

Permitting Development in the Floodplain

TFMA Conference, March 2023
Texas Water Development Board
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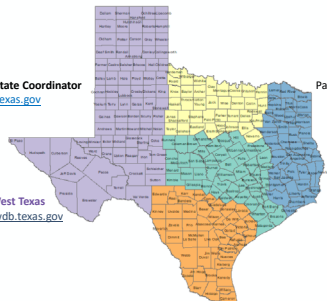
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Texas Water Development Board


- Headquarters in Austin, with a few regional offices
- **State Coordinating Agency for the National Flood Insurance Program**
 - Community Assistance Program - State Support Services Element (CAP-SSSE)
- **Flood Financial Assistance**
 - Flood Mitigation Assistance Grants (FMA)
 - Flood Infrastructure Funding (FIF)
- **Flood Science**
 - Mapping and Modeling programs
 - Flood Priority Research projects
- **Flood Planning**
 - First statewide and regional flood plans for Texas


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Community Assistance Program






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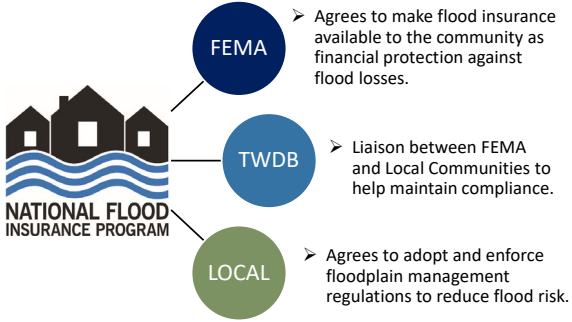

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National Flood Insurance Program



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Floodplain Administrator Responsibilities

Summary of the role:

- understand the regulations
- process permit applications
- ensure projects are built according to the permits issued
- keep records – permits, site plans, certificates, etc.
- take enforcement actions in order to correct violations
- update the flood damage prevention ordinance/court order, as needed
- coordinate with other departments, as needed
- coordinate with other state/federal agencies, as needed



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What to Include on the FP Permit?

- Address
- Contact info for the owner and the builder/contractor
- Signatures from owners, contractors, and City personnel
- Expiration date
- Flood zone, BFE data
- Description or scope of work
- Value of work, repairs, improvements
- Does it include bringing in fill? Or excavating?
- Special requirements:
 - freeboard?
 - Elevation Certificates at which phases?
 - restrictions for utility services or the Certificate of Occupancy?
 - drainage/detention?
 - no-rise certificate?

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What FP Activities Require Permitting?

Development that requires a permit includes, but is not limited to:

- new construction and substantial improvements
- placement of a manufactured home
 - recreational vehicles on site for more than 180 days and not road ready
- mining, dredging, filling, grading, or excavating
- altering or relocating stream channels
- storage of equipment and materials

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NFIP Definitions

NEW CONSTRUCTION (for Floodplain Management Purposes)
structures for which the start of construction commenced on or after the effective date of a floodplain management regulation adopted by a community and includes any subsequent improvements to such structures.

SUBSTANTIAL IMPROVEMENT (SI)
reconstruction, rehabilitation, addition, or other improvements, the cost of which equals or exceeds 50% of the market value of the building before the "start of construction" of the improvement.

SUBSTANTIAL DAMAGE (SD)
damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

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Other Development

DREDGING = Removing silt and other materials from the bottom of bodies of water

EXCAVATION = Digging, scooping, or cutting to create a hole or cavity in the earth



Photo credit: Tangev9999, Dredging with long reach excavator, May 2011

Potential Impacts to the SFHA:

- These are typically considered encroachment activities and an H&H study is required to prove that Base Flood Elevations and water-carrying capacity will not be changed as a result.
- Changes to velocity and direction of watercourse
- Storage of water where there wasn't any before (excavation)
- Adding dredged/excavated material (fill) to SFHA

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Other Development

GRADING = Changing the slope or leveling of the ground

PAVING = Covering the earth with impervious material (concrete, asphalt) or semi-pervious material (brick, stone)



Photo credit: Aaron Volkening, Parking lot reconstruction, West Allis, Wisconsin, June 2022

Potential Impacts to the SFHA:

- Changes to velocity and direction of stormwater runoff and drainage
- Adding or removing fill
- Major projects could impede water flow and act as small levees, trapping water in areas or causing ponding

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Other Development

MINING & DRILLING = Extracting useful materials from the earth

Potential Impacts to the SFHA:

- Creating a new watercourse or adding more water to existing watercourses
- Removal of vegetation can speed up waterflow
- Equipment can divert, slow, or stop waterflow
- Equipment can become flood-borne debris
- Possible collapse of ground
- Contamination of floodplain or watershed
- May also affect aquifers



Photo credit: The Bureau of Land Management

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Other Development

STORAGE OF EQUIPMENT & MATERIALS

- Machinery, mechanical hardware, trailers, vehicles, boats, etc.
- Tanks, containers, construction materials, etc.



Potential Impacts to the SFHA:

- Equipment, tanks, and containers can divert, slow, or stop water flow
- Materials can become flood-borne debris
- Hazardous materials could contaminate the floodplain/watershed

Photo credits: Jonathan Wilkins, Boat storage, September 2021. AK House Project Media, Storage container, October 2019. Corey Coyle, Berry Town Hall's Propane Tank, June 2015

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State/Federal Permitting

Other agencies that may require permits, including but not limited to:

- U.S. Army Corp of Engineers
- U.S. Fish and Wildlife Service
- U.S. Environmental Protection Agency
- U.S. Coast Guard
- TX Parks and Wildlife Department
- TX General Land Office
- TX Commission on Environmental Quality
- TX Department of Transportation
- TX Railroad Commission
- U.S. International Boundary and Water Commission



If any permits are required from these agencies, a copy of the approved permit must be included in the local permit package.

