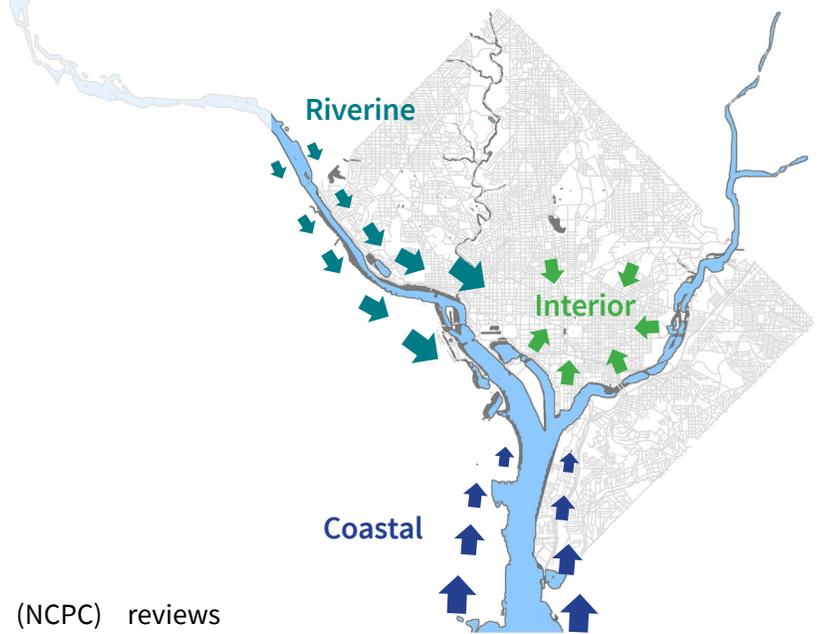


# Projects in Floodplains



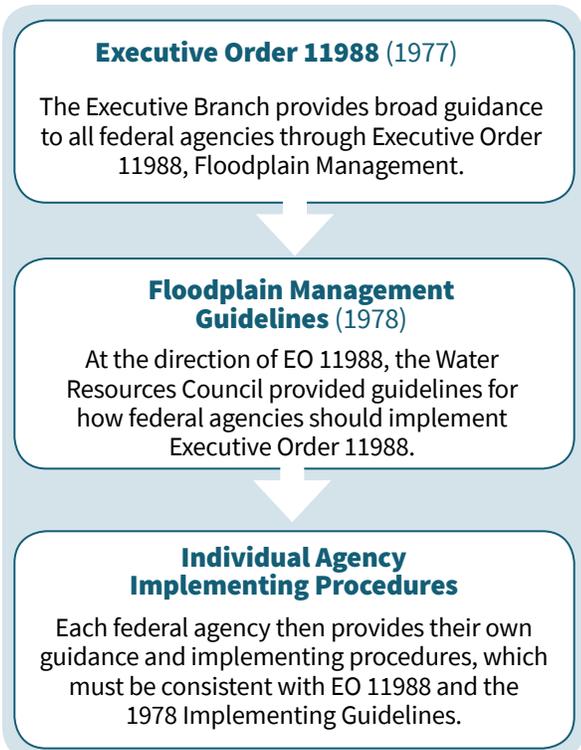
## Overview

The National Capital Planning Commission (NCPC) reviews applications for development within the National Capital Region (NCR), including review for compliance with applicable environmental requirements, such as protecting floodplains. In addition to the environmental benefits that result from protecting floodplains, review of projects in floodplains can also decrease risk to proposed facilities as flooding can severely damage property, infrastructure, and assets, and impact agency missions and operations. Because of the significant federal assets in the NCR, geography of the region, and potential impacts from flooding, consideration of floodplain management is important part of NCPC’s project review process. This guide is meant to assist project applicants, NCPC staff, and the public in understanding NCPC’s review process for projects in floodplains. This resource guide is for general information purposes, and is not a regulatory document.

**The NCR is vulnerable to three types of flooding.** Riverine, or freshwater floods, occur when heavy rainfall or snowmelt in the Potomac River Basin increases water levels downstream, sometimes hours or days later. Interior, or flash, floods are caused by heavy rainfall that can’t be absorbed by the ground, and then overwhelm drainage systems. Coastal floods occur from inundation related to high tides and from coastal storms (including hurricanes) that drive storm surge and waves upriver from the Atlantic Ocean and Chesapeake Bay.

## Legislation and NCPC Authorities

There are multiple levels of federal guidance for floodplain development, starting with Executive Order (EO) 11988 from 1977. As shown in the adjacent chart, the guidance becomes more specific, but must always be consistent with the guidance “above” it. Every federal agency, including NCPC, has its own guidance and implementing procedures for how to review proposed actions in floodplains. For federal agencies, their implementing procedures typically occur in the context of the agency’s National Environmental Policy Act (NEPA) processes. In rare cases where NEPA review is not required but the proposed action is in a floodplain, federal agencies must still comply with EO 11988 and their own agency implementing guidance.



