



# Glossary

## Frequently Used Terms for Levee Systems

The terms listed below will regularly be encountered by mapping partners, stakeholders, and users that are actively involved in the Flood Map Modernization (Map Mod) effort that has been undertaken by the Department of Homeland Security, Federal Emergency Management Agency (FEMA), as part of its administration of the National Flood Insurance Program (NFIP). Many of these terms would be of particular interest to those involved in the evaluation and mapping of levee systems and levee-impacted areas.

**0.2-Percent-Annual-Chance Flood**—The flood that has a 0.2-percent chance of being equaled or exceeded in any given year (also known as the 500-year flood).

**1-Percent-Annual-Chance Flood**— The flood that has a 1-percent chance of being equaled or exceeded in any given year (also known as the 100-year flood).

**2-Percent-Annual-Chance Flood**—The flood that has a 2-percent chance of being equaled or exceeded in any given year (also known as the 50-year flood).

**10-Percent-Annual-Chance Flood**—The flood that has a 10-percent chance of being equaled or exceeded in any given year (also known as the 10-year flood).

**10-Year Flood**—See 10-Percent-Annual-Chance Flood.

**44 CFR Section 65.10 Requirements**—See Section 65.10 Requirements.

**50-Year Flood**—See 2-Percent-Annual-Chance Flood.

**100-Year Flood**—See 1-Percent-Annual-Chance Flood.

**500-Year Flood**—See 0.2-Percent-Annual-Chance Flood.

**Accredited Levee System**—A levee system that FEMA has shown on a Flood Insurance Rate Map (FIRM) or Digital Flood Insurance Rate Map (DFIRM) as providing protection from the 1-percent-annual-chance or greater flood. This determination is based on the submittal of data and documentation as required by Section 65.10 of the NFIP regulations. The impacted area landward of an accredited levee system is shown as Zone X (shaded) on the FIRM or DFIRM except for areas of residual flooding, such as ponding areas, which are shown as Special Flood Hazard Area.

**Adequate Progress Determination**—A written determination issued by FEMA to the Chief Executive Officer of a community that has provided sufficient information for FEMA to determine that substantial completion of a flood protection system has been effected because: (1) 100 percent of the total financial project cost of the completed flood protection system has been authorized; (2) at least 60 percent of the total financial project cost of the completed flood protection system has been appropriated; (3) at least 50 percent of the total financial project cost of the completed flood protection system has been expended; (4) all critical features of the flood protection system, as identified by FEMA, are under construction, and each critical feature is 50 percent completed as measured by the actual expenditure of the estimated construction budget funds; and (5) The community has not been responsible for any delay in the completion of the system.





**Appeal**—The formal objection to proposed and/or proposed modified Base Flood Elevations (BFEs) and/or base flood depths, submitted by a community official or an owner or lessee of real property within the community during the statutory 90-day appeal period. An appeal must be based on data that show the proposed or proposed modified BFEs or base flood depths are scientifically or technically incorrect.

**Appeal Period**—The statutory period, beginning on the date of second publication of proposed BFEs, proposed modified BFEs, proposed base flood depths, or proposed modified base flood depths in the local newspaper, during which community officials or owners or lessees of real property within the community may appeal the proposed or proposed modified BFEs and/or base flood depths by submitting data to show those BFEs or base flood depths are scientifically or technically incorrect.

**Application Forms**—The comprehensive, easy-to-use forms that were implemented by FEMA in October 1992 to facilitate the processing of requests for revisions or amendments to NFIP maps.

**Approved Model**—A numerical computer model that has been accepted by FEMA for use in performing new or revised hydrologic or hydraulic analyses for NFIP purposes. All accepted models must meet the requirements set forth in Subparagraph 65.6(a)(6) of the NFIP regulations.

**Approximate Study**—An engineering study that results in the delineation of floodplain boundaries for the 1-percent-annual-chance flood, but does not include the determination of BFEs or base flood depths.

**As-Built**—A term used to describe mapping and mapping-related data that reflect conditions within a floodplain based on flood-control and other structures being completed.

**Base Flood**—The flood that has a 1-percent chance of being equaled or exceeded in any given year.

**Base Flood Elevation (BFE)**—The elevation of a flood having a 1-percent chance of being equaled or exceeded in any given year.

**Berms**—Horizontal strips or shelves of material built contiguous to the base of either side of levee embankments for the purpose of providing protection from underseepage and erosion, thereby increasing the stability of the embankment or reducing seepage.

**Breach**—See Levee Breach.

**Building**—See Structure.

**Channel**—A naturally or artificially created open conduit that periodically or continuously contains moving water or which forms a connecting link between two bodies of water.

**Channel Capacity**—The maximum flow that can pass through a channel without overflowing the banks.

**Chief Executive Officer (CEO)**—The official of a community who has the authority to implement and administer laws, ordinances, and regulations for that community.

**Closure Devices**—Any movable and essentially watertight barriers, used during flood periods to close openings in levee systems, securing but not increasing the levee systems' design level of protection.

**Coastal Flooding**—Flooding that occurs along the Great Lakes, the Atlantic and Pacific Oceans, and the Gulf of Mexico.

**Coastal High Hazard Area**—An area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high-velocity wave actions from storms or seismic sources.



