

Floodplain Toolkit

This guidance is meant to be used in conjunction with the EA Template, which includes Required and Sample text for all of the scenarios included in this guidance.

For NEPA questions on this subject matter, please contact the NEPA Section Leader.

This document provides guidance to the NEPA Analyst in conducting floodplains coordination and documentation. Generally, coordination and documentation requirements vary depending on whether the project would encroach on a floodplain and, if encroachment would take place, on the FIRM designation of the floodplain. For that reason, the “Research, Coordination, and Documentation” section, which serves as the heart of this guidance, is organized around floodplain designations.

Regulatory Setting: 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 flood plains and to avoid direct and indirect support of floodplain development wherever there is a practical alternative. 44 CFR Part 60.3 documents the requirements for regulation of development within a floodplain or a floodway.

Application to GDOT Projects: All projects in GDOT’s work program should be evaluated for floodplain impacts regardless of funding source (state and federal).

Definition of Key Terms/Acronyms:

- BFE (Base Flood Elevation) = “The elevation of surface water resulting from a flood that has a 1% chance of equaling or exceeding that level in any given year. The BFE is shown on the Flood Insurance Rate Map (FIRM) for zones AE, AH, A1–A30, AR, AR/A, AR/AE, AR/A1– A30, AR/AH, AR/AO, V1–V30 and VE.”
- CLOMR (Conditional Letter of Map Revision) – a revision of the FIRM processed through FEMA.
 - *Zone A Floodplains:* A CLOMR is required for encroachments on Zone A Floodplains that would increase the BFE by more than one foot, or alter the boundaries of the floodplain (unless a GDOT waiver is available for this 1+ foot rise to a Zone A floodplain – check with GDOT Design Policy).
 - *Zone AE Floodplains without regulatory floodway:* A CLOMR is required for encroachments that would increase the BFE by more than a foot
 - *Zone AE Floodplains with regulatory floodway:* A CLOMR is required for encroachments that would increase the floodway elevation, increase the floodplain elevation, or increase the floodway width.
 - The hydraulics engineer will prepare the CLOMR and coordinate with FEMA.
 - Coordination with FEMA is unlikely to be complete at the time of the NEPA document, in which case a Preconstruction Commitment to complete coordination before letting should be placed on the Green Sheet.
- Community – Areas that have the responsibility for enforcing National Flood Insurance Program (NFIP) regulations in that community if they participate in the NFIP. The community is typically

represented by a city or county office that has jurisdiction over land use for the area. FEMA's definition states – "A political entity that has the authority to adopt and enforce floodplain ordinances for the area under its jurisdiction."

- FEMA – Federal Emergency Management Agency
- FIRM (Flood Insurance Rate Map) = Official map of a community on which FEMA has delineated the Special Flood Hazard Areas (SFHAs), the Base Flood Elevations (BFEs) and the risk premium zones applicable to the community.
- FIS – Flood Insurance Study
- SFHA (Special Flood Hazard Area) = an area having special flood, mudflow, or flood-related erosion hazards and shown on a Flood Hazard Boundary Map (FHBM) or a Flood Insurance Rate Map (FIRM) Zone A, AO, A1-A30, AE, A99, AH, AR, AR/A, AR/AE, AR/AH, AR/AO, AR/A1-A30, V1-V30, VE or V. For the purpose of determining Community Rating System (CRS) premium discounts, all AR and A99 zones are treated as non-SFHAs.
- Floodplain - Per FEMA: "Any land area susceptible to being inundated by floodwaters from any source."
 - Unmapped: floodplain has not been determined by approximate methods and is not designated on the FIRM
 - *SFHA Zone A Floodplains*: These floodplain areas are defined as having a 1% chance of annual flooding. No detailed analysis/hydraulic study has been performed to determine the BFE and the floodplain is delineated by approximate methods on the FIRM
 - *SFHA Zone AE Floodplains without regulatory floodway*: a detailed study has been performed to determine the BFE's and the limits of the floodplain shown on the FIRM
 - *SFHA Zone AE Floodplains with regulatory floodway*: has detailed analysis to determine the BFE and has a regulatory floodway (see definition below)
- Hydraulic Study— A study including hydraulic modeling of existing and proposed conditions used to size structures to convey floods and provide connectivity of transportation elements. Involvement or encroachment on any of the designated floodplains requires a hydraulic study. The study, which is requested by either the PM or Hydraulics engineer, is completed during preliminary design. In many cases, it should be completed prior to the environmental document, but not in all cases. It should be noted that hydraulic studies are completed for all stream crossings and their associated floodplains, but FEMA regulations and NEPA documentation apply only to floodplains designated as A, AE without regulatory floodway, and AE with regulatory floodway.
- Regulatory Floodway—the channel of a river or other watercourse and adjacent portion of the 100 year floodplain that must be kept clear of encroachment so that flood elevations are not increased more than one foot
- No Rise Certification— Documentation supported by technical data to illustrate that a project does not cause any rise in regulatory floodway elevations, floodplain elevations or increase regulatory floodway widths
 - No Rise Certifications are required only for encroachments on Zone AE Floodplains with Regulatory Floodways, not for encroachments on Zone A Floodplains or for

