



Town of Barnstable

Conservation Commission

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CHAPTER 705

BARNSTABLE CONSERVATION COMMISSION COASTAL BANK DEFINITION & DELINEATION POLICY

Definition

A Coastal bank is defined under Chapter 237, Wetlands Protection, of the General Ordinances of the Code of the Town of Barnstable as a seaward face or elevated landform, other than a coastal dune, which resides at the landward side of a coastal beach, land subject to tidal action, or other coastal wetland. A coastal bank must have a slope greater than 18%, (compare figures 1. & 3.). A coastal bank may serve as a vertical buffer to floodwater, or as a sediment source.

Analysis

Chapter 237 coastal bank policy loosely parallels DEP's bank policy (92-1), but important differences exist.

In contrast with DEP

- To be regulated, a coastal bank must have a slope greater than 18%. The toe of bank is that point where the slope first exceeds 18%. The top of bank is that point where the slope diminishes to 18% or less (figures 3. & 4.). Observe that the top of bank may occur below (figure 4.) or above (figure 3.) the FEMA 100 year coastal floodplain.
- A slope less than or equal to 18% is not a coastal bank under Chapter 237, although it may be under DEP policy (figure 1.).
- Under DEP policy, a coastal bank may arise anywhere the FEMA 100 year coastal floodplain occurs, as long as the slope criteria are met. Thus, a DEP coastal bank may occur at a seemingly "interior" location, removed from the shoreline itself, but where the topography is low and the landscape prone to coastal flooding. Under Chapter 237, a regulatable coastal bank must necessarily reside adjacent to a tidal waterbody.

In common with DEP

- Multiple or tiered coastal banks may reside at the same site (figure 5.).
- A coastal bank may extend above the FEMA 100 year coastal floodplain only when the toe of bank is located below the floodplain (figure 3.). That is, a bank originating beyond the FEMA 100 year coastal floodplain is presumed insignificant to storm damage prevention and flood control: interests, and is not regulated (figure 2.).

Methods

Slopes of potential coastal banks. shall be determined by employing one or more linear transects, depending on the bank's profile view:

- Where the slope is relatively uniform (Figure 3.), the transect shall extend from the toe of bank to the FEMA 100 year coastal floodplain (or velocity zone, should no "A" zone be indicated). The derived "run-up slope" must exceed 18% to qualify as regulatable.
- Where the slope is variable (Figure 5.), the transects shall be fitted so that the steepest portions of the bank are analyzed. Employing a single transect that includes both steep and gently sloping portions of the bank would serve to "average" the run-up slope, and shall not be considered appropriate.

The top of coastal bank may be determined by either sighting the first observable break in the >18% slope, or by using the transect method to quantify the point at which the slope diminishes to 18% or less.

Observe that as this policy and methodology are independent of their DEP counterparts, different "local" and "state" banks may exist at the same site.

Slopes which are clearly <18% shall require no demonstration that they are not regulatable. Where slopes are clearly >18%, a regulated coastal bank may simply be conceded by the applicant without detailed analysis. Otherwise, slopes for Notice of Intent filings shall typically be determined from field survey spot elevations. Transect location(s) shall be shown in plan view, with spot elevations and run-up slope indicated. As a rule, deriving slopes through interpolated contours shall not be an acceptable method. Neither shall the "averaging" of a slope by the selection of too long a transect length.

The Conservation Commission shall, however, reserve the right to find the appropriateness of an applicant's particular delineation method on a site by site basis. Moreover, where the application of this policy would describe a regulatable bank which is truly insignificant in scope, the Conservation Commission and/or its staff shall reserve the right to decline any jurisdiction over it.

Approved by the Conservation Commission: March 22, 1994
Revised: March 14, 2006

ILLUSTRATIONS

▲ FEMA - 100 YEAR COASTAL FLOOD PLAIN

↙ TOP OF COASTAL BANK

⊘ NO COASTAL BANK PRESENT

