



DEPARTMENT OF PLANNING AND ZONING
NORTHAMPTON COUNTY, VIRGINIA

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**NORTHAMPTON COUNTY
WETLANDS BOARD**

**Minutes
December 16, 2009**

This was the regular meeting of the Northampton County Wetlands Board conducted on Wednesday, December 16, 2009 and held at 10:30 a.m. in the former circuit courtroom located at 16404 Courthouse Road in Eastville, Va., for the purpose of conducting regular business.

Those members present were Marshall Cox, Chair; John Chubb, Mark Gates, Nancy Wells Drury and Dot Field. Those absent were Bowdoin Lusk, Vice-Chair; and Robert Meyers.

Also present were Melissa Kellam, Zoning Administrator; and Kay Downing, Secretary to the Board. Mr. Hank Badger from the Virginia Marine Resources Commission was also in attendance.

The Chairman called the meeting to order and established a quorum.

It is noted for the record that those members present met at 8:30 a.m. and conducted a field visit to the Arnold property with Ms. Hickman.

All those wishing to speak on any matter before the Board were sworn in by the Chairman.

Public Hearings

The first hearing called to order was continuance of a matter heard in November.

Continuance of VMRC 09-1339: Tom Waller, Jr., has filed to construct a 324' +/- vinyl bulkhead, 5 feet to 6 feet high, along the northern shoreline at the bottom of the bank behind the marsh. Also planned is construction of a 320' +/- rip rap revetment, 5 feet high, sloped 2:1 from the bottom of the bank along the south shoreline. All construction access will be from the top of the bank. Clearing along the northern shoreline will consist of mainly stump removal. Clearing along the southern shoreline will involve many trees that have fallen or are in danger of falling over to grade the revetment at a 2:1 slope. The property is located in the Great Pine Harbor Subdivision at 2673 Old Neck Road and is described as being Tax Map 1A, double circle 5, parcel X.

Ms. Kellam noted that VIMS had submitted additional comments concerning this matter as requested by the Board after the November meeting. However, it was noted that VIMS had not conducted a field visit to the property. Those additional comments dated December 11, 2009 are as follows.

EXISTING SITE CONDITIONS AND PROPOSED ACTION:

The applicant revises his original request to install 324 LF of bulkhead to 324 LF of onshore revetment against the toe of a bank situated landward of an existing marsh fringe along his moderate to potentially high energy northern shoreline of Johnson Cove; and 320 LF of riprap against an approximately five foot tall bank along his low energy southern shoreline of Johnson Cove. The existing shoreline is sandy and contains a moderately tall bank with marsh vegetation along portions of the bank; and an existing pier. The upland is forested along the top of bank with the remainder of upland primarily in lawn. The residence on the parcel has burned.

The proposed revetment would sever the connection between the riparian, inter-tidal and sub-aqueous areas resulting in a loss of marine resources, a reduction in the ability of the upland to filter runoff, and a change in the benthic community able to live along the shoreline.

THE PREFERRED APPROACH FROM AN INTEGRATED MARINE ENVIRONMENTAL VIEWPOINT:

Proposed Revetment (324 LF): Section A

*The shoreline in this location supports marsh vegetation which plays a role in reducing wave energy and providing protection to the shoreline. The nearshore depths appear shallow. Expanding the existing fringe marsh channelward would provide more wave attenuation and therefore more effective upland protection. Additional wetlands can be created by depositing clean sandy material channelward of the existing marsh out to a desired width at an elevation to support marsh grass. The area can then be planted in *Spartina alterniflora* sprigs on 18 centers. Encouraging expansion of wetland vegetation in the inter-tidal zone helps stabilize the shoreline without severing the connection*

between the riparian, inter-tidal and sub-aqueous areas, while also providing marine resources and habitat. This option would avoid the impacts to marsh vegetation by the proposed revetment.

Due to the higher wave energy along this section of shoreline, a properly designed rock sill structure constructed channelward of the created marsh would provide an energy buffer and shoreline protection to both the newly expanded marsh and upland bank.

