CHAPTER 21. WETLANDS

1. INTRODUCTION AND DEFINITIONS.

a. Nonjurisdictional wetlands. Nonjurisdictional wetlands do not involve navigable waters because they are not connected to or adjacent to navigable waters of the United States (U.S.). Dredge and fill activities in these wetlands do not require U.S. Army Corps of Engineers (Corps) approvals, but these wetlands are natural resources FAA must assess under NEPA. In addition, two other documents provide direction and instruction on assessing impacts of Federal actions on these nonjurisdictional wetlands. Executive Order 11990, *Protection of Wetlands*, sets the standard for a Federal agency action involving any wetland. The U.S. Department of Transportation (DOT) developed and issued DOT Order 5660.1A, *Preservation of the Nation's Wetlands* to provide more guidance to DOT agencies regarding their actions in wetlands. The DOT Order governs the Federal Aviation Administration's (FAA's) actions. The Order defines wetlands as:

> "Lowlands covered with shallow and sometimes temporary or intermittent waters. This includes, but is not limited to, swamps, marshes, bogs, sloughs, potholes, wet meadows, river overflows, tidal overflows, estuarine areas, and shallow lakes and ponds with emergent vegetation. Areas covered with water for such a short time that there is no effect on moist-soil vegetation are not included in the definition, nor are the permanent waters of streams, reservoirs, and deep lakes. The wetlands ecosystem includes those areas which affect or are affected by the wetland area itself; e.g., adjacent uplands or regions up and down stream. An activity may affect the wetlands indirectly by impacting regions up or down stream from the wetland or by disturbing the water table of the area in which the wetland lies. "

b. Jurisdictional wetlands. Section 404 of the Clean Water Act (CWA) governs the dredging and filling of navigable waters of the U.S. The term, "navigable waters of the U.S." includes wetlands connected or adjacent to navigable waters of the U.S. Navigable waters of the U.S. are those waters that are subject to the ebb and flow of the tide and/or are used, have been used in the past, or may be susceptible to use to transport interstate or foreign commerce (see 33 CFR Section 329.4). In carrying out Section 404, the Corps uses 33 CFR Parts 320 through 330 to define wetlands under its jurisdiction. To conduct dredge or fill activities in these wetlands, the Corps must issue a permit authorizing those activities. Wetlands under the Corps' jurisdiction are:

> "[A]reas that surface or groundwater inundate or saturate at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands include swamps, marshes, bogs, and similar areas."

c. Wetland delineation standards. The definitions presented above include three basic elements: hydrology, vegetation, and soil type. A qualified wetland delineation specialist should evaluate the proposed site's characteristics to determine if an airport development action affects an area meeting either of the above definitions. The delineation must follow the *Corps of Engineers Wetland Delineation Manual* (Technical Report Y-87-1). The Corps, the U.S. Environmental Protection Agency (EPA) and other Federal agencies use this manual to standardize wetland delineations and to govern the procedures for Federal actions affecting those ecosystems.

d. Practicable alternative. Executive Order 11990, *Protection of Wetlands*, and DOT Order 5660.1A, *Preservation of Wetlands*, requires Federal agencies to avoid wetlands when a practicable alternative avoiding a wetland exists (See section 2 of this chapter). A practicable alternative is an alternative that is possible (i.e., feasible), after considering the alternative's:

(1) safety aspects;

(2) ability to meet the action's transportation objectives; and

(3) ability to meet accepted design, engineering, environmental, economic, or any other applicable factors.

Note: Some additional cost alone does not necessarily make an alternative [or minimization measure] impractical, since such cost may be recognized as necessary and justified to meet national wetlands policy objectives.

e. New construction. This term includes any draining, dredging, channelizing, filling, diking, impounding, and related activities, any structures or facilities. According to DOT Order 5660.1A, *Preservation of the Nation's Wetlands*, paragraph 4.b, this term does not include routine repairs and maintenance of existing facilities. For new construction in wetlands, FAA should provide the public and agencies with special interest in wetlands appropriate opportunity for early review of the proposal.

