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Construction Setbacks

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Overview:

Approximately two-thirds of coastal and Great Lakes states have some type of construction setback or construction control line requiring development be a certain distance from the water's edge. Of those that do not have state-mandated setback regulations, most have delegated authority for local governments or Local Coastal Programs to establish setbacks.



Construction setback lines help to ensure shoreline development is set back far enough from the water's edge so that it will not be threatened by erosion in the near future.

The type of setback used, including how and from where it is established can vary widely. Setback lines are often measured from a specific shoreline feature such as the high-tide line, extreme high water mark, or dune vegetation line.

Some states have arbitrary setback lines. An arbitrary setback line, while the simplest to establish, does not reflect the true erosion threat to shoreline structures. For example, an arbitrary 100 foot setback may not be adequate in a highly erosive area but may be too restrictive in a very stable environment. Therefore, many coastal states, such as North Carolina and Florida, have developed setbacks based on annual erosion rates for beach-front lots. Although erosion along estuarine shores can also be problematic, setbacks based on erosion rate data are rarely used in these environments, to date. Few estuarine shorelines have sufficient annual erosion rate data to be able to calculate setbacks based on erosion rate for these shorelines.

While more realistic, establishing setbacks based on the erosion rate can be more difficult because it requires a significant amount of data on past shoreline change—something that may not be available for the entire shoreline or is costly to obtain. Erosion rates can change over time, therefore, the setback lines must also be reassessed routinely. For example, South Carolina updates their setback lines and erosion rate data every 8-10 years.

To overcome gaps in its erosion rate data, Minnesota adopted a hybrid approach to their setback lines along the North Shore of Lake Superior. Minnesota's North Shore Management Plan establishes a setback of 50 times the annual erosion rate plus 25 feet in areas where erosion data is available and reverts to a standard 125-foot setback elsewhere.

Frequently, setback lines based on erosion rates are set 30 or 50 times the annual erosion rate. The assumption being that the structure should last long enough to pay off a 30-year mortgage. However, even a setback line set to the 30-year annual erosion rate may not be adequate. Setback lines do not factor in catastrophic storm events, such as Hurricane Katrina that hit the Gulf Coast in 2005.

Establishing new setback lines can be very controversial if the setback renders some properties unbuildable. This can result in "takings" claims, requiring the state or local government to compensate the property owner for their loss. The same can be true if the setback line is placed landward of an existing structure. While the structure can exist as is, typically, if it is significantly damaged or destroyed by a storm, it must be rebuilt to comply with the new setback line. If there is not enough space on the lot to move the structure behind the setback line, a "taking" could also result.

Setback regulations should clearly stipulate when (or if) it would be allowable for a building damaged or destroyed by a storm or chronic erosion to be rebuilt. For example, in Maine, if repairs will cost more than 50 percent of the structure's value, the existing structure must comply with the setback requirements. One way to avoid "takings" claims is to ensure waterfront lots are sufficiently deep to allow for relocation as the shore retreats. Rolling easements, discussed in more detail under the [erosion control easement](#) section, are another way to minimize or prevent "takings" claims.

In addition to creating clear policies on when a structure can be repaired or rebuilt, states or local governments also need to establish clear policies stating how setback lines can move as the beach naturally or artificially accretes. For example, New Jersey's Coastal Zone Management Rules do not allow a waiver from the setback if the beach accretes. A permit application for development within a setback area of an accreting beach would be denied. However, if an Administrative Hearing request was filed, the applicant could petition for a permit if they can show the accreted beach offers sufficient increased protection from erosion.

Benefits: Reduces the need for costly and/or unsightly shoreline erosion control structures and minimizes property damage due to erosion. Maintains natural shoreline dynamics. Helps to maintain lateral beach/shorefront access.

Drawbacks: Requires good scientific data to establish effective setback lines. Can be viewed as a "taking" if the setback causes property to be unbuildable or significantly restricts the size of the building. Only prolongs the life of the building, eventually another shoreline policy will be needed such as retreat or stabilization if the shore continues to advance.

Case Studies:

Maui County Planning Commission Establishes New Setback

Before 2003, Maui County only required shorefront development to adhere to Hawaii's statewide, minimum arbitrary construction setback lines. Lots less than 100 feet deep required a 25-foot setback where as lots 100-160 feet deep needed a 40-foot setback. Buildings erected on lots more than 160 feet deep must be setback 150-foot or one-fourth the lot depth, whichever was smaller. However, the Maui County Planning Department was finding that these statewide minimum setbacks were not adequate to protect shoreline development from coastal erosion or provide sufficient space for natural shoreline processes to occur. In less than a decade, the county lost five miles of sandy beach. Also sixteen percent of Maui's shoreline was already hardened. Many in the county wanted to avoid the need for additional shoreline armoring because it was not as attractive to tourists—a driving-force of the county's economy—and led to increased beach erosion.

In 2003, to better address shoreline erosion issues within the county, the Maui Planning Commission passed a [new shoreline setback standard](#) based on historic erosion rates. The new ordinance required development to be set back fifty times the annual erosion rate plus 20 feet or adhere to the old arbitrary setback, whichever was greater. Only minor and/or removable structures would be permitted seaward of the setback line.

As might be expected, the new regulations were opposed by some shorefront property owners and realtors because they limited development. Property owners were most concerned that they would not be permitted to rebuild existing structures that were seaward of the setback line if they were damaged or destroyed. To help appease these concerns, the new ordinance allowed existing structures to be rebuilt if damaged by fire or non-coastal hazards. The ordinance also included a provision that the lot must have a 30 foot buildable depth after the front yard setback. If this was not achievable due to the new erosion-based setback, a variance could be granted to allow some of the structure to extend into the shoreline setback area to avoid a takings claim. Finally, rocky shores or areas of the shoreline that were already artificially hardened were exempt from the erosion-based setback and only had to adhere to the state minimum setback requirements.

To help determine the correct erosion rate-based setback, the Maui Planning Department used the [Maui Shoreline Atlas](#) developed by the University of Hawaii Coastal Geology

Group. The Atlas divides the shoreline into 20 meter transects and lists the annual erosion hazard rate for each transect.

North Carolina Setback Requirements

In August 2009, new setback rules took effect in North Carolina. North Carolina's Administrative Code for Ocean Hazard Areas ([15A NCAC 7H .0306](#)) now bases setbacks solely on size and does away with an exemption in the previous rules that treated single-family homes larger than 5,000 square feet differently than other similarly sized structures. The new minimum setback remains 30 times the long-term average annual erosion rate, as measured from the first line of stable and natural vegetation, for all structures less than 5,000 square feet. The setback for ALL structures between 5,000 and 9,999 square feet is 60 times the erosion rate. For structures 10,000 square feet and larger, the setback increases incrementally with structure size, reaching a maximum setback of 90 times the erosion rate for structures 100,000 square feet and larger.

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