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ATTACHMENT 2. ANALYSIS OF ENVIRONMENTAL IMPACT CATEGORIES

This attachment provides specific environmental analysis procedures to be used in preparing environmental assessments (EA's) and environmental impact statements (EIS's).

The table of contents lists the potential impact category within this attachment.

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This paragraph contains a summary of the requirements and procedures to be used in evaluating these categories of environmental impacts in the Environmental Consequences section of environmental documents.

To effectively use this attachment, first become familiar with the material contained in each section. The overview box highlights major applicable Federal statute(s), regulations, executive orders, and guidance and the oversight agency(ies). Executive Order (E.O.) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, is addressed in this attachment in paragraph 15, Socioeconomic Impacts. Since environmental justice is defined as any adverse and disproportionately high impact on minority and low-income groups, this E.O. applies to other impact categories where appropriate. The other related Federal requirements that may apply were too numerous to list.

The information, however, should guide the responsible Federal Aviation Administration (FAA) official to appropriate resources and applicable requirements to be addressed as part of the National Environmental Policy Act (NEPA) process. To assist in this effort, the majority of the impact categories are divided into the following discussion areas: (1) Requirements, (2) FAA Responsibilities, and (3) Analysis of Significant Impacts. A few impact categories will also have a discussion area on Significant Impact Thresholds if thresholds have been

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established by the FAA or appropriate oversight agencies. When there is a discussion area on Significant Impact Thresholds, it will follow the FAA Responsibilities discussion area.

Should a proposed Federal action have a potential air quality impact for example, review the Air Quality section of the attachment to identify the legal references for air quality impacts. These requirements are summarized for ease of use; however, if further information is required, the law, associated implementing regulations, and FAA policy should be reviewed with the Office of the Chief Counsel staff and/or regional counsel support and through coordination with appropriate Federal and State agency personnel.

Once the standards and relationship of the requirements to the project are understood, the significant impact thresholds established by oversight agencies should be reviewed. This section summarizes the impact threshold used to define significance of the effects of the proposed action where such thresholds have been established. For example, the FAA has issued guidance in determining the scope and context of potential noise impacts, and thus, whether an EIS is required.

The final section, the analysis of impacts, provides guidance on the types and levels of evaluation when the impact is determined to be significant. It includes further information on consultations, studies, and identification of mitigation alternatives and monitoring actions.

Each potential impact category relevant to a FAA proposed action and alternative(s) identifies alternative mitigation measures that should be followed except as otherwise provided under the procedures of Section 176(c) of the Clean Air Act, Section 106 of the National Historic Preservation Act, or other special purpose environmental laws.

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1. AIR QUALITY

Statute	Regulation	Oversight Agency
Clean Air Act (CAA), as amended [42 United States Code (U.S.C.) section 7401 et seq.] [Public Law (PL) 91-604, PL 101-549]	Title 40 Code of Federal Regulations (CFR) Parts 9, 50-53, 60, 61, 66, 67, 81, 82, and 93 (which includes General Conformity)	Environmental Protection Agency
49 U.S.C. 47106(c)(1)(B), as amended (formerly sections 509(B)(5) and (B)(7) of the Airport and Airway Improvement Act of 1982, as amended; PL 97-248) [PL 103-272, as amended]		Federal Aviation Administration

a. Requirements. Three primary laws apply to air quality: NEPA, the Clean Air Act (CAA), and 49 U.S.C. 47106(c)(1)(B). As a Federal agency, the FAA is required under NEPA to prepare an environmental document (e.g., environmental impact statement (EIS) or environmental assessment (EA)) for major Federal actions that have the potential to affect the quality including air quality of the human environment. An air quality assessment prepared for inclusion in a NEPA environmental document should include an analysis and conclusions of a proposed action's impacts on air quality.

The CAA established National Ambient Air Quality Standards (NAAQS) for six pollutants, termed *criteria pollutants*. The six pollutants are: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), particulates (PM-10 and PM-2.5), and sulfur dioxide (SO_2). The CAA requires each State to adopt a plan to achieve the NAAQS for each pollutant within timeframes established under the CAA. These air quality plans, known as State implementation plans (SIP), are subject to Environmental Protection Agency (EPA) approval. In default of an approved SIP, the EPA is required to promulgate a Federal implementation plan (FIP).

Title 49 U.S.C. 47106(c)(1)(B) provides that the DOT/FAA may not approve a grant application for an airport development project involving the location of the airport, runway, or major runway extension, unless the Governor of the State in which the project will be located certifies that there is reasonable assurance that the project will be located, designed, constructed, and operated in compliance with applicable air quality standards. Certification must be obtained from the Governor of the State prior to FAA approval of the project. Alternatively, unless delegation is prohibited under applicable State law, certification may be obtained from a State official to whom the Governor has expressly delegated, in writing, his or her authority in this area.

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When a NEPA analysis is needed, the proposed action's impact on air quality is assessed by evaluating the impact of the proposed action on the NAAQS. The proposed action's *build* and *no-build* emissions are inventoried for each reasonable alternative. The inventory should include both direct and indirect emissions that are reasonably foreseeable. Normally, further analysis would not be required for pollutants where emissions do not exceed general conformity thresholds. However, based on the nature of the project and consultation with State and local air quality agencies additional analysis may be deemed appropriate. If there are any questions about whether additional analysis is reasonable, contact the appropriate headquarters office and the Office of Environment and Energy. If required, the emissions for the proposed build case then are translated into pollutant concentrations using a dispersion model. Depending on the project, this step can be data and computation intensive. Once dispersion modeling has been performed, pollutant concentrations are combined with background pollutant concentrations and compared to the NAAQS. If concentrations do not exceed the NAAQS, then the analysis is complete. If concentrations exceed the NAAQS, emissions must be mitigated or offset, or the action redesigned to reduce emissions.

In addition to NEPA, General Conformity, and grant funding requirements, there may be State and local air quality requirements to consider. These requirements can include, but are not limited to, provisions such as State indirect source regulations and State air quality standards.

Section 176(c) of the CAA, as amended in 1990, requires that Federal actions conform to the appropriate Federal or State air quality plans (FIPs or SIPs) in order to attain the CAA's air quality goals. Section 176(c) states:

> "No department, agency, or instrumentality of the Federal Government shall engage in, support in any way or provide financial assistance for, license or permit, or approve, any activity which does not conform to an implementation plan."

Conformity is defined as conformity to the implementation plan's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards, and that such Federal activities will not:

(1) Cause or contribute to any new violation of any standard in any area.

(2) Increase the frequency or severity of any existing violation of any standard in any area.

(3) Delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.

The CAA 1990 Amendments required the EPA to issue rules that would ensure Federal actions conform to appropriate FIP or SIP. A final rule

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for determining conformity of general Federal actions (40 CFR Part 93, Subpart B) was published in the Federal Register (FR) on November 30, 1993, and became effective January 31, 1994. In addition, 40 CFR Part, 51 Subpart W specify requirements for conformity which States must include in their respective SIP's. Once a SIP conformity provision has been approved by EPA, the State conformity requirements included in the SIP apply. EPA issued separate rules addressing conformity of highway, roadway, and transit plans and projects (40 CFR Part 93, Subpart A, and 40 CFR Part 51, Subpart T) on November 15, 1993. The remaining conformity discussion addresses only General Conformity since FAA actions are subject to this rule, although projects involving airport access may also be subject to some provisions of Transportation Conformity.

The General Conformity Rule establishes the procedures and criteria for determining whether certain Federal actions conform to State or EPA (Federal) air quality implementation plans. To determine whether conformity requirements apply to a proposed Federal action, the following must be considered: the non-attainment or maintenance status of the area; type of pollutant/emissions; exemptions from conformity and presumptions to conform; the project's emission levels; and the regional significance of the project's emissions. FAA actions are subject to the General Conformity Rule. Projects involving airport access may also be subject to some provisions of Transportation Conformity.

General conformity requirements are distinct from NEPA requirements. For example, NEPA may require FAA to analyze several alternatives in detail. If a general conformity determination is required, only the proposed action must be addressed. General conformity, like other environmental requirements, should be integrated into the NEPA process as much as possible. For example, the draft conformity determination should be issued along with any required draft EIS for public comment. However, there may be valid reasons to address general conformity separately rather than concurrently.

The General Conformity Rule only applies in areas that EPA has designated non-attainment or maintenance. A non-attainment area is any geographic area of the U.S. that experiences a violation of one or more NAAQS. A maintenance area is any geographic area of the U.S. previously designated non-attainment for a criteria pollutant pursuant to the CAA Amendments of 1990 and subsequently re-designated to attainment.

The rule covers direct and indirect emissions of criteria pollutants or their precursors from Federal actions that meet the following criteria:

(1) Reasonably foreseeable, and
(2) Can practicably be controlled and maintained by the Federal agency through continuing program responsibility.

A conformity determination is not required if the emissions caused by the proposed Federal action are not reasonably foreseeable; if the emissions caused by the proposed Federal action cannot practicably be controlled and maintained by the Federal agency through its continuing program responsibility; if the action is listed as exempt or presumed to

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conform; or if the action is below the emission threshold (*de minimis*) levels. The emission threshold levels are defined in the General Conformity Rule.

Certain Federal actions are exempt from the requirement of the General Conformity Rule because they result in no emissions or emissions are clearly below the rule's applicability emission threshold levels. These include, but are not limited to:

(1) Continuing and recurring activities such as permit renewals.

(2) Routine maintenance and repair activities.

(3) Routine installation and operation of aviation and maritime navigation aids.

(4) Administrative actions.

(5) Planning studies and provision of technical assistance.

(6) The routine, recurring transportation of materiel and personnel.

(7) Transfers of land, facilities, and real properties.

(8) Actions affecting an existing structure where future activities will be similar in scope to activities currently being conducted.

(9) Enforcement and inspection activities.

(10) Air traffic control activities and adopting approach departure and en route procedures for air operations.

The General Conformity Rule (58 FR 63250, November 30, 1993) provides a provision that permits agencies to develop a list of actions presumed to conform which would be exempt from the requirements of the rule unless regionally significant (discussed below). To date, FAA does not have a list of actions that are presumed to conform. Notification of such a list and the basis for the presumption of conformity will be published in the Federal Register.

If a Federal action is not exempt or presumed to conform, the project's emissions must be analyzed with regard to conformity applicability emission levels. The rule established the threshold emission levels (annual threshold levels) to identify those actions with the potential to have significant air quality impacts. If the project's emissions are below annual threshold levels (*de minimis* levels) and are not regionally significant, then the requirements of the general conformity regulation do not apply to the Federal action or project (and therefore, a conformity determination is not required).

In determining whether emission threshold levels are exceeded (and a conformity determination required), agencies must consider direct and

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indirect emissions. Direct emissions are those that are caused by or initiated by the Federal action and occur at the same time and place as the action. Indirect emissions are those caused by the Federal action, but that occur later in time and/or may be removed in distance from the action. Temporary construction emissions must be considered in determining whether emission threshold levels are exceeded. (See EPA General Conformity Questions and Answers, dated November 1994.)

In addition, the General Conformity Rule adopted the exclusive definition of indirect emissions, which excludes emissions that may be attributable to the Federal action, but that the FAA has no authority to control. The FAA is responsible for assessing only direct and indirect emissions of criteria pollutants and precursors that are caused by a Federal action, are reasonably foreseeable, and can practicably be controlled by the FAA through its continuing program responsibility. The FAA may compare emissions with and without the proposed Federal action during the year in which emissions are projected to be greatest in determining whether emission threshold levels are exceeded.

If a Federal action does not exceed the threshold levels or is presumed to conform, it may still be subject to a general conformity determination if it has regional significance. If the total of direct and indirect emissions of any pollutant from a Federal action represent 10 percent or more of a maintenance or non-attainment area's total emissions of that pollutant, the action is considered to be a regionally significant activity and conformity rules apply. Parts of the overall Federal action that are exempt from conformity requirements (e.g., emission sources covered by New Source Review) should not be included in the analysis. The purpose of the regionally significant requirement is to capture those Federal actions that fall below threshold levels, but have the potential to impact the air quality of a region.

When it has been determined that a proposed Federal action is not exempt, presumed to conform, exceeds emission threshold levels, or is regionally significant, the agency must prepare a conformity determination based on analysis using criteria stated in EPA's General Conformity Rule (40 CFR Part 93).

A proposed action cannot be approved or initiated unless conformity does not apply or a positive conformity determination is issued (i.e., the action conforms to the SIP). If initial analysis does not indicate a positive conformity determination, alternative actions (including mitigation measures as part of the action) should be considered and further consultation, analysis, and documentation will be necessary.

b. FAA Responsibilities. The FAA has a responsibility under NEPA to include in its EA or EIS sufficient analysis to disclose the potentially significant impact of a proposed action on the attainment and maintenance of air quality standards established by law or administrative determination.

It is also the FAA's affirmative responsibility under Section 176(c) of the CAA to assure that its actions conform to applicable SIPs. Before the FAA can fund or support in any way any activity, it must address the

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conformity of the action with the applicable SIP using the criteria and procedures prescribed in the General Conformity Rule or applicable SIP.

In conducting air quality analysis for purposes of complying with NEPA and/or conformity, the FAA required model for aviation sources (aircraft, auxiliary power units, and ground support equipment) is the Emissions and Dispersion Modeling System (EDMS). The EPA accepted EDMS as a formal EPA preferred guideline model in 1993. An order form for the EDMS software and user's guide can be obtained from the EDMS Internet Site or by writing the EDMS Program, Federal Aviation Administration, Office of Environment and Energy, Rm. 902W, 800 Independence Ave., S.W., Washington, D.C. 20591.