2. APPLICABLE STATUTES AND IMPLEMENTING REGULATIONS.

APPLICABLE STATUTES AND IMPLEMENTING REGULATIONS	SUMMARY DESCRIPTION	OVERSIGHT AGENCY
Executive Order 11990 - *Protection of Wetlands*, (42 FR 26961, 1977)	Requires Federal agencies to "avoid to the extent possible the long-term and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative."	DOT
DOT Order 5660.1A - *Preservation of the Nation's Wetlands*, dated August 24, 1978	Provides DOT agencies with instructions on how to carry out Executive Order 11990.	DOT
Clean Water Act (Federal Water Pollution Control Act, as amended, 33 USC 1251, *et seq*. (P.L. 92-500)). See 40 CFR Parts 110-112, 116, 117, 122, 125, 129, 130, 131, 136, and 403 for regulations implementing this Act	Maintains and restores the physical, biological, and chemical integrity of the nation's waters.	EPA/Corps
CWA Section 404, 33 USC 1344. See 33 CFR Parts 320-330 for Corps regulations implementing the Act. See 40 CFR Part 230 for Environmental Protection Agency's (EPA)	States the Corps or those states delegated authority to run the Section 404 permit program are responsible for regulating placing dredged or fill material in U.S. waters, including jurisdictional wetlands.	Corps/State Environmental Agencies

APPLICABLE STATUTES AND IMPLEMENTING REGULATIONS	SUMMARY DESCRIPTION	OVERSIGHT AGENCY
404(b)(1) guidelines.		
Rivers and Harbors Act of 1899, 33 USC 401, et seq., 30 Stat. 1151	This law protects the navigability of waters used for commerce.	Corps
Rivers and Harbors Act of 1899, Section 10, 33 USC 403	Regulates building any obstacle (i.e., jetty, breakwater, wharf pier, boom, bulkhead, etc.) in any port, harbor, canal, navigable water, or other U.S. waters located outside fixed harbor lines or in areas where no harbor line exists.	Corps
Fish and Wildlife Coordination Act, as amended, 16 USC 661, *et seq*.	When processing requests for Federal approval of or financing actions in wetlands or waterways, this Act requires Federal agencies to consider U.S. Fish and Wildlife Service (FWS) and state wildlife agency comments on action impacts on wildlife. For purposes of the Act, the term "wildlife" includes birds, fish, mammals, etc. and vegetation on which they depend.	FWS/State Wildlife Agencies

Note: Regulations for Section 404 permitting are at 33 CFR Part 323. Regulations on dams and dikes in navigable waters are at 33 CFR Part 321. Regulations for other work affecting navigable waters are at 33 CFR Part 322. Regulations addressing seaplane operations are at 33 CFR Section 322.5(j).

3. APPLICABILITY TO AIRPORT DEVELOPMENT ACTIONS.

a. General. If a proposed airport development action involves wetlands, the environmental document prepared for that action must include discussions of potential wetland impacts. Examples of airport actions that could cause wetland impacts include: airside development associated with new or expanded terminal and hangar facilities; new or extended runways and taxiways; and installing navigational aids (NAVAIDS). Examples of landside activities include new or relocated airport access roadways or on-airport remote parking or rental car facilities.

b. Actions affecting wetlands. An airport action affects a wetland if it:

(1) requires building a structure, facility, or other development in a wetland;

(2) requires dredging, filling, draining, channelizing, diking, impounding, or other direct effects on a wetland;

(3) requires disturbing the water table of an area in which a wetland is located; or

(4) indirectly affects a wetland because it impacts areas upstream or downstream of the wetland or it introduces secondary development that would affect a wetland.

