



# **Wetlands/Coastal Dune Board**

## **Public Hearing & Meeting**

**Town Hall**  
**February 29, 2012**  
**6:00 p.m.**

At approximately 6:00 p.m. in the Town Hall, Chairwoman Ann Hayward Walker called to order the Wetlands/Coastal Dune Board Public Hearing and Meeting. In attendance were board members Wayne Creed, Russ Dunton, Bruce Lindeman and Jim Weiner. Also present were Town Planner Tom Bonadeo, Hank Badger from the Virginia Marine Resources Commission (VMRC) and the applicants, Robert Rea and Wayne McCoy from Mid-Atlantic Environmental, and Todd Hopper from Gamesa, Doug Law and supporting staff from Northrup Grummond and Steve Wood and Roger Hill from ESS Group, and Larry Lemond from Bay Coast Railroad.

### **CONSENT AGENDA**

**The agenda was accepted as presented by unanimous consent.**

The Board reviewed the minutes from the April 4, 2011 Public Hearing and Meeting.

**Motion made by Russ Dunton, seconded by Jim Weiner and unanimously approved to accept the minutes as presented.**

### **BUSINESS**

Ann Hayward Walker stated that the purpose of the Public Hearing and Meeting was to hear public comments regarding the Joint Permit Applications (JPA) for Robert Rea, et al. for a three section breakwater and beach nourishment to prevent further beach erosion of the Bay Vistas property, and Gamesa for a wind turbine and submarine cable to Cape Charles Harbor and to review the applications. Prior to the discussion regarding the applications, Tom Bonadeo would give a review of the Wetlands and Dune Board jurisdiction and procedures.

Ann Hayward Walker thanked Tom Bonadeo and Town staff for preparing the packages for the Board to review the information regarding the applications prior to the meeting. The reports were very complete and helped the Board a great deal.

#### **A. *Review of Wetlands and Dune Board Jurisdiction and Procedures:***

Tom Bonadeo explained that the JPAs were for a larger scope than the Town's Wetlands Board had jurisdiction over. The Board would be looking at only a portion of the JPAs within our areas of jurisdiction – Vegetated Wetlands, Non-vegetated Wetlands, and Coastal Primary Sand Dune or Dune. The applicants would give an overview of their projects so the Board could see the whole project. Tom Bonadeo continued to state that the specific guidelines would be reviewed along with his recommendations regarding the applications.

#### **B. *Robert Rea, et al, JPA #12-0059 – 3 Section Breakwater and Beach Nourishment:***

Wayne McCoy, President of Mid-Atlantic Environmental, addressed the Board stating that their project was a unique project and that it had not been done in Virginia as yet. The

application / project consisted of three parts – restoration and beach nourishment, which were both under the Board’s jurisdiction, and an offshore revetment system that was different from the traditional stone revetments used in the past. Mr. McCoy stated that initially, he would discuss the areas under the Board’s jurisdiction and afterwards give an overview of the wave attenuating devices. Mr. McCoy explained that the site received a lot of wave energy which caused a significant amount of erosion in the area. Since the original application, which was submitted last year for a stone revetment, Sea Breeze apartments had come onboard for this application. The original project was permitted but not pursued after the homeowners found out the cost of the project. Mr. McCoy stated that he received a call asking if there were any alternative devices which could be used at a lesser cost. Mr. McCoy continued to state that he did some research on the internet and found this wave attenuation device (WAD) which looked promising. Something needed to be done to stop the erosion and to replenish the land that was lost. The WADs built up sand behind them.

Tom Bonadeo stated that Town staff did an assessment of the area and after Hurricane Irene, it was noticed that the transformer behind Sea Breeze apartments had slipped over the bank. Since that time, some concrete rip rap had been placed in the water. Tom Bonadeo stated that this area was in the Board’s jurisdiction. This application was to restore the uplands and nourish the beach with additional sand.

Mr. McCoy showed information regarding WADs on the internet. Wave energy passed through the WAD and was deflected causing significantly less damage to the shoreline and build sand up behind the WAD. WADs also provide a habitat for oysters and fish.

Tom Bonadeo stated that the analysis from the Virginia Institute of Marine Science recommended careful consideration of the project as the WADs were considered “experimental since no experience is available from Virginia.” Letters had been sent to the neighboring property owners and some letters had not been returned. No written comments from the public had been received at this time. Tom Bonadeo stated that after reviewing the application, he felt that the Board should consider the following strengths and weaknesses of the application as outlined in his staff report.

Strengths:

1. The removal of the emergency fill and restoration of the upland would protect the Sea Breeze apartment building. The loss of this building due to future erosion would jeopardize much needed subsidized housing.
2. The future of the newly construction homes and home sites in Bay Vistas Subdivision were also in jeopardy.
3. Beach nourishment would create a larger area for tiger beetle habitat and make the beach much safer.

Weaknesses:

1. While no wetlands would be filled, some potential submerged aquatic vegetation (SAV) area could be covered with the WADs. This area was currently under lease for aquaculture. This was supported by the report from the Virginia Institute of Marine Science (VIMS).
2. The upland restoration did not contain buffer vegetation other than beach grass. Native vegetation should be included in the upland restoration. This was supported by the report from VIMS.

There was some discussion regarding the movement of sand with the installation of the WADs. Wayne Creed noted that breakwaters were very disruptive to the nature movement of sand and sand would be built up in certain areas while being taken away from others. Russ Dunton added that properties on either end of the breakwaters were in trouble. Ann Hayward Walker asked whether the design of the WADs took into consideration the relationship of the existing breakwaters to the north and would Mr. McCoy anticipate the same type of erosion pattern on the south side. Tom Bonadeo stated that this was a good point and pointed out that the WADs would carry on from the existing Bay Creek breakwater.

