band of Mission Indians* court reasoned that the FAA did not follow up because the undertaking would have no impact on the property, whether it was a historic property or not.[567]

In some cases, courts have been willing to overlook agency lapses in following the procedural requirements of FHWA. In *National Indian Youth Council v. Watt*, the Tenth Circuit Court of Appeals overlooked the Department of the Interior's failure to comply with the Advisory Council's regulations where the consulting parties made a 'good faith, objective, and reasonable effort to satisfy NHPA'."[568] The court found that a failure to adhere to timing requirements relating to the designation of archeological sites was a "technicality" that did not affect the agency's ultimate decision.

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[554] Gettysburg Battlefield Pres. Ass'n v. Gettysburg College, 799 F. Supp. 1571 (M.D. Penn. 1992).

[555] 359 F. Supp. 611 (E.D. Va. 1973).

[556] *See* Citizens for Scenic Severn River Bridge, Inc. v. Skinner, 802 F. Supp. 1325 (D.C. Md. 1991), *aff'd without op.,* 972 F.2d 338 (4th Cir. 1991).

[557] Los Ranchos De Albuquerque v. Barnhart, 906 F.2d 1477 (10th Cir. 1990, *cert. denied,* 112 L. Ed. 2d 1099, 11 S. Ct. 1017).

[558] *Id*. at 1484.

[559] 176 F.3d 686 (3d Cir. 1999).

[560] *Id*. at 695.

[561] *Id*. at 695–96.

[562] *Id*. at 696.

[563] *Id*.

[564] Morongo Band of Mission Indians v. Fed. Aviation Admin., 161 F.3d 569 (9th Cir. 1998).

[565] *Id*. at 582.

[566] *Id*.

[567] *Id*.

[568] Nat'l Indian Youth Council v. Watt, 664 F.2d 220, 227 (C.A.N.M. 1981); *See also* Melissa A. MacGill, Comment, *Old Stuff is Good Stuff: Federal Agency Responsibilities Under Section 106 of the National Historic Preservation Act*, 7 ADMIN. L.J. AM. U. 697, 717 (1994).

Other cases have dealt with how long an agency must oversee a project. For example, the Fourth Circuit found that an MOA entered into by the EPA 10 years earlier, prior to funding a sewer project, did not require the EPA to reinitiate the Section 106 review process when a developer requested a permit to connect additional lines to the sewer. The MOA stated that the parties would submit all revisions of the plan to the SHPO.[569] The court noted that Congress's intent was not to require agencies to "affirmatively protect preservation interests."[570] The scope of the agency's participation in the Section 106 review is limited to its "undertaking." Once the Section 106 review process for the undertaking in complete, the agency is discharged of its duties under NHPA.

There is no suggestion in either the statute or the legislative history that Section 106 was intended to impose upon federal agencies anything more than a duty to keep the Advisory Council informed of the effect of federal undertakings and to allow it to make suggestions to mitigate adverse impacts on preservation interests: it encourages them to do so by facilitating dialogue and consultation.[571]

i. Duty to "Take Into Account."—The federal agency official needs to take adverse affects of an undertaking into account prior to rendering a final decision. The duty to "take into account" the effect of the undertaking involves the step-by-step literature review, consultation, and MOA process described above, as well as a duty to produce an administrative record that documents how the agency made its final determination.[572] All information relating to adverse effects should be documented, including consultations with the SHPO/THPO, Council, or public.[573] "Instances of apparent noncompliance with the statutory duty to 'take into account' are more likely to occur because of disagreement over the scope of the review which a project agency should conduct."[574] For example, in *Hall County Historical Soc. v. Georgia Dep't of Transp.*,[575] the District Court of Georgia held that the agency relied too heavily on the state transportation agency's recommendations rather than undertaking its own research to "take into account" any adverse effects of the project. The court called this action "an improper delegation of Federal Highway Administration responsibilities under the National Historic Preservation Act" and chided the federal agency for its "blind reliance" on the state's findings and determinations.[576]

The agency only has to consider the effects of the proposed project and does not have to consider potential modifications of the project. The District Court of Illinois stated that

> [i]f we were to adopt plaintiffs' argument that HUD must consider completely independent and different proposals for the use of federal funds, i.e. construction outside the historic district or rehabilitation of existing housing within it, then any proposal for construction within a historic district would always have to be rejected since the alternatives would always create less of an impact on the district.[577]

The court rejected this notion.

c. NHPA and NEPA Procedural Comparison

The NHPA regulations contain provisions intended to streamline and simplify the Section 106 process. One critical streamlining factor is the coordination of the NHPA and NEPA processes. The NHPA regulations specifically provide for this coordination.

> An Agency Official may use the process and documentation required for the preparation of an EA/FONSI[578] or an EIS/ROD[579] to comply with section 106 in lieu of the procedures set forth in Secs. 800.3 through 800.6, if the Agency Official has notified in advance the SHPO/THPO and the Council that it intends to do so and [certain] standards are met.[580]

The processes may run concurrently so long as the NEPA process encompasses all the consultations and document reviews that would be required under NHPA. Thus, the processes can be included in one document.[581]

It should be noted that the threshold for EIS review under NEPA and for Section 106 review under the NHPA are not the same. NEPA requires a "major federal action significantly affecting the quality of the human environment," while NHPA simply requires a federal agency "undertaking." Because the two statutes have different triggers for review and encompass different procedural mandates, compliance with one does not automatically mean compliance with the other.[582] Notably, the NHPA regulations provide that "[a] finding of adverse effect on a historic property does not necessarily require an EIS under NEPA."[583]

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[569] Waterford Citizens' Ass'n v. Reilly, 970 F.2d 1287, 1289 (4th Cir. 1992); *See also* MacGill, Comment, *supra* note 568.