Note: Contact the Corps, FWS, or State or local natural resource agency if uncertainty exists about whether an area is a wetland.

c. Actions not affecting wetlands. If an action would not involve wetlands, the environmental document need not meet the requirements of this chapter. The document should simply state the action would not affect a wetland.

d. FAA alternatives analysis. To comply with Section 404 guidelines, Executive Order 11990, and DOT Order 5660.1A, the responsible FAA official must consider practicable alternatives that would avoid affecting wetlands. If the sponsor proposes an action in a wetland, but later the sponsor decides to select an alternative that avoids the wetland or FAA will approve a location that avoids the wetland, the environmental document should explain how the location achieves the purpose and need while avoiding wetland impacts.

e. Determining if FAA may categorically exclude an airport action involving a wetland. If an airport action that is normally categorically excluded (Order 5050.4B, Tables 6-1 and 6-2) involves wetland dredging or filling, the responsible FAA official must determine if an action affects a nonjurisdictional or jurisdictional wetland. If the action involves a *nonjurisdictional* wetland, the action's design must meet the design standards defined in a General Permit (General Permits include Nationwide Permits (NWP), Regional General Permits and State Program General Permits) that would have applied had the action involved a jurisdictional wetland. If the action involves a *jurisdictional* wetland, the action's design must meet the design standards that would qualify the action for a General Permit. Whether the action involves a nonjurisdictional or jurisdictional wetland, the responsible FAA official must determine if the action involves an extraordinary circumstance (see Paragraph 304 of FAA Order 1050.1E or Table 6-3 of FAA Order 5050.4B). The official must then decide if the action still qualifies as a categorical exclusion. If the action qualifies for a categorical exclusion, an EA or EIS is not needed.

Note: In some areas, such as FAA's Great Lakes Region, state agencies have assumed some of the Corps' general permit program responsibilities. Contact the appropriate Corps office for information about similar state programs to ensure the sponsor completes the applicable permit process.

4. PERMITS, CERTIFICATIONS, AND APPROVALS.

a. Sponsor's statement. To satisfy the Orders protecting wetlands, the responsible FAA official should ensure there are no practicable alternatives that would avoid placing the airport action in a wetland (see section 1.d of this chapter). For example, many airport development actions require construction of a facility at a specific location to ensure safe, efficient airport or aircraft operations. In other instances, airport design criteria such as runway wind coverage are essential for safe aircraft operations. In both cases, avoiding a wetland may not be practicable. As a result, when a sponsor proposes an action that would unavoidably involve a wetland, the sponsor should provide the FAA with an analysis explaining why the wetland is the only practicable location for the proposed action. FAA will consider this information in its independent evaluation of alternatives (see 40 CFR Section 1506.5).

b. Sponsor's assurance. When the sponsor determines the action must occur in a wetland, it should also provide FAA information on how the action's design would include all practicable measures to minimize unavoidable wetland impacts. FAA will consider this information in its independent evaluation of the measures that will be used to minimize harm to wetlands (See 40 CFR Section 1506.5).

c. Clean Water Act, Section 404 permit. Issuance of this permit is not needed to complete the environmental document, but the environmental document must contain information on the status of the sponsor's Section 404 permit application. To approve an airport action in wetlands or waterways that does not qualify for a General Permit, the responsible FAA official must have reasonable assurance from the Corps verifying that the requirements can be met. The reasonable assurance could be made via a statement, memo, letter, or other correspondence. The environmental document should contain information verifying the sponsor has started consulting with the Corps. The NEPA document must report the status of the Section 404 permit application process. FAA's approval of the action does not remove a sponsor's need to get a Section 404 permit.

Note: Some states require the sponsor to get state permits authorizing work in wetlands. Permit issuance is not needed to complete the environmental document, but that document must contain information on the status of the sponsor's state wetland permit application. FAA approval does not remove a sponsor's need to get a state permit from the proper state agency.

d. Agency letters. An appendix to the environmental document should contain any correspondence containing Federal or State agency opinions on action-related wetland impacts. Correspondence often can identify potential issues the environmental document should address.

