

Chapter 2 - Federal Policy for Urban Storm Drainage

Federal policy related to urban storm drainage sets the context for planning, design, construction, operations, and maintenance of roadways and their associated stormwater drainage infrastructure. This chapter provides background on applicable FHWA specific statutes and regulations and provides an overview of other Federal statutes and regulations that may affect roadway projects and urban storm drainage.

Context for Roadways and Urban Storm Drainage

Federal policy—in the form of statutes and regulations—establishes the “guard rails” and “signage” for the development of transportation infrastructure that serves to facilitate the movement of both people and goods. Taken together, these statutes and regulations, administered by multiple Federal agencies, reflect national values for economic well-being and environmental stewardship. This manual provides information on methods and tools to realize these values in the planning, development, construction, and operations and maintenance of urban storm drainage that supports the nation’s transportation infrastructure.

2.1 *Federal Highways and Urban Drainage: National Overview*

The FHWA has the primary responsibility for Federal policy on highways. Legislation for the Federal road system dates back over a century. The Federal-Aid Road Act of 1916 created the Federal-Aid Highway Program that funded State highway agencies so they could make road improvements “to get the farmers out of the mud.” This 1916 Act charged the Bureau of Public Roads with implementing the program. The growth of the Federal highway system, including the addition of the Interstate Highway System and concerns about how all these highways affected the environment, city development, and the ability to provide public mass transit, led to the 1966 establishment of the U.S. Department of Transportation (USDOT). The same enabling legislation renamed the Bureau of Public Roads to the FHWA. Currently, the FHWA continues to administer U.S. Federal policy on highways, but also coordinates extensively with other Federal agencies on environmental policies and permits, floodplains, and other compliance issues related to highway program and project delivery.

Other agencies influence urban storm drainage policy. At the Federal level, the Federal Emergency Management Agency (FEMA) oversees the National Floodplain Insurance Program (NFIP). The U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) administer and enforce the Endangered Species Act (ESA). Almost every project involving work or activities in rivers is subject to the Clean Water Act (CWA) of 1972, which the U.S. Environmental Protection Agency (USEPA) administers in coordination with State governments.

2.2 *FHWA Statutes and Regulations*

The FHWA provides financial and technical assistance to State and local governments to ensure that the Nation’s roads and highways continue to be among the safest and most technologically sound in the world. The FHWA authority for the subject matter of this manual includes the following statutes and regulations. The section below provides a synopsis of these various authorities as well as pertinent Congressional findings and statements, policy, and guidance.

2.2.1 FHWA Statutes

The FHWA operates under the statutory authority of Title 23 (Highways) of the United States Code (U.S.C.). For the purposes of this manual, relevant sections include:

- **Standards [23 U.S.C. § 109].** It is the intent of Congress that Federally funded projects to resurface, restore, and rehabilitate highways shall “be constructed in accordance with standards to preserve and extend the service life of highways and enhance highway safety.” [23 U.S.C. § 109(n)]. Designs for new, reconstructed, resurfaced, restored, or rehabilitated highways on the National Highway System must consider, among other criteria, the “constructed and natural environment of the area.” [Id. at (c)(1)(a)].
- **Maintenance [23 U.S.C. § 116].** Preventive maintenance is eligible for Federal assistance under Title 23 if a State Department of Transportation (DOT) can demonstrate that it is a “cost-effective means of extending the useful life of a Federal-aid highway.” [23 U.S.C. § 116(e).]
- **National highway performance program [NHPP] [23 U.S.C. § 119].** The NHPP allows the FHWA to provide Federal-aid funds for “[c]onstruction, replacement ..., rehabilitation, preservation, and protection (including ... protection against extreme events) of bridges on the National Highway System.” [23 U.S.C. § 119(d)(2)(B)]. The NHPP also allows Federal-aid funds for “[c]onstruction, replacement ..., rehabilitation, preservation, and protection (including ... protection against extreme events) of tunnels on the National Highway System.” [Id. at (d)(2)(C)].
- **Surface transportation block grant [STBG] program [23 U.S.C. § 133].** The STBG program allows the FHWA to provide Federal-aid funds for protection of “bridges (including approaches to bridges and other elevated structures) and tunnels on public roads” including “painting, scour countermeasures, seismic retrofits, impact protection measures, security countermeasures, and protection against extreme events.” [23 U.S.C. § 133(b)(10)]. The STBG program also allows Federal-aid funds for “inspection and evaluation of bridges and tunnels and other highway assets.” [Id.]
- **Metropolitan transportation planning [23 U.S.C. § 134].** In the context of metropolitan transportation planning, Congress has found that it “is in the national interest ... to encourage and promote the safe and efficient management, operation, and development of surface transportation systems ... within and between States and urbanized areas” including taking “resiliency needs” into consideration. [23 U.S.C. § 134(a)(1)].
- **National bridge and tunnel inventory and inspection standards [23 U.S.C. § 144].** Congress has found that “continued improvement to bridge conditions is essential to protect the safety of the traveling public.” [23 U.S.C. § 144(a)(1)(A)]. Congress has further found that “the systematic preventative maintenance of bridges, and replacement and rehabilitation of deficient bridges, should be undertaken.” [Id. at (a)(1)(B)]. In addition, Congress has also declared that “it is in the vital national interest” to use a “data-driven, risk-based approach” toward meeting these ends.” [Id. At (a)(2)(B)]. Considering these findings and declarations, Section 144 requires the FHWA to maintain an inventory of bridges and tunnels on public roads both “on and off Federal-aid highways.” [Id. at (b)]. The FHWA is also required to “establish and maintain inspection standards for the proper inspection and evaluation of all highway bridges and tunnels for safety and serviceability.” [Id. at (h)(1)(A).] Section 144 also provides an exception to the requirement to obtain a bridge permit from the U.S. Coast Guard for certain bridges over a limited subset of navigable waters. [Id. at (c)(2)].