Proposed Riprap (320 LF): Section B

The location, orientation and morphology of this shoreline section are indicative of low energy conditions. From a marine environmental viewpoint, the preferred bank stabilization alternative at this site is to grade unstable areas of the bank to a maintainable slope and densely plant with wetland and native woody shrubs, herbaceous plants and deep-rooted grasses at appropriate elevations. The planting of vegetation in the riparian zone would provide natural shoreline stabilization as well as habitat and water quality benefits. Bank grading should be limited to only those portions of the bank that need stabilization; stable vegetated banks should not be graded. Leaning or damaged trees on stable banks however should be selectively removed to prevent future failure of the bank.

*If additional stabilization is necessary, this section of the shoreline is south facing and already contains some marsh vegetation. From aerials, a sandy intertidal flat appears to be present. Creating additional wetland area channelward of the existing toe of bank (approximately 10 to 15 feet wide) would provide more effective upland protections to this section of shoreline. A wetland can be created by depositing clean sandy material channelward of the existing bank out 10 or 15 feet at an elevation to support marsh grass. The area can then be planted in *Spartina alterniflora* sprigs on 18 centers. Removal of leaning and overhanging trees along the upland bank will help allow sunlight to reach the shoreline.*

The deposited sand would create distance between the bank and the tidal wave action, provide an area for wave attenuation and planting marsh grass, and raise the elevation of the shoreline, providing more effective upland protection to this site without severing the connection between the riparian, inter-tidal and sub-aqueous areas.

If wave energy is determined to be erosive at this site and a structure deemed justified, it is our opinion that placing the proposed riprap channelward of the newly expanded marsh, in the form of a marsh sill structure rather than a revetment against the bank as proposed, would better protect both the shoreline and existing marsh fringe from wave energy and provide more comprehensive erosion protection for this shoreline.

Establishing native deep-rooted woody shrubs, trees and herbaceous plantings in the rest of the upland riparian zone (yard) where possible is also recommended to enhance the

ability of the shoreline to provide water quality improvement and erosion control benefits.

SUMMARY RECOMMENDATION(S):

**Expand the wetland fringe channelward of the bank*

**Construct a rock sill channelward of the marsh*

Mr. Grant Cooley, agent for the applicant, stated that a riprap structure was preferred by the Board during discussion at the last meeting, but is not the first choice of his client. However, Mr. Waller is amenable to do the riprap as encouraged by the Wetlands Board. Noting that at the time that the Board visited the property it at high tide and that at low tide one can see the blow-out that is occurring. He stressed that both sides of the property are eroding and what VIMS has suggested will not alleviate the erosion problem. He noted that the banks will soon collapse due to the undercutting that is occurring.

Ms. Field noted that before the scarping there was a very nice buffer area on the property.

Mr. Cooley noted that leaning trees or ones with exposed roots in danger of falling were cut down. Ms. Kellam noted that a possible violation may have occurred, but Mr. Cooley stated that county staff had given approval to cut down the trees. Ms. Kellam added that a mitigation plan will be needed.

Discussion followed on the feasibility and effectiveness of sills. Mr. Cooley stated his opinion that sills work until breached which will happen when northeasters occur such as the one in November. He added that a sill would protect wetlands maybe, but not the upland where the owner wants to build. Mr. Cooley also stated that there is no grass along the shoreline due to the sunlight that was shaded out by trees. The owner hopes to establish a vegetated area where sill will be located.

Mr. Chubb stated his opinion that on the south side, trees should be removed that overhang the bank and grasses replanted. He added that there was no need for that amount of stone on the south side and that its installation would cause destruction of most trees. Ms. Drury concurred as did Ms. Field.

Mr. Badger stated that the Board should address the riprap proposal which is before the Board. He added that a sill cannot be installed without a new application and public hearing in his opinion. However, the Board can modify what is before them at this time.

Ms. Drury suggested that the Board visit a property where a sill has been installed since VIMS has twice recommended a sill for this property.

Mr. Chubb suggested that the Board approve the north facing riprap and deny the south facing one. Ms. Kellam noted that the extent of riprap should be delineated on the

applicant's drawings. Ms. Drury suggested that the north facing riprap should go around the tip of the property.

Ms. Field suggested that action be postponed another month and that another site visit be conducted perhaps.

Mr. Cooley reminded the Board that the applicant has made a good faith effort to do what this Board discussed and suggested at last month's hearing.

Mr. Chubb noted that the Board should continue the matter because of the different options presented and that if the Board does not follow the VIMS recommendation then the Board should state why.