(1) The responsible FAA official or sponsor should forward to the Corps copies of comments about wetland impacts received during the NEPA process.

(2) As part of the NEPA and 404 processes, the responsible FAA official should ensure that any comments about 404 permit issues are addressed during consultations with the Corps District Engineer responsible for the affected wetland.

(3) As part of the NEPA process addressing wetland impacts, the responsible FAA official should ensure the environmental document includes the concerns of the state agency responsible for permitting actions affecting wetlands and a discussion on how the sponsor will address those concerns.

Note: See Chapter 2 of this Desk Reference for Fish and Wildlife Coordination Act requirements (16 USC Section 662(a)) when an action affects water resources, which include wetlands.

e. Wetland banking. If the sponsor, FAA, and the permitting agency agree that wetland banking is suitable mitigation for unavoidable wetland impacts, the environmental document should contain a copy of any agreement on the use of a wetland bank. To comply with FAA's Wetland Banking Strategy of July 1996, this agreement should verify the following facts about the specific number of credits bought in the bank:

(1) the bank will meet defined wetland success criteria;

(2) a specific number of credits will be withdrawn from the bank's total credit allotment to compensate for action-related impacts;

(3) the sponsor's purchase of these credits satisfies some or all of its wetland mitigation requirements for the proposed action; and

(4) the mitigation will not create or worsen wildlife hazards to aviation.

Note: For further information about mitigation banking, see the *Federal Guidance for the Establishment, Use and Operation of Mitigation Banks,* 60 FR 58605 (November. 28, 1995).

g. FAA's finding under Executive Order 11990 and DOT Order 5660.1A. For new construction actions located in wetlands, the approving FAA official should make a written finding in an EA, its FONSI, the Final EIS, or the ROD. In summary, the environmental document should contain information verifying the following facts:

(1) There is no practicable alternative to the construction; and

(2) The action includes all practicable measures to minimize harm to wetlands that construction would cause. In considering practicable measures, FAA may take into account economic, environmental, transportation, and other pertinent factors.

Note: See section 6.e of this chapter for information on the extent of mitigation the NEPA document should contain.

5. ENVIRONMENT COMPLIANCE PROCEDURES - ENVIRONMENTAL ANALYSIS.

a. Required consultation. Early consultation with the agencies listed below during the environmental review process may provide the sponsor with an opportunity to consider other locations that do not involve wetlands or waterways. This effort also alerts the sponsor and FAA to problems the consulted agencies may have regarding a proposed action's design. If there is no practicable alternative to avoiding an action affecting a wetland, consultation allows the sponsor to:

(1) notify the agencies of that fact and explain why other alternatives are not practicable;

(2) try to resolve issues about the action's use of the wetland; and

(3) include ways to minimize the proposed action's unavoidable impacts.

Failing to address and resolve these issues may alter the start of the action and its completion because the necessary permits could be either denied or delayed. As noted earlier, NEPA documents for airport actions requiring wetland dredging or filling should provide reasonable assurances that the sponsor consulted with Federal and state agencies responsible for permitting actions affecting wetlands. These reasonable assurances should be included in an appendix to the environmental document as a memo, letter, or other correspondence.

Note: See Chapter 2 of this Desk Reference for Fish and Wildlife Coordination Act requirements (16 USC Section 662(a)) when an action affects water resources, which include wetlands. Often agencies having concerns for aquatic organisms in wetlands will provide comments. If another section of the environmental document addresses impacts on a resource occurring in the affected wetland, the environmental document's wetlands chapter should summarize those effects and provide the page numbers of the document or the appendices where the reader would find the detailed information on the affected resource.

b. Roles of various agencies and the public during wetland consultation. Besides the Corps, various agencies often have jurisdiction over wetlands. The following information identifies different entities and their areas of concern:

(1) The U. S. Fish and Wildlife Service (FWS). As noted earlier, compliance with the Fish and Wildlife Coordination Act requires consultation with FWS when an action would affect a wetland or water body. This consultation focuses on how the action would affect habitats and the corresponding environmental consequences to wildlife. See Chapter 2 of this Desk Reference for more information.