[570] Waterford Citizens' Ass'n v. Reilly, 970 F.2d 1287, 1291 (4th Cir. 1992).

[571] *Id*.

[572] ROSS D. NETHERTON, SUPPLEMENT TO LEGAL ASPECTS OF HISTORIC PRESERVATION IN HIGHWAY AND TRANSPORTATION PROGRAMS 14 (Nat'l Coop. Highway Research Program, Legal Research Digest No. 20, 1991).

[573] *Id*.

[574] *Id*.

[575] Hall County Historical Soc. v. Ga. Dep't of Transp., 447 F. Supp. 741 (N.D. Ga. 1978).

[576] *Id*. at 751.

[577] Wicker Park Historic Dist. v. Pierce, 565 F. Supp. 1066, 176 (N.D. Ill. 1982).

[578] EA/FONSI is an environmental assessment/finding of no significant impact under NEPA.

[579] EIS/ROD is an environmental impact statement/record of decision under NEPA.

[580] 36 C.F.R. § 800.8(c).

[581] Stern & Slade, *supra* note 488, at 133, 144 (1995).

[582] *Id.* at 143–44.

[583] 36 C.F.R. § 800.8(a)(1).

d. Section 110

i. Preservation of Historic Properties Owned or Controlled by Federal Agencies.—Section 110 of the NHPA states, "[t]he heads of all Federal agencies shall assume responsibility for the preservation of historic properties which are owned or controlled by such agency"[584] and "undertake, consistent with the preservation of such properties and the mission of the agency,…any preservation, as may be necessary to carry out this section."[585] The federal agency must establish a preservation program and "ensure…(B) that such properties [under the agency's control] are managed and maintained in a way that considers the preservation of their historic, archaeological, architectural, and cultural values in compliance with [Section 106]."[586]

ii. Duty of Agency.—Section 110 raises the question of what, if any, additional duties are imposed on the agency by Section 110. The Federal District Court for the District of Columbia has held that Section 110 "cannot be read to create new substantive preservationist obligations separate and apart from the overwhelmingly procedural thrust of the NHPA."[587] The court held that Section 106 "constitutes the main thrust of NHPA" and that Section 110 does not add any additional preservationist obligations.[588]

When local residents challenged a city's approval of a federally-funded historic hotel renovation project alleging violations of NHPA, the New Jersey District Court examined Section 110(f). Section 110(f) imposes a duty to minimize harm caused by a federal undertaking on national landmarks and to provide the Council with an opportunity to comment.[589] The court held that the defendants had fulfilled the mitigation requirement when the defendants evaluated a range of treatment options in consultation with the SHPO; required the property owner to evaluate alternative designs for additions to the building; and required the property owner to rehabilitate the exterior and interior of the building.[590]

In *Colorado River Indian Tribes v. Marsh*,[591] the Army Corps of Engineers was held to have violated NHPA and its regulations by failing to take the required measures to protect cultural and archeological resources on federal land adjacent to proposed development. The Corps' mistake occurred when it confined the scope of its protective measures to properties that may qualify for the National Register only in the area directly affected by the permit and not the broader, adjacent affected areas.[592]

e. Standing to Sue Under NHPA

The test for who has standing to sue under the NHPA has expanded since the early days of the NHPA litigation. The standard test for standing requires an injury in fact, causation, and redressibility. Some early cases read the NHPA as permitting suits to be brought only when a plaintiff had ownership, title, and legal control in the building to be preserved or where the plaintiff was significantly involved in the administrative process.[593] In 1972, the United States Supreme Court in *Sierra Club v. Morton*[594] held that an injury in fact did not have to be an economic injury. A plaintiff could maintain standing through the lessened enjoyment and aesthetics of an area that the plaintiff used.[595] Cases following Sierra Club extended standing to neighborhood organizations and individual residents who "use" buildings for "aesthetic and architectural value."[596]

Courts have also addressed whether there is an implied private right of action under NHPA. In *National Trust for Historic Preservation v. Blanck*, the District Court for the District of Columbia held that the agency was subject to the arbitrary and capricious standard of review under the Administrative Procedures Act (APA) because there is no private right of action under the NHPA.[597] The court based its opinion that the APA's arbitrary and capricious standard applies to review of agency decisions under the NHPA on several circuit court opinions[598] and the NHPA legislative history.[599]

Other cases have granted standing to historic preservation groups under NHPA, thus providing these groups with a private right of action.[600] For example, the

[584] 16 U.S.C. § 470h-2(a)(1).

[585] *Id*.

[586] 16 U.S.C. § 470h-2(a)(2)(B).

[587] Nat'l Trust for Historic Pres. v. Blanck, 938 F. Supp. 908, 922 (D.C. 1996).

[588] *Id*. at 925.

[589] Lesser v. City of Cape May, 110 F. Supp. 2d 303, 307 (D. N.J. 2000).