**Code of Federal Regulations (CFR)**—The codification of the general and permanent rules published in the FEDERAL REGISTER by the Executive Departments and agencies of the Federal Government. NFIP regulations are printed in Parts 59 through 77 of Title 44 of the CFR.

**Community**—Any State or area or political subdivision thereof, or any Indian tribe or authorized tribal organization, or Alaska Native village or authorized native organization, which has the authority to adopt and enforce floodplain management regulations for the areas within its jurisdiction.

**Community Assistance Call (CAC)**—A telephone call made by FEMA Regional Office staff or the State NFIP Coordinator to a community to supplement or replace a Community Assistance Visit.

**Community Assistance Program (CAP)**—A FEMA program, funded by the NFIP, under which cost-shared funds are provided to States to provide technical assistance support to communities participating in the NFIP. The purpose of the CAP is to identify, prevent, and resolve floodplain management issues in NFIP participating communities before a flood occurs, or before poor performance or noncompliance warrant enforcement and intervention by FEMA.

**Community Assistance Program-State Support Services Element (CAP-SSSE)**—A FEMA program through which FEMA provides funding to States to provide technical assistance to communities in the NFIP and to evaluate community performance in implementing NFIP floodplain management activities.

**Community Assistance Visit (CAV)**—A visit by FEMA Regional Office staff or the State NFIP Coordinator to a community to assess whether the community's floodplain management program meets NFIP participation requirements.

**Community Coordination Meeting**—A meeting during which FEMA Regional Office staff, State NFIP Coordinators, community officials, and other project team members or stakeholders discuss scope and plans for a study/mapping project, interim results of a study/mapping project, and final results of a study/mapping project for a particular community or group of communities.

**Community Rating System (CRS)**—A FEMA initiative, established under the National Flood Insurance Program, to recognize and reward communities that have implemented floodplain management measures beyond the minimum required by NFIP regulations. Under the CRS, those communities that choose to participate voluntarily may reduce the flood insurance premium rates for property owners in the community by taking these additional actions.

**Compliance Period**—The period that begins with the issuance of a Letter of Final Determination and ends when a new or revised FIRM or DFIRM becomes effective. During the compliance period, a community must enact and adopt new or revised floodplain management ordinances required for participation in the NFIP.

**Consultation Coordination Officer (CCO)**—The individual on the FEMA Regional Office staff who is responsible for coordinating with a community on activities related to the NFIP.

**Cooperating Technical Partners (CTP) Program**—An innovative FEMA program to create partnerships between FEMA and participating NFIP communities, regional agencies, and State agencies that have the interest and capability to become more active participants in Flood Map Modernization.

**Countywide Format**—A format used by FEMA to show flooding information for the entire geographic area of a county, including the incorporated communities in the county, on one map and in one report.

**Critical Features**—Integral and readily identifiable parts of a levee or other flood protection system, without which the flood protection provided by the entire system would be compromised.

**Crevasse**—See Levee Crevasse.



**Cultural Features**—Railroads, airfields, streets, roads, highways, levees, dikes, seawalls, dams and other flood-control structures, and other prominent manmade features and landmarks shown on an NFIP map.

**De-Accredited Levee System**— A levee system that was once shown on the FIRM or DFIRM as providing protection from the 1-percent-annual-chance or greater flood, but is no longer accredited with providing this protection because FEMA has not been provided with sufficient data and documentation to determine that the levee system continues to meet the NFIP regulatory requirements cited at 44 CFR Section 65.10. The impacted area landward of a de-accredited levee system is shown on a new DFIRM as a Special Flood Hazard Area, labeled Zone A or Zone AE, depending on the type of engineering study that was performed for the area.

**Detailed Study**—An engineering study that, at a minimum, results in the delineation of floodplain boundaries for the 1-percent-annual-chance flood and the determination of BFEs and/or base flood depths.

**Developed Area**—An area of a community that is:

- (a) A primarily urbanized, built-up area that is a minimum of 20 contiguous acres, has basic urban infrastructure, including roads, utilities, communications, and public facilities, to sustain industrial, residential, and commercial activities, and (1) within which 75 percent or more of the parcels, tracts, or lots contain commercial, industrial, or residential structures or uses; or (2) Is a single parcel, tract, or lot in which 75 percent of the area contains existing commercial or industrial structures or uses; or (3) Is a subdivision developed at a density of at least two residential structures per acre within which 75 percent or more of the lots contain existing residential structures at the time the designation is adopted.
- (b) Undeveloped parcels, tracts, or lots, the combination of which is less than 20 acres and contiguous on at least 3 sides to areas meeting the criteria of paragraph (a) at the time the designation is adopted.
- (c) A subdivision that is a minimum of 20 contiguous acres that has obtained all necessary government approvals, provided that the actual "start of construction" of structures has occurred on at least 10 percent of the lots or remaining lots of a subdivision or 10 percent of the maximum building coverage or remaining building coverage allowed for a single lot subdivision at the time the designation is adopted and construction of structures is underway. Residential subdivisions must meet the density criteria in (a)(3) above.

**Development**—Any manmade change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

**Digital Elevation Model (DEM)**—A file with terrain elevations recorded for the intersection of a fine-grained grid and organized by quadrangle as the digital equivalent of the elevation data on a topographic base map.