If the proposed action either will not conform with the SIP or there is potential for the proposed action to cause the area to exceed the NAAQS, then further consultation, analysis, and documentation will be required in an EA or EIS and conformity determination document.

c. Analysis of Significant Impacts. When the analysis indicates potentially significant air quality impacts, it may be necessary to consult further with State or regional air quality officials and/or with EPA. It also is advisable to include such officials in the EIS scoping process to represent cooperating agencies with air quality expertise. These officials will help identify specific analyses needed, alternatives to be considered, and/or mitigation measures to be incorporated in the action.

AIR QUALITY ASSESSMENT PROCEDURES. NEPA, the CAA Amendments of 1990, and 49 U.S.C. 47106(c)(1)(B) have separate requirements and processes; however, their steps can be integrated and combined for efficiency. Also, an air quality analysis can require the coordination of many different agencies. Such coordination and subsequent analysis takes time; therefore, air quality impacts should be addressed as **EARLY** as practicable when preparing an EA or EIS. For more detailed guidance on air quality procedures see the FAA's *Air Quality Procedures for Civilian Airports and Air Force Bases*, April 1997.

MODELING REQUIREMENTS. The EDMS is FAA's required methodology for performing air quality analysis modeling for aviation sources. EDMS also offers the capability to model other airport emission sources that are not aviation-specific, such as power plants, fuel storage tanks, and ground access vehicles.

Except for air toxics or where advance written approval has been granted to use an equivalent methodology and computer model by the FAA Office of Environment and Energy, the air quality analyses for aviation emission sources from airport and FAA proposed projects conducted to satisfy NEPA, general conformity, and 49 USC 47106(c) requirements under the Clean Air Act must be prepared using the most recent EDMS model available at the start of the environmental analysis process. In the event that EDMS is updated after the environmental analysis process is underway, the updated version of EDMS may be used to provide additional disclosure concerning air quality but use is not required. A complete

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description of all inputs, particularly the specification of non-default data, should be included in the documentation of the air quality analysis. Users also must provide one copy of EDMS input files used in the analysis and the corresponding output files to the FAA official on magnetic media specified by the FAA official.

As stated above, EDMS currently is not designed to perform air toxic analyses for aviation sources, and may be supplemented with other air toxic methodology and models in consultation with the appropriate FAA regional program office. Use of supplemental methodology and models for more refined analysis of *non-aviation* sources also is permitted in consultation with the appropriate FAA regional program office.

All input data should be collected early in the environmental process and should reflect the latest available data. Assistance from the FAA Office of Environment and Energy is available on a case-by-case basis by request through the respective headquarters operating office.

2. COASTAL RESOURCES

Statute	Regulation	Oversight Agency
Coastal Barrier Resources Act of 1982 as amended by the Coastal Barrier Improvement Act of 1990 [16 U.S.C. 3501 3510] [PL 97-348]	U.S. Department of Interior Coastal Barrier Act Advisory Guidelines	Fish and Wildlife Service
Coastal Zone Management Act as amended [16 U.S.C. 1451 to 1464] [PL 92-583]	15 CFR Part 930, Subparts C and D 15 CFR Part 923	National Oceanic and Atmospheric Administration Office of Coastal Zone Management Appropriate State Agency

a. Requirements. Federal activities involving or affecting coastal resources are governed by the Coastal Barriers Resources Act (CBRA) and the Coastal Zone Management Act (CZMA). The CBRA prohibits, with some exceptions, Federal financial assistance for development within the Coastal Barrier Resources System that contains undeveloped coastal barriers along the Atlantic and Gulf coasts and Great Lakes. The CZMA and the National Oceanic and Atmospheric Administration (NOAA) implementing regulations (15 CFR Part 930) provide procedures for ensuring that a proposed action is consistent with approved coastal zone management programs.

Permits/Certificates: Not applicable.

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b. FAA Responsibilities.

CBRA. Maps specifically identifying lands included in the CBRA system are available from the Fish and Wildlife Service (FWS) office administering the CBRA program. If additional guidance on CBRA is needed, refer to the Department of Interior's (DOI) CBRA Advisory Guidelines (43 CFR Subtitle A, reference 48 FR 45664). If the proposed action would occur on land within the CBRA system and involve funding for development, the action must receive an FWS exemption from the provisions of the CBRA. Results of consultation with FWS must be incorporated in the environmental document. Project-related impacts on coastal resource biotic resources and water quality may be described in the document's CBRA section, or in the sections of the document addressing these biotic and water quality issues.

CZMA. When a proposed action affects (changes the manner of use or quality of land, water, or other coastal resources, or limits the range of their uses) the coastal zone in a State with an approved coastal zone management (CZM) program, the EA or EIS shall include the following:

(1) For Federally assisted activities or for other FAA activities, the views of the appropriate State or local agency as to the relationship of such activities with the approved State coastal zone management program, and the determination of the State as to whether the proposal is consistent with the approved State coastal zone management program.

(2) For issuance of a Federal license or permit, the applicant's certification that the proposed action complies with the State's approved program and that such activity will be conducted in a manner consistent with the program, and the State's concurrence with the applicant's certification. (Approval of an airport layout plan approval could by definition be a Federal license or permitting action). The State's concurrence may be presumed if the State does not act within six months after receipt of the applicant's certification, provided the State did not require additional information regarding that certification.

c. Analysis of Significant Impacts. When a State having an approved CZM program raises an objection to the proposed action because the action would not be consistent with the applicable CZM plan, the FAA can not approve the action, unless the objection is satisfied, or it is successfully appealed to the Secretary of Commerce. The process will be normally completed prior to a determination by the FAA of whether or not an EIS is needed for the action. If any issues remain that have not been resolved regarding the relationship of the action to an approved CZM program, such issues are identified in the scoping process and resolved in the EIS. In this situation, the State coastal zone management agency is invited to participate in the scoping process.

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For proposed actions determined to be inconsistent with the State's approved program and if the project cannot be modified so that it is consistent with the plan, the final EIS shall include a finding by the Secretary of Commerce that the proposed action is consistent with the purposes or objectives of the Coastal Zone Management Act or is necessary in the interest of national security. If a finding is not obtained from the Secretary of Commerce, the FAA can not approve the proposed action.

CBRA. Information regarding CBRA application and funding exceptions, including consultation with FWS, is sufficient for EIS purposes. Any significant impacts are reported under other appropriate impact categories.

CZMA. CZM consistency applies only to States having an approved CZM plan. If an action would occur in a State not having an approved CZM plan, the FAA should consult (as necessary) with State and Federal agencies having jurisdiction over or expertise on the affected resources to determine if additional information is needed. Discuss impacts on these resources in sections of the environmental document prepared for those resources.

3. **Compatible Land Use.**

Statute	Regulation	Oversight Agency
Aviation Safety and Noise Abatement Act of 1979, as amended (49 U.S.C. 47501-47507)	Title 14 Code of Federal Regulations (CFR) Part 150	Federal Aviation Administration

a. Requirements. The compatibility of existing and planned land uses in the vicinity of an airport is usually associated with the extent of the airport's noise impacts. Airport development actions to accommodate fleet mix changes or the number of aircraft operations, air traffic changes, or new approaches made possible by new navigational aids are examples of activities that can alter aviation-related noise impacts and land uses subjected to those impacts. In this context, if the noise analysis described in the noise analysis section, paragraph 13, concludes that there is no significant impact, a similar conclusion usually may be drawn with respect to compatible land use. However, if the proposal would result in other impacts exceeding example, disruption of communities, relocation, and induced socioeconomic impacts, the effects on land use shall be analyzed in this context and described accordingly under the appropriate impact category with any necessary cross-refereces to the Compatible Land Use section to avoid duplication.

The Compatible Land Use section of the environmental document shall include documentation to support the required sponsor's assurance under 49 USC 47107(a)(10), formerly Section 511(a)(5) of the 1982 Airport Act, that appropriate action, including the adoption of zoning laws, has been or will be taken, to the extent reasonable, to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities

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and purposes compatible with normal airport operations, including landing and takeoff of aircraft. The assurance must be related to existing and planned land uses.

The Airport Development Grant Program (49 USC 47101 *et seq.*) requires that a project may not be approved unless the Secretary of Transportation is satisfied that the project is consistent with plans (existing at the time the project is approved) of public agencies for development of the area in which the airport is located (49 USC 47106(a)(1)).

Permits/Certificates: Not applicable.

b. FAA Responsibilities. FAA officials will contact the sponsor and representatives of affected communities to encourage the development of appropriate compatible land use measures early in the project planning stage. The environmental document shall address what is being done by the jurisdiction(s) with land use control authority, including an update on any prior assurance.

Table 1 describes compatible land use information for several land uses as a function of DNL values. The ranges of DNL values in Table 1 reflect the statistical variability for the responses of large groups of people to noise. Any particular DNL level might not, therefore, accurately assess an individual's perception of an actual noise environment. Compatible or noncompatible land use is determined by comparing the predicted or measured DNL values at a site to the values listed in Table 1.

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TABLE 1— LAND USE COMPATIBILITY WITH YEARLY DAY-NIGHT AVERAGE SOUND LEVELS

Land Use	Yearly day-night average sound level (L_{dn}) in decibels					
	Below 65	65-70	70-75	75-80	80-85	Over 85
RESIDENTIAL						
Residential, other than mobile homes and transient lodgings	Y	N(1)	N(1)	N	N	N
Mobile home parks	Y	N	N	N	N	N
Transient lodgings	Y	N(1)	N(1)	N(1)	N	N
PUBLIC USE						
Schools	Y	N(1)	N(1)	N	N	N
Hospitals and nursing homes	Y	25	30	N	N	N
Churches, auditoriums, and concert halls	Y	25	30	N	N	N
Government services	Y	Y	25	30	N	N
Transportation	Y	Y	Y(2)	Y(3)	Y(4)	Y(4)
Parking	Y	Y	Y(2)	Y(3)	Y(4)	N
COMMERCIAL USE						
Offices, business and professional	Y	Y	25	30	N	N
Wholesale and retail— building materials, hardware and farm equipment	Y	Y	Y(2)	Y(3)	Y(4)	N
Retail trade— general	Y	Y	25	30	N	N
Utilities	Y	Y	Y(2)	Y(3)	Y(4)	N
Communication	Y	Y	25	30	N	N
MANUFACTURING AND PRODUCTION						
Manufacturing, general	Y	Y	Y(2)	Y(3)	Y(4)	N
Photographic and optical	Y	Y	25	30	N	N
Agriculture (except livestock) and forestry	Y	Y(6)	Y(7)	Y(8)	Y(8)	Y(8)
Livestock farming and breeding	Y	Y(6)	Y(7)	N	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y
RECREATIONAL						
Outdoor sports arenas and spectator sports	Y	Y(5)	Y(5)	N	N	N
Outdoor music shells, amphitheaters	Y	N	N	N	N	N
Nature exhibits and zoos	Y	Y	N	N	N	N
Amusements, parks, resorts, and camps	Y	Y	Y	N	N	N
Golf courses, riding stables and water recreation	Y	Y	25	30	N	N

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Numbers in parenthesis refer to notes.

*The designations contained in this table do not constitute a Federal determination that any use of land covered by the program is acceptable or unacceptable under Federal, State, or local law. The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rests with the local authorities. FAA determinations under Part 150 are not intended to substitute Federally determined land uses for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving noise compatible land uses.

KEY TO TABLE 1

SLUCM = Standard Land Use Coding Manual.

Y (YES) = Land Use and related structures compatible without restrictions.

N (No) = Land Use and related structures are not compatible and should be prohibited.

NLR = Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.

25, 30, or 35 = Land use and related structures generally compatible; measures to achieve NLR of 25, 30 or 35 dB must be incorporated into design and construction of structure.

NOTES FOR TABLE 1

(1) Where the community determines that residential or school uses must be allowed, measures to achieve outdoor to indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be expected to provide a NLR of 20 dB, thus, the reduction requirements are often stated as 5, 10 or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round. However, the use of NLR criteria will not eliminate outdoor noise problems.

(2) Measures to achieve NLR of 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.

(3) Measures to achieve NLR of 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.

(4) Measures to achieve NLR of 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.

(5) Land use compatible provided special sound reinforcement systems are installed.

(6) Residential buildings require an NLR of 25.

(7) Residential buildings require an NLR of 30.

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(8) Residential buildings not permitted.

c. Analysis of Significant Impacts. When the noise analysis (see Noise paragraph) indicates that a significant noise impact will occur over noise sensitive areas within the DNL 65 dB contour, the analysis should include a discussion of the noise impact on those areas. Any mitigation measures to be taken in addition to those associated with other land use controls shall be discussed. FAA Advisory Circular 150/5020-1, *Noise Control and Compatibility Planning for Airports,* presents guidance for airport operators and planners to help achieve compatibility between airports and their environs.

4. CONSTRUCTION IMPACTS

Statute	Regulation	Oversight Agency
See requirements below		

a. Requirements. Local, State, or Federal ordinances and regulations address the impacts of construction activities, including construction noise, dust and noise from heavy equipment traffic, disposal of construction debris, and air and water pollution. Many of the specific types of impacts that could occur are covered in the descriptions of other appropriate impact categories.