(2) The National Marine Fisheries Service (NMFS). NMFS is responsible for protecting wetlands or waters that sustain marine mammal and marine fish communities. Contact NMFS when an action would affect tidal wetlands, estuaries, or marine ecosystems. Chapter 2 of this Desk Reference presents information on the Magnuson-Stevens Fishery Conservation and Management Act of 1976, as amended (16 USC Section 1801, *et seq*.).

(3) The Natural Resource Conservation Service (NRCS). NRCS (formerly the Soil Conservation Service) delineates agricultural wetlands. The Food Security Act Manual is to be used to delineate agricultural wetlands whereas delineation of non-agricultural wetlands follows the Corps of Engineers Wetland Delineation Manual. Contact NRCS for actions that would affect agricultural wetlands.

(4) EPA. Under Section 404(b) of the CWA, EPA may object to the Corps' issuance of a 404 permit. Consultation with EPA is important to ensure the sponsor's proposal addresses EPA's concerns.

(5) Other Federal agencies. Besides the agencies noted above, contact with other agencies may be needed. Ask the agencies discussed above if they know of other Federal agencies that may have an interest in a proposed action's effect on wetlands.

(6) State wetland agencies and State wildlife agencies. Besides complying with Federal wetland laws and regulations, compliance with state wetland requirements is often necessary to get state approval of a proposed action. In addition, under the Fish and Wildlife Coordination Act, FAA needs to consult with the state agency having administration over the wildlife resources. Contact the state agency having jurisdiction over the affected wetlands and the agency having administration over the state's affected wildlife. Use the procedures in Executive Order 12372 (this replaces A-95 Clearinghouse instructions) if you need information about contacting appropriate state agencies.

(7) Public involvement. Public involvement helps FAA recognize the issues concerning the public and resource agencies. Such involvement promotes efficient environmental review processes and avoids delays in completing the processes that would occur when those processes omit evaluating wetland impacts or other information needed for wetland-related approvals or permits. If FAA is not preparing an EIS for an action involving a wetland, the responsible FAA official should ensure the public has an early opportunity to review the action (Executive Order 11990, section 2(b)).

c. Timely permit issuance. The Corps, EPA, FWS, NRCS, and NMFS are Federal agencies that might have wetlands concerns. In addition, most states have at least one agency responsible for protecting wetlands. There are local natural resource agencies that may have responsibility or concern for protecting wetlands. Also, the public may have concerns. These interested parties often have conflicting missions or differing ideas on how to minimize wetland impacts. Addressing any concerns early in the planning and environmental processes may avoid delays in action approval or construction. Experience shows that substantial interaction among sponsors and these agencies facilitates permitting or approval processes.

d. Integrating Section 404 permitting and NEPA. Integrating Section 404 permitting and NEPA increases the likelihood that one NEPA document will contain the information and findings needed for Corps and FAA decisions (40 CFR Section 1500.5(h)). It also strengthens efficient and consistent consideration of public concerns. In addition, integrating these processes increases the likelihood the agencies will make their respective decisions on the proposed action at similar times. To properly integrate the 404 and NEPA processes, it is essential the sponsor meet early with the Corps FAA, and other parties interested in the action's effects on wetlands.

Note: For guidance on integrating these processes, review the following as needed: 33 CFR Part 320, General Regulatory Policies; 33 CFR Part 25, Appendix B, the NEPA implementing procedures for the regulatory program; Corps Pamphlet EP 1145-2-1, dated May 1985, and 40 CFR Part 1500.

e. Actions involving leases, easements, right-of-ways, or disposal. When Federally-owned wetlands or portions of them are proposed for lease, easement, right-of-way, or disposal to a non-Federal public or private party, FAA should do the following to comply with DOT Order 5660.1A, paragraph 7.e and FAA Order 1050.1E, Appx. A, paragraph 18.4c:

(1) ensure the conveyance references those uses restricted by relevant Federal, State, or local wetland regulations;

(2) attach other appropriate restrictions on how the grantee or property purchaser and any successor may use the properties, except where prohibited by law; or

(3) withhold the properties from disposal.