[590] *Id*. at 325–26.

[591] Colo. River Indian Tribes v. Marsh, 605 F. Supp. 1425 (C.D. Cal. 1985).

[592] *Id.* at 1438.

[593] BOWER, at 15 (citing South Hill Neighborhood Ass'n, Inc. v. Romney, 421 F.2d 454 (6th Cir. 1969).

[594] Sierra Club v. Morton, 405 U.S. 727 (1972).

[595] *Id.*

[596] *See, e.g*., Neighborhood Dev. Corp. v. Advisory Council on Historic Pres., 623 F.2d 21, 23–24 (6th Cir. 1980).

[597] Nat'l Trust for Historic Pres. v. Blank, 938 F. Supp. 908, 914–15 (D.D.C. 1996) (citations omitted).

[598] *Id.* at 914, *citing* Conn. Trust for Historic Pres. v. ICC, 841 F.2d 479, 481–82 (2d Cir. 1988); Abenaki Nation of Mississquoi v. Hughes, 805 F. Supp. 234, 239–40 (D. Vt. 1992), *aff'd*, 990 F.2d 729 (2d Cir. 1993); Citizens for the Scenic Severn River Bridge v. Skinner, 802 F. Supp. 1325, 1337 (D. Md. 1991) (applying same review standards to NHPA as apply to NEPA), *aff'd*, 972 F.2d 338 (4th Cir. 1992).

[599] *Id.* at 915.

[600] *See, e.g.,* Vieux Carre Property Owners, Residents & Assocs., Inc. v. Brown, 875 F.2d 453 (5th Cir. 1989), *cert. denied,* 110 S. Ct. 720, 493 U.S. 1020, 107 L. Ed. 2d 739; Waterford Citizens' Ass'n v. Reilly, 970 F.2d 1287 (4th Cir. 1992); Brewery Dist. Soc. v. FHWA, 996 F. Supp. 750 (S.D.

Third Circuit Court in *Boarhead Corp. v. Erickson*[601] held that there is a private right of action under NHPA. The court in this case relied in part on the provision in NHPA awarding attorney's fees to the prevailing party in a case brought by "any interested person to enforce the provisions" of the NHPA.[602] The court additionally relied on other courts of appeals' decisions that had reached the merits of NHPA cases, assuming, therefore, that the plaintiffs in those cases must have met the jurisdictional prerequisites for such a private cause of action.[603]

An additional bar to bringing suits under NHPA is the notion of an "implicit statute of limitations." This issue was raised and held to be invalid by the Ninth Circuit in *Tyler v. Cisneros*.[604] In *Tyler*, the plaintiffs were homeowners in an area surrounding the future site of a low-income housing project. They objected to the Department of Housing and Urban Development's (HUD) and the city's plans on the grounds that the plans were incompatible with the surrounding neighborhood, which was comprised of homes eligible for inclusion on the National Register. The District Court held that the plaintiffs' claims were moot based on the "implicit statute of limitations" under NHPA because HUD had already dispensed funds to the city.[605] This "implicit statute of limitations" arose from the District Court's reading of Section 106, which states that the agency official must undertake the Section 106 review "prior to" the expenditure of any federal funds.[606] The Circuit Court held that the "prior to" language was a control on the agency's action and was not intended to delineate a time period during which plaintiffs must bring a law suit. "An implicit statute of limitations could create a situation where cases are dismissed as unripe before disbursement of federal funds and dismissed as moot after disbursement of federal funds, leaving virtually no window of opportunity for a private enforcement action."[607]

2. The Antiquities Act

The Antiquities Act authorizes the President to declare historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest that are situated upon the lands owned or controlled by the United States, as national monuments.[608] This may include reservation of the smallest area of land compatible with the proper care and management of the objects to be protected. Only Congress may authorize any further extension or establishment of national monuments in Wyoming.[609] The U.S. Supreme Court in *Cappaert v. United States*[610] ruled that this Act provides protection for both a site and its rare inhabitants and that an underground pool and a unique species of desert fish inhabiting it were objects of historic or scientific interest that qualified the area as a national monument under the Act.

According to Section 433, no person shall appropriate, excavate, injure, or destroy a historic or prehistoric ruin or monument, or an object of antiquity, situated on lands owned or controlled by the United States, without permission of the secretary of the department with jurisdiction over the lands.[611] This prohibition applies regardless of whether the site has been declared a national monument. Thus FHWA or another federal agency is required to notify the Department of the Interior when a highway or other federal project may result in the loss or destruction of an archeological resource, and may be required to undertake a survey or data recovery.[612] Violators are subject to a fine or imprisonment for not more than 90 days, or both.[613]

3. The Archaeological Resources Protection Act

The Archaeological Resources Protection Act[614] establishes a permitting program to regulate the excavation and removal of archaeological resources from public and Indian lands. According to the Act, no person may excavate, remove, damage, or otherwise alter or deface or attempt to excavate, remove, damage, or otherwise alter or deface any archaeological resource located on public lands or Indian lands unless such activity is pursuant to a permit.[615] A permit to remove and excavate archaeological resources can only be issued if the federal land manager determines that: 1) the applicant is qualified to carry out the permitted activity; 2) the activity is undertaken for the purpose of furthering archaeological knowledge in the public interest; 3) the archaeological resources that are excavated or removed from public lands will remain the property of the United States and such resources and copies of associated archaeological records and data will be preserved by a suitable university, museum, or other scientific or educational institution; and 4) the activity pursuant to such permit is not inconsistent with any management plan applicable to the public lands

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Ohio 1998) (holding that organizations and individuals had standing to sue the FHWA under NHPA).