**Digital Flood Insurance Rate Map (DFIRM)**—A FIRM that has been prepared as a digital product, which may involve converting an existing manually produced FIRM to digital format, or creating a product from new digital data sources using a Geographic Information System environment. The DFIRM product allows for the creation of interactive, multi-hazard digital maps. Links are built into an associated database to allow users options to access the engineering backup material used to develop the DFIRM, such as hydrologic and hydraulic models; Flood Profiles; data tables; DEMs; and structure-specific data, such as digital elevation certificates and digital photographs of bridges and culverts.



**Digital Flood Insurance Rate Map (DFIRM) Spatial Database**—A database designed to facilitate collecting, storing, processing, and accessing data developed by FEMA, enabling Mapping Partners to share the data necessary for the DFIRM production and conversion process. Where possible, all mapping and engineering data elements are linked to physical geographic features and georeferenced. The use of a Geographic Information System as a component of the DFIRM spatial database provides the ability to georeference and overlay the mapping and engineering data, allowing the database to support a wide variety of existing and forthcoming FEMA engineering and mapping products.

**Digital Orthophoto Quadrangle (DOQ)**—Photographic maps distributed by the U.S. Geological Survey. A DOQ is an aerial photograph that is adjusted to remove distortions caused by variations in terrain and the camera lens to produce a photograph that displays features in their planimetrically correct location. This term is sometimes used loosely to mean any photographic map produced by this process.

**Digital Terrain Model (DTM)**—A land surface represented in digital form by an elevation grid or lists of three-dimensional coordinates.

**Dikes**—Embankments constructed of earth or other suitable materials to protect land from overflows or to regulate water.

**Dual Flood Zones**—Flood insurance risk zones shown on a FIRM or DFIRM when (1) a levee-impacted area that is labeled as Zone AR also is subject to 1-percent-annual-chance flooding from a flooding source other than the source on the riverward side of the levee that causes the Zone AR flooding; or (2) some residual 1-percent-annual-chance flooding from the flooding source that causes the Zone AR flooding will remain even after the restoration project is complete. The flood insurance risk zone designations for dual flood zones are AR/A1-30, AR/AE, AR/AH, AR/AO, and AR/A.

**Effective Date**—The date on which the NFIP map for a community becomes effective and all sanctions of the NFIP apply.

**Effective Map**—The NFIP map issued by FEMA that is in effect as of the date shown in the title block of the map as “Effective Date,” “Revised,” or “Map Revised.”

**Eligible Levee**—A levee categorized as “active” in the U.S. Army Corps of Engineers (USACE) Rehabilitation and Inspection Program (RIP), for which USACE can provide assistance under Public Law 84-99 to repair damage caused by a flood event.

**Emergency Phase**—The phase of the NFIP that was implemented, on an emergency basis, to provide a first-layer amount of insurance on all insurable structures before the effective date of the initial FIRM/DFIRM.

**Emergency Program**—See **Emergency Phase**.

**Encroachment**—Construction, placement of fill, or similar alteration of topography in the floodplain that reduces the area available to convey floodwaters.

**Failure Breach**—See **Levee Failure Breach**.

**Federal Emergency Management Agency (FEMA)**—The component of the U.S. Department of Homeland Security that oversees the administration of the NFIP.

**Federally Authorized Levee System**—A levee system that was designed and built by the U.S. Army Corps of Engineers in cooperation with a local sponsor and then turned over to that local sponsor to operate and maintain.

**FEMA Levee Inventory System (FLIS)**—A Web-based database and information retrieval system used by FEMA to collect and maintain information on structures shown on effective and soon-to-be-effective FIRMs/DFIRMs, including levees, dikes, floodwalls, and road and railroad embankments.



**FEMA Map Assistance Center (FMAC)**—A FEMA customer service center staffed by Map Specialists that are specially trained to answer specific questions about NFIP mapping and related issues, including: levee resources; status of active and completed studies/mapping projects, conditional and final map revision requests, and conditional and final map amendment requests; technical and administrative support data available from the FEMA archives. FMAC Map Specialists will link callers with other FEMA service and fax numbers and the FEMA Web site and provide information regarding, or copies of, FEMA products, brochures, and publications.

**Federal Register**—The document, published daily by the Federal Government, that presents regulation changes and legal notices issued by Federal agencies. FEMA publications in the Federal Register include Proposed, Interim, and Final Rules for BFE determinations; Compendium of Flood Map Changes, published twice each year; Final Rules concerning community eligibility for the sale of flood insurance; and Notices announcing clarifications of procedures and requirements.

**Fill**—Soil that is brought in to raise the level of the ground. Depending on where the soil is placed, fill may change the flow of water or increase flood elevations. Fill may be used to elevate a building to meet NFIP requirements. Sometimes fill is combined with other methods of elevation such as pilings or foundation walls. Placement of fill requires a local permit from the community.

**Fiscal Year**—The 12-month period that begins on October 1 and ends on September 30.

**Flood**—A general and temporary condition of partial or complete inundation of normally dry land areas from (1) the overflow of inland or tidal waters or (2) the unusual and rapid accumulation or runoff of surface waters from any source.