- **National goals and performance management measures [23 U.S.C. § 150].** Congress has declared that it is “in the interest” of the United States to focus the Federal-aid highway program on certain national transportation goals including Infrastructure Condition, or the objective to “maintain ... highway infrastructure in a state of good repair;” and System Reliability, or the objective to “improve the efficiency of the surface transportation system.” [23 U.S.C. § 150(b)].
- **PROTECT Program [23 U.S.C. § 176].** The Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) program allows the FHWA to provide grants for resilience improvements through: (i) formula funding distributed to States; (ii) competitive planning grants; and (iii) competitive resilience improvement grants. [23 U.S.C. § 176(b)]. Eligible activities under the PROTECT program include, among others, “resurfacing, restoration, rehabilitation, reconstruction, replacement, improvement, or realignment of” certain existing surface transportation facilities and “the incorporation of natural infrastructure.” [23 U.S.C. §§ 176(c)(1) and 176(d)(4)(A)(ii)(II)].
- **Bridge Replacement, Rehabilitation, Preservation, Protection, and Construction Program (or Bridge Formula Program) (Division J, title VIII, Highway Infrastructure Program heading, paragraph (1)).** The Bridge Formula Program provides funding to help repair approximately 15,000 highway bridges. In addition to providing funds to states to replace, rehabilitate, preserve, protect, and construct highway bridges, the Bridge Formula Program has dedicated funding for Tribal transportation facility bridges as well as “off-system” bridges, which are generally locally-owned facilities not on the federal-aid highway system.
- **Bridge Investment Program (23 U.S.C. § 124).** The Bridge Investment Program provides financial assistance for eligible projects with program goals to improve the safety, efficiency, and reliability of the movement of people and freight over bridges; improve the condition of bridges; and provide financial assistance that leverages and encourages non-Federal contributions from sponsors and stakeholders involved in the planning, design, and construction of eligible projects.
- **National Culvert Removal, Replacement, and Restoration Grants Program (49 U.S.C. §§ 6703)].** The National Culvert Removal, Replacement, and Restoration Grant program established an annual competitive grant program to award grants to eligible entities for projects for the replacement, removal, and repair of culverts or weirs that would meaningfully improve or restore fish passage for anadromous fish.
- **Research and technology development and deployment [23 U.S.C. § 503].** In carrying out certain highway and bridge infrastructure and research and development activities, the FHWA must “study vulnerabilities of the transportation system to ... extreme events and methods to reduce those vulnerabilities.” [23 U.S.C. § 503(b)(3)(B)(viii)].
- **Statutory Definition of “Resilience.” [23 U.S.C. § 101(a)(24)].** Section 11103 of the Bipartisan Infrastructure Law (BIL), enacted as the Infrastructure Investment and Jobs Act, Pub. L. 117-58 (Nov. 15, 2021), added a definition of “resilience,” which applies throughout Title 23 of the U.S. Code. With respect to a project, “resilience” means a project with the ability to anticipate, prepare for, and or adapt to changing conditions and or withstand, respond to, and or recover rapidly from disruptions, including the ability: (A) to resist hazards or withstand impacts from weather events and natural disasters, or reduce the magnitude or duration of impacts of a disruptive weather event or natural disaster on a project; and (B) to have the absorptive capacity, adaptive capacity, and recoverability to decrease project vulnerability to weather events or other natural disasters. 23 U.S.C. § 101(a)(24). See also FHWA Order 5520 (FHWA 2014b).