[601] Boarhead Corp. v. Erickson, 923 F.2d 1011 (3d Cir. 1991).

[602] *Id*. at 1017 (citing 16 U.S.C.A. § 470w-4.).

[603] *Id*. (*citing* Lee v. Thornburgh*,* 877 F.2d 1053 (D.C. Cir. 1989); Vieux Carre Property Owners, Residents & Assocs. v. Brown, 875 F.2d 453 (5th Cir. 1989), *cert. denied,* 493 U.S. 1020, 110 S. Ct. 720, 107 L. Ed. 2d 739 (1990); Nat'l Ctr. for Pres. Law v. Landrieu*,* 635 F.2d 324 (4th Cir. 1980) (per curiam); WATCH v. Harris*,* 603 F.2d 310 (2d Cir.), *cert. denied,* 444 U.S. 995, 100 S. Ct. 530, 62 L. Ed. 2d 426 (1979).

[604] Tyler v. Cisneros, 136 F.3d 603 (9th Cir. 1998).

[605] *Id*. at 607.

[606] *Id*.

[607] *Id*. at 608.

[608] 16 U.S.C. §§ 431–33.

[609] 16 U.S.C. § 431a.

[610] 426 U.S. 128 (1976).

[611] 16 U.S.C. § 433.

[612] FHWA Environmental Guidebook, *supra* note 410, at Tab 6.

[613] 16 U.S.C. § 433.

[614] 16 U.S.C. §§ 470aa–470mm.

[615] 16 U.S.C. § 470ee(a).

concerned.[616] The Act also prohibits the removal for transport or sale in interstate commerce of archaeological resources from private lands in violation of state and local law.[617] A transportation agency should ensure that its contractor receives the necessary permit and identifies and evaluates the resource, and should endeavor to mitigate or avoid the resource or, where necessary, apply for permission to examine, remove, or excavate the objects.[618]

Transportation projects may encounter and need to properly evaluate archaeological resources in accordance with the Act, as well as similar state and local laws. Furthermore, Section 4(f) of the DOT Act also applies when a highway project would result in the disturbance or destruction of protected archaeological resources. FHWA regulations specifically speak to compliance with Section 4(f) in the context of archaeological resources.[619] The FHWA regulations, however, conclude that where an archaeological resource is important primarily for the information it contains but has minimal value preserved in place, the removal and preservation of the resources will bring the project outside the scope of Section 4(f) and obviate the need to look for prudent and feasible alternatives.[620]

F. MITIGATING THE IMPACT OF TRANSPORTATION PROJECTS ON LAND*[622]

1. Types of Mitigation

Under the classic definition of mitigation adopted by the CEQ under NEPA, "mitigation" includes measures intended to

> (a) Avoid the impact altogether by not taking a certain action or parts of an action;
>
> (b) Minimize impacts by limiting the degree or magnitude of the action and its implementation;
>
> (c) Rectify the impact by repairing, rehabilitating or restoring the affected environment;
>
> (d) Reduce or eliminate the impact over time by preservation and maintenance operations during the life of the action;
>
> (e) Compensate for the impact by replacing or providing substitute resources or environments.[622]

It has been said more specifically with respect to the adverse effects of highway location, construction, and operation that there are "essentially five types of mitigation:" "location modifications, design modifications, construction measures, operational conditions, and right-of-way measures and replacement land."[623] These categories, in turn, may be applied in the context of potential impacts on wetlands, floodplains, natural resources, and endangered species; noise impacts; impacts on parklands and historic and archaeological resources; and impacts on viewsheds and aesthetic concerns. Requirements to mitigate adverse environmental impacts of a transportation improvement can come from many sources, including federal and state laws and regulations and private agreements between transportation agencies and other parties such as private citizens, environmental groups, or other government agencies.[624]

2. Authority to Mitigate

a. Wetlands, Floodplains, Erosion, and Endangered Species

Wetlands mitigation requirements applicable to transportation and nontransportation projects alike are derived from the EPA regulations implementing the CWA Section 404 dredge and fill permit program. Under these regulations, no wetland may be filled "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."[625] The regulations set forth in detail acceptable measures to minimize adverse impacts of dredged or fill material, including those relating to

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[616] 16 U.S.C. § 470cc(b).

[617] 16 U.S.C. § 470ee(c). *See* United States v. Gerber, 999 F.2d 112 (7th Cir. 1993), *cert. denied*, 510 U.S. 1071 (1994) (conviction for possession of Native American artifacts removed from private land by bulldozer operator during highway construction).

[618] FHWA Environmental Guidebook, *supra* note 410, at Tab 6.

[619] *See, e.g.,* 23 C.F.R. § 771.135(g)(1); Town of Belmont v. Dole, 766 F.2d 28 (1st Cir. 1985), *cert. denied*, 474 U.S. 1055. *See* § 2B *supra*.

[620] *Id*.

