

COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

May 6, 2003

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In the Matter of

J. JOHN BRENNAN and MAUREEN  
BRENNAN, Requestors

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Docket No. 2002-069  
Determination of Applicability  
Landowner: J. John Brennan and  
Maureen Brennan  
Property: 19 Ruggles Road  
Orleans

RECOMMENDED FINAL DECISION

WETLANDS - appeal by landowners from negative superseding determination of applicability. On the sole issue of whether the top of the coastal bank on the property should be delineated as proposed by the landowners, summary decision granted for the Department and against the landowner movants. The evidence demonstrates that the slope measurements made on the landowners' behalf show an irregularity in the slope rather than a change in slope that would demarcate the top of the bank.

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Peter A. Alpert, Esq., (Ropes & Gray), Boston, for requestors/petitioners.

Anne Bingham, Senior Regional Counsel, for the Department.

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JAMES P. ROONEY, Administrative Law Judge.

Introduction

Requestors John Brennan and Maureen Brennan have filed a motion for summary decision in which they seek approval of a delineation they propose for the top of the coastal

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bank on their property. I conclude that the alleged slope break on which they rely is not a change in the slope of the entire bank sufficient to identify its top under the Department's Coastal Banks Policy. Accordingly, I grant summary decision against the Brennans and in favor of the Department and affirm the Department's negative superseding determination of applicability.

### Background

The Brennans own a half-acre lot at 19 Ruggles Road in Orleans. The lot abuts Town Cove and contains a number of coastal wetland resource areas including coastal bank and land subject to coastal storm flowage.<sup>1</sup> The elevation of the lot rises from 8 feet above sea level at the base of the coastal bank, passes the limit of land subject to coastal storm flowage at 10 feet, and continues rising to 55 feet at its highest point along Ruggles Road. There is a single story house on the lot at elevation 34 where the lot has been leveled.

The Brennans' desire to determine the top of the bank is connected to an earlier request to add a second story to their house. In 1998, the Brennans filed a notice of intent with the Orleans Conservation Commission seeking a wetlands permit for construction of a second story addition, an elevated walkway, and a concrete driveway in the buffer zone of the bank. The plan they submitted was prepared by Ryder and Wilcox and showed a bank elevation that varied from 12 feet on the eastern side of the property to 32 feet at the house

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<sup>1</sup> A coastal bank is the "seaward face or side of any elevated landform, other than a coastal dune, which lies at the landward edge of a coastal beach, land subject to tidal action, or other wetland." 310 CMR 10.30(2).

Land subject to coastal storm flowage is "land subject to any inundation caused by coastal storms up to and including that caused by the 100-year storm, surge of record or storm of record, whichever is greater." 310 CMR 10.04.

location. The Commission issued an order of conditions approving the project.

Although the Brennans obtained a wetlands permit, they were unable to build for the Town of Orleans denied them a special permit for the second story. The town did so because, with only two feet separating the house from the top of the bank, the project did not meet a local zoning requirement that "all construction ... shall be set back a minimum distance equal to one and one-half ... times the building height from any coastal bank." Orleans Zoning Bylaw, § 164-21-C.

The Brennans hired East Cape Engineering to render a second opinion concerning the location of the top of the coastal bank. Timothy Brady, a professional engineer and professional land surveyor with that firm, surveyed the lot and determined that the slope of the bank was greater than 4:1 at its base, meaning that the bank rose more than one foot vertically for every four feet horizontally. Using a four-foot measuring stick, he delineated a line between elevations 14 and 22 where he calculated that the slope became less than 4:1. Relying on the Department's Coastal Banks Policy (Division of Wetlands and Waterways Policy 92-1), which treats the point where the slope changes to less than 4:1 as the top of the bank, he concluded that this line represented the bank's top.

In 1999, the Brennans submitted a request for a determination of applicability based on Brady's redelineation. That request was ultimately turned down by the Department because the bank delineation accepted in connection with the 1998 order of conditions remained valid for three years. See 310 CMR 10.05(6)(d).