**Flood Elevation Determination Docket (FEDD)** — A file maintained by FEMA that includes all correspondence between FEMA and the community concerning a flood study; reports of meetings held among FEMA representatives, community representatives, the State NFIP Coordinator, private citizens, FEMA and community contractors, or other interested parties; relevant publications (e.g., newspaper notices, Federal Register notices); Letter of Final Determination; a copy of the Flood Insurance Study report; and a copy of the FIRM/DFIRM and Flood Boundary and Floodway Map.

**Flood Fighting**—Actions taken immediately before or during a flood to protect human life and to reduce flood damages, such as evacuation, emergency sandbagging and diking, and providing assistance to flood victims.

**Flood Hazard Boundary Map (FHBM)**—The initial insurance map issued by FEMA that identifies, based on approximate analyses, the areas of the 1-percent-annual-chance flood hazard within a community.

**Flood Insurance Rate Map (FIRM)**—The insurance and floodplain management map produced by FEMA that identifies, based on detailed or approximate analyses, the areas subject to flooding during a 1-percent-annual-chance flood event in a community. Flood insurance risk zones, which are used to compute actuarial flood insurance rates, also are shown. In areas studied by detailed analyses, the FIRM shows BFEs and/or base flood depths to reflect the elevations of the 1-percent-annual-chance flood. For many communities, when detailed analyses are performed, the FIRM also may show areas inundated by 0.2-percent-annual-chance (500-year) flood and regulatory floodway areas.

**Flood Insurance Rate Zones**— See Flood Insurance Risk Zones.

**Flood Insurance Risk Zones**—The zones, also referred to as “risk premium rate zones” and “flood insurance rate zones,” shown on a FIRM/DFIRM or FHBM that are used to determine flood insurance premium rates for properties in the community covered by the FIRM/DFIRM or FHBM. The flood insurance risk zones include Special Flood Hazard Areas (i.e., Zones A, A1-30, AE, A0, A99, AH, AR, AR/A, AR/A1-30, AR/AE, AR/A99, V, V1-30, VE, V0) and areas outside Special Flood Hazard Areas (i.e., Zones B, X, D, M, N, P, E).



**Flood Insurance Study (FIS) Report**—A document, prepared and issued by FEMA, that documents the results of the detailed flood hazard assessment performed for a community. The primary components of the FIS report are text, data tables, photographs, and Flood Profiles.

**Flood Map Modernization (Map Mod)**—The multiyear, congressionally supported initiative undertaken by FEMA to identify flood hazards, assess flood risks, and produce new or updated DFIRMs and FIS reports for floodprone communities throughout the United States.

**Floodplain**—Any land area that is susceptible to being inundated by water from any source.

**Floodplain Management**—The operation of a 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 Management Regulations**—The zoning ordinances, subdivision regulations, building codes, health regulations, special-purpose ordinances, and other applications of enforcement used by a community to manage development in its floodplain areas.

**Flood Profile**—A graph showing the relationship of water-surface elevation to location, with the latter generally expressed as distance above the mouth for a stream of water flowing in an open channel.

**Floodprone Area**—See Floodplain.

**Floodprone Community**—Any community that is subject to inundation by the 1-percent-annual-chance flood.

**Floodproofing**—A process for reducing or eliminating flood damage to a structure and/or its contents.

**Flood Protection Restoration Determination**—A written determination by FEMA, issued to the CEO of a community, that the community has provided the data and documentation required by Section 65.14 of the NFIP regulations to show that the community is in the process of restoring a flood protection system (i.e., a levee system) that was constructed using Federal funds, recognized as providing 1-percent-annual-chance flood protection on an effective FIRM or DFIRM, and decertified by a Federal agency responsible for flood protection design or construction. The determination informs the community that FEMA will revise the effective FIRM or DFIRM to designated areas impacted by the system as a Special Flood Hazard Area designated Zone AR.

**Flood Protection Restoration Project**—A project undertaken by a community, alone or in cooperation with a sponsoring Federal agency, to restore a flood protection system (i.e., levee system) that was constructed using Federal funds, recognized as providing 1-percent-annual-chance flood protection on an effective FIRM or DFIRM, and decertified by a Federal agency responsible for flood protection design or construction. The intent of the completed project is to restore the system to providing at least a 1-percent-annual-chance level of flood protection.

**Flood Protection System**—Those physical works for which funds have been authorized, appropriated, and expended and which have been constructed specifically to modify flooding in order to reduce the extent of the area subject to a “special flood hazard” and the extent of the depths of the associated flooding. Flood protection systems typically include hurricane tidal barriers, dams, reservoirs, levees, or dikes.

**Floodwall**—Concrete wall constructed adjacent to streams for the purpose of reducing flooding of property on the landside of the wall. Floodwalls are normally constructed in lieu of or supplement levees where the land required for levee construction is too expensive or not available.

**Floodway**—See Regulatory Floodway.



**Floodway Fringe**—The portion of the 1-percent-annual-chance floodplain that is not within the regulatory floodway and in which development and other forms of encroachment may be permitted under certain circumstances.

**Freeboard**—A factor of safety usually expressed in feet above a flood level for purposes of floodplain management.

**Geographic Information System (GIS)**—A system of computer hardware, software, and procedures designed to support the capture, management, manipulation, analysis, modeling, and display of spatially referenced data for solving complex planning and management problems.