## Executive Order 11988, Floodplain Management (1977)

Executive Order 11988 requires federal agencies to “avoid, to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid the direct or indirect support of floodplain development whenever there is a practicable alternative.”

EO 11988 describes in broad terms how agencies should evaluate potential effects of any actions it may take in a floodplain, and requires federal agencies to prescribe procedures to implement the policies and requirements of the EO. A key section of the EO provides the overarching policy to which the *Floodplain Management Guidelines* and individual agency procedures adhere:

*“If an agency has determined to, or proposes to, conduct, support, or allow an action to be located in a floodplain, the agency shall consider alternatives to avoid adverse effects and incompatible development in the floodplains. If the head of the agency finds that the only practicable alternative consistent with the law and with the policy set forth in this Order requires sitting in a floodplain, the agency shall, prior to taking action, (i) design or modify its action in order to minimize potential harm to or within the floodplain, consistent with regulations issued in accord with Section 2(d) of this Order, and (ii) prepare and circulate a notice containing an explanation of why the action is proposed to be located in the floodplain.”*

## Floodplain Management Guidelines (1978)

The *Floodplain Management Guidelines*, also called implementing guidelines in this document, were created by the Water Resources Council in 1978 to further describe how agencies should apply EO 11988. One of the primary contributions of the Floodplain Management Guidelines was the introduction of an eight-step process outlining how agencies should make decisions on proposed actions in or affecting floodplains. Implementing procedures for individual federal agencies use some version of the eight-step process.

## Individual Agency Implementing Procedures

Most agencies in the NCR have their own implementing procedures for complying with EO 11988 and the *Floodplain Management Guidelines*. The guidance used by the National Park Service is “Director’s Order 77-2” and “Procedural Manual 77-2.” The General Services Administration’s guidance is “The Floodplain Management Desk Guide.” These documents, which are subject to change, can provide additional context for the floodplain-related materials submitted by applicants.

Federal agencies revise their implementing procedures on occasion to reflect new information. Agencies may identify more conservative floodplain elevations than specified in EO 11988 in their implementing procedures to reflect their mission and interests.

Other executive orders addressing flood risk management include EO 13690, issued in 2015 and later revoked by EO 13807, issued in 2017. The floodplain elevations established in EO 13807 are the same as in EO 11988.

## NCPC Implementing Procedures (1981)

As a federal agency, NCPC has its own implementing procedures for EO 11988. These do not supersede other federal agency guidance. Projects submitted by federal applicants use the applicant agency’s own implementing procedures for the projects and apply them in the context of their NEPA process.

Projects submitted by non-federal applicants that require NCPC’s approval authority (advisory authority is not included) are subject to NCPC’s implementing procedures. Examples of these types of projects include, but are not limited to, projects from the Smithsonian Institution, the Kennedy Center, and projects on District land within the Central Area.

## Key Definitions and Maps

EO 11988 defines a floodplain as “the lowland and relatively flat areas adjoining inland and coastal waters including flood prone areas of offshore islands, including at a minimum, that are subject to one percent or greater chance of flooding in any given year.”

The *Floodplain Management Guidelines* make a distinction between non-critical actions and critical actions. Critical actions are defined as any activity for which even a slight chance of flooding would be too great. Examples of critical actions include construction of or substantial improvements to schools, hospitals, fuel storage facilities, museums, and facilities that store irreplaceable records or archaeological artifacts. For critical actions, the floodplain of concern is the more extensive 500-year floodplain rather than the 100-year floodplain.

### For Non-Critical Actions

1 % annual chance  
(100-year) floodplain

### For Critical Actions

0.2 % annual chance  
(500-year) floodplain

The Federal Emergency Management Agency (FEMA) prepares Flood Insurance Rate Maps (FIRMs) to identify floodplains. To determine whether an area is in the 1 percent annual chance (100-year) or 0.2 percent annual chance (500-year) floodplain, agencies should use FEMA’s Flood Insurance Rate Maps (FIRMs). The *Floodplain Management Guidelines* specify that federal agencies should use the FIRMs to determine if their proposed action is in the 1 percent annual chance or 0.2 percent annual chance floodplain.

## Information Needed From Federal and Non-Federal Applicants

When a project is in a floodplain, applicants must respond to the “Flooding” sections of the Submission Guidelines to ensure that NCPC staff has the information it needs to review the project for consistency with the Comprehensive Plan’s policies on floodplains, which can be found in the Federal Environment Element, specifically in Section D, policies FE.D.1-6. These policies are based upon the federal guidance referenced above.

In most cases, federal applicants will already have materials related to their proposed action in a floodplain that will satisfy NCPC’s submission guidelines requirements. For many agencies, the analysis is integrated into their NEPA process. The exact materials provided to NCPC will vary by agency because every individual agency develops its own implementing procedures and guidance for floodplain actions.