encroachments on Zone AE Floodplains without Regulatory Floodways. For Zone AE without regulatory floodways and Zone A floodplains, a hydraulic study is the documentation needed to show a <1 foot BFE increase.

- The affected community must provide concurrence with the technical data.
- FEMA is not involved in coordination for a No-rise Certification.
- If the no-rise certification and community concurrence are required and have not been completed at the time of the NEPA document, the Green Sheet must include a preconstruction commitment to complete coordination before letting.
- Impact/Involvement—Involvement is most commonly an increase of fill or the addition of structure(s) into the designated floodplain/floodway
- Floodplain Management/Floodplain Manager – The operation of an overall program of corrective and preventative measures for reducing flood damage, including but not limited to, emergency preparedness plans, flood-control works and floodplain management regulations. Floodplain resources include information on the National Flood Insurance Program (NFIP) regulations, FEMA Letter of Map Change (LOMC) processes, FEMA guidelines and guidance documents, and training.

Research, Coordination, and Documentation

The first step for the NEPA Analyst is to determine whether a floodplain/floodway exists within the project’s area of potential effect (APE). This determination is made by consulting the appropriate Georgia FIRM map, which can be found at www.map.georgiafirm.com or at <https://msc.fema.gov/portal>, and by consulting with the Project Manager and/or Engineer. The FIRM panel with the project location should always be included in the attachments of the CE/EA/EIS, regardless of the floodplain impacts and coordination. If floodplains are present on the FIRM panel that includes the project location, complete the email Early Coordination to GA DNR (using the email template in Sharepoint) and include that in the attachments of the document.

Depending on whether a designated floodplain is present and whether the project would encroach on it, one of four situations is possible. The procedures the NEPA Analyst should follow in each situation and the information that he or she should include in the NEPA Document are discussed below.

- **If the FIRM shows no Floodplain in the APE:**
 - Confirm with engineer that there is no designated floodplain in the APE
 - Coordination with Community Officials or Watershed Stakeholders and/or FEMA is not required
 - (Note: if a project encroaches on a stream, a hydraulic study is conducted even if there is no designated floodplain associated with that stream. The results of the hydraulic study will be used to properly size the structure and to minimize the impacts of fill, both of which will avoid or minimize flooding impacts)