[621*] This section updates, as appropriate, and relies in part upon RICHARD A. CHRISTOPHER & MARGARET L. HINES, ENFORCEMENT OF ENVIRONMENTAL MITIGATION COMMITMENTS IN TRANSPORTATION PROJECTS: A SURVEY OF FEDERAL AND STATE PRACTICE (Nat'l Coop. Highway Research Program, Legal Research Digest No. 42, 1999); RICHARD A. CHRISTOPHER, AUTHORITY OF STATE DEPARTMENTS OF TRANSPORTATION TO MITIGATE THE ENVIRONMENTAL IMPACT OF TRANSPORTATION PROJECTS (Nat'l Coop. Highway Research Program, Legal Research Digest No. 22, 1992); and MICHAEL C. BLUMM, HIGHWAYS AND THE ENVIRONMENT: RESOURCE PROTECTION AND THE FEDERAL HIGHWAY PROGRAM 27–30 (Nat'l Coop. Highway Research Program, Legal Research Digest No. 29, 1994).

[622] 40 C.F.R. § 1508.20.

[623] MICHAEL C. BLUMM, HIGHWAYS AND THE ENVIRONMENT: RESOURCE PROTECTION AND THE FEDERAL HIGHWAY PROGRAM 27–30 (Nat'l Coop. Highway Research Program, Legal Research Digest No. 29, 1994), at 29.

[624] RICHARD A. CHRISTOPHER & MARGARET L. HINES, ENFORCEMENT OF ENVIRONMENTAL MITIGATION COMMITMENTS IN TRANSPORTATION PROJECTS: A SURVEY OF FEDERAL AND STATE PRACTICE (Nat'l Coop. Highway Research Program, Legal Research Digest No. 42, 1999) at 3, 4.

[625] 40 C.F.R. § 230.10(a).

project design and operational controls and practices, as well as mitigation through the construction of compensatory wetlands habitats.[626] These regulations are discussed in more detail in subsection 4A.

FHWA has recently promulgated new wetlands mitigation regulations[627] pursuant to Executive Order No. 11990 and DOT Order No. 5660.1A and reflecting the expanded authority provided by TEA-21 for federal funding of wetlands mitigation efforts. The previous regulations provided for the mitigation of impacts to privately owned wetlands that were caused by "new construction" of federal-aid highway projects.[628] These prior regulations established a hierarchy of mitigation measures that were to be considered in the order listed in order for their cost to qualify for federal funding and preferred mitigating wetland impacts within the highway right-of-way limits. The updated regulations do not clearly establish a hierarchy, but rather encompass a broad range of mitigation alternatives, including compensatory efforts both inside and outside the right-of-way and the restoration of historic wetlands, as well as mitigation banking and in-lieu funding of wetlands efforts.[629]

FHWA regulations addressing policies and procedures for the location of highway encroachments on floodplains prohibit any "significant encroachment" unless it is documented in final NEPA environmental documentation (FONSI or EIS) as the only practicable alternative.[630] "Significant encroachment" includes both direct encroachment of a highway construction or reconstruction, rehabilitation, repair, or improvement activity within the limits of the base flood plain, and direct support of base flood plain development that would (1) have a significant potential for interruption or termination of a transportation facility needed for emergency vehicles or evacuation, (2) result in a significant risk to life or property loss during a flood, or (3) cause a significant adverse impact on natural and beneficial floodplain values.[631] The regulations require that location studies for highways include evaluation and discussion of the practicability of alternatives to any significant encroachments.[632] Design standards are intended to minimize the effect of encroachments that cannot be avoided. These address a number of criteria and include the requirement that the design of encroachments be consistent with standards established by FEMA and state and local governmental agencies for the administration of the NFIP.[633] These standards may include the provision of compensatory flood storage.

FHWA regulations include requirements for erosion and sedimentation control on highway construction projects.[634] This includes both permanent and temporary controls consistent with good construction and management practices. FHWA references the American Association of State Highway and Transportation Officials' Highway Drainage Guidelines, Volume III, *Erosion and Sediment Control in Highway Construction*, 1992, or more stringent state standards as guidance for implementing these requirements, and cites to EPA guidance for control of erosion from projects within CZMAs.[635]

The requirements of the ESA impose mitigation obligations through avoiding impacts on listed species or their habitats. These requirements are discussed in detail in Section 4.D.1 and are not repeated here. In furtherance of its obligations under the ESA, FHWA has entered into an agreement with The Nature Conservancy to share information and cooperate in addressing ecological impacts and mitigation in connection with transportation projects.[636]

b. Noise

Section 136 of the Federal-Aid Highway Act of 1970[637] requires the Secretary of Transportation to develop "standards for highway noise levels compatible with different land uses" and prohibits FHWA approval of plans and specifications for any proposed highway project unless they include adequate measures to implement the noise level standards. As important, the same section provides that noise mitigation measures may be counted as part of the project for purposes of federal-aid reimbursement. Such measures include but are not limited to the acquisition of additional rights-of-way, construction of physical barriers, and landscaping.

FHWA procedures for Abatement to Highway Traffic Noise and Construction Noise[638] set forth standards for conducting analyses of traffic noise impacts and evaluation of alternative noise abatement measures. The regulations divide noise abatement projects into two types; Type I projects are those that involve the construction of a highway in a new location or a significant alteration to an existing highway, and Type II projects are those intended to abate noise on an existing highway.[639] The regulation applies mainly to Type I projects, but also to Type II projects where highway agencies opt to implement a Type II project with federal aid.[640]

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[626] 40 C.F.R. § 230.70 *et seq*.