**Gravity Outlets**—Culverts, conduits, or other similar conveyance openings through the line-of-protection that permit discharge of interior floodwaters through the line-of-protection by gravity when the exterior flood stages are relatively low. Gravity outlets are equipped with gates to prevent riverflows from entering the protected area during time of high exterior flood stages.

**Hazard**—An event or physical condition that has the potential to cause fatalities, injuries, property damage, infrastructure damage, agricultural loss, damage to the environment, interruption of business, and other types of loss or harm.

**Hazard Mitigation Grant Program (HMGP)**—The program, authorized under Section 404 of the Stafford Act, under which FEMA provides grants to States and local governments to implement long-term hazard mitigation measures after a presidential disaster declaration. The purpose of the HMGP is to reduce the loss of life and property due to natural disasters and to enable mitigation measures to be implemented during the immediate recovery from a presidentially declared disaster.

**Head Pressure**—See Underseepage.

**Headquarters (HQ)** —The FEMA office in Washington, DC.

**Highest Adjacent Grade**—The highest natural elevation of the ground surface, prior to construction, next to the proposed walls of a structure.

**Hydraulic Analysis**—An engineering analysis of a flooding source carried out to provide estimates of the elevations of floods of selected recurrence intervals.

**Hydraulic Computer Model**—A computer program that uses flood discharge values and floodplain characteristic data to simulate flow conditions and determine flood elevations.

**Hydraulic Methodology**—Analytical methodology used for assessing the movement and behavior of floodwaters and determining flood elevations and regulatory floodway data.

**Hydrograph**—A graph showing stage, flow, velocity, or other properties of water with respect to time.

**Hydrologic Analysis**— An engineering analysis of a flooding source carried out to establish peak flood discharges and their frequencies of occurrence.

**Hydrology**—The science encompassing the behavior of water as it occurs in the atmosphere, on the surface of the ground, and underground.

**Indefinite Delivery/Indefinite Quantity Contractor (IDIQ)**—An architectural and engineering firm or a Federal, State, or local agency that performs flood hazard studies under contract with FEMA as part of Flood Map Modernization.

**Interior Drainage**—Natural or modified outflow of streams within a levee-impacted area for the conveyance of runoff.

**Interior Drainage Systems**—Systems associated with levee systems that usually include storage areas, gravity outlets, pumping stations, or a combination thereof.



**Legally Defined Parcel of Land**—A parcel of land for which a metes and bounds description or a plat has been recorded. Structure may exist on legally defined parcels of land.

**Letter of Final Determination (LFD)**—The letter in which FEMA announces its final determination regarding the flood hazard information, including (when appropriate) BFEs or base flood depths, presented on a new or revised DFIRM and FIS report. By issuing the LFD, FEMA begins the compliance period and establishes the effective date for the new or revised DFIRM and FIS report.

**Letter of Map Change**—A collective term used to describe official amendments and revisions to National Flood Insurance maps that are accomplished by a cost-effective administrative procedure and disseminated by letter.

**Levee**—A man-made structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water so as to provide protection from temporary flooding.

**Levee Breach**—A rupture, break, or gap in a levee system that causes flooding in the adjacent area and whose cause has not been determined.

**Levee Crevasse**—A crack or breach in a levee that causes flooding in the adjacent area.

**Levee Failure Breach**—A rupture, break, or gap in a levee system that causes flooding in the adjacent area and for which a cause of failure is both known and occurred without overtopping. An investigation is usually required to determine the cause.

**Levee-Impacted Area**—The floodplain area landward of a levee system for which the levee system provides some level of flood protection or risk reduction.

**Levee Overtopping**—Floodwater levels that exceed the crest elevation of a levee system and flow into levee-impacted areas landward of the levee system.

**Levee Overtopping Breach**—A rupture, break, or gap in a levee system that causes flooding in the adjacent area and whose cause is known to be a result of overtopping.

**Levee Owner** – a Federal or State agency, a water management or flood control district, a local community, a levee district, a nonpublic organization, or an individual considered the proprietor of a levee.

**Levee System**—A flood protection system that consists of a levee, or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.

**Lines of Protection**—Locations of levees or walls that prevent floodwaters from entering an area.

**Local Newspaper**—The community newspaper, identified by the Chief Executive Officer (CEO) or other designated community official, in which FEMA publishes notices at the beginning of a Mapping project, at the beginning of the appeal period, and at other times during the processing of a new or revised FIRM when required.

**Local Sponsor**—See Public Sponsor.

**Lot**—A parcel of land for which a metes and bounds description or a plat has been recorded and on which one or more structures may be built.

**Lowest Adjacent Grade (LAG)**—The lowest natural elevation of the ground surface next to a structure.

**Lowest Finished Floor Elevation (LFFE)**—The lowest floor of the lowest enclosed area (including basement) of a structure.



**Maintenance Deficiency Correction Period** – A one-time-only 1-year period granted to qualified levees that provides the time for levee owners/communities to correct maintenance deficiencies.

**Map Amendment**—A change to an effective NFIP map that results in the exclusion from the SFHA of an individual structure or legally defined parcel of land that has been inadvertently included in the SFHA (i.e., no alterations of topography have occurred since the date of the first NFIP map that showed the structure or parcel to be within the SFHA).

**Map Modernization**—See Flood Map Modernization.

**Mapping Needs Update Support System (MNUSS)**—The computerized database system that is used by FEMA and its Flood Hazard Mapping Partners to compile information on mapping needs nationwide collected using the Mapping Needs Assessment Process.