Permits/Certificates: National Pollutant Discharge Elimination System (NPDES) permit (when construction disturbs 1 acre or more).

b. FAA Responsibilities. The environmental document must include a general description of the type and nature of the construction and measures to be taken to minimize potential adverse effects. At a minimum, reference is made to the incorporation in project specifications of the provisions of Advisory Circular 150/5370-10A, Standards for Specifying Construction of Airports.

c. Analysis of Significant Impacts. In an unusual circumstance where a construction impact would create significant consequences that cannot be mitigated, a more thorough discussion is needed, including the results of consultations with those agencies that have concerns and the reasons why such impacts cannot be avoided or mitigated to insignificant levels.

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5. DEPARTMENT OF TRANSPORTATON - SECTION 4(f)

Statute	Regulation	Oversight Agency
Department of Transportation Act of 1966, section 4(f) [recodified at 49 U.S.C. 303 (c)]		Department of Transportation

a. Requirements. The Federal statute that governs impacts in this category is the Department of Transportation (DOT) Act, Section 4(f) provisions. Section 4(f) of the DOT Act provides that the Secretary of Transportation will not approve any program or project that requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance or land from an historic site of national, State, or local significance as determined by the officials having jurisdiction thereof, unless there is no feasible and prudent alternative to the use of such land and such program, or the project includes all possible planning to minimize harm resulting from the use.

Procedural requirements are set forth in DOT Order 5610.1C, Attachment 2, paragraph 4. The FAA also uses as guidance to the extent relevant the Federal Highway Administration and Urban Mass Transportation Administration's guidance defining *Constructive Use* under 23 CFR Section 771.135 (56 FR 13269, April 1, 1991).

Designation of airspace for military flight operations is exempt from Section 4(f). The Department of Defense reauthorization in 1997 provided that " [n]o military flight operations (including a military training flight), or designation of airspace for such an operation, may be treated as a transportation program or project for purposes of Section 303(c) of title 49, United States Code" (PL 105-85, Nov. 18, 1997).

Permits/Certificates: Not Applicable.

b. FAA Responsibilities.

(1) Any part of a publicly owned park, recreation area, refuge, or historic site is presumed to be significant unless there is a statement of insignificance relative to the whole park by the Federal, State, or local official having jurisdiction thereof. Any such statement of insignificance is subject to review by the FAA.

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(2) Where Federal lands are administered for multiple uses, the Federal official having jurisdiction over the lands shall determine whether the subject lands are in fact being used for park, recreation, wildlife, waterfowl, or historic purposes. National wilderness areas may serve similar purposes and shall be considered subject to Section 4(f) unless the controlling agency specifically determines that for Section 4(f) purposes the lands are not being used.

(3) Where property is owned by and currently designated for use by a transportation agency and a park or recreation use of the land is being made only on an interim basis, a Section 4(f) determination would not ordinarly be required. The FAA official or sponsor should indicate in any lease or agreement involving such use that this use is temporary.

(4) Where the use of a property is changed by a State or local agency from a Section 4(f) type use to a transportation use in anticipation of a request for FAA approval, Section 4(f) shall be considered to apply, even though the change in use may have taken place prior to the request for approval or prior to any FAA action on the matter. This is especially true where the change in use appears to have been undertaken in an effort to avoid the application of Section 4(f).

For Section 4(f) properties, the initial assessment will determine whether the requirements of Section 4(f) are applicable. When there is an actual physical taking of lands being used for park purposes in conjunction with a project, there is generally no latitude for judgement regarding 4(f) applicability. Use within the meaning of Section 4(f) includes not only actual, physical takings of such lands but also adverse indirect impacts (constructive use) as well. When there is no physical taking, but there is the possibility of adverse impacts, the FAA must determine if the activity associated with the proposal is compatible or conflicts with the normal activity associated with the land. The proposed action is compatible if it would not affect the normal activity or aesthetic value of a 4(f) resource. When this is the case, the action would not constitute a use and would not therefore invoke Section 4(f) of the DOT Act.

In determining whether there is constructive use, the FAA determines whether increases in noise or other impacts due to proximity of the project are so severe that the activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired. Substantial impairment occurs only when the activities, features, or attributes of the resource that contribute to its significance or enjoyment are substantially diminished. A project which respects a park's territorial integrity may still, by means of noise, air pollution, or otherwise, dissipate its aesthetic value, harm its wildlife, defoliate its vegetation, and take it in every practical sense.

The land use compatibility guidelines in 14 CFR Part 150 (Part 150) may be relied upon to determine whether there is a constructive use under Section 4(f) (and a potentially significant impact under the NEPA) where the land uses specified in the regulation bear some relevance to the

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value, significance, and enjoyment of the 4(f) lands in question. For example, Part 150 criteria may be relied upon in evaluating constructive use of lands devoted to traditional recreational activities. FAA may primarily rely upon the average day night sound levels (DNL) in Part 150 rather than single event noise analysis because DNL is the best measure of significant impact on the quality of the human environment and is the only noise metric with a substantial body of scientific data on the reaction of people to noise.

Turning to historic sites, FAA may also rely upon Part 150 criteria to evaluate impacts on historic properties that are in use as residences. If architecture and place in history are the relevant characteristics of an historic neighborhood, then project-related noise does not degrade the values that led to eligibility for or listing on the National Register of Historic Places. As a result the noise does not constitute an adverse effect and Section 4(f) would not be triggered. A historic property would not be " used" for Section 4(f) purposes when FAA issues a finding of " No Effect" or " No Adverse Effect" under Section 106 of the National Historic Preservation Act. Although there may be some physical taking of land, Section 4(f) does not apply to archeological resources that have value chiefly for data recovery and which are not important for preservation in place.

Carefully evaluate whether to rely solely upon Part 150 criteria when assessing use of Section 4(f) properties where a quiet setting is a generally recognized feature or attribute of the site's significance or impacts upon enjoyment of an urban park where serenity and quiet are significant attributes. For example, Part 150 guidelines are of little use in addressing the effects of noise on the expectations and purposes of persons who visit wildlife refuges to study and enjoy wildlife. The FAA official must consult all appropriate Federal, State, and local officials having jurisdiction over the affected property's impacts on Section 4(f) resources.

The FAA official should become aware of and make all reasonable attempts to consult with other Federal, State, and local officials who have responsibility over any adjacent, nearby, or potentially affected properties.

If it is determined that Section 4(f) is applicable and there are no feasible or prudent alternatives which would avoid such use, the effect on the Section 4(f) land shall be described in detail. The description of the land shall include size, activities, patronage, access, unique or irreplaceable qualities, relationship to similarly used lands in the vicinity, or other factors necessary to determine the effects of the action and measures needed to minimize harm. Such measures may include replacement of land and facilities and design measures such as planting or screening to mitigate any adverse effects. Replacement satisfactory to the Secretary of the Interior (DOI) is specifically required for recreation lands aided by the DOI's Land and Water Conservation Fund and for certain other lands falling under the jurisdiction of the DOI. The environmental document shall include evidence of concurrence or efforts to obtain concurrence of appropriate officials having jurisdiction over such land regarding actions proposed to minimize harm.

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If Federal grant money was used to acquire the land involved (e.g., open space under the Department of Housing and Urban Development (HUD) and various conservation programs under DOI) the environmental document shall include evidence of or reference to appropriate communication with the grantor agency.

c. Significant Impact Thresholds. A significant impact would occur when a proposed action would eliminate or severely degrade the purpose of use for which the Section 4(f) land was established and mitigation would not reduce the impact to levels that would allow the purpose or use to continue.

d. Analysis of Significant Impacts. The FAA shall consult with the officials having jurisdiction over the Section 4(f) property(ies), and other agencies, as necessary. The EIS thoroughly analyzes and documents alternatives that would avoid the use of Section 4(f) property and provide detailed measures to minimize harm.

6. FARMLANDS

Statute	Regulation	Oversight Agency
Farmland Protection Policy Act [7 U.S.C. 4201 et seq.] [PL 97-98] Food Security Act of 1985 [PL 99-198]	7 CFR Part 658 (57 FR 31110) 7 CFR Part 657 (43 FR 4030)	Natural Resource Conservation Service

a. Requirements. The Farmland Protection Policy Act (FPPA) regulates Federal actions with the potential to convert farmland to non-agricultural uses.

Permits/Certificates: Not Applicable.

b. FAA Responsibilities. Consultation with the Natural Resources Conservation Service (NRCS) should occur to determine if the FPPA applies to the land the proposed action would convert, or if an exemption to the FPPA exists. If it is determined that the farmland is protected by the FPPA, formal coordination as provided by 7 CFR Part 658 is required.

The FAA official should become aware of and make all reasonable attempts to consult with other Federal, State, and local officials who have responsibility over any adjacent, nearby, or potentially affected lands to assure compatibility of the proposed action and affected farmland.

For FPPA-regulated farmland, scoring of the relative value of the site for preservation is performed by the NRCS and the proponent. If the total score on Form AD-1006 is below 160, no further analysis is

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necessary. Scores between 160 and 200 may have potential impacts and require further consideration of alternatives that would avoid this loss. Consider measures that reduce the amount of protected farmland that the project would convert or use farmland having relative lower value. If NRCS fails to respond within 45 days and if further delay would interfere with construction activities, the action may proceed as though the site were not farmland protected by the FPPA. The FAA then documents a *no response* by the NRCS in the environmental document.

If there are unresolved land use issues with State and local officials, then further consultation will be required.

c. **Significant Impact Thresholds.** A significant impact would occur when the total combined score on Form AD 1006 (copies available from NRCS) ranges between 200 and 260 points. Note that impact severity increases as the total combined score approaches 260 points.

d. **Analysis of Significant Impacts.** The analysis evaluates the impacts on agricultural production in the area; compatibility with State, local and private programs and policies to protect farmland; any disruption of the farming community either as a direct result of the construction or by changes in land use associated with the action; and non-viability of farm support services in the area as a result of farmland conversion. Measures to minimize harm will be considered, including adjustments in the action to reduce the amount of farmland taken out of production or retain as much of the land as possible for agricultural use by incorporation into compatible land use plans.

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7. FISH, WILDLIFE, AND PLANTS

Statute	Regulation	Oversight Agency
Endangered Species Act of 1973 [16 U.S.C. 1531 to 1544] [PL 93-205]	50 CFR Parts 17 and 22 50 CFR Part 402 50 CFR Parts 450-453 MOU on Implementation of the Endangered Species Act, 9/28/94 MOU on Using an Ecosystem Approach in Agency Decision-making, 12/5/95 CEQ Guidance on Incorporating Biodiversity Considerations into Environmental Impact Analysis, January 1993	Fish and Wildlife Service National Marine Fisheries Service U.S. Department of the Interior Council on Environmental Quality
Sikes Act Amendments of 1974 [PL 93-452, 88 Stat. 1369]		State Natural Heritage Programs
Executive Order 13112, Invasive Species	DOT Policy on Invasive Species, 4/22/99	
Fish and Wildlife Coordination Act of 1958 [16 U.S.C. 661-666c] [PL 85-624, 72 Stat. 563]		
Fish and Wildlife Conservation Act of 1980 [16 U.S.C. 2901 to 2912] [PL 96-366, 94 Stat. 1322]	50 CFR Part 83	

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a. Requirements.

Section 7 of the Endangered Species Act (ESA), as amended, applies to Federal agency actions and consultations. Section 7(a)(2) requires each agency, generally the lead agency, in consultation with the Services to ensure that any action the agency authorizes, funds, or carries out is not likely to jeopardize the continued existence of any Federally listed endangered or threatened species or result in the destruction or adverse modification of critical habitat. (The effects on fish, wildlife, and plants include the destruction or alteration of habitat and the disturbance or elimination of fish, wildlife, or plant populations.) Section 10 recovery plans should be reviewed for guidance. If a species has been listed as a candidate species, Sec. 7(a)(4) states that each agency shall confer with the Services. Refer to the FWS and NMFS *Endangered Species Consultation Handbook: Procedures for Conducting Consultation and Conference Activities Under Section 7 of the Endangered Species Act*, March 1998.

The Sikes Act and various amendments authorizes States to prepare statewide wildlife conservation plans and the Department of Defense (DOD) to prepare similar plans for resources under its jurisdiction. Actions should be checked for consistency with the State Wildlife Conservation Plans and DOD plans where such plans exist.

The Fish and Wildlife Coordination Act requires that agencies consult with the State wildlife agencies and the Department of the Interior (FWS) concerning the conservation of wildlife resources where the water of any stream or other water body is proposed to be controlled or modified by a Federal agency or any public or private agency operating under a Federal permit.

The Fish and Wildlife Conservation Act provides for financial and technical assistance to States to develop conservation plans, subject to approval by the Department of the Interior, and implement State programs for fish and wildlife resources. The Fish and Wildlife Conservation Act also encourages all Federal departments and agencies to utilize their statutory and administrative authority, to the maximum extent practicable and consistent with each agency's statutory responsibilities, to conserve and to promote conservation of nongame fish and wildlife and their habitats, in furtherance of the provisions of this Act.