[627] 65 Fed. Reg. 82913 (Dec. 29, 2000).

[628] 23 C.F.R. pt. 777 (1996).

[629] 23 C.F.R. § 777.9 (Apr. 1, 2001). Mitigation banking is discussed in § 4.A.6., *supra.*

[630] 23 C.F.R. § 650.113(a).

[631] 23 C.F.R. § 650.105.

[632] 23 C.F.R. § 650.111(d).

[633] 23 C.F.R. § 650.115.

[634] 23 C.F.R. § 650.201.

[635] 23 C.F.R. § 650.211.

[636] Cooperative Agreement Between the Federal Highway Administration and The Nature Conservancy, June 6, 1997, available at http://www.fhwa.dot.gov/environment/guidebook/chapters/v1ch17.htm.

[637] 23 U.S.C. §§ 109(h),(i).

[638] 23 C.F.R. pt. 772.

[639] 23 C.F.R. § 772.5(h)-(i).

[640] 23 C.F.R. § 772.7.

The regulations also specify that in considering noise abatement measures, "every reasonable effort shall be made to obtain substantial noise reductions" and that the opinions of impacted residents "will be a major consideration in reaching a decision on the reasonableness of abatement measures to be provided."[641] The regulations further provide that noise impacts be identified in an EIS or FONSI.[642] Both construction noise impacts and operational noise impacts are to be considered.[643]

Noise abatement measures under the FHWA regulations need only be applied to protect existing activities and developed lands or to protect undeveloped lands for which development is planned, designed, and programmed. Furthermore, noise abatement projects on an existing highway that is not being significantly realigned or widened are not eligible for federal funds unless they were approved before November 28, 1995, or are proposed where land development or substantial construction predated the existence of any highway. Federal funding is no longer available for noise abatement on existing highways designed to reduce impact on development that occurred after the highway was approved or right-of-way acquired.[644]

Noise abatement measures that may be incorporated in some or all federally-funded highway projects include the following: traffic management measures, alteration of horizontal and vertical alignments, acquisition of property rights for construction of noise barriers, construction of noise barriers within or outside the right-of-way, acquisition of property rights in undeveloped property to preempt development, and noise insulation.[645] Additional noise mitigation measures may be approved on a case-by-case basis, subject to cost-benefit justification.[646]

FHWA regulations provide that constructive use under Section 4(f) of the DOT Act may be found where projected noise level increases attributable to a project substantially interfere with the use and enjoyment of a noise-sensitive facility protected under Section 4(f), such as an amphitheater, sleeping area of a campground, or historic or park setting where quiet is a significant attribute.[647]

c. Parklands and Historic and Archaeological Resources

Obligations to avoid or mitigate impacts are imposed under Section 4(f) of the USDOT Act,[648] which requires that a transportation project not use publicly owned land of a public park, a recreation area, or a wildlife and waterfowl refuge or historic site of national state or local significance unless 1) there is no prudent and feasible alternative to using that land, and 2) the program or project includes all possible planning to minimize harm to the park, recreation area, refuge, or historic site. Section 4(f) is discussed in more detail in Section 3B. Regulations addressing Section 4(f) compliance provide first for discussion of avoidance alternatives and mitigation measures in the final EIS, FONSI, or a separate 4(f) evaluation.[649]

In addition to obligations to consider historic impact under Section 4(f) for projects that "use" a historic site, review under Section 106 of the NHPA is triggered by transportation projects potentially affecting a historic property listed or eligible for listing on the National Register of Historic Places, even if there is no physical impact on that site. Under Section 106 review, if an adverse effect on a historic property cannot be avoided, the federal agency sponsoring the project must consult with the State Historic Preservation Officer on ways to mitigate the adverse effect and endeavor to reach an MOA as to mitigation measures acceptable to both sides. It may be possible to resolve adverse effects identified during the Section 106 review process with respect to archeological resources by committing to a process of documentation and data recovery.[650]

d. Viewsheds and Aesthetic Concerns

A precursor to the current emphasis on controlling the environmental impacts of highway projects was the passage of the Highway Beautification Act of 1965, which controlled the placement and maintenance of advertising billboard signs along the National Highway System; required the screening or removal of roadside junkyards; and provided for the costs of landscaping, highway rest areas, and the acquisition of land adjacent to the highway right-of-way for the "restoration, preservation, and enhancement of scenic beauty."[651] As amended, the federal landscaping program now includes a requirement for seeding with native wildflowers with a portion of the funding available for landscaping.[652]

In addition, many states have adopted scenic easement acquisition programs or established buffer areas along highways as a means of preserving scenic viewsheds.[653] Under a scenic easement program, the acquiring agency pays a landowner not to build in such a way as to obstruct the view from a highway. The agency acquires only the right to enforce a negative

[641] 23 C.F.R. §§ 772.11(d), (f).

[642] 23 C.F.R. § 772.11(e).

[643] 23 C.F.R. §§ 772.9, 772.19.

[644] 23 C.F.R. § 772.13(b).

[645] 23 C.F.R. § 772.13(c).

[646] 23 C.F.R. § 772.13(d).