**Mapping Activity Statement (MAS)**—An agreement signed by FEMA and a participant (community, regional agency, or State agency) in the CTP Program under which the participant will complete specific mapping activities.

**Mapping Project**—See Study/Mapping Project.

**Map Revision**—A change to an effective NFIP map that is accomplished by a LOMR or a Physical Map Revision (PMR).

**Mitigation**—A sustained action taken to reduce or eliminate long-term risk to people and property from flood hazards and their effects. Mitigation distinguishes actions that have a long-term impact from those more closely associated with preparedness for, immediate response to, and short-term recovery from specific events.

**Mitigation Directorate**—The component of FEMA that manages the NFIP and a range of other programs designed to reduce future losses to homes, businesses, schools, public buildings, and critical facilities from floods, earthquakes, tornadoes, and other natural disasters. The programs and initiatives managed by the Mitigation Directorate staff are: Map Mod and Risk Mapping, Analysis and Planning (RiskMAP), including the CTP Program; National Dam Safety Program; National Hurricane Program; Mitigation Planning; Hazard Mitigation Grant Program; Flood Mitigation Assistance Program; Pre-Disaster Mitigation Program; Severe Repetitive Loss Program; Repetitive Flood Claims Program; Community Rating System; and National Earthquake Hazards Reduction Program.

**Mitigation Planning**—A *process* for State, local, and Indian Tribal governments to identify policies, activities, and tools to implement sustained actions to reduce or eliminate long-term risk to life and property from a hazard event. The mitigation planning process has four steps: (1) organizing resources; (2) assessing risks; (3) developing a mitigation plan; and (4) implementing the plan and monitoring progress.

**National Flood Insurance Fund (NFIF)**—The fund used as the funding mechanism for the NFIP.

**Non-Federal Levee System**—A levee system that was designed, built, operated, and maintained by an entity other than a Federal agency.

**National Flood Insurance Program (NFIP)**—Federal Program under which flood-prone areas are identified and flood insurance is made available to the owners of the property in participating communities.

**Non-Participating Community**—A community that has been identified by FEMA as being floodprone but has chosen not to participate in the NFIP.



**Non-USACE Levee Systems**—Levee systems that are not authorized by the U.S. Congress or other Federal agency authority; levee systems built by other Federal agencies and not incorporated into the USACE Federal system; locally built and maintained levee systems built by a local community; and levee systems that were privately built by a nonpublic organization or individuals and maintained by a local community.

**Overtopping**—See Levee Overtopping.

**Overtopping Breach**— See Levee Overtopping.Breach.

**Participating Community**—Any community that voluntarily elects to participate in the NFIP by adopting and enforcing floodplain management regulations that are consistent with the standards of the NFIP.

**Permanent Identifier (PID)**—The six-character alphanumeric code used by the National Geodetic Survey to identify control points and stations.

**Ponding**—The result of runoff or flows collecting in a depression that may have no outlet, subterranean outlets, rim outlets, or manmade outlets such as culverts or pumping stations. Impoundments behind manmade obstructions are included in this type of shallow flooding as long as they are not backwater from a defined channel or do not exceed 3.0 feet in depth.

**Pressure Conduits**—Closed conduits designed to convey interior flows through the line-of-protection under internal pressure. The inlet to a pressure conduit that discharges interior flows by force of gravity must be at a higher elevation than the river stage against which it functions. Some pressure conduits may serve as discharge conduits from pumping stations.

**Procedure Memorandum (PM)**—A memorandum issued by FEMA to clarify mapping-related procedures, particularly procedures documented in FEMA’s *Guidelines and Specifications for Flood Hazard Mapping Partners*.

**Project Cost**—The total financial cost of a flood protection system (including design, land acquisition, construction, fees, overhead, and profits).

**Proposed Base Flood Elevations/Depths and Proposed Modified Base Flood Elevations/Depths**—Those new and modified BFEs and base flood depths that FEMA publishes in a local newspaper and in the FEDERAL REGISTER at the start of the 90-day appeal period.

**Protest**—An objection to any information, other than BFEs, shown on an NFIP map that is submitted by community officials or interested citizens through the community officials during the 90-day appeal period.

**Provisionally Accredited Levee (PAL)**— A designation for a levee system that FEMA has previously accredited with providing 1-percent-annual-chance protection on an effective FIRM or DFIRM, and for which FEMA is awaiting data and/or documentation that will demonstrate the levee system’s compliance with the NFIP regulatory criteria cited at 44 CFR Section 65.10. A PAL is shown on a DFIRM as providing 1-percent-annual-chance flood protection, and the area landward of the levee is shown as Zone X (shaded) except for areas of residual flooding, such as ponding areas, which will be shown as an SFHA.

**Provisionally Accredited Levee (PAL)Agreement**—A signed agreement stating that, to the best of the levee owner’s knowledge, the levee that is the subject of the agreement meets the requirements of Title 44, Chapter 1, Section 65.10 of the Code of Federal Regulations and has been maintained in accordance with an adopted operation and maintenance plan as well as tests of any mechanized interior drainage systems.