The Brennans submitted the present request after the order of conditions expired. The Conservation Commission declined to accept Brady's line. It remained convinced that the

Ryder and Wilcox delineation was correct and found that the Brennans had failed to present "substantial evidence" to justify a redelineation.

The Brennans requested a superseding determination of applicability from the Department. The Department was similarly unconvinced of the accuracy of Brady's line and declined to confirm it. In a cover letter accompanying the superseding determination, the Department questioned Brady's reliance on a purported change in topography over a four foot horizontal distance:

After a thorough review, the Department disagrees with the methodology used to measure a change in slope at the subject site. In the Department's opinion, the use of a four-foot horizontal distance to determine a break in slope at this site results in the identification of micro-topographic features and not a distinct break in slope. In the Department's judgment, the top of the coastal bank at this site occurs at or near the 32-34 foot contour.

The Brennans requested an adjudicatory hearing. Chief Administrative Law Judge Edna Travis held a prehearing conference at which she set a deadline for the parties to file cross-motions for summary decision on the sole issue identified for adjudication: the accuracy of the Brennans' proposed coastal bank delineation.

The Brennans filed a summary decision motion; the Department did not. Rather, it opposed the Brennans' motion arguing that there exists a dispute of material fact as to whether the bank had been properly delineated and asked that a hearing be scheduled. The Brennans replied that there is no dispute as to the accuracy of Brady's survey, that no hearing is necessary, and that the only question to be resolved is a legal one as to whether the slope break he identified is the top of the bank under the Coastal Banks Policy. The Department responded that it disputes Brady's conclusion that the slope of the property eases to less than 4:1 along the line he identified. It asks for a "limited finding" that the Brennans have not

established that the coastal bank on their property breaks to a slope of less than 4:1 at the elevations they propose.

#### Discussion

The Wetlands Protection Regulations define coastal bank as the:

seaward face or side of any elevated landform, other than a coastal dune, which lies at the landward edge of a coastal beach, land subject to tidal action, or other wetland.

310 CMR 10.30(2). The Regulations do not describe how to determine the top of a bank.

That is covered by the Coastal Banks Policy. The Policy references an earlier document called A Guide to the Coastal Wetlands Regulations, which was prepared by the Massachusetts Coastal Zone Management Office and described the top of the bank as "the top of, or the first major break in, the face of the coastal bank." According to the Policy, the Guide implies that the first major break in the face of the coastal bank could readily be determined from United States Geologic Survey topographic quadrangles. But that did not prove practical because "the scale of topographic quadrangle maps generally do not allow for parcel specific analysis."

The Policy therefore endeavors to provide a more workable standard for delineating banks based on measurable changes in bank slope. Where, as here, the slope of the coastal bank is greater than or equal to 4:1 at its base, the top of the bank is "that point above the 100-year flood elevation where the slope becomes  $< 4:1$ ." (emphasis in original.)

The Policy recognizes that, even with this change in approach, delineating the top of a coastal bank is not easy. "Due to the complex topography associated with coastal banks," the Policy requires that applicants justify a proposed delineation with a plan at a scale not greater than 1 inch = 50 feet that includes "a plan view and a cross section(s) of the area being

delineated showing the slope profile, the linear distance used to calculate the slope profile, and the location of this linear distance." At the same time as it requires these plan details, the Policy warns that attempting to delineate the top of the bank exclusively based on "interpolating contours on plans can result in inaccurate delineations." It therefore "strongly recommends" follow-up field observations to "verify delineations made from engineering plan data."