EO 13112, Invasive Species, and the DOT Policy on Invasive Species require FAA to identify proposed actions that may involve risks of introducing invasive species on native habitat and populations" Introduction" is the intentional or unintentional escape, release, dissemination, or placement of a species into an ecosystem as a result of human activity. " Invasive species" are alien species whose introduction does or is likely to cause economic or enviornmental har or harm to human health. Section 2 of the Executive Order spells out Federal agency duties. Where such an action has been identified, FAA may not authorize, fund, or carry out actions that the FAA believes are likely to cause or promote the introduction or spread of invasive species in the United States or elsewhere unless, pursuant to guidelines that it has prescribed, the agency has determined that the benefits of

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such actions clearly outweigh the potential harm caused by invasive species; and that all feasible and prudent measures to minimize risk of harm will be taken in conjunction with the actions. In addition, FAA must to the extent practical and permitted by law, and subject to the availability of approriations, and within Administration budgetary limits, use relevant programs and authorities to prevent introduction; detect and respond rapidly to and control populations of such species in a cost-effective and environmentally sound manner; monitor invasive species populations accurately and reliably; provide for restoration of native species and habitat conditions in ecosystems that have been invaded; conduct research on invasive species and develop technologies to prevent introduction and provide for environmentally sound control of invasive species; and promote public education on invasive species and the means to address them. Other related requirements, include the Aquatic Nuisance Plant Control Act, which includes provisions relating to the brown tree snake, and those laws governing import or export of plants and animals across state and national borders, such as the Lacey Act Amendments of 1991, which prohibit the transport across state lines of any wildlife or plants taken in violation of any State law, depending on the circumstances. The Presidential Memorandum on Economically and Environmentally Beneficial Landscaping encourages the use of native plants at Federal facilities and in federally funded projects.

a. The CEQ guidance on incorporating biodiversity considerations into environmental impact analyses under the National Environmental Policy Act requires Federal agencies to consider the effects of Federal actions on biodiversity to the extent that is possible to both anticipate and evaluate those effects. The guidance outlines the general principles and discusses the importance of context, that is, examining the indirect, direct, and cumulative impacts of a specific project in the regional or ecosystem context.

b. The MOU on Using an Ecosystem Approach in Agency Decision-making requires FAA to participate, as appropriate to its mandates, in ecosystem management efforts initiated by other Federal agencies, by state, local or tribal governments, or as a result of local grass-roots efforts. The ecosystem approach, consistent with the requirements in NEPA to use ecological information, emphasizes consideration of all relevant and identifiable ecological and economic consequences both long term and short term; coordination among Federal agencies; partnership; communication with the public; efficient and cost-effective implementation; use of best available science; improved data and information management, and responsiveness to changing circumstances.

Permits/Certificates: Various wildlife statutes, such as the Marine Mammal Protection Act, require permits.

b. FAA Responsibilities. Coordination is to be initiated with the Services pursuant to the ESA for Federally listed endangered, threatened, and candidate species or designated critical habitat, and, pursuant to the Fish and Wildlife Coordination Act where there is a potential impact on water resources with the Services as well as other Federal, State, Tribal, and local agencies having administration over

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fish, wildlife, and plant resources. For Federally listed, proposed, and candidate species and listed and proposed critical habitat, this initial step is known as informal consultation and triggers the ESA Section 7(d) prohibition on irreversible or irretrievable commitment of resources.

Letters will be obtained from these officials on the possible effects of the proposal on these resources and possible mitigation measures. The letters from the appropriate officials will provide an indication of the potential for substantial damage to water resources and wildlife attributable to the proposal, if applicable.

Informal consultation under ESA Section 7: Informal consultation with the Services under Section 7 of the ESA will clarify whether and what Federally listed, proposed, or candidate species or Federally designated or proposed critical habitat may be found in the potentially impacted areas, determine what effect the action may have on these species or critical habitats; explore ways to modify the action to reduce or remove adverse effects to the species or critical habitats; determine the need to enter into formal consultation for listed species or designated critical habitat, or conference for proposed species or proposed critical habitat; and explore the design or modification of an action to benefit the species. The Services will prepare or concur with the action agency's species list and identify major gaps in biological information. A biological assessment (BA) is defined as information prepared by, or under the direction of, a Federal agency to determine whether a proposed action is likely to: (1) adversely affect listed species or designated critical habitat, (2) jeopardize the continued existence of species that are proposed for listing; or (3) adversely modify proposed critical habitat. Biological assessments are mandatory for " major construction activities." See 50 CFR Section 402.02. BA's are not required to analyze alternatives to proposed actions. The recommended contents of a BA are found in 50 CFR Section 402.12(f). For other types of proposed actions, the Federal agency must provide the Services with the information the Federal agency used in evaluating the likely effects of the action. Informal consultation ends if the proposed action, whether a major construction activity or other action, is not likely to adversely affect species or critical habitat (i.e., effects are expected to be completely beneficial (contemporaneous positive effects without any adverse effects to the species), discountable (extremely unlikely to occur), or insignificant (should never reach the scale where take occurs)), and the Service concurs in writing.

Formal consultation under ESA Section 7(a)(2): For Federally listed threatened and endangered species and Federally designated critical habitat, formal consultation with FWS or NMFS under Section 7(a)(2) of the ESA is triggered when: 1) the FAA determines that the proposed action " may affect" Federally listed species or designated critical habitat, unless the FWS or NMFS concur in writing that the proposed action is not likely to adversely affect any listed species or critical habitat, or 2) the FWS or NMFS does not concur with the agency's determination that the proposed action is not likely to adversely affect Federally listed species or designated critical habitat. Formal

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consultation is concluded with a Biological Opinion (No Jeopardy/Adverse Modification Opinion, including an

incidental take statement, or Jeopardy/Adverse Modificiation Opinion), as discussed below.

Conference under ESA Section 7(a)(4): If the proposed action is likely to adversely affect Federally proposed species or critical habitat, then conference is required for Federally proposed species and Federally proposed critical habitat, unless the Federal agency decides to include the analysis of effects on proposed species and proposed critical habitats in the formal consultation process. Conference can be useful in later expediting the consultation process when a proposed species is listed or proposed critical habitat is designated. For Federally proposed species and critical habitat, at the conclusion of conference, the Services will provide conservation recommendations. Conservation recommendations are discretionary agency activities.

Other statutes: Other statutes, such as the Marine Mammal Protection Act, may also apply depending upon the circumstances.

It may be assumed that there are no significant impacts on fish, wildlife, and plants if:

For Federally listed threatened and endangered species and designated critical habitat under the ESA:

(1) The reply from the FWS or NMFS following informal consultation indicates that the proposed action is not likely to adversely affect any listed species or critical habitat (i.e., the effects are completely beneficial, insignificant, or discountable); or

(2) A Biological Opinion issued by the FWS or NMFS following formal consultation states that the proposed action is not likely to jeopardize the continued existence of Federally listed threatened or endangered species in the affected area or result in the destruction or adverse modification of Federally designated critical habitat in the affected area (No Jeopardy/Adverse Modification Opinion). A No Jeopardy/Adverse Modification Opinion may include one or more reasonable and prudent alternatives to eliminate jeopardy. The incidental take statement, included in the No Jeopardy/Adverse Modification Opinion, provides nondiscretionary reasonable and prudent measures that are necessary and appropriate to minimize the level of incidental take and avoid jeopardy. Different levels of take and different reasonable and prudent measures may be specified for each reasonable and prudent alternative. (Formal consultation may be reinitiated when the amount or extent of incidental take is exceeded; new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; the action is modified in a manner causing effects to listed species or critical habitat not previously considered; or a new species is listed or critical habitat is designated that may be affected by the action.)

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For species not Federally listed as threatened or endangered and habitats not Federally designated as critical under the ESA:

The FWS, NMFS, or other Federal, State or Tribal agency responsible for protecting wildlife where there is an impact on a water resource indicate that the impacted area is human-dominated, or the impact is transient in nature, or the alteration would not result in a long-term or permanent loss of wildlife or water resources.

If, after these efforts, significant impacts are unavoidable, then the FAA official conducts further consultation and analysis with the Services and other Federal, State, Tribal, or local officials in the preparation of the EIS.

c. Analysis of Significant Impacts.

(1) General. The FAA will coordinate with the Services, other Federal, State, Tribal, or local wildlife agencies, and others as necessary to assess the potential impacts. If the proposed action affects water resources and thereby triggers the Fish and Wildlife Coordination Act, then the FAA considers the recommendations of the FWS, NMFS, other Federal agencies, and the State or Tribal wildlife agency and assures that further detailed analysis is performed. This may include:

(a) Use of aerial photographs and field reconnaissance.

(b) Determining the significance of impacted habitats including the importance and range of fauna and flora and the location of nesting and breeding areas.

(c) A more detailed analysis of other impact areas (e.g., noise, air quality, water quality).

(2) Federally listed threatened and endangered species and Federally designated criticat habitat. For Federally listed threatened and endangered species and Federally designated critical habitats, the FAA forwards to the Services the BA as required for major construction activities or supporting information as needed for other types of proposed actions with a request to initiate formal consultation under Section 7(a)(2) of the ESA. The BA may be included in an EA. If the FAA accepts an alternative proposed by the FWS or the NMFS or proposes another acceptable alternative, the FAA also may conclude that impacts are not significant. If neither of the above apply, the potential impact is considered significant. In the preparation of an EIS, the FAA requests the Services to be cooperating agencies on the basis of their jurisdiction. Further detailed analysis may consider:

(a) Further mitigation measures or action modifications.

(b) Further biological assessment.

(c) If the FWS or NMFS issues a Jeopardy/Adverse Modification Opinion, FAA may not proceed with the action unless the project is

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modified sufficiently to enable the Services to issue a No Jeopardy/Adverse Modification Opinion, or the action is exempted under 50 CFR Part 451.

8. FLOODPLAINS AND FLOODWAYS

Statute	Regulation	Oversight Agency
Executive Order 11988, Floodplain Management	DOT Order 5650.2, Floodplain Management and Protection	Federal Aviation Administration
Appropriate State and local construction statutes		Federal Emergency Management Agency
		Appropriate State and local agencies

a. Requirements. Executive Order 11988 directs Federal agencies to take action to reduce the risk of flood loss, minimize the impact of floods on human safety, health, and welfare, and restore and preserve the natural and beneficial values served by floodplains. DOT Order 5650.2 contains DOT's policies and procedures for implementing the executive order. Agencies are required to make a finding that there is no practicable alternative before taking action that would encroach on a base floodplain based on a 100-year flood.(7 CFR Section 650.250).

b. FAA Responsibilities. The FAA official will consult with State and local officials to determine the boundaries of floodplains near the site of the action. The Federal Emergency Management Agency (FEMA) maps are the primary reference for determining the extent of the base floodplain. If a floodplain designation is in question, FEMA or the Army Corps of Engineers will be contacted for information.

If the proposed action and reasonable alternatives are not within the limits of, or if applicable, the buffers of a base floodplain, that statement should be made. No further analysis is needed.

If the agency finds that the only practicable alternative requires siting in the base floodplain, a floodplain encroachment would occur and further environmental analysis is needed. The FAA shall, prior to taking the action, design or modify the proposed action to minimize potential harm to or within the base floodplain. The action is to be consistent with regulations issued according to Section 2(d) of E.O. 11988. The FAA shall also provide the public with an opportunitiy to review the encroachment through its public involvement process and any public notices, notices of opportunity for public hearing, public hearing notices, and notices of environmental document must state that an encroachment is anticipated.

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FAA's analysis shall also indicate if the encroachment would be a " significant encroachment," that is, if it would cause one or more of the following impacts:?

(1) The action would have a high probability of loss of human life.

(2) The action would likely have substantial, encroachment-associated costs or damage, including interrupting aircraft service or loss of a vital transportation facility (e.g., flooding of a runway or taxiway; important navigational aid out of service due to flooding, etc.); or

(3) The action would cause adverse impacts on natural and beneficial floodplain values.

If one or more of the alternatives under consideration includes significant floodplain encroachments, then any public notices, notices of opportunity for public hearing, public hearing notices, and notices of environmental document availability, shall note that fact.

When flood storage is displaced, the analysis should consider compensatory floodwater storage impacts on upstream property, or how that storage could affect aquatic or other biotic systems. Development project not causing higher flood elevations or altering flood storage could adversely affect beneficial or natural floodplain values.

Actions outside a base floodplain may adversely affect natural and beneficial floodplain resources. Consider impacts on natural and beneficial floodplain values, water pollution, increased runoff from impermeable surfaces, changes in hydrologic patterns, or induced secondary development. Mitigation to minimize such impacts is needed to comply with the applicable regulations. This mitigation may include: commiting to comply with special flood-related design criteria; elevating facilities above the base flood elevation; or minimizing fill placed in floodplains.

c. Significant Impact Thresholds. If a significant encroachment is involved that would result in notable adverse impacts on natural and beneficial floodplain values, preparation of an EIS is required. Mitigation measures for base floodplain encroachments may include commiting to special flood related design criteria, elevating facilities above base flood level, locating nonconforming structures and facilities out of the floodplain, or minimizing fill placed in floodplains.

d. Analysis of Significant Impacts. When the FAA prepares an EIS addressing significant impacts in this category, Federal, State, or local agencies with floodplain jurisdiction and expertise may become cooperating agencies. Further analysis includes the following as applicable to the action:

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(1) Further consideration of the practicability of any alternatives.

(2) Inclusion of all practicable measures in the design of the proposal to minimize harm and to restore and preserve the natural and beneficial floodplain values affected. Commitments to later compliance with special flood related design criteria or the imposition, in advance, of protective conditions may be warranted in some situations.

(3) Evidence that the action conforms to applicable State and/or local floodplain protection standards.