[647] 23 C.F.R. § 771.135(p)(4).

[648] 49 U.S.C. § 303(c).

[649] 23 C.F.R. § 771.135.

[650] *See* 36 C.F.R. § 800.5(2); 36 C.F.R. § 800.6(b)(i); and Recommended Approach for Consultation on Recovery of Significant Information of Archeological Sites, available at http//www.achp.gov/archguide.html# resolving.

[651] 23 U.S.C. §§ 131, 136, and 319.

[652] One quarter of one-percent of landscaping funds. 23 U.S.C. § 319(b).

[653] These programs are discussed in CHRISTOPHER, *supra* note 621, at 6.

easement, with no physical right of use or access on the property.[654]

Various state programs also require mitigation of landscape impacts. For example, Maryland requires mitigation of forest clearing in excess of 1 acre for highway projects by requiring reforestation on public land on a 1:1 basis or a cash payment if mitigation areas are unavailable.[655]

3. Constraints on the Use of Funding for Mitigation

Federal reimbursement is commonly available for the costs of mitigation measures consistent with FHWA requirements. Under ISTEA, federal transportation funds may be used for wetlands mitigation efforts consistent with all applicable federal laws and regulations.[656] FHWA regulations specifically provide for the use of federal aid funds to improve existing publicly owned wetlands and to purchase replacement wetlands outside the right-of-way, where mitigation of wetlands impacts within the right-of-way is not feasible.[657] However federal aid funds may not be used for maintaining or managing wetlands areas on an ongoing basis.[658]

Federal funding may not be used for noise abatement projects on an existing highway that is not being significantly realigned or widened, unless the measures were approved before November 28, 1995, or are proposed for land where a building permit, filing of a plat plan, or similar action took place prior to right-of-way acquisition or construction approval for the original highway.[659] Federal Interstate highway funding may not be used for noise abatement on existing highways that are not being substantially expanded or realigned.[660]

4. Use of Eminent Domain for Mitigation

Whether a transportation agency has the power to condemn property for the purpose of mitigating the environmental impacts of transportation projects depends upon an interpretation of the statutory authority under which it purports to act. There are few reported decisions addressing the use of eminent domain for mitigation of transportation environmental impacts.[661] However, of those jurisdictions that have addressed the issue, there seems to be a tendency to find such authority within even fairly general provisions addressing the construction of a transportation system. This is particularly the case where the mitigation is seen as necessary in order for the project to go forward or to receive federal funding.

Two such cases involve the acquisition of land to replace wetlands disturbed as a result of highway construction. The Pennsylvania court in *Appeal of Gaster*[662] held that the state DOT had legislative authority to acquire land for the replacement of wetlands under a statute that allowed it to acquire property for "the purpose of mitigating adverse effects on other land adversely affected by its proximity to such highway or other transportation facility."[663] The court also found such authority in a general provision authorizing the department to condemn property for "all transportation purposes."[664] The court's reasoning was that the wetlands mitigation in question was required for the state to receive federal funds for the highway construction in question.[665] Further demonstrating the breadth of its holding, the court also dismissed as collateral to the condemnation action the condemnee's challenge to the department's interpretation of the FHWA regulations at 23 C.F.R. 777, which formed the basis for the decision to take the condemnee's property. More recently, the Missouri Supreme Court, in *Missouri Highway and Transportation Commission v. Keeven*[666] held that that state's highway agency had "authority to meet the requirements of the federal government and, in furtherance of those requirements, condemn some land to replace wetlands disturbed by the construction of state highways, where necessary for the proper and economical construction of state highways."[667] In that case, the Army Corps of Engineers required wetlands replacement as a condition of the permit required for the construction of the highway.[668] In contrast to the ruling under Pennsylvania law that the agency's compliance with regulatory requirements pertaining to wetlands mitigation requirements were collateral to the eminent domain proceedings, the Missouri court remanded for trial the question of whether the agency reasonably selected the condemnee's land to fulfill the federal requirements for wetlands replacement.[669]

A California court, similarly, found authority for the use of eminent domain to acquire land for environmental mitigation in connection with the construction of a ferry terminal.[670] The court stated that "the terminal project required the approval of dozens of different agencies" and that these agencies, which included the State Lands Commission, Army Corps of Engineers, and Bay Conservation and Development

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[654] *Id*.

[655] MD. CODE ANN., NAT. RES. ART. 5–103.

[656] BLUMM, *supra* note 623, at 28.

[657] 23 C.F.R. § 777.9(b).

[658] 23 C.F.R. § 777.11(g).

[659] 23 C.F.R. § 772.13(b).

[660] 23 C.F.R. § 772.13(c).

[661] See the general discussion of this subject in CHRISTOPHER, *supra* note 621, at 7.

[662] 124 Pa. Commw., 314, 556 A.2d 473 (1989); *alloc. den.*, 524 Pa. 633, 574 A.2d 73 (1989).

[663] 556 A.2d 476.

[664] *Id*. at 477.

[665] *Id*.

[666] 895 S.W.2d 587 (Mo. 1995).

[667] *Id*. at 590.

[668] *Id*. at 588–89.

[669] *Id*.

[670] Golden Gate Bridge, Highway and Transp. Dist. v. Muzzi, 148 Cal. Rptr. 197 (Cal. Ct. App. 1978).

