

Flood Terminology

Base Flood Elevation (BFE): The term "Base Flood Elevation" refers to the elevation (normally measured in feet above sea level) that the base flood is expected to reach. Base flood elevations can be set at levels other than the 100-year flood. Some communities choose to use higher frequency flood events as their base flood elevation for certain activities, while using lower frequency events for others. For example, for the purpose of stormwater management, a 25-year flood event might serve as the base flood elevation, while the 500-year flood event may serve as base flood elevation for the tie down of mobile homes. The regulations of the National Flood Insurance Program (NFIP) focus on development in the 100-year floodplain.

Development: For floodplain ordinance purposes, development is broadly defined by Salem Revised Code (SRC) 140.020(f) to mean "bring about growth or availability; to construct, alter, or place a structure; to conduct a mining, filling, grading, paving, drilling, dredging or excavation operation; to make a physical change in the use or appearance of land; to partition or divide land into parcels; or to create or terminate rights of access." The definition of development for floodplain purposes is generally broader and includes more activities than the definition of development used in other sections of local land use ordinances.

Federal Emergency Management Administration (FEMA): FEMA is part of the Department of Homeland Security's Emergency Preparedness and Response Directorate. FEMA's continuing mission within the new department is to lead the effort to prepare the nation for all hazards and effectively manage federal response and recovery efforts following any national incident. FEMA also initiates proactive mitigation activities, trains first responders, and manages the National Flood Insurance Program and the U.S. Fire Administration.

Flood Insurance Rate Map (FIRM): According to SRC 140.020(k) means "the official map, in paper or digital form, on which the Federal Insurance Administration, FEMA has delineated both the areas of special flood hazards and the risk premium zones applicable to the City of Salem, and includes the accompanying floodway and floodway fringe boundary maps accompanying the FIRM as a part of the flood insurance study."

Floodplain: A floodplain is a land area adjacent to a river, stream, lake, estuary, or other water body that is subject to flooding. This area, if left undisturbed, acts to store excess floodwater. The floodplain is made up of two sections: the floodway and the flood fringe.

100-Year Flood: The 100-year flooding event is the flood having a 1 percent chance of being equaled or exceeded in magnitude in any given year. Contrary to popular belief, it is not a flood occurring once every 100 years. The 100-year floodplain is the area adjoining a river, stream, or watercourse covered by water in the event of a 100-year flood. This MAP([this should be the link to the map that I sent to Louise](#)) illustrates the 100-year floodplain in Salem.

Floodway: The floodway is one of two main sections that make up the floodplain. Floodways are defined for regulatory purposes. Unlike floodplains, floodways do not reflect a recognizable geologic feature. For NFIP purposes, floodways are defined as the channel of a river or stream, and the overbank areas adjacent to the channel. The floodway carries the bulk of the floodwater downstream and is usually the area where water velocities and forces are the greatest. NFIP regulations require that the floodway be kept open and free from development or other structures that would obstruct or divert flood flows onto other properties. The NFIP floodway definition is "the channel of a river or other watercourse and adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot. Floodways are not mapped for all rivers and streams but are generally mapped in developed areas.

Floodway Fringe: The floodway fringe refers to the outer portions of the floodplain, beginning at the edge of the floodway and continuing outward. In SRC 140.120(o), the floodway fringe is defined as "the area of the 100-year floodplain lying outside of the floodway within interim flood hazard areas, and designated as floodway fringe by the Director of Public Works pursuant to SRC 140.110." This is the area where development is most likely to occur, and where precautions to protect life and property need to be taken.

National Flood Insurance Program (NFIP): Managed by FEMA, the NFIP has three components which are: Flood Insurance, Floodplain Management and Flood Hazard Mapping. Nearly 20,000 communities across the United States and its territories participate in the NFIP by adopting and enforcing floodplain management ordinances to reduce future flood damage. In exchange, the NFIP makes Federally backed flood insurance available to homeowners, renters, and business owners in these communities. Community participation in the NFIP is voluntary.

Flood insurance is designed to provide an alternative to disaster assistance to reduce the escalating costs of repairing damage to buildings and their contents caused by floods. Flood damage is reduced by nearly \$1 billion a year through communities implementing sound floodplain management requirements and property owners purchasing of flood insurance. Additionally, buildings constructed in compliance with NFIP building standards suffer approximately 80 percent less damage annually than those not built in compliance. And, every \$3 paid in flood insurance claims saves \$1 in disaster assistance payments.

In addition to providing flood insurance and reducing flood damages through floodplain management regulations, the NFIP identifies and maps the Nation's floodplains. Mapping flood hazards creates broad-based awareness of the flood hazards and provides the data needed for floodplain management programs and to actuarially rate new construction for flood insurance.

Substantial Improvement: Any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either (1) before the improvement or repair is started or (2) if the structure has been damaged and is being restored, before the damage occurred.

Special Flood Hazard Areas (SFHA): Areas inundated by the 100-Year Flood. The following are subject to the 100-Year Flood and are defined as follows:

1. Zone A: No Base flood elevations determined
2. Zone AE: Base flood elevations determined
3. Zone AH: Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined
4. Zone AO: Flood Depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined

Other Areas:

5. Shaded Zone X: Areas of 500-Year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.
6. Zone X: Areas determined to be outside the 500-year floodplain
7. Zone D: Areas in which flood hazards are undetermined