- NEPA Document Requirements : CE Table should check “None” and Floodplains section in Attachment 1 should be removed (still include the FIRM panel in Attachment 2). An EA or EIS should briefly note that the FIRM was reviewed, that no designated floodplain was shown within the APE, and that this finding was confirmed with the Hydraulics or Design Engineer. Required and sample text can be found in the EA template.
- **If any type of designated floodplain (i.e., Zone A, AE without floodway, AE with floodway) is within the APE, but the project would not encroach on it:**
 - Confirm with the Hydraulics Engineer that the project would not encroach on a designated floodplain
 - A hydraulic study is not required
 - Coordination with the Community or FEMA is not required.
 - NEPA Document Requirements: A CE Table should check “No Involvement. Attachment 1 of the CE, EA, or EIS should state that the FIRM Map shows a floodplain (cite the designation) in the APE but that the project would not encroach on it.
 - State that the Hydraulics Engineer had confirmed the above.
 - Include a Floodplain Location Map.
 - See the EA template for Required and Sample Text.
 - Include the email correspondence with GA DNR in the attachments.
- **If the project would encroach on a Zone A floodplain:**
 - Confirm with the Hydraulics Engineer that the project would impact the floodplain
 - Have the Hydraulics Engineer provide the approximate fill impact.
 - If you have an upcoming PIOH or PDOH, show the floodplains on the layouts. No need to go back and do a second PIOH, though, if you have already held the meeting and didn’t show the floodplain delineations. Floodplains must, however, be shown on PHOH layouts.
 - A hydraulic study is required and will be conducted by the Engineering Team.
 - Per GDOT’s Drainage Manual, the project is allowed an increase of up to one foot above the natural flood elevation (elevations with no bridge or roadway in place). If the elevation climbs to above one foot (rare), the GDOT Hydraulics Office can grant a waiver.
 - Neither community nor FEMA Coordination is required.
 - A CLOMR can be required for flood elevation increases to Zone A floodplains if they are over 1 foot or if they change the boundaries of the Zone A floodplain. Coordinate with GDOT Design Policy to identify if a CLOMR is needed or if they can grant a GDOT waiver.
 - NEPA Document Requirements: The CE Table should indicate “Involvement.” The CE Attachment 1, EA, or EIS should include the following statements and information (required and sample text available in EA template):
 - State that the project would encroach on a Zone A floodplain
 - Define a Zone A floodplain using the definition provided above

- Include and reference a Floodplain Location Map
 - Cite the fill impacts to the floodplain
 - If the hydraulic study has not been completed
 - ✓ State that one will be conducted before final design and used to minimize any increase in flood elevation
 - ✓ State that final increases whatever their level will not require community or FEMA coordination since this floodplain is designated Zone A (if you have already identified that a CLOMR is not needed).
 - ✓ Include a Preconstruction Commitment to complete the hydraulic study for the purpose of minimizing floodplain impacts
 - If the hydraulic study has been completed
 - ✓ State that a hydraulic study has been conducted, that the results have been used to minimize the increase in BFE, and cite the increase in elevation that would occur.
 - ✓ If the increase in BFE is less than one foot, note that no further action is required.
 - ✓ If the elevation increase is greater than one foot
 - Note that due to design constraints the increase in elevation could not be held below one foot
 - Note if a waiver for the greater than one-foot increase was approved by the Hydraulics Office
 - State if FEMA coordination (in the form of a CLOMR) is needed (if a waiver was not available).
 - Include a Preconstruction commitment if any of the floodplain coordination is not complete.
 - ✓ Include the hydraulic study in the Correspondence Attachment.
 - ✓ Include the GA DNR Early Coordination emails in the attachments.

- **If the project would encroach on a Zone AE floodplain without regulatory floodway:**
 - Confirm with the Hydraulics Engineer that the project would impact the floodplain
 - Have the Hydraulics Engineer provide the approximate fill impact.
 - If you are planning to have a PIOH or PDOH, show the floodplains on the public layouts. If the PIOH/PDOH has already occurred, no need to go back and re-do the public meeting in order to show the floodplains. If this will have a PHOH, the floodplains must be shown on the PHOH layouts.
 - A hydraulic study is required. Engineering will perform the study and make every effort to keep the rise below one foot.
 - If the final design will not produce a greater than one foot rise in the BFE:
 - ✓ Neither community nor FEMA Coordination is required