The Chair disagreed noting that VIMS is proposing a recommendation only and the Board does not have to adhere to any recommendation presented.

Motion was made by Mr. Gates that action be delayed until next month and that the Board conduct another field visit at low tide and to visit a nearby property where a sill has been previously installed. Second was made by Ms. Drury and carried.

The second hearing was called to order.

B. VMRC 09-1676: Thomas A. Arnold, Sr., has applied to construct stone revetment, 115 linear feet long, approximately 5 feet high from existing grade, using mostly Class II quarry stone. The project will be done from the upland bank with no clearing necessary. The property is located at 6417 Riverside Lane and is described as being Tax Map 14A, double circle 2, parcel 2B.

Ms. Kellam presented the staff report and VIMS recommendations. Both reports are included for the record as follows.

VIMS Findings and Recommendations Summary: Presented to the Board and read into the record.

Adjacent Property Owners: No correspondence received.

Staff Recommendation: Although staff does agree, the preferred approach as recommended by VIMS for the construction of a sill and / or breakwater system and beach enhancement, the application proposed by the owner should be considered a sound alternative if impacts to the wetlands are further reduced and the buffer is restored. It would be possible to move the toe of the revetment landward and decrease the slope of revetment to reduce wetland impacts. Because the buffer area landward of the project is established as a lawn and sparsely vegetated, this move would not greatly increase the impacts to the buffer. Impacts to the buffer must be approved by the zoning plan of development process, which includes a water quality impact review and mitigation

planting of riparian buffer vegetation in the impacted areas. Staff's recommendation is approval of the project only if the applicant will make the necessary changes to the revetment to reduce impacts to the wetlands and restore a riparian buffer. If the applicant does not consider these changes, the sill and / or breakwater system and beach enhancement must be considered the most approval option.

VIMS Report:

EXISTING SITE CONDITIONS AND PROPOSED ACTION:

The applicant proposes 115 LF of onshore riprap revetment against a natural bank along his potentially high-energy, sandy shoreline of Nassawadox Creek. The shoreline is sandy and contains a marsh area and a pier structure. The upland is in lawn and trees. The lawn area near the project site is being mowed to the shoreline edge. The residential structure is located greater than 100 feet from the project shoreline. The proposed revetment would sever the connection between the riparian, beach, intertidal and subaqueous areas resulting in a loss of marine resources, a reduction in the ability of the upland to filter runoff, and a change in the benthic community able to live along the shoreline. Based on the aerial photos and the drawings, it appears that this project may be impacting jurisdictional beach area not reflected in the impact information on the application.

THE PREFERRED APPROACH FROM AN INTEGRATED MARINE ENVIRONMENTAL VIEWPOINT:

From an environmental perspective, the preferred approach to shoreline protection on potentially high-energy, sandy shorelines such as this site is to provide erosion protection through artificial beach nourishment (depositing sand) and construction of an offshore breakwater or sill (rock) structure.

*The shoreline in this location supports an existing marsh which plays a role in reducing wave energy and providing protection to the shoreline. Creating additional wetland area channelward of the existing toe of bank would provide more wave attenuation and create distance between erosive wave action and the bank, providing more effective upland protection to this site without severing the connection between the riparian, inter-tidal and sub-aqueous areas. A wetland can be created by depositing clean sandy material channelward of the existing bank out to a desired width (the wider the marsh the more protection) at an elevation to support marsh grass. The area can then be planted in *Spartina alterniflora* sprigs on 18 centers. Encouraging expansion of wetland vegetation in the inter-tidal zone helps stabilize the shoreline while also providing marine resources and habitat.*

Any overhanging tree limbs in the vicinity of the shoreline should be routinely trimmed to allow sunlight to reach the marsh grass and allow it to grow.

A rock structure constructed channelward of the created marsh, in the form of a sill or breakwater, rather than against the bank in the form of a revetment as proposed would

hold the sand in place and provide more comprehensive, long-term shoreline protection for both the marsh and the upland bank.

In addition, any unstable upland bank areas may be minimally graded to obtain a maintainable slope and be densely planted with native deep-rooted grasses and shrubs for stabilization. Existing stable, vegetated banks should not be graded. Stopping the routine mowing to the shoreline edge and planting the riparian area (yard) in a variety of vegetation are also recommended to provide erosion control and water quality benefits to this shoreline.