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9. HAZARDOUS MATERIALS AND SOLID WASTE

Statute	Regulation	Oversight Agency
Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) (as amended by the Superfund Amendments and Reauthorization Act of 1986 and the Community Environmental Response Facilitation Act of 1992) [42 U.S.C. 9601- 9675]	40 CFR Parts 300, 302, 373, 355, 370, and 372 Executive Order 12856	Environmental Protection Agency
Pollution Prevention Act of 1990 [42 U.S.C. 1310- 13109]	CEQ Memorandum on Pollution Prevention and the National Environmental Policy Act, 1/12/93 (58 FR 6478)	Council on Environmental Quality
Toxic Substances Control Act (TSCA) [15 U.S.C. 2601- 2692] [PL 94-550]	40 CFR Parts 761 and 763	
Resource Conservation and Recovery Act of 1976 (RCRA) [42 U.S.C. 6901-6992(k)] [PL 94-580] (As amended by the Solid Waste Disposal Act of 1980, [PL 96-482] As amended by the Hazardous and Solid Waste Amendments of 1984, [PL 98-616] and the Federal Facility Compliance Act of 1992)	40 CFR Parts 240 - 280	

a. **Requirements**. Four primary laws have been passed governing the handling and disposal of hazardous materials, chemicals, substances, and wastes. The two statutes of most importance to the FAA in proposing actions to construct and operate facilities and navigational aids are the Resource Conservation and Recovery Act (RCRA) (as amended by the Federal Facilities Compliance Act of 1992) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended (also known as Superfund). RCRA governs the generation, treatment, storage, and disposal of hazardous wastes. CERCLA provides

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for cleanup of any release of a hazardous substance (excluding petroleum) into the environment. FAA actions to fund, approve, or conduct an activity may require consideration of hazardous material and solid waste impacts in NEPA documentation. NEPA documents prepared in support of project development should include an appropriate level of review regarding the hazardous nature of any materials or wastes to be used, generated, or disturbed by the proposed action, as well as the control measures to be taken. The CEQ memorandum on pollution prevention and the National Environmental Policy Act encourages early consideration, for example, during scoping, of opportunities for pollution prevention. FAA should, to the extent practicable, include pollution prevention considerations in the proposed action and its alternatives; address pollution prevention in the environmental consequences section; and disclose in the record of decision the extent to which pollution was considered. A discussion of pollution prevention may also be appropriate in an EA. Consideration of these issues in evaluating the effects of proposed actions should begin with an understanding of the following three terms:

Hazardous Material - any substance or material that has been determined to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce (49 CFR Part 172, Table 172.101). This includes hazardous substances and hazardous wastes.

Hazardous Waste - under the Resource Conservation and Recovery Act (RCRA) a waste is considered hazardous if it is listed in, or meets the characteristics described in 40 CFR Part 261, including ignitability, corrosivity, reactivity, or extraction procedure toxicity.

Hazardous Substance - any element, compound, mixture, solution, or substance defined as a hazardous substance under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and listed in 40 CFR Part 302. If released into the environment, hazardous substances may pose substantial harm to human health or the environment.

b. FAA Responsibilities. The FAA must comply with applicable pollution control statutes and requirements that may include, but may not be limited to, those listed in Appendix 2 of Order 1050.10B, Prevention, Control, and Abatement of Environmental Pollution at FAA Facilities.

In accordance with Order 1050.19, Environmental Due Diligence Audits in the Conduct of FAA Real Property Transactions, an Environmental Due Diligence Audit (EDDA) shall be conducted to evaluate subject properties for potential hazardous substances contamination that could result in future FAA liabilities.

FAA actions to fund or approve airport layout plans for terminal area development may also require consideration of solid waste impacts in NEPA documentation. A preliminary review should indicate if the projected quantity or type of solid waste generated or method of collection or disposal will be appreciably different than would be the

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case without the action. Special attention shall be given to the control of hazardous waste.

NEPA documents should include appropriate information as described below.

(1) The environmental document should demonstrate that the FAA (or airport sponsor as appropriate) has determined whether hazardous wastes as defined in 40 CFR Part 261 (RCRA) will be generated, disturbed, transported or treated, stored or disposed, by the action under consideration. If so, management of these wastes is regulated by 40 CFR Parts 260-280 and transportation is governed by 49 CFR Parts 171-199. To the extent that the existence of hazardous wastes affects phasing of project construction, analysis of alternatives and consideration of mitigation measures, the means for compliance with applicable regulations must be discussed. It may be helpful to briefly discuss the means for compliance with applicable regulations in the NEPA documentation. For example, operators of activities that would cause hazardous waste must obtain a RCRA hazardous waste generator identification number from EPA or an authorized State.

(2) The document should analyze alternatives considering applicable permitting requirements, and in the case of direct actions or funding, Federal and State guidelines and regulations on procurement of recycled or recyclable productions, the source separation and recycling of recyclable products and solid waste storage, transport, or disposal.

(3) The document should analyze the cost and feasibility of alternatives regarding the avoidance or use of hazardous materials, hazardous wastes, recycled materials, recyclable products, and any related need for permits, remediation, storage, transport, or disposal.

(4) The document should indicate the presence of any sites within the action area listed or under consideration for listing on the National Priorities List (NPL) established by EPA in accordance with CERCLA. NEPA documentation should include a discussion of the impact of any NPL or NPL candidate sites on the action and/or impacts of the action on any NPL or NPL candidate sites. NEPA documentation should also identify sites in the vicinity that have been designated RCRA Solid Waste Management Units (SWMUs) and that may impact or be impacted by the action.

(5) The NEPA documentation should reflect that consultation with the appropriate State agency (or EPA) has been initiated. If a formal agreement has been reached, it should be included in the document itself or incorporated by reference, as appropriate. In many cases, construction may not commence until a formal agreement between the FAA (or action sponsor) and the State agency (or EPA) has been executed.

(6) The NEPA documentation, i.e., EIS, Record of Decision, and FAA construction contracts should include a provision that in the event previously unknown contaminants are discovered during construction, or a

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spill occurs during construction, work should stop until the National Response Center is notified. Their number is (800) 424-8802.

c. Analysis of Significant Impacts. Generally, additional information or analysis is needed only if significant problems are anticipated with respect to meeting the applicable local, State, or Federal laws and regulations on hazardous or solid waste management. Additional data may include results of any further consultation with affected agencies and measures to be taken to minimize the impacts. Disposal that would adversely affect water quality or other environmental resources may be discussed under those sections of the environmental analysis addressing affected resources, with the hazardous material section cross-referencing those sections. Actions that involve property listed (or potentially listed on) the NPL are considered significant by definition. In other cases, only a significant unresolved issue may warrant additional analysis in an EIS.

The cost and feasibility of any necessary remediation of hazardous waste contamination should be considered and for guidance on considering existing environmental contamination issues associated with proposed actions to acquire land consult Order 1050.19, Environmental Due Diligence Audits in the Conduct of FAA Real Property Transactions.

For guidance on design, construction, and operational compliance of FAA facilities with pollution control statutes, the following FAA orders should be consulted:

(1) Order 1050.10B, Prevention, Control, and Abatement of Environmental Pollution at FAA Facilities.

(2) Order 1050.14A, Polychlorinated Biphenyls (PCB) in the National Airspace System.

(3) Order 1050.15A, Underground Storage Tanks at FAA Facilities.

(4) Order 1050.18, Chlorofluorocarbons and Halon Use at FAA Facilities.

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10. HISTORICAL, ARCHITECTURAL, ARCHEOLOGICAL, AND CULTURAL RESOURCES

[THIS SECTION REFLECTS THE MAJOR REVISIONS TO 36 CFR PART 800 ISSUED MAY 18, 1999]

Statute	Regulation	Oversight Agency
Laws Governing National Historic Preservation Programs and National Historic Landmarks:		
Historic Sites Act of 1935 [16 U.S.C. 461-467] [PL 74-292 (1935)]		National Park Service
National Historic Preservation Act of 1966, as amended [16 U.S.C. 470, 470 note] [PL 102-575 (1992)]	36 CFR Parts 60, 61, 62.1 (National Natural Landmarks),63, 65,65.1 (National Historic Landmarks), 68, 73 (World Heritage Program, 78 36 CFR Part 800, as revised, May 18, 1999, effective June 17, 1999	National Park Service Advisory Council on Historic Preservation State Historic Preservation Officer
Statute	**Regulation**	**Oversight Agency**
Laws Governing the Federal Archeology Program:		
Antiquities Act of 1906 [16 U.S.C. 431, 432, 433] [PL 59-209 (1906)]	43 CFR Part 3 25 CFR Part 261	Department of Interior
Archaeological and Historic Preservation Act of 1974, as amended [16 U.S.C. 469-469c] [PL 89-665]	Guidelines for Archeology and Historic Preservation: Standards and Guidelines (DOI), (48 FR 44716, September 29, 1983) 36 CFR Part 68	Departmental Consulting Archeologist and Archeological Assistance Program, National Park Service

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Statute	Regulation	Oversight Agency
Laws Governing the Federal Archeology Program:		
Archaeological Resources Protection Act of 1979, as amended [16 U.S.C. 470aa-470mm] [PL 96-95 (1979)]	43 CFR Parts 3 and 7 36 CFR Part 79 25 CFR Parts 261 and 262	Departmental Consulting Archeologist and Archeological Assistance Program, National Park Service
Native American Graves Protection and Repatriation Act of 1990 [25 U.S.C. 3001] [PL 101-601 (1990)]	43 CFR Part 10 25 CFR Section 262.8 36 CFR Part 79	Departmental Consulting Archeologist and Archeological Assistance Program, National Park Service
Other Major Federal Historic Preservation Laws		
American Indian Religious Freedom Act of 1978 [42 U.S.C. 1996, 1996 note] [PL 95-341 (1978)]	43 CFR Sections 7.7 and 7.32 25 CFR Section 262.7	
Executive Order 13007, Indian Sacred Sites		
Executive Order 11593, Protection and Enhancement of the Cultural Environment		

a. **Requirements**. Several laws apply to this category of impact. The major laws include the National Historic Preservation Act (NHPA) of 1966, as amended, which establishes the Advisory Council on Historic Preservation (ACHP). Section 110 governs Federal agencies responsibilities to preserve and use historic buildings; identify, evaluate, and nominate eligible properties under the control or jurisdiction of the agency to the National Register; give full consideration in planning to potentially affected historic properties; consult on preservation-related activities with other Federal, State, and local agencies, Indian tribes, Native Hawaiian organizations, and the private sector; and comply with the consultation and public notice requirements of Section 106, the professional standards of Section 112, and the confidentiality requirements of Section 314.

The Archaeological Resources Protection Act (ARPA) is triggered by the presence of archeological resources on Federal or Indian lands. The

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Archeological and Historic Preservation Act of 1974 provides for the survey, recovery, and preservation of significant scientific, pre-historical, historical, archeological, or paleontological data when such data may be destroyed or irreparably lost due to a Federal, Federally licensed, or Federally funded action. The DOI's *Standards and Guidelines* were published in the Federal Register (48 FR 44716, September 29, 1983) to advise Federal agencies on the manner in which this latter law will be implemented. Requirements are specified under subparagraph (c) of the Archeological and Historic Preservation Act of 1974.

The Native American Graves Protection and Repatriation Act (NAGPRA) is triggered by the possession of human remains or cultural items by a Federally funded repository or by the discovery of human remains or cultural items on Federal or tribal lands and provides for the inventory, protection, and return of cultural items to affiliated Native American groups. Most of the historic and archeological preservation laws require consultation with Native Americans. Permits are required for intentional excavation and removal of Native American cultural items from Federal or tribal lands. The Act includes provisions that, upon inadvertent discovery of remains, the action will cease in the area where the remains were discovered, and the FAA official will protect the materials and notify the appropriate land management agency. For additional information see the Advisory Council's policy statement of June 11, 1993, on *Consultation with Native Americans Concerning Properties of Traditional Religious and Cultural Importance*.

The Antiquities Act of 1906 was the first general law providing protection for archeological resources. It protects all historic and prehistoric sites on Federal lands and prohibits excavation or destruction of such antiquities without the permission (antiquities permit) of the Secretary of the department having jurisdiction. It also authorizes the President to declare areas of public lands as national monuments and to reserve or accept private lands for that purpose.

The Historic Sites Act of 1935 declares as national policy the preservation for public use of historic sites, buildings, objects, and properties of national significance. It gives the Secretary of the Interior authority to make historic surveys, to secure and preserve data on historic sites, and to acquire and preserve archeological and historic sites. This act also establishes the National Historic Landmarks program for designating properties having exceptional value in commemorating or illustrating the history of the United States. It gives the Secretary of the Interior broad powers to protect nationally significant historic properties, including the Secretary's authority to establish and acquire nationally significant historic sites.

The American Indian Religious Freedom Act of 1978 requires consultation with Native American groups concerning proposed actions on sacred sites on Federal land or affecting access to sacred sites. It establishes Federal policy to protect and preserve for American Indians, Eskimos, Aleuts, and Native Hawaiians their right to free exercise of their religion. It allows these peoples to access sites, use and possess sacred objects, and freedom to worship through ceremonial and

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traditional rites. In practical terms, the act requires Federal agencies to consider the impacts of their actions on religious sites and objects that are important to Native Americans, including Alaska Natives, and Native Hawaiians, regardless of the eligibility for the National Register of Historic Places.

Executive Order 11593, Protection and Enhancement of the Cultural Environment, (36 FR 8921, May 13, 1971; reprinted in 16 U.S.C. 470 note), and Order DOT 5650.1, Protection and Enhancement of the Cultural Environment, November 20, 1972, require that Federal plans and programs contribute to the preservation and enhancement of sites, structures, and objects of historic, architectural, or archaeological significance.

