

**NORTH CAROLINA DEPARTMENT OF TRANSPORTATION, DIVISION OF AVIATION (NCDOA) STANDARD  
OPERATING PROCEDURE (SOP) FOR NEPA DOCUMENTATION OF FLOODPLAIN ENCROACHMENTS**

**NOVEMBER 2020**

**Executive Order 11988 and DOT Order 5650.2 Requirements**

To comply with Executive Order 11988, Floodplain Management, 42 Federal Register 26951, (May 25, 1977) and DOT Order 5650.2, Floodplain Management and Protection, **all FAA actions** must avoid floodplains if a practicable alternative exists; if no practicable alternative exists, actions in a floodplain must be designed to minimize adverse impacts to the floodplain's natural and beneficial values. If the proposed action or alternative(s) involves a significant encroachment in a floodplain, the FAA should issue a written finding that the proposed significant encroachment is the only practicable alternative. This requirement also applies to projects under the purview of NCDOA, under terms of the State Block Grant Program Agreement.

To demonstrate compliance with the Executive Order and the DOT Order, sponsors and their consultants should:

1. Determine if a proposed airport improvement project will occur in a base floodplain by consulting a FIRM, FEMA Flood Insurance Rate Map (<https://msc.fema.gov/portal/home>), or, if a FIRM is not available, a FEMA Flood Hazard Boundary Map (FHBM), Flood Insurance Study;
2. Determine if the proposed improvement project meets the definition of "action" in DOT Order 5650.2;
3. Determine if the proposed encroachment is likely to be "significant," as defined below;
4. If the proposed encroachment is likely to be significant, conduct a floodplain impact analysis or hydrological study, which considers the factors outlined in FAA 1050.1F Desk Reference (February 2020) paragraph 14.2.3.2.c., and determine appropriate mitigation measures.
5. Coordinate with the local floodplain administrator. A local floodplain administrator might be an existing local staff person, such as the building inspector, community zoning official, engineer or planner. The community also might contract to have the job done by the county, regional planning agency, another jurisdiction or authority, or a private firm. Help in identifying the appropriate contact may be found on the website of the North Carolina Association of Floodplain Managers ([http://www.ncafpm.org/CFM\\_list.html](http://www.ncafpm.org/CFM_list.html));
6. Provide the public an opportunity for early public review of any plan or proposal that would encroach on the base floodplain (see Public Involvement section below).

Sponsors/consultants should execute steps 1 through 3 above when submitting work authorizations or scopes of work for airport improvement projects. In most cases, conceptual design should be sufficient to help establish the degree of encroachment and possible mitigation measures.

**Definition of "Action" in a Floodplain**

According to DOT Order 5650.2, an "action" is defined as "the construction or reconstruction of a federal or federally-financed, licensed, or approved transportation improvement (including any relocation housing built or moved to a new site); and the acquisition, management, or disposition of

Departmental lands and facilities.” Therefore, the construction or reconstruction of a runway or taxiway that extends the existing footprint constitutes an action, as defined by the order; however, the rehabilitation of a runway or taxiway that does not extend the existing footprint does not constitute an action under the order.

If a floodplain encroachment does occur, it must be determined if it is a significant floodplain encroachment as defined below.

### **Significant Encroachment**

As defined in DOT Order 5650.2, **significant encroachment** is an encroachment in a floodplain that results in one or more of the following construction or flood-related impacts: 1) considerable probability of loss of human life, 2) likely future damage associated with the encroachment that could be substantial in cost or extent, including interruption of service on or loss of a vital transportation facility, and 3) a notable adverse impact on “natural and beneficial floodplain values”. The FAA must provide the finding within or together with a NEPA document. **NOTE:** A significant floodplain encroachment is not necessarily a significant environmental impact under NEPA, as explained in FAA 1050.1F Desk Reference (February 2020) Paragraph 14.2.3.2.

### **CATEX or EA Required**

A proposed action listed in FAA Order 1050.1F as categorically excluded for which there are no extraordinary circumstances may be cleared with a documented CATEX, even if there is a floodplain encroachment, as long as it can be documented that that encroachment is not significant, as defined above. Impacts to floodplains must be considered, including any direct and indirect impacts that result from the construction and operation of the proposed project. Activities such as building an airport, construction of hangars, or any modification such as grading of the land, could have an impact on floodplains. All areas where permanent infrastructure would be built, and locations where temporary construction-related activity might occur (such as equipment laydown, staging, and building of temporary access roads) must be considered for potential direct construction-related impacts. Additionally, all indirect impacts on floodplains within the study area should be identified.

Any action that could cause significant encroachment to the floodplain must be documented with an environmental assessment (EA). If the potential floodplain encroachment is the only extraordinary circumstance involved, a short-form EA should be sufficient. Please obtain prior NCDOA approval for use of the Short-Form EA.

### **Consultations, Permits, and Other Approvals**

To comply with the terms of Executive Order 11988, DOT Order 5650.2, and FAA Order 1050.1F, the proposed project must follow the participating community’s FEMA approved floodplain management plan, if such a plan exists. Early consultation with FEMA, USACE, or the National Flood Insurance Program (NFIP) participating community may assist NCDOA in addressing floodplain issues or conflicts early in the NEPA process and in developing ways to resolve them. Therefore, the sponsor/consultant preparing the NEPA document should coordinate in writing with the local floodplain administrator to document compliance with Executive Order 11988, DOT Order 5650.2, and FAA Order 1050.1F.

The letter addressed to the local floodplain administrator should ask that the administrator provide written concurrence that the proposed action does not constitute significant encroachment, if that is the case, or concurs with potential mitigation measures if the encroachment is likely to be significant, and must:

1. Clearly identify the proposed action, and include an exhibit delineating the floodplain and boundaries of the proposed action;
2. Describe (a) Any risk to, or resulting from, the transportation action; (b) The impacts on natural and beneficial floodplain values; and (c) The degree to which the action provides direct or indirect support for development within the base floodplain.
3. State whether the encroachment is likely to be significant;
4. If the encroachment is likely to be significant, state (a) there is no practicable alternative to placing a project in the floodplain and that all measures to minimize harm will be included in a project; (b) the proposed action must be located in the floodplain, including a discussion of the alternative(s) and why they were not practicable; and (c) the action conforms to applicable state and/or local floodplain protection standards.
5. Make it clear that the sponsor is **NOT** asking for issuance of a floodplain development permit at the present time (the application for this permit will be made after the NEPA document is approved but before contracts for construction are let).

### **Public Involvement**

Executive Order 11988 and DOT Order 5650.2 also direct agencies to provide the public an opportunity for early public review of any plan or proposal that would encroach on the base floodplain. This ensures the public has an early opportunity to review a proposal in the base floodplain, even if the proposal does not require an Environmental Impact Statement (EIS). NCDOA may use the NEPA process to meet the public notification requirements for an action encroaching on a floodplain.

In those cases where a CATEX is appropriate NEPA documentation, the requirement for public involvement may be met by posting of a Notice of Opportunity for a Public Hearing Regarding a Floodplain Encroachment, either in a newspaper of local circulation, or on the airport's website. A template notice is attached.

In those cases where an EA is required to address a significant encroachment, a Notice of Availability of the Environmental Assessment and a Notice of Opportunity for a Public Hearing would be required.

### **Further Guidance**

Please consult Executive Order 11988, Floodplain Management, 42 Federal Register 26951, (May 25, 1977), DOT Order 5650.2, Floodplain Management and Protection, and FAA 10501.F Desk Reference (February 2020), Chapter 14, for additional guidance.