**Provisionally Accredited Levee (PAL) Progress Report**— A progress report due to FEMA within 12 months after initiation of the 24-month PAL period that reports progress toward obtaining 44 CFR Section 65.10-compliant data and documentation for a levee system.



**Public Sponsor**—A public entity that is a legally constituted public body with full authority and capability to perform the terms of its agreement as the non-Federal partner of the U.S. Army Corps of Engineers for a project, and able to pay damages, if necessary, in the event of its failure to perform. A public sponsor may be a State, county, city, town, federally recognized Indian Tribe or tribal organization, Alaska Native Corporation, or any political subpart of a State or group of states that has the legal and financial authority and capability to provide the necessary cash contributions and lands, easements, rights-of-way, relocations, and borrow and dredged or excavated material disposal areas necessary for the project.

**Pumping Stations**—Pumps located at or near the line-of-protection to discharge interior flows over or through the levees or floodwalls (or through pressure lines) when free outflow through gravity outlets is prevented by high exterior stages.

**Residual Flooding Area**—The area of 1-percent-annual-chance flooding that is shown an SFHA on a FIRM or DFIRM in the impacted area behind an accredited or provisionally accredited levee/levee system; the source of residual flooding is usually local drainage or flooding from a source that is controlled by the levee/levee system.

**Regional Offices (ROs)**—The FEMA offices located in Boston, Massachusetts; New York, New York; Philadelphia, Pennsylvania; Atlanta, Georgia; Chicago, Illinois; Denton, Texas; Kansas City, Missouri; Denver, Colorado; San Francisco, California; and Bothell, Washington.

**Regular Phase**—The phase of a community's participation in the NFIP when more comprehensive floodplain management requirements are imposed and higher amounts of insurance are available. The FIRM forms the basis for this phase of participation in the NFIP.

**Regular Program**—See Regular Phase.

**Regulatory Floodway**—A floodplain management tool that is the regulatory area defined as the channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment so that the base flood discharge can be conveyed without increasing the BFEs more than a specified amount. The regulatory floodway is not an insurance rating factor.

**Rehabilitation and Inspection Program (RIP)**—The Rehabilitation and Inspection Program is the U.S. Army Corps of Engineers' program that provides for inspection of flood control projects, the rehabilitation of damaged flood control projects, and the rehabilitation of federally authorized and constructed hurricane or shore protection projects.

**Ring Levees**—Levees that completely encircle or “ring” an area subject to inundation from all directions.

**Risk Analysis Division**—The component of the Mitigation Directorate that applies engineering and planning practices in conjunction with advanced technology tools to identify hazards, assess vulnerabilities, and develop strategies to manage the risks associated with natural hazards.

**Risk Insurance Division**—The component of the Mitigation Directorate that helps reduce flood losses by providing affordable flood insurance for property owners and by encouraging communities to adopt and enforce floodplain management regulations that mitigate the effects of flooding on new and improved structures.

**Risk Reduction Division**—The component of the Mitigation Directorate that works to reduce risk to life and property through the use of land use controls, building practices, and other tools. These activities address risk in both the existing built environment and in future development, and they occur in both pre- and post-disaster environments.

**Sand Boils**—The volcano-like cones of sand that are formed on the landward side of a levee system when the upward pressure of water flowing through soil pores under a levee (underseepage) exceeds the downward pressure from the weight of the soil above it.



**Secondary Levees**—Levees that are riverward of the main or principal levees. The level of protection of a secondary levee is always less than the level of protection provided by the main or principal levee.

**Section 65.10 Requirements**—The NFIP regulatory criteria for the evaluation and mapping of areas protected by levee systems, which are presented at Title 44, Chapter 1, Section 65.10 of the Code of Federal Regulations.

**Sediment**—Fragmental material that originates from the weathering of rocks and is transported by, suspended in, or deposited by water or air or is accumulated in beds by other natural occurrence.

**Setback Levees**—Levees that are built landward of existing levees, usually because the existing levees have suffered distress or are in some way being endangered, as by river or stream migration.

**Scientifically Incorrect Base Flood Elevations/Depths**—Those BFEs and base flood depths determined through analyses in which the methodologies used and/or assumptions made are inappropriate for the physical processes being evaluated or are otherwise erroneous.

**Shallow Flooding**— Unconfined flows over broad, relatively low relief areas, such as alluvial plains; intermittent flows in arid regions that have not developed a system of well-defined channels; overbank flows that remain unconfined, such as on delta formations; overland flow in urban areas; and flows collecting in depressions to form ponding areas. For NFIP purposes, shallow flooding conditions are defined as flooding that is limited to 3.0 feet or less in depth where no defined channel exists.

**Sheet Runoff**—The broad, relatively unconfined downslope movement of water across sloping terrain that results from many sources, including intense rainfall and/or snowmelt, overflow from a channel that crosses a drainage divide, and overflow from a perched channel onto deltas or plains of lower elevation. Sheet runoff is typical in areas of low topographic relief and poorly established drainage systems.

**Special Flood Hazard Area (SFHA)**—The area delineated on an NFIP map (FHBM, FIRM, or DFIRM) as being subject to inundation by the 1-percent-annual-chance flood. SFHAs are determined using statistical analyses of records of riverflow, storm tides, and rainfall; information obtained through consultation with a community; floodplain topographic surveys; and hydrologic and hydraulic analyses.