2.2.2 FHWA Regulations

The FHWA's regulations are found within the Code of Federal Regulations (CFR), Title 23, Highways (23 CFR). The FHWA requires compliance with Federal law and the regulations in Chapter I, Subchapter A, Part 1 of 23 CFR for a project to be eligible for Federal-aid or other FHWA participation or assistance. [23 CFR 1.36]. The following FHWA regulations apply to highway projects and actions interacting with and within rivers and floodplains (paraphrased for brevity):

Scope of the statewide and nonmetropolitan transportation planning process [23 CFR 450.206]. State DOTs must “carry out a continuing, cooperative, and comprehensive statewide transportation planning process that provides for consideration and implementation of projects, strategies, and services that will ... improve the resiliency and reliability of the transportation system...” [23 CFR 450.206(a)].

Asset Management Plans [23 CFR Part 515]. Part 515 establishes processes that a State DOT must use to develop an asset management plan. Two notable provisions include:

- **Section 515.7(b).** “A State DOT shall establish a process for conducting life-cycle planning for an asset class or asset sub-group at the network level (network to be defined by the State DOT). As a State DOT develops its life-cycle planning process, the State DOT should include future changes in demand; information on current and future environmental conditions including extreme weather events, climate change, and seismic activity; and other factors that could impact whole of life costs of assets.”
- **Section 515.7(c).** A State DOT shall establish a process for developing a risk management plan. This process shall, at a minimum, produce information including: Identification of risks that can affect condition of NHS pavements and bridges and the performance of the NHS, including risks associated with current and future environmental conditions, such as extreme weather events, climate change, seismic activity, and risks related to recurring damage and costs as identified through the evaluation of facilities repeated damaged by emergency events carried out under Part 667 of title 23 of the CFR. Additional information that must be produced is specified in the regulation at 23 CFR 515.7(c).
- In addition, BIL Section 11105 amended 23 U.S.C. Section 119(e)(4) to require State DOTs to consider extreme weather and resilience as part of the life-cycle planning and risk management analyses within a TAMP (FHWA 2022d).

Design Standards [23 CFR Part 625]. Part 625 describes structural and geometric design standards.

- **Sections 625.3(a)(1), 625.3(b), and 625.4(b)(3).** The FHWA, in cooperation with SDOTs, has approved the American Association of State Highway and Transportation Officials (AASHTO) Load and Resistance Factor Design (LRFD) Bridge Design Specifications. Based on the FHWA's approval, certain National Highway System (NHS) projects must follow those LRFD Specifications, including sections related to hydrology, hydraulics, and bridge scour. Among other standards, policies, and specifications listed in 23 CFR 625.4, FHWA has also approved the AASHTO Policy on Geometric Design of Highways and Streets (AASHTO 2018).
- **Section 625.3(a)(2).** Non-NHS projects must follow State DOT standard(s) and specifications on drainage, bridges, and other topics.

Location and Hydraulic Design of Encroachments on Flood Plains [23 CFR Part 650, Subpart A]. One of the FHWA's important river-related regulations, 23 CFR Part 650, Subpart A sets forth policies and procedures for location and hydraulic design of highway encroachments in

base (1-percent chance) floodplains. Section 650.111 sets forth requirements for location hydraulic studies to identify the potential impact of the highway alternatives on the base floodplain; these studies are commonly used during the National Environmental Policy Act (NEPA) process. The regulations prohibit significant encroachments on base floodplains unless the FHWA determines that such encroachment is the only practicable alternative. [23 CFR 650.113(a)]. This finding must be included in the NEPA documents for a project and supported information including the reasons for the finding and considered alternatives. [Id.]. The procedures also provide minimum standards for Interstate Highways, set freeboard requirements to account for debris and scour, and require highway encroachments to be consistent with certain established design flood standards for hydraulic structures, including standards from FEMA and State and local governments related to administration of the National Flood Insurance Program (NFIP). [23 CFR 650.115(a)]. Notably, the policies and procedures in this Subpart apply to encroachments in all base floodplains, not just the floodplains regulated by the Federal Emergency Management Agency (FEMA) in the NFIP. [23 CFR 650.107]. Additionally, the Subpart incorporates a requirement for project-by-project risk assessments or analyses. [23 CFR 650.115(a)(1)]. Notable sections include:

- **Section 650.103 [Policy].** This section states that “it is the policy of the FHWA: (a) To encourage a broad and unified effort to prevent uneconomic, hazardous or incompatible use and development of the Nation’s flood plains, (b) To avoid longitudinal encroachments, where practicable, (c) To avoid significant encroachments, where practicable, (d) To minimize impacts of highway agency actions which adversely affect base flood plains, (e) To restore and preserve the natural and beneficial flood-plain values that are adversely impacted by highway agency actions, (f) To avoid support of incompatible flood-plain development, (g) To be consistent with the intent of the Standards and Criteria of the National Flood Insurance Program, where appropriate, and (h) To incorporate “A Unified National Program for Floodplain Management” of the Water Resources Council into FHWA procedures.” [23 CFR 650.103].
- **Section 650.115 [Hydraulic Design Standards].** This regulation applies to all Federal-aid projects, whether on the NHS or Non-NHS. Federal, State, local, and AASHTO standards may not change or override the design standards set forth under § 650.115 — although certain State and local standards must also be satisfied under the same section. The section also requires development of a “Design Study” for each highway project involving an encroachment on a floodplain. [23 CFR 650.115(a)].
- **Section 650.117 [Content of Design Studies].** This regulation requires studies to contain the “hydrologic and hydraulic data and design computations.” [23 CFR 650.117(b)]. As both hydrologic and hydraulic factors and characteristics lead to scour formation, data and computations applicable to scour should be provided as well. Project plans must show the water surface elevations of the overtopping flood and base flood (i.e., 100-year flood) if larger than the overtopping flood. [23 CFR 650.117(c)].

Executive Order 14030, Climate-Related Financial Risk, and Executive Order 13690, Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input (80 FR 6425). Project applicants should be aware that DOT and FHWA, as of 2022, are in the process of developing guidance and considering updates to floodplain requirements, including redefining the appropriate flood hazard area to account for future climate conditions.

National Bridge Inspection Standards [23 CFR 650 Subpart C]. This regulation implements requirements of 23 U.S.C. § 144. In addition to the inspection and inventory requirements, the regulation specifically focuses on scour at bridges.

Mitigation of Impacts to Wetlands and Natural Habitat [23 CFR Part 777]. This regulation provides policy and procedures for the evaluation and mitigation of adverse environmental impacts to wetlands and natural habitat resulting from Federal-aid funded projects.

2.3 Other Federal Agency Statutes and Regulations

Civil engineering projects are subject to numerous Federal laws, policies, and regulations. This section describes some of the common Federal statutes, regulations, and other authoritative guidance that may apply highway projects.

2.3.1 Rivers and Harbors Act of 1899 [33 U.S.C. § 401 and § 403]

River and coastal highway engineering projects are subject to Section 9 [33 U.S.C. § 401] and Section 10 [33 U.S.C. § 403] of the Rivers and Harbors Act of 1899. Section 9 of this Act restricts the construction of any bridge, dam, dike, or causeway over or in U.S. navigable waterways. Except for bridges and causeways under Section 9 [33 U.S.C. § 401], the U.S. Army Corps of Engineers (USACE) is responsible for maintaining the standards set by and for issuing permits under the Rivers and Harbors Act. Authority to administer Section 9, applying to bridges and causeways, was redelegated to the U.S. Coast Guard under the provisions of the Department of Transportation Act of 1966 (as discussed below).

2.3.2 General Bridge Act of 1946 [33 U.S.C. §§ 525-533]

The General Bridge Act of 1946 requires the location and plans of bridges and causeways across the navigable waters of the United States be submitted to and approved by the U.S. Coast Guard prior to construction. [33 U.S.C. § 525]. The USACE may also impose conditions relating to maintenance and operation of the structure. [Id.]. The General Bridge Act of 1946 is cited as the legislative authority for bridge construction in most cases. Although the General Bridge Act of 1946 originally provided authority for issuing bridge permits to the USACE, subsequent legislation transferred these responsibilities from the USACE to the U.S. Coast Guard.

