



## **APPENDIX A: GLOSSARY**



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## **GLOSSARY**

**A zone** — Under the NFIP, area subject to inundation by the 100-year flood where wave action does not occur or where waves are less than 3 feet high; designated Zone A, AE, A1–A30, A0, AH, or AR on Flood Insurance Rate Maps. See **Coastal A zone** and **Non-coastal A zone**.

**Base flood** — Flood that has a one percent probability of being equaled or exceeded in any given year. Also known as the 100-year flood.

**Base Flood Elevation** — Elevation of the base flood in relation to a specified datum, such as the NGVD. The base flood elevation is the basis of the insurance and floodplain management requirements of the NFIP.

**Basement** — Under the NFIP, any area of a building having its floor subgrade on all sides. (Note: What is typically referred to as a “walkout basement,” which has a floor that is at or above grade on at least one side, is not considered a basement under the NFIP.)

**Bathymetry** — Ground elevations below the waterline.

**Beach nourishment** — Replacement of beach sand removed by ocean waters.

**BFE** — Base Flood Elevation.

**BPAT** — Building Performance Assessment Team.

**Breakaway wall** — Under the NFIP, a wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces, without causing damage to the elevated portion of the building or supporting foundation system. Breakaway walls are required by the NFIP regulations for any enclosures constructed below the BFE beneath elevated buildings in V zones. In addition, breakaway walls are recommended in areas where flood waters flow at high velocities or contain ice or other debris.

**Bulkhead** — Wall or other structure, often of wood, steel, stone, or concrete, designed to retain or prevent sliding or erosion of the land. Occasionally, bulkheads are used to protect against wave action.

**CCCL** — Coastal Construction Control Line.

**Coastal A zone** — The portion of the SFHA landward of a V zone or landward of an open coast without mapped V zones (e.g., the shorelines of the Great Lakes, in which the principal sources of flooding are astronomical tides, storm surges, seiches, or tsunamis, not riverine sources). This classification, introduced in the *Coastal Construction Manual*, is not currently recognized by the NFIP.

**Coastal geology** — The origin, structure, and characteristics of the sediments that make up the coastal region, from the uplands to the nearshore region.



**Coastal sediment budget** — The identification of sediment sources and sinks, and the quantification of the amounts and rates of sediment transport, erosion, and deposition within a defined region.

**Cross-shore sand transport** — Wave- and/or tide-generated movement of shallow-water coastal sediments toward or away from the shoreline.

**Design flood** — The greater of either (1) the base flood or (2) the flood associated with the flood hazard area depicted on a community's flood hazard map, or otherwise legally designated.

**Design flood elevation (DFE)** — Elevation of the design flood, or the flood protection elevation required by a community, including wave effects, relative to the NGVD or other datum.

**Dune toe** — Junction of the gentle slope seaward of the dune and the dune face, which is marked by a slope of one on 10 or steeper.

**Ebb shoals** — Sediment deposits formed by ebb tidal currents just offshore of a tidal inlet (also called ebb tidal delta).

**Enclosure** — That portion of an elevated building below the DFE that is partially or fully surrounded by solid (including breakaway) walls.

**FBBCS** — Florida Bureau of Beaches and Coastal Systems.

**Fetch** — Distance over which wind acts on the water surface to generate waves.

**Fill** — Material such as soil, gravel, or crushed stone placed in an area to increase ground elevations or change soil properties. See **structural fill**.

**FIRM** — Flood Insurance Rate Map.

**FIS** — Flood Insurance Study.

**500-year flood** — Flood that has a 0.2 percent probability of being equaled or exceeded in any given year.



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**Flood** — Under the NFIP, either (a) a general and temporary condition or partial or complete inundation of normally dry land areas from:

- (1) the overflow of inland or tidal waters,
- (2) the unusual and rapid accumulation or runoff of surface waters from any source, or
- (3) mudslides which are proximately caused by flooding as defined in (2) and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when the earth is carried by a current of water and deposited along the path of the current,

or (b) the collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood or abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in (1).