**Spur Levees**—Levees that project from main levees and serve to protect the main levees from the erosive action of stream currents. Spur levees are not true levees; they are training dikes.

**State**—Any State, the District of Columbia, the territories and possessions of the United States, the Commonwealth of Puerto Rico, and the Trust Territory of the Pacific Islands.

**State Coordinating Agency**— See State National Flood Insurance Program (NFIP) Coordinator.

**State National Flood Insurance Program (NFIP) Coordinator**—The agency of the State government, or other office designated by the Governor of the State or by State statute at the request of FEMA to assist in the implementation of the NFIP in that State.

**State Plane Coordinates**—A system of X,Y coordinates defined by the U.S. Geological Survey for each state. Locations are based on the distance from an origin within each State.

**Stillwater Flood Elevation (SWEL)**—Projected elevation that flood waters would assume, referenced to National Geodetic Vertical Datum of 1929, North American Vertical Datum of 1988, or other datum, in the absence of waves resulting from wind or seismic effects.

**Stillwater Flood Level (SWFL)**—Rise in the water surface above normal water level on the open coast due to the action of wind stress and atmospheric pressure on the water surface.



**Stoplogs**—Logs, planks, cut timber, steel, or concrete beams fitting into end guides between walls or piers to close openings in levees, floodwalls, dams, or other hydraulic structures.

**Street Gates**—Closure gates used during flood periods to close roadway openings through levees or floodwalls.

**Structures**—For floodplain management purposes, walled and roofed buildings, including gas or liquid storage tanks that are principally above ground, as well as manufactured homes. For flood insurance purposes, walled and roofed buildings, other than a gas or liquid storage tanks, that are principally above ground and affixed to permanent sites, as well as a manufactured homes on a permanent foundation.

**Study Contractor (SC)**—See Indefinite Delivery Indefinite Quantity Contractor (IDIQ).

**Study/Mapping Project**—Any activity undertaken by FEMA, separately or in partnership with a mapping partner, to create a new or updated DFIRM, including detailed engineering studies, approximate engineering studies, and floodplain boundary redelineations based on updated topographic information.

**Subcritical Flow**—Flow with a mean velocity that is less than the critical velocity; in other words, tranquil flow.

**Sublevees**—Levees that are built for the purpose of underseepage control. Sublevees encircle areas impacted by the main levee that are subject, during high-water stages, to high uplift pressures and possibly the development of sand boils. Sublevees normally tie into the main levees, thus providing a basin that can be flooded during high-water stages. Sublevees are rarely employed as the use of relief wells or seepage berms make them unnecessary except in emergencies.

**Substantial Improvement**—Any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the start of the construction of the improvement.

**Supercritical Flow**—Flow with a mean velocity that is greater than the critical velocity; in other words, rapid flow.

**Technically Incorrect Base Flood Elevations/Depths**—Those BFEs and base flood depths determined through analyses in which the methodologies used have not been applied properly, are based on insufficient or poor-quality data, or do not account for the effects of physical changes that have occurred in the floodplain.

**Temporary Bench Mark (TBM)**—Benchmark established for a particular mapping project or community.

**Tieback Levees**—Levees that extend from the main levees along a river, lake, or coast to bluff line (high ground) and are part of the lines-of-protection.

**Triangulated Irregular Network (TIN)**—A set of non-overlapping triangles developed from irregularly spaced points that are used to represent the facets of a surface.

**USACE Levees**—Levees that are within the programs operated by the U.S. Army Corps of Engineers, including levees that were built by the USACE that were authorized for construction by the U.S. Congress or by USACE continuing authorities (e.g., Section 205); levee projects constructed by non-Federal interests or other (non-USACE) Federal agencies and incorporated into the USACE Federal system by specific congressional action; Federal projects that are either operated and maintained by the USACE or turned over to a local sponsor for operation and maintenance; and Non-Federal projects within the Rehabilitation and Inspection Program (RIP), Public Law 84-99).

**Underseepage**—The upward pressure on the land behind a levee system that is exerted by groundwater, under pressure from the flooding source, when the elevation of the floodwaters are higher than the elevation of the land.

**Unnumbered A Zones**—Flood insurance risk zones, designated “Zone A” on an FHBM, FIRM, or DFIRM, that are based on approximate studies.



**Velocity Zone**—See Coastal High Hazard Area.

**Violation**—The failure of a structure or other development to be fully compliant with a community’s floodplain management regulations. A structure or other development without an Elevation Certificate, other certifications, or other evidence of compliance required in Section 60.3 of the NFIP regulations is presumed to be in violation until such time as that documentation is provided.

**Watershed**—An area of land that drains into a single outlet and is separated from other drainage basins by a divide.

**Water-Surface Elevations (WSELs)**—The heights of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas, in relation to a specified vertical datum.

**Wave Height**—The vertical distance between the wave crest and the wave trough.

**Wave Runup**—The rush of wave water up a slope or structure.

**Wave Setup**—The increase in the still water surface near the shoreline, due to the presence of breaking waves.

**Zone A99 Determination**—See Adequate Progress Determination.

**Zone AR Determination**—See Flood Protection Restoration Determination.

**Zone Gutter**—Boundary, shown on a FIRM or DFIRM, dividing SFHAs of different BFEs, base flood depths, flow velocities, or flood insurance risk zone designations.