2.3.3 Transportation Act of 1966 [Public Law 89-670]

The Transportation Act of 1966 transferred the U.S. Coast Guard (USCG) to USDOT. One of USCG's newly assigned duties was to issue bridge permits. This, along with the Rivers and Harbors Act and General Bridge Act, made the USCG responsible for ensuring that bridges and other waterway obstructions do not interfere with the navigability of waters of the United States without express permission of the United States Government. Subsequent legislation amended 23 U.S.C. § 144 to provide certain exceptions to USCG's authority under 33 U.S.C. § 401 and 33 U.S.C. § 525 for bridges constructed, reconstructed, rehabilitated, or replaced using Federal-aid funds. [23 U.S.C. § 144(c)(2)].

2.3.4 National Environmental Policy Act [42 U.S.C. § 4321 et seq.]

The National Environmental Policy Act of 1969 (NEPA) establishes the continuing policy of the Federal government to use all practicable means and measures "to foster and promote the general welfare, ... create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans." [42 U.S.C. § 4331]. To achieve this goal, NEPA creates a requirement for Federal agencies to consider the environmental impacts of their actions before undertaking them. [42 U.S.C. § 4332(C)].

Section 102(2)(C) of NEPA requires that Federal agencies develop a detailed statement on proposals for major Federal actions significantly affecting the quality of the human environment. [42 U.S.C. § 4332(C)]. Environmental impact statements address items including "the

environmental impact of” and “alternatives to” the proposed action.” [Id.] FHWA implements NEPA according to the Council on Environmental Quality (CEQ) NEPA regulations at 40 CFR Part 1500 et seq. and the FHWA-FRA-FTA joint regulations at 23 CFR Part 771.

2.3.5 Clean Water Act [33 U.S.C. §§ 1251-1387]

Almost every project involving work or activities in rivers is subject to the Clean Water Act (CWA) of 1972, which is administered by the U.S. Environmental Protection Agency (USEPA) in coordination with State governments. The CWA is the primary Federal statute governing protection of the Nation’s surface waters. Engineering of highways in the river environment is often subject to Section 404 of the CWA, which regulates the discharge of dredged or fill material in waters of the United States, including wetlands. [33 U.S.C. § 1344]. This includes the use of dredged or fill material for development, water resource projects, and infrastructure development (e.g., roads, bridges, etc.). The USACE handles the day-to-day administration and enforcement of the Section 404 program, including issuing permits. In circumstances where Section 404 is triggered, permit applicants also obtain a Section 401 certification from the State in which the discharge of dredged or fill material originates. [13 U.S.C. § 1341]. The Section 401 certification assures that materials discharged to waters of the United States will comply with relevant provisions of the CWA, including water quality standards. In addition, Section 402 of the CWA establishes the National Pollutant Discharge Elimination System (NPDES) Program. [33 U.S.C. § 1342]. The NPDES Program requires a permit for discharges of pollutants into waters of the United States, including storm water discharges.

2.3.6 Endangered Species Act [16 U.S.C. §§ 1531-1544]

Highway engineering projects have the potential to impact Federally-listed fish, wildlife, and plants. The purposes of the Endangered Species Act of 1973 (ESA) include conserving “the ecosystems upon which endangered species and threatened species depend” and providing “a program for the conservation of such endangered species and threatened species.” [16 U.S.C. § 1531]. It is the policy of Congress that all Federal agencies shall seek to conserve endangered and threatened species and shall utilize their authorities in furtherance of the purposes of the ESA [Id.]. The U.S. Fish and Wildlife Service (USFWS) and the NOAA National Marine Fisheries Service (NMFS) administer the ESA. The USFWS and NMFS conduct consultations with the lead Federal agency when a proposed project may affect Federally endangered or threatened species. USFWS or NMFS involvement in a project depends on the affected species and the nature and extent of anticipated impacts (direct and indirect) to that species and its designated critical habitat. If anticipating a “take” of a Federally-listed species, USFWS or NMFS will issue a biological opinion, the terms and conditions of which are binding on the lead Federal agency. [16 U.S.C. § 1536].

2.3.7 National Historic Preservation Act [54 U.S.C. § 300101 et seq.]

River highway engineering projects are often subject to the National Historic Preservation Act of 1966 (NHPA). Section 106 of the National Historic Preservation Act (NHPA) (commonly called “Section 106”) requires Federal agencies to consider the impacts on historic properties of projects that they carry out, approve, or fund. [54 U.S.C. § 306108]. The implementing regulations for the Section 106 process are found in 36 CFR Part 800. Those regulations provide that Federal agencies, in consultation with the Advisory Council on Historic Preservation, the State Historic Preservation Officers (SHPO), and certain other interested parties, identify and assess adverse effects to historic properties and seek ways to avoid, minimize, or mitigate those effects. [36 CFR 800.4-800.6]. Under Section 106, “historic property” is defined as any prehistoric or historic district, site, building, structure, or object included in, or eligible to be included in, the National

Register of Historic Places [36 CFR 800.16(l)(1); see also 54 U.S.C. 300311 and 302102]. The responsibilities of SHPOs are set forth at 54 U.S.C. § 302303.