A. Consistency of Coastal Bank Policy with the Wetlands Protection Regulations

The Brennans maintain that, by defining top of bank to be above the 100 year floodplain in this instance, the Policy exceeds the authority granted the Department by statute and is inconsistent with the Regulations. The Wetlands Protection Act defines coastal wetlands as "bank, marsh, swamp, meadow, flat or other lowland subject to tidal action or coastal storm flowage." M.G.L. c. 131, § 40, ¶ 7. The Brennans contend that this language means that the Act covers only the portion of a bank that is subject to tidal action or coastal storm flowage. They claim that the regulatory definition of coastal bank as the "seaward face ... of any elevated landform" is consistent with the Act if the coastal bank is simply that portion of the landform that is subject to tidal action or coastal storm flowage. They ask that any portion of the Coastal Bank Policy be disregarded that declares the top of the bank to be above the coastal floodplain.

The Coastal Bank Policy to which the Brennans object is simply a written expression of the Department's interpretation of its own regulations. The Policy's explicit treatment as bank of some areas above the coastal floodplain means that the Department interprets the regulatory definition of coastal bank as including those areas. So long as that interpretation is

reasonable, I will apply it.

The Policy is consistent with 310 CMR 10.30(2) and is a reasonable interpretation of it. The regulatory definition of coastal bank describes both the bank itself and the bank's relationship to other coastal resource areas. The bank is the "seaward face ... of any elevated landform." The most straightforward reading of this language is that the bank includes the entire seaward face of the landform up to its highest point. As far as its relationship with other coastal wetlands goes, the bank must simply be at the "landward edge" of a "coastal beach, land subject to tidal action, or other wetland." There is nothing about this portion of the definition to suggest that the bank ends where these other wetlands do. Rather, the language suggests that the bank begins at the "landward edge" of these others wetlands. And indeed, that is the case when a bank adjoins a coastal beach, for there it begins where the beach ends.

Applying the regulatory definition of coastal bank to the situations in which a bank and land subject to coastal storm flowage intersect, the definition requires only that some portion of the bank be within the floodplain. So long as that is the case, the entire seaward face of the elevated surface of the landform is considered bank.

The Coastal Bank Policy clarifies where the top of this elevated surface is. The Policy's requirement that the top of the bank be above the floodplain where the bank has a slope greater than 4:1 is consistent with the regulatory definition and is more conservative than it, for the Policy provides that the bank ends where the slope decreases to less than 4:1 rather than at the highest possible elevation of the seaward face of the landform.

B. Top of Bank Location

The Brennans also claim that Timothy Brady's survey conclusively demonstrates that the slope becomes less than 4:1 along a line between elevations 14 and 22. Brady's affidavit describes his effort to demonstrate that the line proposed is a slope break rather than a "micro-topographic feature" as the Department claimed. He states:

[A]t the request of the Brennans, I returned to [the site] to further document the accuracy of the Delineation Line. My purpose was to determine the horizontal distances of the actual break in slope along the Delineation Line. Using horizontal straightedges of 4ft., 6ft., and 8ft. 8in., I made measurements that located five areas along the Delineation Line where the break in slope extends upslope as much as 8ft. 8in. These areas are relatively evenly spaced along the Delineation Line. ...

At the five points measured ..., the slope eases to less than 4:1 for depths ranging upwards of 8.66 feet. Specifically, the following slopes were measured at the five points:

22-inch rise over 8 feet, 8 inch span: slope = 21.1%

25 inches over 8 feet, 8 inch span: slope = 24.03%

18 inches over 6 feet: slope = 25% (three points)

The average slope over these five points is 24.026%, which is less than 4:1 (25%). The average horizontal depth of the reduced slope at these five points is 7.06 feet. At the three locations where the slope rose 18 inches over 6 feet (precisely a 4:1 slope), the slope is more gradual (i.e., less than 4:1) for at least the first 4 feet of the 6-foot horizontal distance.

He also submitted a plan showing the proposed line, the spots along the line where he made his measurements, and two cross-sections to support his conclusion that the slope break is "significant and obvious."