Permits/Certificates: Various statutes, such as the Antiquities Act of 1906 (Section 3), NAGPRA (Section 3(c)), and ARPA (Section 4), require permits.

b. FAA Responsibilities. The State or Tribal Historic Preservation Officer (SHPO/THPO) and other appropriate sources, must be consulted for advice early in the environmental process. See 36 CFR Part 800 which governs the Section 106 consultation process under NHPA and encourages coordination between Section 106 and other statutes and with environmental and planning reviews under State or local ordinances. (Undertakings that have the potential to affect historic properties under Section 106 constitute an extraordinary circumstance requiring an EA even if the project normally qualifies as a categorical exclusion under NEPA. Findings of no historic properties present or affected or no historic properties adversely affected under NHPA Section 106 support determinations of no use (either constructive or physical) under DOT Section 4(f)). See also specific requirements in 36 CFR Part 800 and ACHP guidance for public involvement during the consultation process.

The FAA official determines whether the proposed action is an " undertaking," as defined in 36 CFR 800.16(y) and whether it is a type of activity that has the potential to cause effects on historic properties. If the agency determines, and the SHPO/THPO concurs, that the action is not an undertaking or is an undertaking but does not have the potential to an effect on historic properties, a historical or cultural resource survey is not necessary and the FAA may issue a determination that the action is not an undertaking or has no effect. If the action is an undertaking and may have an effect, then the first step is to identify the area of potential effect (APE) and the historical or cultural resources within it (see *Secretary's Standards and Guidelines for Identification*).

<u>Determination of Area of Potential Effect (APE):</u> It is the FAA's responsibility to determine the APE. This determination is made generally in consultation with the appropriate SHPO(s)/THPO(s). APE means the geographic area or areas within which an undertaking may cause changes in the character or use of historic properties, if any such properties are subsequently identified within the APE. The ACHP and the SHPO/THPO may provide technical advice.

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Identification and Evaluation Process: The FAA must survey the APE to identify properties potentially eligible or listed on the National Register of Historic Places. If any eligible or listed property is identified within the area of the proposed action's APE, the ACHP's regulations, *Protection of Historic Properties* (36 CFR Part 800) will be consulted and followed. Additional information may be obtained from the FAA's Federal (Historic) Preservation Officer in the Office of Environment and Energy and through cultural resources surveys in the APE.

Traditional cultural places (TCPs) may be eligible for listing on the National Register of Historic Places and thus may become the subject of Section 106 consultation following the procedures in 36 CFR part 800 and National Park Service Bulletin 38 on " Identifying Traditional Cultural Places." The National Park Service Bulletin 38 identifies the National Register criteria for determining whether a place qualifies as a TCP under the National Historic Preservation Act. (Other Bulletins are available to assist in identifying other types of historic properties. Many of these are on file with the FAA Federal Preservation Officer in the Office of Environment and Energy.) The FAA may obtain necessary information to apply the criteria by informally consulting. If informal consultation does not resolve issues relating to identification of properties as National Register eligible or the determination of effect, then the FAA must follow the procedures for identification and analysis outlined in the Secretary of the Interior's Standards and Guidelines.

Note that if a TCP is also a sacred site for a tribe, regardless of whether it is the subject of Section 106 consultation, the FAA must consult the tribe under the American Indian Religious Freedom Act of 1978, and the E.O. 13007, Indian Sacred Sites.

If human remains occur at the site, NAGPRA applies. Various archeological statutes, including ARPA and State, local and tribal laws and ordinances may also apply. Criminal laws and the need to preserve evidence may also be involved when human remains are found. Consistent with FAA security directives, contact the FAA Federal Historic Preservation Officer, SHPO, or THPO to coordinate with the designated counterpart Federal, State, or Tribal law enforcement officials if criminal activity is suspected.

If the SHPO/THPO concurs with the FAA's determination regarding eligibility of a resource for inclusion in the National Register, then the consultation moves to the next step. If the SHPO/THPO does not concur, the FAA must seek a determination of eligibility from the Keeper of the National Register (DOI). The Keeper of the National Register is responsible for issuing formal determination of National Register eligibility when FAA and the SHPO/THPO can't agree on a resource's eligibility for the National Register. (See also 36 CFR Part 63.) Any person can request ACHP review of an agency's findings related to identification of historic properites; evaluation of historic significance; and finding that no historic properties are present. As a result of such a request, the ACHP may request the FAA to seek a formal determination from the Keeper. This is called a " Determination of Eligibility" (DOE).

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If no properties have been identified within the APE (i.e., the area or areas in where the undertaking has the potential to alter the characteristics that qualify or may qualify a property for inclusion in the National Register of Historic Places), and no resources have been identified that are subject to ARPA, NAGPRA, American Indian Religious Freedom Act (AIRFA), Antiquites Act, Section 303 of the amended Department of Transportation Act (known as Section 4(f)), the Archeological and Historic Preservation Act, E.O. 13007, Indian Sacred Sites, or other laws covering specific types of cultural resources, then no further analysis is needed.

Effects Finding: It is the FAA's responsibility to make a finding of " no historic properties present or affected" or " no historic properties adversely affected" after applying the criteria of effect to historic properties in the APE and considering the views of the consulting parties and the public.

To assess effects of the undertaking on identified historic properties located in the area of potential effect, the FAA applies the Criteria of Effect listed in 36 CFR Part 800 in consultation with the SHPO/THPO. If the criteria in 36 CFR Part 800 indicate and the SHPO/THPO agrees that the action would not affect any listed or eligible property, then a finding of no historic properties present or affected accompanied by the SHPO's/THPO's letter and any documentation 36 CFR Part 800 requires must be sent to the ACHP with a notice to that effect and be included in the environmental document.

No agreement on findings of no effect or no adverse effect: If the SHPO(s)/THPO(s) disagree with the FAA's finding of no historic properties present or affected or no historic properties adversely affected (No Adverse Effect), then the process moves to the next stage in which an adverse effect is presumed and negotiations are begun to identify mitigation measures.

If the SHPO/THPO disagrees with the FAA's finding of no historic properties present or affected or no historic properties adversely affected (No Adverse Effect), then the dispute may be referred to the ACHP. Supporting documentation for a finding of No Adverse Effect together with the written views of the SHPO/THPO will be forwarded to the ACHP for review by the Executive Director. Under 36 CFR Part 800, any person can request ACHP review of an agency finding of No Adverse Effect. If ACHP does not agree with a No Adverse Effect finding and the FAA does not accept ACHP recommended changes, an Adverse Effect finding occurs.

If an adverse effect on properties is indicated, a finding of Adverse Effect and the Memorandum of Agreement (MOA) will be included in the EA or EIS with supporting documentation. If the consulting parties agree on an alternative to avoid or satisfactorily mitigate adverse effects, a MOA will be executed specifying how the proposed action will proceed to avoid or mitigate the adverse effects. For more information concerning drafting MOA's, consult the ACHP's *Preparing Agreement Documents* (PAD). A finding of Adverse Effect triggers further consultation among Federal

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agency, SHPO/THPO, and other interested parties to consider means to avoid or minimize effects on historic properties. Mitigation can include data collection according to the Secretary's Guidelines prior to destruction or modification of the resource. The ACHP must be notified of the potential for adverse effect and may participate in consultation. The results of consultation concerning the action's adverse effects on an eligible or listed property are included in the MOA. If a finding of Adverse Effect cannot be avoided through mitigation or action modification, further consultation and analysis will be necessary.

Planning for Unanticipated Discovery: In projects especially involving excavation or ground-disturbing activities which may result in unanticipated discovery of potentially eligible historic or archeological resources, the FAA should develop a plan for addressing impacts on these properties and include this plan in the MOA, or the EA or EIS prepared for the action. The MOA may include provision for unanticipated discovery and include provisions to halt construction. When the FAA has developed such a plan and then discovers historic properties after completing Section 106 requirements, the FAA follows the plan that was approved during the Section 106 consultation and thereby meets its Section 106 requirements regarding the newly discovered properties. The FAA should include a commitment in the EA/FONSI or EIS/ROD to halt construction in the immediate vicinity of the discovered properties and implement the plan if new or additional historic properties are discovered after work has begun on a project. If the FAA has not prepared a plan to address discovery of unanticipated historic properties, then the FAA must afford the SHPO/THPO, the ACHP, and interested parties an opportunity to comment on effects to these newly discovered properties in one of several ways. See 36 CFR Part 800 for additional information.

Programmatic agreements: When an undertaking is going to be repeated many times, e.g., the decommissioning of a particular type of building, the FAA may negotiate a programmatic agreement (PA) with the ACHP. A PA may also be negotiated with the ACHP and the National Conference of State Historic Preservation Officers (NCSHPO) if the undertaking will be repeated in several different States (see 36 CFR 800). The FAA may work through the National Association of Tribal Historic Preservation Officers (NATHPO) to facilitate coordination with tribes. A PA may also be negotiated with the ACHP and the NCSHPO and counterpart tribal organization, if an undertaking is complex, wide in scope, and the effects are not known precisely. Typically, the FAA must be able to describe the undertaking, including the timeframe and whether the undertaking will be staged. For example, as studies are completed, the APE and the types of expected effects as well as the potential for mitigation must be identified before the ACHP will agree to the PA. For more information see 36 CFR 800.13 and the ACHP's *Preparing Agreement Documents*.

The FAA may proceed without agreement on mitigation, i.e., without a MOA or PA, but first the FAA must seek ACHP comment. The ACHP can send the request back to the FAA with the comment that it is premature to request ACHP comments until the FAA can provide more documentation. If the FAA has made a good faith attempt to identify eligible properties, determine

effects, and negotiate an agreement on mitigation but has determined that agreement is unlikely, the ACHP may convene a panel of ACHP members and hold public hearings before preparing its comments. Typically, the ACHP will ask the FAA to pay for the cost of the panel's travel and other expenses related to the hearings. ACHP comments are directed to the FAA Administrator. The FAA Administrator must then respond to the ACHP comments before proceeding. This responsibility cannot be delegated.

c. Significant Impact Thresholds. The consultation process includes consideration of feasible and prudent alternatives to avoid adverse effects on National Register listed or eligible properties; of mitigation measures; and of accepting adverse effects. The FAA has the final judgment on whether the appropriate action choice is an EIS or a FONSI. Advice from the ACHP and the SHPO/THPO may assist the FAA in making this judgment.

d. Analysis of Significant Impacts. If the consulting parties agree that the alternative would not avoid or mitigate the adverse impacts but that it is in the public interest to proceed with the proposed action, a MOA shall be executed. This MOA may specify recording, salvage, or other measures that shall be taken to minimize adverse impacts before the proposed action proceeds. It is likely that, in this circumstance, the impact on National Register or eligible properties will be considered significant and require the preparation of an EIS.

The FAA makes the final decision on whether to prepare an EIS. If the FAA is already preparing a draft EIS because of other significant impacts, this draft EIS should discuss impacts on historic resources and can be submitted as the preliminary case report, if appropriately identified as such and if the FAA so requests in the cover letter transmitting the draft EIS and requesting comments. Unless accompanied by such a request, circulation of the draft EIS does not constitute a request for ACHP comments pursuant to Section 106 of NHPA and 36 CFR Part 800.

The ACHP may be a cooperating agency when the preparation of an EIS is needed to address significant impacts on historic, archeological, and cultural resourcrs. Information developed for and during the consultation process will be sufficient for purposes of EIS documentation. The final EIS shall include comments of the ACHP and a copy of any MOA. (If a MOA has been executed prior to circulation of a draft EIS, the MOA shall be included in the draft). Within 90 days after carrying out the terms of a MOA, the FAA is required to report to all signatories on the actions taken to comply with the MOA.

11. LIGHT EMISSIONS AND VISUAL IMPACTS

Statute	Regulation	Oversight Agency
See requirements below		

a. **Requirements.** A description of potential impacts due to light emissions or visual impacts associated with a Federal action may be necessary. Consideration should be given to impacts on people and properties covered by Section 106 or DOT Section 303 (formerly, 4(f)).

Permits/Certificates: Not Applicable.

b. **FAA Responsibilities.**

Light Emissions. The FAA official considers the extent to which any lighting associated with an action will create an annoyance among people in the vicinity or interfere with their normal activities. Because of the relatively low levels of light intensity compared to background levels associated with most air navigation facilities (NAVAIDS) and other airport development actions, light emissions impacts are unlikely to have an adverse impact on human activity or the use or characteristics of the protected properties. Information will be included in the environmental document whenever the potential for annoyance exists, such as site location of lights or light systems, pertinent characteristics of the particular system and its use, and measures to lessen any annoyance, such as shielding or angular adjustments.

Visual Impacts. Visual, or aesthetic, impacts are inherently more difficult to define because of the subjectivity involved. Aesthetic impacts deal more broadly with the extent that the development contrasts with the existing environment and whether the community jurisdictional agency considers this contrast objectionable. Public involvement and consultation with appropriate Federal, State, local, and tribal agencies may help determine the extent of these impacts. The art and science of analyzing visual impacts is continuously improving and the FAA official should consider, based on scoping or other public involvement, the degree to which available tools should be used to more objectively analyze subjective responses to proposed visual changes.

c. **Analysis of Significant Impacts.** When an action is determined to have significant light or visual-related impacts, use the following applicable instructions:

Light Emissions. The EIS description of potential annoyance from airport lighting and measures to minimize the effects should be documented in a similar fashion in an EIS to that in an EA. Further consideration may concentrate on previously unconsidered mitigation measures and alternatives. It is possible that the FAA official will judge that a special lighting study is warranted.