**Flood-damage-resistant material** — Any construction material capable of withstanding direct and prolonged contact (i.e., at least 72 hours) with flood waters without suffering significant damage (i.e., damage that requires more than cleanup or low-cost cosmetic repair, such as painting).

**Flood elevation** — Height of the water surface above an established elevation datum such as the NGVD or mean sea level.

**Flood shoals** — Sediment deposits formed just inside a tidal inlet by flood tidal currents (also called flood tidal delta).

**Freeboard** — Under the NFIP, a factor of safety, usually expressed in feet above flood level, that is applied for the purposes of floodplain management. Freeboard tends to compensate for the many unknown factors that could contribute to flood heights greater than those calculated for a selected flood, such as the base flood.

**Frontal dune reservoir** — Ridge or mound of unconsolidated sandy soil, extending continuously along shore landward of the sand beach and defined by relatively steep slopes abutting markedly flatter and lower regions on each side.

**Groins** — Short, shore-perpendicular structures designed to trap available littoral sediments.

**Hazard identification** — The process of defining and describing a hazard (including its physical characteristics, magnitude, severity, frequency, and causative factors) and the locations or areas it affects.

**High-velocity wave action** — Condition in which wave heights or wave runup depths are greater than or equal to 3 feet.

**Hydrodynamic loads** — Loads imposed on an object, such as a building, by water flowing against and around it. Among these loads are positive frontal pressure against the structure, drag effect along the sides, and negative pressure on the downstream side.



**Hydrostatic loads** — Loads imposed on a surface, such as a wall or floor slab, by a standing mass of water. The water pressure increases with the square of the water depth.

**Jetty** — Wall built out into the water to restrain currents or protect a structure.

**Littoral** — Of or pertaining to the shore, especially of the sea; coastal.

**Littoral drift** — Movement of sand by littoral (longshore) currents in a direction parallel to the beach along the shore.

**Longshore sand transport** — Wave- and/or tide-generated movement of shallow-water coastal sediments parallel to the shoreline.

**Lowest floor** — The lowest floor of a building includes the floor of a basement. The NFIP regulations define a basement as “...any area of a building having its floor subgrade (below ground level) on all sides.”

**Lowest horizontal structural member** — In an elevated building, the lowest beam, joist, or other horizontal member that supports the building. Grade beams installed to support vertical foundation members where they enter the ground are not considered lowest horizontal structural members.

**Masonry** — Built-up construction of a combination of building units or materials of clay, shale, concrete, glass, gypsum, stone, or other approved units bonded together with or without mortar or grout or other accepted methods of joining.

**Mean sea level** — Average height of the sea for all stages of the tide, usually determined from hourly height observations over a 19-year period on an open coast or in adjacent waters having free access to the sea.

**Mitigation** — Sustained action taken to reduce or eliminate long-term risk to people and property from hazards and their effects.

**NEHRP** — National Earthquake Hazard Reduction Program.

**NFIP** — National Flood Insurance Program.

**NGVD** — National Geodetic Vertical Datum, established in 1929 and used as a basis for measuring flood, ground, and structural elevations. Previously referred to as Sea Level Datum or Mean Sea Level. The BFEs shown on most of the FIRMs issued by FEMA are referenced to NGVD or, more recently, to the North American Vertical Datum.

**NOAA** — National Oceanic and Atmospheric Administration.

**Non-coastal A zone** — Portions of the SFHA in which the principal source of flooding is runoff from rainfall, snowmelt, or a combination of both. (The NFIP does not differentiate between coastal and non-coastal A zones.)



**100-year flood** — See **Base flood**.

**Overwash** — Transport of sediments carried landward by floodwaters, burying uplands, roads, and at-grade structures.

**Pre-FIRM** — In communities participating in the NFIP, buildings constructed on or before the date of the first FIRM for that community (or 12/31/74—whichever is later). These buildings have flood insurance rates that are “grandfathered” or “subsidized.”

**Post-FIRM** — For purposes of determining insurance rates under the NFIP, structures for which the start of construction began on or after the effective date of an initial FIRM or after 12/31/74 (whichever is later), including any subsequent improvements to such structures.