Department analyst James Mahala, a coastal geologist, rejects Brady's conclusions and his approach. In an affidavit submitted with the Department's opposition to the Brennans' motion, he declares that "[m]easuring short horizontal distances on the face of a coastal bank



often yields identification of small topographic changes along a slope," rather than a major break in the slope. He states that the bank slope:

can be characterized as having a moderate and fairly continuous slope from its toe to the top of the coastal bank. Further Mr. Brady's top of coastal bank delineation was not visually significant or obvious in the field on the two occasions I was on-site.

In order to determine the top of the bank, he overlaid four cross-sections on the plan prepared by Brady and found that in each instance the slope from the base of the bank to the 32 or 34 foot elevation was greater than 4:1. Above this, it flattens out due to leveling and filling associated with the house.

1. Absence of a Material Factual Dispute

There is certainly a dispute between Brady and Mahala about the location of the top of the bank and the method for calculating it.<sup>2</sup> But is there a material factual dispute that would preclude summary decision? Mahala's conclusion that the top of the bank is between 32 and 34 feet is not per se at issue because the only issue to be determined is whether the Brennans' proposed delineation is accurate. Proof that there is a slope break above the one the Brennans propose is not proof that a slope break is absent at a lower elevation. On that score, the Brennans can prevail if they have undisputed proof that the bank's slope becomes less than 4:1 along the delineation they propose and if they can show that the method Brady used to calculate this change in slope comports with the Policy.

The Adjudicatory Hearing Rules, however, also allow summary decision to be entered

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<sup>2</sup> The dispute is not about the accuracy of the horizontal line Brady would draw from elevation 14 to elevation 22 to represent the top of the bank, but rather about whether the individual points along that line represent changes in the slope of the vertical face of the bank sufficient to show the top of the bank is reached at each point.

against the moving party, if appropriate. See 310 CMR 1.01(11)(f). Hence, I consider as well whether the Department should be granted summary decision. In this instance, I may grant summary decision for the Department only if Brady's affidavit conclusively establishes facts showing that the delineation cannot be where the Brennans say it is. A mere failure of the affidavit to include evidence sufficient to prove the delineation would warrant a denial of summary decision in favor of the Brennans. It would not support summary decision in the Department's favor, if the Brennans could submit additional evidence at a hearing sufficient to meet their evidentiary burden.

On this point, I take into account the Brennans' unambiguous objection to holding a hearing and their assertion that the evidence they have submitted proves sufficient facts to locate the top of the bank, leaving only its legal sufficiency to be decided.<sup>3</sup> I take from this that the Brennans have presented all the evidence they intend to present in favor of their delineation and are asking for a decision on it, if possible.

A decision is possible. Mahala points out in his affidavit that of the five points where Brady remeasured the slope along the proposed top of the bank, three of them show a slope

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<sup>3</sup> The Brennans state in their reply brief that:

DEP's objection to the issuance of Summary Decision and request for "full litigation" invites this [forum] to waste its valuable time trying an incredibly simple question of law, or more accurately, "policy." Contrary to the Department's assertion, there is no searing factual dispute between the parties. As indicated in the Superseding Determination of Applicability ... and the Mahala Affidavit attached to the DEP Reply, there is no dispute that the slope on the Brennans' property eases to less than 4:1 along the top-of-bank line that has been mapped by the Brennans' surveyor. The primary issue for [the ALJ] to decide is whether this break in slope is significant enough to qualify as top-of-bank under DEP Policy 92-1.

of exactly 4:1. Under the Policy, a 4:1 slope demonstrates the existence of bank; the slope must be less than 4:1 to show that the bank has reached its top. Mahala also asserts that one of the points at which Brady measured a slope of less than 4:1 is just off the property. A review of the plan Brady submitted confirms this. Hence, Brady's affidavit includes evidence of only one point on the property along the line he proposes as the top of the bank where the slope is less than 4:1. That one point alone is mathematically insufficient to demonstrate that the entire line represents the top of the bank.