Visual Impacts. The impact discussion will normally include appropriate presentation of the application of design, art, architecture and

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landscape architecture in mitigating adverse visual and other impacts and encouraging enhancement of the environment.

12. NATURAL RESOURCES AND ENERGY SUPPLY

Statute	Regulation	Oversight Agency
See requirements below		

a. Requirements. FAA Order 1053.1, Policies and Procedures for Energy Planning and Conservation, provides for assessing energy demands.

Permits/Certificates: Not Applicable.

b. FAA Responsibilities. For purposes of the EA, the proposed action will be examined to identify any proposed major changes in stationary facilities or the movement of aircraft and ground vehicles that would have a measurable effect on local supplies of energy or natural resources. If there are major changes, power companies or other suppliers of energy will be contacted to determine if projected demands can be met by existing or planned source facilities. The use of natural resources other than for fuel need be examined only if the action involves a need for unusual materials or those in short supply. Therefore, evaluation of significant energy use for major construction actions is important.

For most actions, changes in energy demands or other natural resource consumption will not result in significant impacts. If the EA identifies problems such as demands exceeding supplies, additional analysis may be required in an EIS. Otherwise, it may be assumed that impacts are not significant.

c. Analysis of Significant Impacts. Analysis in an EIS includes detail needed to fully explain the degree of the problem and measures to be taken to minimize the impact. Measures such as more efficient airfield design, ground access improvements, or energy efficient building design will be considered and described where applicable and incorporated in the action to the extent possible. The Department of Energy (DOE) may be a cooperating agency and be of assistance in determining additional specific analysis needed and in judging the seriousness of impacts.

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13. **NOISE**

Statute	Regulation	Oversight Agency
49 U.S.C. § 47501-47507 (Aviation Safety and Noise Abatement Act of 1979, as amended) 49 U.S.C. § 40101, et seq., as amended by PL 103-305 (Aug. 23, 1994) (The Federal Aviation Act of 1958) The Control and Abatement of Aircraft Noise and Sonic Boom Act of 1968 49 U.S.C. § 47101, et seq., as amended by PL 103-305 (Aug. 23, 1994) (The Airport and Airway Improvement Act)	14 CFR Part 150 Noise Control and Compatibility Planning for Airports Advisory Circular, 150/5020 14 CFR Part 161 Notice and Approval of Airport Noise and Access Restrictions	Federal Aviation Administration (FAA)
49 U.S.C. § 2101 et seq. (Airport Noise and Capacity Act of 1990) 49 U.S.C. § 44715 (The Noise Control Act of 1972)		EPA

a. Requirements. For aviation noise analysis, the FAA has determined that the cumulative noise energy exposure of individuals to noise resulting from the operation of an airport must be established in terms of yearly day/night average sound level (DNL). An initial noise analysis during the environmental assessment process should be accomplished to determine whether further, more detailed analysis is necessary.

Permits/Certificates. Not applicable.

b. FAA Responsibilities. If significant noise impacts are expected, the FAA official must prepare a detailed noise analysis as part of an EIS in accordance with the following requirements. An EIS need not be prepared if the proposed action incorporates mitigation that reduces the noise impact to below significant noise impact threshold levels.

All detailed noise analyses must be performed using the most current version of the FAA's Integrated Noise Model (INM) and/or Heliport Noise Model (HNM) to develop noise exposure contours at and around airports and heliports. Use of an equivalent methodology and computer model must receive prior written approval from the FAA's Office of Environment and Energy (AEE).

EA and EIS preparers will provide input documentation with one copy of the INM/HNM input files used in the noise analyses and the corresponding

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case echo reports to the FAA official on electronic media specified by that official. All computer model input data should be collected early in the environmental process and should reasonably reflect current and forecasted conditions relative to the proposed action and alternatives

All noise analyses must be performed using the FAA's INM and/or HNM standard and default data. Preceedence evaluation with FAA screening methodologies e.g., Area Equivalent Method (AEM) and Air Traffic Noise Screening (ATNS), may be appropriate. Use of equivalent methodologies must receive prior written approval from AEE. If equivalent methodologies are approved, a description of additional, non-standard, or non-default data must be submitted along with a copy of AEE's approval.

c. Significant Impact Thresholds. FAA has determined that a significant noise impact would occur if a detailed noise analysis indicates that the proposed action results in an increase within the DNL 65 dB contour of DNL 1.5 dB or greater on any noise sensitive area.

d. Analysis of Significant Impacts. For proposed actions which result in a general overall increase in daily aircraft operations or the use of larger/noisier aircraft, as long as there are no changes in ground tracks or flight profiles, the initial analysis may be performed using the FAA's Area Equivalent Method (AEM) computer model. The time of day is also part of the equation used in the AEM method. If the AEM calculations indicate that the proposed action would result in less than a 17 percent (approximately a DNL 1 dB) increase in the DNL 65 dB contour area, it may be concluded that there would be no significant impact over noise sensitive areas and that no further noise analysis is required. If the AEM calculations indicate an increase of 17 percent or more, or if the proposed action is such that use of the AEM is not appropriate, then the proposed action must be analyzed using the INM or HNM to determine if significant noise impacts will result.

The determination of significance must be obtained through the use of INM or HNM noise contours and/or grid point analysis along with local land use information and general guidance contained in Appendix A of 14 CFR Part 150. Special consideration may need to be given to whether Part 150 land use categories are appropriate for evaluating noise impact on properties protected under Section 4(f) of the DOT Act (recodified as 49 U.S.C. 303).

In accordance with the 1992 FICON (Federal Interagency Committee on Noise) recommendations, examination of noise levels below DNL 65 dB may be required if determined to be appropriate after application of the FICON screening procedure (FICON p.3-5). If screening shows that noise sensitive areas at or above DNL 65 dB will have an increase of DNL 1.5 dB or more, further analysis should be conducted of noise-sensitive areas between DNL 60-65 dB having an increase of DNL 3 dB or more due to the proposed action. If the DNL 65 dB screening calls for further analysis between DNL 60-65 dB, the FAA shall conduct a supplemental noise analysis of noise sensitive areas between 60-65 dB to identify those areas projected to have an increase of DNL 3 dB or more as a

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result of the action. The FAA then uses this information during its consideration of potential mitigation for those areas (FICON p. 3-7).

The INM or HNM will be used to produce the following information:

(1) Noise exposure contours at the DNL 75 dB, DNL 70 dB, and DNL 65 dB levels.

(2) Grid point analysis of areas within the DNL 65 dB contour to identify noise sensitive areas where noise will increase by DNL 1.5 dB.

(3) Grid point analysis of areas within the DNL 60-65 dB contours to identify noise sensitive areas where noise will increase by DNL 3 dB only when DNL 1.5 dB increases are documented within the DNL 65 dB contour.

The noise analysis will be conducted to reflect current conditions and forecast conditions for all reasonable alternatives, including the preferred and no action alternatives. This analysis should include maps, aerial photographs, and other means to depict land uses within the noise impact area. The addition of flight tracks is helpful in illustrating where the aircraft normally fly. Illustrations shall be large enough and clear enough to be readily understood.

Differences in the DNL contours and grid point analysis will be determined by comparing the following modeling scenarios:

(1) Current conditions versus the proposed action, and

(2) Future conditions with and without the proposed action. Future conditions will be examined for a period at least 5 years beyond when the proposed action occurs, or is constructed.

If the above comparisons show a DNL 1.5 dB or greater increase over a noise sensitive area within the DNL 65 dB contour, a level of significant noise impact has been reached.

The following information will be disclosed in the EIS as a minimum for each modeling scenario that was analyzed:

(1) The number of people living within each noise contour in or above DNL 65 dB by community, including the net increase or decrease in the number of people exposed to that level of noise. (Use of maps that depict population and streets to location a community or noise sensitive area is recommended.)

(2) The number of people that would be included in the DNL 65 dB contour as a result of the proposed action, and the number of people taken out of the DNL 65 dB contour by the proposal.

(3) The location and number of schools, churches, parks, recreation areas, wildlife refuges, and other noise sensitive areas within the DNL 65 dB contour.

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(4) Mitigation measures in effect or proposed and there relationship to the proposal.

If conditions warrant, additional analysis to supplement DNL may be necessary and will be considered on a case-by-case basis. Supplemental noise analyses are most often used to determine aircraft noise impacts at specific noise-sensitive locations or for noise-sensitive situations.

If the proposal is the result of a recommended noise mitigation measure included in an FAA-approved 14 CFR Part 150 noise compatibility program, the noise analysis developed in the program will be incorporated in the EA or EIS and will be considered sufficient for noise analysis purposes.

14. SECONDARY (INDUCED) IMPACTS

Statute	Regulation	Oversight Agency
See requirements below		

Major development proposals often involve the potential for induced or secondary impacts on surrounding communities. When such potential exists, the EA shall describe in general terms such factors. Examples include: shifts in patterns of population movement and growth; public service demands; and changes in business and economic activity to the extent influenced by the airport development. Induced impacts will normally not be significant except where there are also significant impacts in other categories, especially noise, land use, or direct social impacts. In such circumstances, an EIS may be needed to analyze.

15. SOCIOECONOMIC IMPACTS

Statute	Regulation	Oversight Agency
Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 [42 U.S.C. 4601] [PL 91-528]	FAA Advisory Circular 150/5100-17 49 CFR Part 24 FAA Order 5100.37	
(As amended by the Surface Transportation and Uniform Relocation Act Amendments of 1987) [PL 100-117]		
Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations	DOT Order 5610.2	

a. Requirements. If acquisition of real property or displacement of persons is involved, 49 CFR Part 24 implementing the Uniform

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Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended must be met. Otherwise, the FAA, to the fullest extent possible, observes all local and State laws, regulations, and ordinances concerning zoning, transportation, economic development, housing, etc. when planning, assessing, or implementing the proposed action. (This requirement does not cover local zoning laws, set-back ordinances, and building codes because the Federal government is exempt from them). Additional requirements and responsibilities are established by Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. (See DOT Order 5610.2, Environmental Justice).

Permits/Certificates: Not Applicable.

b. FAA Responsibilities. The FAA official consults with local transportation, housing, and economic development, relocation and social agency officials, and community groups regarding the social impacts of the proposed action. The principal social impacts to be considered are those associated with relocation or other community disruption, transportation, planned development, and employment. The environmental document provides estimates of the numbers and characteristics of individuals and families to be displaced, the impact on the neighborhood and housing to which relocation is likely to take place, and an indication of the ability of that neighborhood to provide adequate relocation housing for the families to be displaced. The environmental document includes a description of special relocation advisory services to be provided, if any, for the elderly, handicapped, or illiterate regarding interpretation of benefits or other assistance available.

c. Significant Impact Thresholds. Factors to be considered in determining impact in this category include, but are not limited to, the following:

(1) Extensive relocation of residents is required, but sufficient replacement housing is unavailable.

(2) Extensive relocation of community businesses, and that relocation would create severe economic hardship for the affected community(ies).

(3) Disruptions of local traffic patterns that substantially reduce the levels of service of the roads serving the airport and its surrounding community(ies).

(4) A substantial loss in community tax base.

d. Analysis of Significant Impacts. This category is triggered when the potential for significant impact exists, because of relocation impacts and any adverse and disproportionately high impact on minority or low income communities, other community disruption, is identified. In these cases, additional analysis is needed to describe the degree of impact and measures to minimize such adverse effects. Such actions do not always trigger preparation of an EIS preparation.

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If an insufficient supply of general available relocation housing is indicated, a thorough analysis of efforts made to remedy the problem will be reflected in the EIS including, if necessary, provision for housing of last resort as authorized by Section 206(a) of the Uniform Relocation Assistance and Real Property Acquisition Policies Act. If business relocation would cause appreciable economic hardship on the community, if significant changes in employment would result directly from the action, or if community disruption is considered substantial, the EIS will include a detailed explanation of the effects and the reasons why significant impacts cannot be avoided.

When the EA indicates substantial induced or secondary effects directly attributable to the proposal, a detailed analysis of such effects will be included in the EIS. As pertinent and to the extent known or reasonably foreseeable, such factors as effects on regional growth and development patterns, and spin-off jobs created will be described.

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16. WATER QUALITY

Statute	Regulation	Oversight Agency
Federal Water Pollution Control Act, as amended, known as the Clean Water Act [33 U.S.C. 1344] [PL 92-500] (As amended by the Clean Water Floodplains Floodways Act of 1977) [33 U.S.C. 1252] [PL 95-217] Safe Drinking Water Act [42 U.S.C. 300f et seq.] Fish and Wildlife Coordination Act of 1980 [16 U.S.C. 661-666c] [PL 85-624, 72 Stat. 563]	40 CFR Parts 110-112, 116, 117, 122, 129, 136, and 403	Environmental Protection Agency
49 USC 47106(c)(1)(B), former Airport and Airways Improvement Act of 1982, Section 509(7)(A)		

a. Requirements. The Federal Water Pollution Control Act, as amended (commonly referred to as the Clean Water Act) provides the authority to establish water quality standards, control discharges, develop waste treatment management plans and practices, prevent or minimize the loss of wetlands, location with regard to an aquifer or sensitive ecological area such as a wetlands area, and regulate other issues concerning water quality.