6. DETERMINING IMPACTS.

a. General. After determining there are no practicable alternatives that avoid a wetland, unavoidable wetland impacts should be analyzed. Various wetland models have been developed to assess effects on wetland hydrology, vegetation, or soil. Analysts use the results of these models as aids in determining an action's impacts on wetland functions and values. Consult the local Corps district office to determine the methods to assess wetland functions and values.

b. Information needed to determine wetland effects. If the proposed action would affect a wetland, and no practicable alternative that avoids the wetland exists, the environmental document must provide the following information.

(1) A description of the location, types, and extent of wetlands the action and its alternatives would affect. Contact the FWS, Corps, or State or local agencies responsible for wetlands in the affected area for information, if needed.

(2) A description of potential impacts on the following wetland resources as appropriate.

(a) water quality;

(b) effects on water supply and the capability to recharge that supply;

(c) interference with surface or subsurface water flows;

(d) the levels of siltation or sedimentation the action would cause;

(e) the disruption of the affected wetland's biotic community; or

(f) the effects of storm hazards, floods, or the ability to store storm runoff or storm flows.

Note: If another section of the environmental document addresses impacts on a resource occurring in the affected wetland (for example, secondary or induced impacts, construction, etc.), the wetlands chapter should summarize those effects and provide the page numbers of the document or the appendices where the reader would find the detailed information on the affected resource.

c. A wetland in coastal zones. A wetland in or adjacent to a coastal area may be subject to state coastal zone management program. Therefore, if this situation applies to the proposed action or a reasonable alternative, the environmental document's wetlands chapter should summarize information about coastal wetland resources and refer the reader to the coastal zone resources chapter for more details. See Chapter 4 of this Desk Reference for information on assessing impacts on coastal zone resources.

d. Section 4(f) Applicability to wetlands. Section 4(f) of the DOT Act may apply if wetlands are publicly owned lands. See Chapter 7 of this Desk Reference for information on assessing impacts to Section 4(f) resources.

e. Mitigation. The environmental document should include a description of conceptual measures the sponsor proposes to mitigate unavoidable wetland impacts. A comprehensive, completed mitigation plan is not necessary for FAA's purposes. However, sponsors should note that, as the Section 404 permitee, it will likely be required to develop a detailed plan satisfactory to the Corps to comply with the applicable Section 404 permit including both individual and General Permits. Mitigation may include some of the following measures:

(1) changes to action design, construction, or operation;

(2) pavement runoff collection to prevent direct discharges to sensitive wetland areas;

(3) provisions to treat waste;

(4) special construction controls; or

(5) compatible land use development.

7. DETERMINING IMPACT SIGNIFICANCE.

a. General. The responsible FAA official should consider the following thresholds and factors in consultation with agencies having jurisdiction or special expertise on wetlands.

ORDER 1050.1E THRESHOLD	FACTORS TO CONSIDER
When an action would: • Adversely affect a wetland's function to protect the quality or quantity of a municipal water supply, including sole source aquifers and a potable water aquifer. • Substantially alter the hydrology needed to sustain the affected wetland's values and functions or those of a wetland to which it is connected. • Substantially reduce the affected wetland's ability to retain floodwaters or storm runoff, thereby threatening public health, safety or welfare. The last term includes cultural, recreational, and scientific public resources or property important to the public. • Adversely affect the maintenance of natural systems supporting wildlife and fish habitat or economically important timber, food, or fiber resources of the affected or surrounding wetlands. • Promote development of secondary activities or services that would affect the above functions. Be inconsistent with applicable State wetland strategies.	None.