Brady included a caveat in his affidavit, however. He said that in the three places where he measured a 4:1 slope over an average run of six feet, he had also measured a slope of less than 4:1 when measuring a run of only four feet. This means that over a short distance he measured four points along the line with a slope less than 4:1, which is some evidence in favor of the Brennans' delineation.

2. Analysis of Evidence under the Coastal Banks Policy

I find that Brady's four foot long measurements do not show a break in slope under the Policy.

As the Policy notes, banks have "complex topography." This complexity is a function of their origin and subsequent natural history. Banks in Massachusetts are formed from glacial deposits of "unconsolidated sediment." See 310 CMR 10.30(1). They are over the years "exposed to vigorous wave action" and erode as a consequence. See 310 CMR 10.30(1). The erosion of unconsolidated bank material creates an irregular, uneven topography and thus the need, recognized in the Policy, for detailed plans and site inspections to demonstrate the correctness of a proposed top of bank delineation. See Coastal Banks

Policy.

The Department did not mean to identify bank irregularities as the tops of banks. It endeavored to avoid this result by requiring that the slope of the landform both above and below the suggested break be taken into consideration. Thus, the Policy contemplates that where the slope of the bank is greater than 4:1, the top of the bank occurs where the bank's "slope becomes < 4:1." (emphasis added.) To emphasize to applicants the need to consider the slope of the landform for some distance, not just at the point where the top of the bank is posited, the Policy requires that applicants specify "the linear distance used to calculate the slope profile." By looking at the slope above and below the alleged top, the Department made sure that consideration is given to a change in the overall slope of the bank, not just a fleeting change.

All that Brady has shown is an area of a few feet at most --in a landform that is at least 55 feet high -- where the slope becomes less than 4:1. Below and above this small area, the bank's slope is 4:1 or greater, according to Brady's own calculations.<sup>4</sup> The cross-sections Brady submitted show no evident change in slope at the points he identified. Mahala could not find a break in the slope along Brady's line either by examining the plans or the site itself. Thus, it is not genuinely disputed that Brady made his measurements at points of minor irregularity in the slope of the bank, rather than along a line where the slope of the entire bank changes in a manner that would show that it has reached its top.

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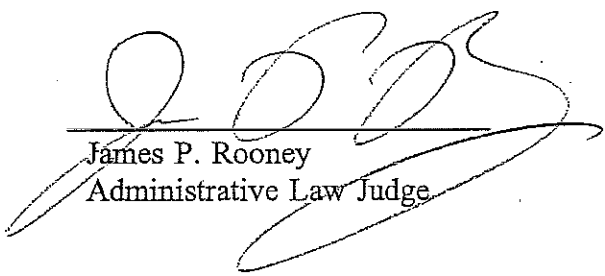
<sup>4</sup> Brady's data show three points at which the slope was less than 4:1 over a horizontal distance of four feet. At each of these points, that slope equalled 4:1 over a distance of six feet. In order for this to be true, the slope must have been greater than 4:1 over the additional two feet Brady measured.

Conclusion

I therefore grant summary decision against the Brennans and for the Department. The Department's negative superseding determination of applicability is affirmed.

Notice

This decision is a recommended final decision of the Administrative Law Judge. It has been transmitted to the Commissioner for her final decision in this matter. This decision is therefore not a final decision subject to reconsideration under 310 CMR 1.01(14)(d), and may not be appealed to the Superior Court pursuant to M.G.L. c. 30A. The Commissioner's final decision is subject to rights of reconsideration and court appeal and will contain a notice to that effect. Because this matter has now been transmitted to the Commissioner, no party shall file a motion to renew or reargue this recommended final decision or any portion of it, and no party shall communicate with the Commissioner's office regarding this decision unless the Commissioner, in her sole discretion, directs otherwise.



James P. Rooney  
Administrative Law Judge

## SERVICE LIST

In Re: John and Maureen S. Brennan

Docket No. 2002-069

Determination of Applicability

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Date: May 6, 2003