If the proposed Federal action would impound, divert, drain, control, or otherwise modify the waters of any stream or other body of water, the Fish and Wildlife Coordination Act applies, unless the project is for the impoundment of water covering an area of less than ten acres. The Fish and Wildlife Coordination Act requires the responsible Federal official to consult with the Fish and Wildlife Service (FWS) and the applicable State agency to identify means to prevent loss or damage to wildlife resources resulting from the proposal.

If there is the potential for contamination of an aquifer designated by the Environmental Protection Agency (EPA) as a sole or principal drinking water resource for the area, the FAA official needs to consult with the EPA regional office as required by section 1424(e) of the Safe Drinking Water Act, as amended.

Permits/Certificates:

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(1) To comply with 49 USC 47106(c)(1)(b), formerly, Section 509(b)(7)(A) of the 1982 Airport Improvement Act, an airport sponsor proposing construction of a new airport, a new runway, or a major runway extension must obtain a water quality certificate from the State in which such airport projects would be located. The FAA can not approve these projects, unless the sponsor has obtained that certificate. Environmental documents prepared for these projects must contain evidence from the governor or the agency responsible for protecting water quality that the project would be located, designed, constructed, and operated in compliance with applicable water quality standards.

Also, regardless of the type of airport project proposed, project proponents applying for a NPDES permit or a Section 404 permit must obtain a water quality certificate (WQC) to comply with Section 401 of the Clean Water Act. Section 401 requires issuance of a WQC as part of the permit issuance process.

(2) A National Pollutant Discharge Elimination System (NPDES) permit under Section 402 of the Clean Water Act is required for point-source discharges into navigable waters. A Section 404 permit is required to place dredged or fill material in navigable waters including jurisdictional wetlands. A Section 10 permit under the Rivers and Harbors Act of 1899 is required for obstruction or alteration of navigable waters.

(3) Other State and local permits pertaining to water quality also may be required.

b. FAA Responsibilities. The EA includes sufficient description of a proposed action's design, mitigation measures, and construction controls to demonstrate that State water quality standards and any Federal, State, and local permit requirements will be met. Consultation with the Federal, State, or local officials will be undertaken if there is the potential for contamination of an aquifer designated by the EPA as a sole or principal drinking water resource for the area pursuant to Section 1424(e) of the Safe Drinking Water Act, as amended. Consultation with appropriate officials is necessary to determine which permits apply. The EA reflects the results of consultation with regulating and permitting agencies and with agencies that must review permit applications, such as the FWS, the Army Corps of Engineers, and State and local officials which may have specific concerns. Such consultation should be started at an early stage of the EA. The FAA Official must ensure that the applicable water quality certificate is issued before FAA approves the proposed action.

c. Significant Impact Threshold. Water quality regulations and issuance of permits will normally identify any deficiencies in the proposal with regard to water quality or any additional information necessary to make judgments on the significance of impacts. If the EA and early consultation show that there is a potential for exceeding water quality standards, identify water quality problems that cannot be avoided or satisfactorily mitigated, or indicate difficulties in obtaining required permits, an EIS may be required.

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d. Analysis of Significant Impacts. When the thresholds indicate the potential exists for significant water quality impacts, additional analysis in consultation with State or Federal agencies responsible for protecting water quality will be necessary. These agencies may require specific information or studies.

In the MOA between the DOT and the Department of the Army on Section 404 Permit Processing, there is a provision for elevating permit applications with the Department of the Army. When an Army District Engineer proposes to deny permit or condition one that would cause substantial, unacceptable conditions to the DOT agency, the FAA official shall advise the appropriate FAA program office in Washington. That office will provide whatever follow-up action may be necessary at the Washington level to resolve the differences.

17. WETLANDS

Statute	Regulation	Oversight Agency
Clean Water Act, Section 404 Rivers and Harbors Act of 1899, Section 10 Executive Order 11990, Protection of Wetlands	33 CFR Parts 320 - 330 DOT Order 5660.1A, Preservation of the Nation's Wetlands	Army Corps of Engineers

a. Requirements. Executive Order (E.O.) 11990, DOT Order 5660.1A, the Rivers and Harbors Act of 1899, and the Clean Water Act address activities in wetlands. E.O. 11990 requires Federal agencies to ensure their actions minimize the destruction, loss, or degradation of wetlands. It also assure the protection, preservation, and enhancement of the Nation's wetlands to the fullest extent practicable during the planning, construction, funding, and operation of transportation facilities and projects (7 CFR Part 650.26, August 6, 1982). DOT Order 5660.1A sets forth DOT policy that transportation facilities should be planned, constructed, and operated to assure protection and enhancement of wetlands.

Typically, the FAA or an airport sponsor applies for a Section 404 permit for projects requiring dredge or fill activities in jurisdictional waters after the NEPA document has been approved. There are benefits, however, to developing the permit application earlier in the process. Time savings and reduced controversy may outweigh the extra effort required to address Section 404 considerations as an integral part of the NEPA process. When the two processes are integrated effectively, the Corps' approval of the permit could be concurrent or closely follow with FAA's approval. The Army Corps of Engineers could adopt the FAA's final NEPA document when making a 404 permit decision, thereby avoiding the need to prepare additional NEPA documents. For further information see 33 CFR Part 320, *General*

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Regulatory Policies (COE), 33 CFR Part 325, Appendix B, *NEPA Implementation Procedures for the Regulatory Program*, Chapter 11 of the Federal Highway Administration guidance cites 40 CFR Sections 230, 80, *Regulatory Program: Applicant Information*, pamphlet EP 1145-2-1, May 1985, US Army Corps of Engineers; 40 CFR Section 1500.2, and E.O. 12291.

On December 13, 1996, the Army Corps of Engineers published a final rule reissuing and substantially revising, the nationwide permit program (NWP) under the Clean Water Act.

The FAA promotes wetland banking as a mitigation tool for aviation-related projects that must occur in wetlands due to aeronautical requirements (e.g., unavoidable construction of a runway in a wetland due to prevailing wind). The FAA has developed a policy supporting the use of a wetland banking mitigation strategy (internal Letter of Agreement, dated July 1996). Wetland mitigation banking provides a way to mitigate wetland impacts <u>before</u> those impacts occur. Purchasing credits from a bank does not give the purchaser title to wetlands tracts that comprise a bank, however, it does fulfill the requirements of law and is cost effective. Rather, the purchase is simply a payment to the wetland banker for wetland mitigation services that the bank provides. The purchase of credits from an approved bank signifies that the Section 404 permittee has satisfied its permit-required mitigation obligations. Copies of this policy are available from FAA's Office of Airport Planning and Programming, Community and Environmental Needs Division, APP-600, 800 Independence Ave., S.W., Washington, D.C. 20591.

Permits/Certificates:

(1) A Section 404 permit is required to place dredged or fill material in navigable waters, including wetlands, and a Section 10 permit under the Rivers and Harbors Act of 1899 is required for obstruction or alteration of navigable waters.

(2) Other State and local permits pertaining to wetlands may also be required.

b. FAA Responsibilities. Early review of proposed actions will be conducted with agencies with special interest in wetlands. Such agencies include State and local natural resource and wildlife agencies, the FWS, the NMFS, the Corps of Engineers, and EPA. This review may be combined as much as possible with the State and local officials. Specific consultation is required under the Fish and Wildlife Coordination Act with the FWS and the State agency having administration over the wildlife resources.

If the action requires an EA, but it would not affect wetlands, the EA should contain a sentence stating that fact. In that case, no wetland impact analysis is needed.

If there is uncertainty about whether an area is a wetland, the local district office of the Army Corps of Engineers or a certified wetland delineation specialist must be contacted for a delineation determination

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(or the Natural Resources Conservation Service (NRCS) formerly SCS to delineate wetlands on agricultural lands). The EA includes information on the location, types, and extent of wetland areas that might be affected by the proposed action. This information can be obtained from the FWS or State or local natural resource agency(ies).

If the action would affect wetlands and there is a practicable alternative that avoids the wetland, this alternative becomes the environmentally preferred alternative. The EA should state that the original project would have affected wetlands, but selection of the practicable alternative enabled the project proponent to avoid the wetlands.

If the action would affect wetlands and there is no practicable alternative, all practical means should be employed to minimize the wetland impacts due to runoff, construction, sedimentation, land use, or other reason. The EA or EIS must contain a description of proposed mitigations, with the understanding that a detailed mitigation plan must be developed to the satisfaction of the 404 permitting agency and those agencies having an interest in the affected wetland.

Impacts of wetlands can be assessed by using the function and values of the wetlands area as a basis to determine significance. If wetlands functions are large in number and the value of these functions is high, it would be appropriate to conduct further study as part of an EIS. For example, the action would substantially alter the hydrology, vegetation, or soils needed to sustain the functions and values of the affected wetlands or the wetlands it supports. Conversely, if wetlands functions are few in number and the value of these functions is low, an EA concluding in a FONSI would be appropriate. For example, the action would not cause substantial increases in sedimentation or siltation in wetlands or waters connected to the affected wetland.

c. Significant Impact Thresholds. A significant impact would occur when the proposed action causes <u>any</u> of the following:

(1) The action would adversely affect the function of a wetland to protect the quality or quantity of municipal water supplies, including sole source, potable water aquifers.

(2) The action would substantially alter the hydrology needed to sustain the functions and values of the affected wetlands.

(3) The action would substantially reduce the affected wetland's ability to retain flood waters or storm-associated runoff, thereby threatening public health, safety and/or welfare (this includes cultural, recreational, and scientific resources important to the public).

(4) The action would adversely affect the maintenance of natural systems that support wildlife and fish habitat and/or economically-important timber, food, or fiber resources in the affected or surrounding wetlands.

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(5) The action would promote development of secondary activities or services that would affect the resources mentioned in items (1) through (4) in this section.

(6) The action would be inconsistent with applicable State wetland strategies.

d. Analysis of Significant Impacts: An agency having expertise in wetland impacts or resources may indicate that the action has potential significant wetland impacts. The FAA Official shall consult with that agency and, as necessary, the FWS, the Corps of Engineers, EPA, or NRCS (if wetlands are on agricultural lands), and State and local natural resource or wildlife agencies to make a determination on severity of wetland impacts. If the action is on tribal lands, then the FAA official must consult with tribal natural resource and wildlife representatives. Any of these agencies may become a cooperating agency due to their expertise or jurisdiction. Permitting agencies may also become cooperating agencies. To the extent practical, the FAA official will ensure that the environmental document meets the needs of the consulted agencies as well as those of the FAA. Scoping is encouraged to meet the needs of the permitting and cooperating agencies. Detailed analysis should include the following, as applicable:

(1) Considerations specified in E.O. 11990, Protection of Wetlands.

(2) An opinion should be issued, based on the above considerations, on the action's overall effect on the survival and quality of the wetlands.

(3) Aeronautical safety, transportation objectives, economics, and other factors bearing on the problem.

(4) Further consideration of the practicability of any alternatives.

(5) Inclusion of all practicable measures to minimize harm.

(6) Pursuant to the Fish and Wildlife Coordination Act, the FAA applies the instructions contained above.

For any action which entails new construction located in wetlands, a specific finding should be made including: (1) there is no practicable alternative to construction in the wetland, and (2) that all practicable measures to minimize harm have been included. The proposed finding should be included in the final EIS or FONSI.

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18. WILD AND SCENIC RIVERS

Statute	Regulation	Oversight Agency
Wild and Scenic Rivers Act [16 U.S.C. 1271 et seq.] [PL 90-542]	36 CFR Part 297, Subpart A FR (September 7, 1982)	Department of Interior

a. Requirements. The Wild and Scenic Rivers Act, as amended, describes those river areas eligible to be included in a system afforded protection under the Act. DOI and the Department of Agriculture (USDA) maintain a National Inventory of river segments that appear to qualify for inclusion in the National Wild and Scenic River System.

The President's 1979 Environmental Message Directive on Wild and Scenic Rivers (August 2, 1979) directs Federal agencies to avoid or mitigate adverse effects on rivers identified in the Nationwide Inventory as having potential for designation under the Wild and Scenic Rivers Act.

Section 12 of the Act requires a Federal agency with jurisdiction over any lands which include, border upon, or are adjacent to any river included, or under consideration for inclusion in the System to take action necessary to protect such river in accordance with the purposes of the Act. In addition, Federal agencies are required to cooperate with the Secretary of the Interior and appropriate State agencies for the purpose of eliminating or minimizing pollution in protected Inventory rivers. All agencies shall, as part of their normal environmental review processes, consult with the DOI (National Park Service (NPS)) prior to taking any actions which could effectively foreclose or downgrade wild, scenic, or recreational river status of rivers in the Inventory.

Permits/Certificates: Not Applicable.

b. FAA Responsibilities. As soon as it appears that the proposed action could affect a National Inventory river, the responsible Federal official should contact DOI for verification. If DOI indicates that an Inventory river could be affected, consult with them for guidance as to avoiding or minimizing impacts.

If no Inventory river is adversely affected or the impact is not considered severe enough to preclude inclusion of the affected river segment in the Wild and Scenic River System or downgrade its classification (e.g., from wild to recreational), no further analysis is necessary. Consultation with DOI will determine whether or not the impact on any National Inventory river is significant.

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c. Analysis of Significant Impacts. When consultation with DOI leads to a determination that the effects on the National Inventory river are significant, or would preclude inclusion in the Wild and Scenic River System or downgrade its classification, the FAA invites the NPS and any affected land management agencies to be cooperating agencies. If NPS does not respond to such request for assistance within 30 days, then the FAA proceeds as otherwise planned, taking care as best it can to minimize adverse effects on the National Inventory river.

U.S. Department
of Transportation

**Federal Aviation
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