Commission, "required as a condition of their approval that environmental mitigation measures be taken."[671] The court went on to state that

> [a]lthough such mitigation measures could in some cases involve actions other than the condemnation of property, the ability to mitigate the adverse environmental effects in this manner gives respondent a power and flexibility which do much to effectuate the specific powers referred to in Streets and Highways Code section 27166.[672]

The court therefore held that the agency's "power to condemn for the construction, acquisition and operation of a water transportation system implicitly includes the power to condemn for environmental mitigation." But it cautioned that this power did not extend to condemnation for environmental purposes unrelated to the agency's transportation mandate.[673] These three cases favoring fairly broad interpretations of statutory eminent domain authority can be contrasted to the decision of the Louisiana court that the taking of a permanent servitude in an access canal, the primary purpose of which was public recreation such as hunting and fishing rather than for highway purposes, was not properly incidental to the construction of a highway bridge.[674]

In at least one instance, federal legislation directly addresses the use of eminent domain for transportation mitigation purposes. The Highway Beautification Act specifically provided that nothing therein was to be "construed to authorize the use of eminent domain to acquire any dwelling" or related buildings.[675]

5. Enforcement of Mitigation Commitments

Mitigation efforts may be memorialized in an EIS, construction contract, permit condition, or private agreement. Depending upon how memorialized, they may be enforceable under substantive environmental statutes or, in the case of contractual agreements, through common law actions. NEPA, however, is an ineffective means of enforcing mitigation requirements through court action, because it is a procedural law and simply requires that mitigation measures be identified and considered.[676]

The requirement of Section 4(f)(2)[677] that a project in a protected area not be approved unless there has been "all possible planning to minimize harm" to the protected area "resulting from the use" has been asserted as a basis for challenging a transportation project on the grounds that the project did not provide sufficient assurance of the completion of identified mitigation measures. In *Geer v. Federal Highway Administration*, however, the Federal District Court concluded that the requisite degree of planning for mitigation had been completed and that "exact details of all financial commitments" were not required to satisfy the statutory obligations.[678]

The NHPA incorporates within the Section 106 Process under that statute a requirement that adverse affects of a project on historic properties be addressed through mitigation measures. Such measures are normally memorialized within an MOA among the permitting agency and the SHPO that is concurred in by the Advisory Council on Historic Preservation.[679] The MOA may be enforced by an environmental or other special interest group, in addition to the parties to the agreement itself.[680]

Citizens suit provisions under the CWA provide a vehicle for enforcing permit standards under the Section 402 NPDES program.[681] Most cases hold that a citizen's suit may also enforce provisions of a state discharge permit that exceed the requirements of the federal act and regulations.[682] At least one court has held that citizens may not sue to compel the Army Corps of Engineers to enforce a condition of a Section 404 permit.[683]

Enforcement of CWA requirements by citizens is contemplated in the statute itself.[684] Citizens may sue to enjoin violations of "an emission standard or limitation" that is in effect under an implementation plan relating to TCMs.[685] TCMs may include improved public transportation, high occupancy vehicle lanes, parking limitations, and similar measures.[686]

Mitigation agreements between agencies and private parties in the environmental context are enforceable in accordance with their terms just like any other contract under state law. Such agreements may even be enforceable by third parties who claim a right arising out of a contract between an agency and another entity, although a recent article did not identify any such cases in the environmental context.[687] Nuisance claims may

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[671] *Id*. at 199.

[672] *Id*. at 199, 200.

[673] *Id*.

[674] State through Dep't of Highways v. Jeanerette Lumber & Shingle Co., Ltd., 350 So. 2d 847 (La. 1977).

[675] Pub. L. No. 89-285, § 305 (Oct. 22, 1965), 79 Stat. 1033.

[676] *See* CHRISTOPHER & HINES, *supra* note 624, at 7-9 and cases cited.

[677] 49 U.S.C. § 303(c).

[678] 975 F. Supp. 47, 78 (D. Mass. 1997). *See* discussion in CHRISTOPHER & HINES, *supra* note 624, at 10.

[679] 16 U.S.C. § 470 *et seq.* and 36 C.F.R. pt. 800.5(e). *See* CHRISTOPHER & HINES, *supra* note 624, at 11.

[680] CHRISTOPHER & HINES, *supra* note 624, at 11, *citing* Weintraub v. Ruckleshaus, 457 F. Supp. 78, 88 (E.D. Pa. 1978).

[681] 33 U.S.C. § 1365(a)(1); Gwaltney of Smithfield v. Chesapeake Bay Found., 484 U.S. 49, 52–53 (1987).

[682] CHRISTOPHER & HINES, *supra* note 624, at 12, n.11 and cases cited.

[683] Harmon Cover Condo. Assoc. v. Marsh, 815 F.2d 949 (3d Cir. 1987). *Also see* discussion in CHRISTOPHER & HINES, *supra* note 624, at 13.

[684] 42 U.S.C. § 7604(a).

[685] 42 U.S.C. § 7604. *See* discussion in CHRISTOPHER & HINES, *supra* note 624, at 13–14.

[686] 42 U.S.C. § 7408(f).

[687] CHRISTOPHER & HINES, *supra* note 624, at 15.

also be the basis for attempts to enforce mitigation agreements or permit conditions.[688]

[688] *Id*.