**Primary frontal dune** — Under the NFIP, a continuous or nearly continuous mound or ridge of sand with relatively steep seaward and landward slopes immediately landward and adjacent to the beach and subject to erosion and overtopping from high tides and waves during major coastal storms. The inland limit of the primary frontal dune occurs at the point where there is a distinct change from a relatively steep slope to a relatively mild slope.

**Revetment** — Facing of stone, cement, sandbags, or other materials placed on an earthen wall or embankment to protect it from erosion or scour caused by flood waters or wave action.

**Risk** — Potential losses associated with a hazard, defined in terms of expected probability and frequency, exposure, and consequences.

**Risk assessment** — The process of evaluating risk that is associated with a specific hazard and defined in terms of probability and frequency of occurrence, magnitude, severity, exposure, and consequences.

**Risk management** — Measures taken to reduce, modify, offset, or share risks associated with development in areas subject to coastal hazards. In the context of coastal residential construction, this is usually accomplished through mitigation or insurance.

**Seawall** — Solid barricade built at the water’s edge to protect the shore and to prevent inland flooding.

**SFHA** — Special Flood Hazard Area. Under the NFIP, an area having special flood, mudslide, and/or flood-related erosion hazards, and shown on a Flood Hazard Boundary Map or FIRM as Zone A, AO, A1–A30, AE, A99, AH, V, V1–V30, VE, M, or E.

**Stillwater elevation** —The elevation of the water surface resulting solely from storm surge (i.e., the rise in the surface of the ocean caused by the action of wind and the drop in atmospheric pressure associated with hurricanes and other storms).

**Storm surge** — Rise in the water surface above normal water level on the open coast caused by the action of wind stress and atmospheric pressure on the water surface.

**Storm tide** — Combined effect of storm surge, existing astronomical tide conditions, and breaking wave setup.



**Structural fill** — Fill compacted to a specified density to provide structural support or protection to a structure. See **Fill**.

**Substantial damage** — Damage to a building (regardless of the cause) is considered substantial damage if the cost of restoring the building to its before-damage condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

**Substantial improvement** — An improvement of a building (e.g., reconstruction, rehabilitation, or addition) is considered a substantial improvement if its cost equals or exceeds 50 percent of the market value of the building before the start of construction of the improvement.

**Tidal inlet** — Short, narrow hydraulic connection between the ocean and inland water.

**Tsunami** — Great sea wave produced by submarine earth movement or volcanic eruption.

**Underlayment** — One or more layers of felt, sheathing paper, nonbituminous saturated felt, or other approved material over which a steep-sloped roof covering is applied.

**Uplift** — Hydrostatic pressure caused by water under a building. It can be strong enough to lift a building off its foundation, especially when the building is not properly anchored to its foundation.

**V zone** — The portion of the SFHA that extends from offshore to the inland limit of a primary frontal dune along an open coast, and any other area subject to high-velocity wave action from storms or seismic sources. Also referred to as the **Coastal High Hazard Area**.

**Wave crest elevation** — The elevation of the crest of a wave, referenced to the NGVD or other datum.

**Wave height** — The height, above the wave trough, of the crest of a wind-driven wave (i.e., the vertical distance between the wave crest and wave trough).

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

**Wave runup depth** — Wave runup depth at any point is equal to the maximum wave runup elevation minus the lowest eroded ground elevation at that point.

**Wave runup elevation** — The elevation reached by wave runup, referenced to the NGVD or other datum.

**Wave setup** — An increase in the stillwater surface near the shoreline, caused by the presence of breaking waves. Wave setup typically adds 1.5 to 2.5 feet to the 100-year stillwater flood elevation.

**X zone** — Areas where the flood hazard is less than that in the SFHA. Shaded X zones shown on recent FIRMs (B zones on older FIRMs) designate areas subject to inundation by the flood with a 0.2 percent annual probability of being equaled or exceeded (the 500-year flood). Unshaded X zones (C zones on older FIRMs) designate areas where the annual exceedance probability of flooding is less than 0.2 percent.