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Rivers and Harbors Appropriation Act

- Section 10 – U.S. Army Corps of Engineers (USACE) manages modifications to navigable waters
 - weirs, jetties, riprap, bulkheads, mooring structures, intake or outfall pipes, tunnels, artificial canals, boat ramps, etc.
- Section 9 – U.S. Coast Guard (USCG) manages the construction of any bridge, dam, dike, or causeway over navigable waters



Photo credits: Ministry of Transportation and Infrastructure in British Columbia, Canada

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Texas General Land Office (GLO)

GLO monitors state-owned lands and maintains the Coastal Zone Management (CZM) Program.

GLO permits include:

- Living shorelines
- Impacts to beaches and sand dunes
- Bulk heads
- Pile-supported cabins in bays
- Land leasing and easements

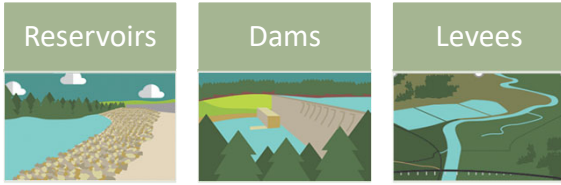


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Clean Water Act – Section 404

U.S. Environmental Protection Agency (EPA) & U.S. Army Corps of Engineers (USACE) coordinate the administration of Section 404 of the Clean Water Act – regulating disposal sites and the discharge of dredged or fill material into waterways and wetlands.



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Texas Commission on Environmental Quality (TCEQ)

TCEQ conducts Section 401 certification reviews of USACE Section 404 permit applications.

TCEQ permits:

- On-site waste sewage facilities
- Septic systems
- Public water systems
- Water wells
- Stormwater runoff
- Landfills
- Petroleum storage tanks
- Auto repair, body, or salvage



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Texas Railroad Commission

- The Texas Railroad Commission primarily regulates the oil and natural gas industry, pipeline industry and pipeline transporters, and coal and uranium mining operations.



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U.S. Fish and Wildlife Service (USFWS)

- USFWS issues multiple types of permits for the Endangered Species Act (ESA), Migratory Birds, International Affairs, and Law Enforcement.
 - FEMA also requires documentation of compliance with the Endangered Species Act for proposed projects before Conditional Letters of Map Revision (CLOMR) or Conditional Letters of Map Revision based on Fill (CLOMR-F) will be processed.
- Types of projects:
- Culvert replacement
 - Dam removal
 - Water diversion
 - Natural rock ramps
 - By-pass channels
 - Low water crossings
 - Fish passage training
 - Levee breach

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Texas Parks and Wildlife (TPWD)

- TPWD issues Marl, Sand, Gravel, Shell, or Mudshell permits in addition to floating cabin permits.
- TPWD is also involved in Endangered Species Act permitting.
 - Species may be listed as state threatened or endangered but not listed federally.
 - The state list deals only with the status of the species within Texas.

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U.S. International Boundary & Water Commission (IBWC)

- IBWC applies the boundary and water treaties of the United States and Mexico and settles differences that may arise in their application.
- The agency manages potential environmental impacts of projects along the US/Mexico border, whether on land or in water.
- IBWC permits:
 - Flood Control Levee Systems
 - Diversion Dams and Related Structures
 - Storage Dams
 - Power Plants
 - Wastewater Treatment Plants

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Resources for the FPA

- Your Flood Damage Prevention Ordinance/Court Order
 - Read it, know it, love it
 - If you don't love it, you can help change it (within the 44 CFR guidelines)
- TWDB, the State NFIP Coordinating Office
- FEMA, Region 6 Office
- ASFPM / TFMA
- Other State/Federal Agencies that require permits
- Your neighboring communities or County FPA



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Record Keeping

For each permit issued, keep a project file containing:

- All correspondence relating to the project:
 - permit application and permit
 - elevation or floodproofing certificates
 - documentation of inspections
 - any variance or appeals proceedings
 - substantial damage or improvement assessments
- Engineering data, site plans/surveys
 - Base Flood Elevation (BFE) data for subdivisions
- Permits from state/federal agencies



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Questions?

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Scenario 1:

A property owner has a navigable creek running through their property. They have built a small dam to control the flow of water without getting any permits.

- 1) What impacts could this project have on the floodplain/floodway?
- 2) What agencies, in addition to the local FPA, should the owner have contacted for a permit?



Scenario 2:

A developer is looking to build a 60-lot subdivision that falls partially on an AO zone. The development area happens to be close to a natural reserve, which is home to a variety of plant and animal species.

- 1) What information needs to be included on the floodplain development permit?
- 2) What additional permit(s) should the floodplain administrator request from the developer?



Scenario 3:

Fuel Co. is wanting to develop a natural gas plant with subterranean pipelines. The project area partially crosses an AE zone.

What type of permits should Fuel Co. have to submit to the floodplain administrator?



Scenario 4:

The South Padre Island Floodplain Administrator is not sure if Tadd Pole Engineering has submitted all the required permits for a living shoreline project. Who would be the best point of contact to double check that Tadd Pole Engineering is following all the regulations?

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