RECOMMENDATION(S) SUMMARY:

**Apply beach nourishment with plantings (construct a wetland) and construct an off shore sill or breakwater*

**Minimally grade existing bank to obtain a stable slope and plant with appropriate shoreline vegetation*

**Stop the routine mowing to the shoreline edge*

**Plant the riparian area (yard) in a variety of native vegetation*

NOTE

The Virginia Institute of Marine Science (VIMS) applies an integrated coastal management perspective during the review of proposed activities on tidal shorelines. The coastal ecosystem has dynamic connections between wetlands, coastal waters and the surrounding landscape. This provides valuable ecosystem services, such as maintaining water quality, shoreline stability, and wildlife habitat. Activities should be designed to avoid adverse impacts to coastal resources. When impacts are unavoidable, every effort should be made to minimize impacts and provide compensation as required.

Ben Mears, agent for the applicant, stated that erosion is occurring at such a rate that an upland utility pole may need to be moved landward soon.

Referring to the Waller situation Mr. Mears noted that the north side of that property was under-cut because of storm effects. He added that the recent type of storms cause a major rise and fall of tidal waters eating away the soil where roots are located. He noted that this causes the same adverse impacts as high wave energy pounding of a shoreline.

Mr. Arnold was present and stated that the last November storm did a great amount of damage. Until then he noted that the grasses had done fairly well. It was his opinion that a toe protection would not provide enough protection and that a sill is needed with grasses established in front. He stated that his neighbor was also experiencing problems with erosion and that the grasses in front of his existing bulkhead were now gone. Mr. Arnold stated that he was willing to do mitigation of the upland area as well.

Mr. Gates stated that the neighbor's bulkhead appears to be contributing to the erosion problem and Mr. Arnold agreed and noted that it would be best to tuck the riprap back behind the adjacent bulkhead.

Ms. Field stated her opinion that the riprap could be shortened on the south end, but Mr. Arnold disagreed as it would be less effective if shortened. However, he suggested that a more tapered design may be feasible.

Discussion followed and Ms. Field noted that the sill edge would be eaten away. Mr. Mears stated that the end of any structure hardening always results in some pivoting. With the wave action coming from the north the design was done to cause less pivoting if tucked behind the existing bulkhead. He suggested that slanting the stone and extending to the pier would also help to soften the effect. The dock, marsh and stone may soften the grade somewhat by flattening out more on the marsh end. He also noted that debris on the north end needs to be removed and the area nourished and re-planted with creeping juniper planted at the top of the stone since it works well in such environments. Mr. Mears noted that the location of the existing utility pole limits the amount of grading that can be done.

Ms. Drury suggested that a combination of sill on the north end and riprap on the south may work better. Mr. Mears stated that both are not really necessary in his opinion and that installing a sill may be difficult since all proposed work must be done from the top of the upland.

Ms. Kellam noted that a mitigation plan must be approved for the project as well if approved.

Mr. Mears stated that very little grading would be done in order to provide access to equipment.

The Chair called for public comments. There being none the hearing was closed.

Motion was made by Mr. Chubb to modify the application to include beach nourishment, planting of spartina and seeding of revetment area. Ms. Field suggested that the any approval include a modification to create a softer slope on the north end of the revetment. At this time Ms. Kellam stated that beach nourishment was not advertised.

Mr. Badger noted that the beach nourishment can be included in the motion; however, 120 square feet of vegetated wetlands will be lost and has to be re-established.

Mr. Mears stated that the area in question has already been smothered. He explained that the toe will go in underneath the area in question and the top would be pre-planted and only temporarily disturbed but not destroyed.

An amended motion was made by Mr. Chubb to approve the project with beach nourishment and plantings thereon and that the north end of the riprap be modified to a more gradual slope. Second was made by Mr. Gates and carried unanimously

Statements from the Public: none.

Old Business.

For the record it is noted that the Board received a redraw of the Moe project as approved by the Board.

Zoning Administrator's Report

Ms. Kellam reported that no new applications have been received to date.

Zoning Inspector's Report: none.

Consideration of Minutes

The minutes of the November 18, 2009 meeting were approved as submitted upon proper motion by Mr. Chubb and second by Ms. Field.

Adjourn

There being no other business the meeting was adjourned at 11:40 a.m.

Chairman

Secretary