Flood Risk Management Planning  
Resources for Washington, DC



January 2018

## Flood Insurance Rate Maps

Flood Insurance Rate Maps (FIRMs), based on historic flood data, are limited in their ability to evaluate future flood risk, which may be impacted by changes in land use within the watershed and changes in precipitation and sea level. While only FIRMs can be used to satisfy the requirements of EO 11988, NCPC encourages applicants to use other tools and resources to better understand and effectively respond to expected increases in future flood risk that may affect their proposed action. Many of the region’s most useful tools for this purpose are described in *Flood Risk Management Planning Resources for Washington, DC*, published jointly by NCPC and the DC Silver Jackets in 2018.

Based on applicant agency NEPA processes, and their own implementing guidance, NCPC staff can expect to have the following floodplain related documents during each review stage.

NCPC Review Stage	Pre-Submission Briefing	Concept	Preliminary	Final
NPS	No information required, but useful to have site plan with floodplains noted.	No Documents	Draft FSOF	FSOF
GSA		Public Notice	Draft JONPA	JONPA
Army		Public Notice	Draft FSOF	FSOF
Navy		Public Notice	Draft FSOF	FSOF
USAF		Public Notice	Draft FSOF	FSOF
USACE		Public Notice	Draft FSOF	FSOF

FSOF = Floodplain Statement of Findings      JONPA = Justification of No Practical Alternative

If the applicant is non-federal, and NCPC is the NEPA lead, the applicant must follow NCPC’s Implementing Procedures, which requires documentation of any action proposed in a floodplain. If NCPC, as a federal agency, has approval authority for (and not just advise or comment on) a project from a non-federal applicant, that project must also comply with EO 11988. In addition, the applicant is also required to provide the information requested in the submission guidelines (note that most are available in the materials produced for compliance with NCPC’s implementing procedures).

## Federal Guidance, Building Codes, and Local Standards

In addition to the federal framework for floodplain management established by EO 11988 and its implementing guidelines, there are local building and design codes and zoning laws that federal and local agencies use to manage flood risk throughout the NCR. Although federal agencies do not have to comply with local standards, many agencies voluntarily comply with nationally recognized building and design standards, such as the International Code Council (ICC) and its family of codes, including the International Building Code (IBC). “ASCE 24-14 Flood Resistant Design and Construction,” a referenced standard in the IBC, provides minimum requirements for design and construction of structures in flood hazard areas.

The General Services Administration (GSA), the Department of Defense (DOD), the National Park Service (NPS), the Army Corps of Engineers (USACE), the Air Force (USAF) and the District Department of Energy and the Environment (DOEE) follow International Building Code design standards. While DOEE adopted IBC into their Construction Codes (12 DCMR), federal agencies like GSA, NPS, and DOD incorporate the codes into facilities standards to require them for design and construction of agency facilities. GSA incorporates the IBC into its Public Building Service Facilities Standards (PBS 100), NPS incorporates IBC into its Design Standards and DOD incorporates it into its Unified Facilities Criteria (UFC 1-200-0-1). DOEE’s Flood Hazard Rules (20 DCMR Chapter 31) regulate activities and development in the District’s Special Flood Hazard Area and require any project in the flood hazard area to be reviewed by the DC Department of Consumer and Regulatory Affairs and DOEE before a permit is issued. DC Zoning Regulations (Title 11, Chapter 11) also prohibit certain uses and activities in the 100-year floodplain.

## Applicant Resources

Executive Order 11988, Floodplain Management (1977)

<https://www.archives.gov/federal-register/codification/executive-order/11988.html>

Floodplain Management Guidelines (1978)

[https://www.ncpc.gov/docs/EO\\_11988\\_Implementing\\_Guidelines\\_1978.pdf](https://www.ncpc.gov/docs/EO_11988_Implementing_Guidelines_1978.pdf)

FEMA's Flood Insurance Rate Maps (FIRMs)

<https://msc.fema.gov/portal/search>

NCPC Implementing Procedures (1981)

[https://www.ncpc.gov/docs/EO11988\\_NCPC\\_Implementing\\_Procedures.pdf](https://www.ncpc.gov/docs/EO11988_NCPC_Implementing_Procedures.pdf)

NCPC's Review Authorities

<https://www.ncpc.gov/review/overview/>

NCPC Submission Guidelines

<https://www.ncpc.gov/review/guidelines/>

Comprehensive Plan for the National Capital (2016)

<https://www.ncpc.gov/plans/compplan/>

Federal Environment Element (2016)

[https://www.ncpc.gov/docs/07\\_2016\\_Environment\\_Element\\_2.29.16.pdf](https://www.ncpc.gov/docs/07_2016_Environment_Element_2.29.16.pdf)

Flood Risk Management Planning Resources for Washington, DC (2018)

[https://www.ncpc.gov/docs/Flood\\_Risk\\_Management\\_Planning\\_Resources\\_January\\_2018.pdf](https://www.ncpc.gov/docs/Flood_Risk_Management_Planning_Resources_January_2018.pdf)

NCPC Flooding and Resilience Topic Page

<https://www.ncpc.gov/topics/flooding/>