



North Carolina Department of Crime Control and Public Safety
Division of Emergency Management
Floodplain Management Branch

Michael F. Easley, Governor

Bryan E. Beatty, Secretary

Swimming Pools in VE Zones

When a pool or other similar development is placed within a VE zone, it does not have to meet the elevation requirement of BFE because it is not an insurable structure by definition under the NFIP. But it must show no adverse effects during the times of flooding and that it will not impact neighboring properties. Utilities must meet BFE requirements, and all utilities servicing the pool must meet the standards of the community's flood ordinance. [NC Model ordinance, Article 5, Section A - items 1-4 reference different aspects of utility protection but item 4 is the primary one for the utilities.] Pool construction must also meet these standards but this shouldn't be a problem except for item #1.

FEMA's Technical Bulletin 5-93, **Free-of-Obstruction Requirements**, addresses swimming pools in VE zones. An excerpt from this TB follows for easy reference. FEMA technical bulletins are FEMA's official interpretation of the federal codes and are to be used by local officials for enforcing these codes. [This TB and many others can be found at <http://www.fema.gov/fima/techbul.shtm>]

Swimming Pools *A swimming pool maybe placed beneath a coastal building only if the top of the pool and accompanying pool deck or walkway are flush with the existing grade and only if the lower area (below the lowest floor) remains unenclosed. Lower-area enclosures around pools constitute a recreational use and are therefore not allowed, even if constructed to breakaway standards. Lattice and insect screening are allowed as they do not create an enclosed area.*

Pools, either at-grade or elevated, are allowed adjacent to coastal buildings only if the pools will not act as obstructions that will result in damage to nearby buildings. Community officials must be assured by the design professional that a pool beneath or near a V-zone building will not be subject to breaking up or floating out of the ground during a coastal flood and will therefore not increase the damage potential to the foundation and elevated portion of any nearby buildings. In addition, the design professional must design and site the pool so that any increased wave or debris impact forces will not affect any nearby buildings. Pools, pool decks, walkways, and associated accessory buildings placed under or adjacent to coastal buildings must be structurally independent of the building and its foundation.

The **Coastal Construction Manual**, FEMA 55, has additional guidance but this guidance often meets higher design criteria than minimum NFIP but it is very good design information.

The Division of Coastal Management, North Carolina Department of Environment and Natural Resources, may also have regulations applicable to pools in V zones.

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December 11, 2003

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