From: Table 7-1, FAA Order 5050.4B.

b. Mitigation. During the environmental review process, agencies having jurisdiction of or expertise on wetlands normally provide letters addressing an action's effects on those resources. Often, those letters include recommended measures to mitigate those effects. An appendix to the environmental document should include copies of those letters. The environmental document should summarize the most important information in those letters

and accurately cross-reference the appendix and pages in that appendix for further information. If the FAA or the sponsor does not adopt any recommended mitigation, the environmental document should clearly explain why the mitigation was not adopted.

(1) The NEPA document should include a description of conceptual measures the sponsor proposes to mitigate unavoidable wetland impacts. A comprehensive, completed mitigation plan is not necessary for FAA's purposes. However, sponsors should note that, as the Section 404 permitee, they will likely be required to develop a detailed plan satisfactory to the Corps to comply with a Section 404 permit or the applicable NWP.

(2) The responsible FAA official, in cooperation with Airports Certification Officers and Wildlife Services staff, should review the mitigation plan to ensure it does not create or worsen wildlife hazards to aviation. See Advisory Circular (AC) 150/5200-33A, *Wildlife Hazards on and near Airports*, for more information about this important safety concern.

8. ENVIRONMENTAL IMPACT STATEMENT CONTENT.

a. General. When FAA prepares an EIS addressing significant wetland impacts, the responsible FAA official should consider inviting the Corps and State wetland agency as cooperating agencies due to their permitting authority and expertise on wetlands. In addition, the responsible FAA official should ensure the EIS contains the information in this section (Section 8).b-e as well as the information discussed in other sections of this chapter.

b. Review the practicability of alternatives. Review all alternatives to ensure there is no practicable alternative that avoids the wetland.

c. Further considerations. Review the information the NEPA document provides to address the issues noted in other parts of this chapter. As needed, include new information specific to the proposed action that FAA and the appropriate resource agency or agencies determine necessary to correct any deficiencies in the EIS section addressing wetland impacts. Some of that new information may include the following, if it applies to the proposed action:

(1) Added information. As appropriate, the information may address some or all of the following factors listed in Executive Order 11990:

(a) Public health, safety, and welfare. This may include: water supply, water quality, and water supply recharge (surface and/or aquifer) and discharge; pollution control; flood and storm water control; or sediment and erosion control.

(b) Natural system maintenance. This may include conservation measures needed to sustain: long-term productivity of existing wetland fauna (fish, wildlife, birds) and flora (timber, food and fiber resources); species and habitat diversity; species and habitat stability; or hydrologic utility.

(c) Other public interest wetland uses. These uses may include recreational, scientific, or cultural wetland use.

(2) Input from expertise agencies. Include input of wetland agencies addressing the survival and quality of the action-affected wetland resources.

(3) Other Considerations. Include information addressing aeronautical safety, transportation objectives, economics and other factors that may affect or are related to the action.

d. Wildlife hazard information. Include information to determine if the proposed mitigation would make existing habitats attractive or more attractive to wildlife that would be hazardous to aviation. Review FAA Advisory Circular (AC) 150/5200-33A, *Hazardous Wildlife Attractants on or near Airports*, for more information about this.

e. Mitigation. The EIS should describe proposed practicable, conceptual mitigation. This includes mitigation that agencies with jurisdiction or expertise on wetlands recommend. FAA should evaluate the mitigation and balance its benefits against those of the proposed action, including the mitigation's effects on aviation safety. Include sponsor commitments to carry out the mitigation. Explain why the sponsor or FAA rejected any mitigation or land uses the agencies recommend. Provide an estimated schedule for undertaking accepted mitigation.

g. Finding under Executive Order 11990 and DOT Order 5660.1A. When an EIS addresses a new construction action located in a wetland, the approving FAA official should make a written finding to comply with Executive Order 11990 and DOT Order 5660.1A. The EIS or its accompanying Record of Decision should contain information verifying the facts listed in sections 4.g.(1) and (2) of this chapter.