- ✓ A No-rise Certification with community concurrence is not required but GDOT provides a copy of the hydraulic study to the community for their records
 - ✓ A CLOMR is not required
 - If the final design will produce a greater than one-foot rise in the BFE:
 - ✓ A No-rise Certification with community concurrence is not required; however, community coordination is required
 - ✓ A CLOMR is required and must be approved by FEMA
- NEPA Document Requirements: The CE should indicate “Involvement.” Include the following statements and information in the CE Attachment 1, the EA, or the EIS:
 - State that the project would encroach on a Zone AE floodplain without regulatory floodway
 - Define Zone AE floodplain without regulatory floodway
 - Include and reference the location on a FIRM panel;
 - Cite the fill impacts to the floodplain
 - If the hydraulic study has not been completed
 - ✓ State that GDOT will complete a study to determine project impacts to the floodplain’s BFE before final design and letting
 - ✓ State that if the study reveals that the project will increase the BFE by more than one foot, GDOT will prepare and obtain FEMA approval of a CLOMR before the project is let
 - ✓ State that community coordination will be conducted should the study show that the project will increase the BFE by more than one foot, but that a No-rise Certification will not be required since a regulatory floodway is not present
 - ✓ Include Preconstruction Commitments to complete a CLOMR and community coordination if the hydraulic study reveals that the project will increase the floodplain BFE by more than one foot.
 - If the hydraulic study has been completed and the BFE increase is less than one foot:
 - ✓ State that a hydraulic study has been conducted and the results show that the impacts would not increase the BFE by more than one foot.
 - ✓ Include the Hydraulic Study in the Correspondence Attachment and reference it appropriately.
 - ✓ State that a No-rise Certification with community concurrence is not required for involvement with Zone AE floodplains without regulatory floodways, but that a copy of the hydraulic study has been provided to the local community
 - ✓ State that a CLOMR (which requires FEMA approval) is not required since the increase in BFE would not exceed one foot

- ✓ Community coordination is still required (but a No-rise certification is obviously not required)
- NEPA Document Requirements: The CE Table should indicate “Involvement.” The following statements and information should be included in CE Attachment 1, the EA, or the EIS (Required and sample text are available in the EA template):
 - State that the project would encroach on a Zone AE floodplain with regulatory floodway
 - Define a Zone AE floodplain with regulatory floodway using the definition provided above
 - Include the location on a FIRM panel.
 - Cite the approximate fill impacts to the floodplain/floodway
 - State that FEMA regulations require that all prudent and feasible efforts be undertaken to avoid any increase in floodway widths, floodway elevations, or floodplain BFEs for Zone AE floodplains with regulatory floodways
 - State that either a no rise certification with community concurrence is required to demonstrate the above increases have been avoided or, if the increases cannot be avoided, a CLOMR must be prepared and approved by FEMA
 - If the hydraulic study has not been completed
 - ✓ State that one will be completed before let to measure floodway and floodplain increases and to help avoid and minimize increases
 - ✓ State that depending on the outcome of the study, either a no rise certification or a CLOMR will approved before let
 - ✓ Include a Preconstruction Commitment to complete the hydraulic study and obtain either a No-rise Certification with community concurrence or a CLOMR with FEMA approval before letting the project.
 - ✓ Include any relevant correspondence that has occurred to date in the Correspondence Attachment
 - If the hydraulic study has been completed and the project would not produce an increase in floodway widths, floodway elevations, or floodplain BFEs
 - ✓ State the above
 - ✓ Include the Hydraulic Study in the Correspondence Attachment and reference it
 - ✓ State whether the No-rise Certification has been concurred with by the community.
 - If concurrence has been received, state that it has, include the concurrence in the Correspondence Attachment, and reference it.

- If it has not be concurred with, state that it will be completed before the project is let and include a Preconstruction Commitment to that effect.
- If the hydraulic study has been completed and the project would cause an increase in floodway widths, floodway elevations, or floodplain BFEs
 - ✓ State the above.
 - ✓ Explain why impacts to the floodplain/floodway cannot be avoided. This information should be available from the hydraulics engineer and should be included in the documentation provided by GDOT for the CLOMR.
 - ✓ Include and reference the Hydraulic Study in the Correspondence Attachment and reference
 - ✓ State whether the CLOMR has been approved by FEMA or not.
 - If it has been approved, include the FEMA approval correspondence in the Correspondence Attachment, and reference it
 - If the CLOMR has not been approved by FEMA, state that approval will be obtained before Let, and include a Preconstruction Commitment
 - ✓ State that community coordination has been completed or that it will also be completed before let, as required under FEMA regulations. Include either the correspondence with the community demonstrating that coordination has been completed or a Preconstruction Commitment to complete coordination before let.

**Please note that the Required and Sample text included in the EA template can also be used for CE documents when there is No Involvement or Involvement. Feel free to copy/paste the template language into the CE.*