In addition to Section 106, Section 4(f) of the U.S. Department of Transportation Act of 1966 [23 U.S.C. § 138 and 49 U.S.C. § 303] requires that the FHWA not approve the use of historic sites for a project unless there is no prudent and feasible alternative and the project incorporates all possible planning to minimize harm, or any impacts to historic sites are determined to be *de minimis*. The FHWA's regulations for implementation of Section 4(f) are found at 23 CFR Part 774.

2.3.8 National Flood Insurance Act of 1968 [42 U.S.C. § 4001 et seq.]

The National Flood Insurance Act of 1968 instituted the National Flood Insurance Program (NFIP) to help indemnify and reduce impacts associated with floods. The NFIP adopted the area subject to a 1 percent chance or greater of being flooded in any given year (also known as the 100-year flood) as the standard, or base flood, for mapping floodplains. [See, e.g., 44 CFR 9.4]. The area inundated by the 100-year flood determines the Special Flood Hazard Area (SFHA) on Flood Insurance Rate Maps (FIRMs) developed by FEMA and used to determine flood insurance rates for structures. [See, e.g., 44 CFR 59.1, which defines "area of special flood hazard"]. FEMA implements the NFIP using its regulations found in Title 44 of the CFR.

The FHWA's policies require projects to be consistent with the Standards and Criteria in the NFIP, where appropriate. [23 CFR 650.115(a)(5)]. To assist State DOTs in complying with this policy, the FHWA developed coordination procedures for Federal-aid highway projects with encroachments in NFIP-regulated floodplains. FEMA agreed to these procedures by signing a 1982 Memorandum of Understanding with the FHWA.

2.3.9 Wild and Scenic Rivers Act [16 U.S.C. § 1271 et seq.].

This Act establishes a policy to preserve designated rivers "in free-flowing condition" and to protect "their immediate environments ... for the benefit and enjoyment of present and future generations." [16 U.S.C. § 1271]. Section 7(a) provides that "no department or agency of the United States shall assist by loan, grant, license, or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which such river was established." [16 U.S.C. § 1278(a)]. A water resources project is "any dam, water conduit, reservoir, powerhouse, transmission line, or other project works under the Federal Power Act ... or other construction of developments which would affect the free-flowing characteristics of a Wild and Scenic River or Study River." [36 CFR 297.3]. "Federal assistance means any assistance by an authorizing agency including, but not limited to, ... [a] license, permit, or other authorization granted by the Corps of Engineers, Department of the Army, pursuant to the Rivers and Harbors Act of 1899 and section 404 of the Clean Water Act (33 U.S.C. 1344)." [Id.]

2.3.10 Fish and Wildlife Coordination Act [16 U.S.C. §§ 661-666c]

The Fish and Wildlife Coordination Act (FWCA) requires adequate consideration for the "conservation, maintenance, and management of wildlife resources" whenever the "waters of any stream or other body of water are impounded, diverted, the channel deepened, or the stream or other body of water otherwise controlled or modified for any purpose ... including navigation and drainage, by any department or agency of the United States. [16 U.S.C. § 663(a)]. This generally includes consultation with the USFWS, the NMFS, and State wildlife agencies for activities that affect, control, or modify waters of any stream or bodies of water in order to minimize the adverse impacts of such actions on fish and wildlife resources and habitat. This consultation is generally incorporated into the process of complying with Section 404 of the Clean Water Act, NEPA, or other Federal permit, license, or review requirements.

2.3.11 Migratory Bird Treaty Act [16 U.S.C. § 703 et seq.].

The protection of all migratory birds is governed by the Migratory Bird Treaty Act (MBTA) [16 U.S.C. §§ 703-712], which generally prohibits the take of any migratory bird or any part, nest, or eggs of any such bird. [16 U.S.C. § 703(a)]. Under the MBTA, it is illegal to “take, kill, possess, transport, or import migratory birds or any part, nest, or egg of any such bird” unless authorized by a valid permit from the USFWS. [Id.]. The regulation at 50 CFR 10.13 includes a list of migratory birds protected by the MBTA.

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