There was some discussion regarding the heavy winds on the beachfront. Ann Hayward Walker asked whether Mr. McCoy could provide any examples to assure that the WADs worked in areas of heavy wind. Mr. McCoy stated that WADs had been deployed on the ocean side in Negril, Jamaica. With the success rate in other areas, Mr. McCoy stated that he felt the WADs would work well for this project. Ann Hayward Walker stated that this was another instance where we were trying to beat Mother Nature and she usually won. We also wanted to be sensitive to the marine environment and not do any additional harm by trying to win the battle with Mother Nature.

There was some discussion regarding the marine habitat that would be created with the WADs and a possibility of a SAV environment.

This project was a modified WAD which was corrugated and provided more surface area. There was some discussion regarding the dimensions and weight of the WADs. Tom Bonadeo stated that the WADs were large – 10’ at the base and 5’ tall. Ann Hayward Walker wondered whether anyone had commented on the aesthetics and wanted to be sure that everything was thought out ahead of time so that no one would be surprised. Ann Hayward Walker also stated that she was not sure how many people would be able to see the project since it was south of the Bay Creek viewing area and around the corner from the beachfront. The main viewpoint would be the homeowners and Sea Breeze apartments.

There was also some discussion regarding the safety issue. Unfortunately, people did not pay attention to signs warning them to keep off and Ann Hayward Walker expressed her concern with people climbing on the WADs. Tom Bonadeo stated that this was on a private beach with no public access to the area.

Tom Bonadeo reviewed several photographs of the properties and stated that this Board’s jurisdiction included the restoration of the upland bank and beach nourishment above low water and the applicant planned to do both. Their goal to increase the beach area which would provide more habitats was a goal to be applauded. The look of the WADs was not part of our Board’s purview but something to be decided by the VMRC. Tom Bonadeo continued to explain that there were two parts to this project: i) Placement of sand on the beach above low water as shown in the plan; and ii) Putting additional dirt on top of some of the sand to rebuild the uplands and to vegetate it with American beach grass. The VIMS report, as well as his staff report, indicated a preference for some native bushes along the edge.

Russ Dunton stated that he did not have to be convinced that something needed to be done to save this area but his concern was that this type of project had never been done in the lower Chesapeake Bay and VIMS had no track record for this type of project.

Ann Hayward Walker stated that in looking at this project, the Wetlands Board had agreed previously on a plan to protect this property and due to cost considerations, this was a more economical approach and continued to state that she felt if the owners were willing to gamble with this approach and if there was no harm to the environment then the Board could not disagree with the project. The VIMS report outlined some criteria to review and some of them were already addressed in the proposal. The only other considerations outlined by VIMS were verifications of the SAV habitat, and grain size of the beach fill. The only other thing was to monitor the performance and its effects.

Mr. McCoy stated that he had been in discussion with VIMS and had numerous reports, which he did not bring with him, but the deciding factor for him was the project in Negril where a house was literally being washed into the ocean and within six (6) months of deployment of a WADs system, a beach had built up around the house. He felt confident that a project of this type would work and he took pride in his record.

Ann Hayward Walker stated that if the VMRC and VIMS approved this project, our Wetlands Board needed to decide if then we would allow the proposed plans for the restoration of the uplands and beach nourishment. She expressed her empathy for the property owners who had lost so much land to erosion and added that she would be devastated if it had happened to her property. Tom Bonadeo added that in addition to the properties in the Bay Vista subdivision, the Sea Breeze apartments, which was financed through the USDA, and the USDA was concerned about the life expectancy of the building which had a relatively long mortgage on it. The USDA was willing to help with the project to protect their investment.

Tom Bonadeo asked if anyone else in attendance would like to speak on the subject. Mr. Hank Badger stated that written approval from Mr. Schlegel for sand replenishment on his property and disturbance of his oyster grounds was needed before the project could move forward. Tom Bonadeo stated that notification had been sent to Mr. Schlegel but he typically spent his winters in Florida and had not replied to the letter. The applicant stated that he received verbal approval but would follow up with Mr. Schlegel for written approval.

**Motion made by Russ Dunton, seconded by Wayne Creed, to accept the upland portion as presented with the stipulation that the temporary rip rap that was placed on the shoreline be removed if the sand restoration project moves forward. The motion was approved by unanimous vote.**

C. *Gamesa, JPA#12-0149 – Wind Turbine and Submarine Cable to Cape Charles:*

Ann Hayward Walker stated that the Wetlands Board portion of the project was a very small part of a larger project and the Boards purview was only the portion that was in our jurisdiction. Gamesa's JPA was requesting the placement of a submarine cable through the bulkhead on the Bay Coast Railroad property. The submarine cable would connect the offshore wind turbine into the power grid. The description of the work included with the meeting packet was very thorough.

Tom Bonadeo added that the landfall location was chosen specifically to avoid interfering with the future locations of additional Town's breakwaters and the Federal Channel. The Town had plans to construct three additional sections of breakwaters in the future and the Federal Channel was maintained by the Army Corps of Engineers to maintain a depth of 18'. The route of the cable was discussed briefly.

Mr. Steve Wood from the ESS Group gave an overview of the project showing the location of the offshore turbine and route of the transmission cable coming into shore around the breakwaters and avoiding the channel coming into the northern edge for landfall on the railroad property into a vault, or concrete box, where the submarine cable would be spliced to an upland cable which would continue along the property for about .6 mile to connect to the existing overhead transmission line and a small substation would be constructed at that location. Tom Bonadeo stated that the line was the one going from the Historic Society building towards Bay Creek. Mr. Wood continued to explain the process of coming ashore and reviewed several photographs to help further describe the process. Tom Bonadeo reviewed photographs of the existing bulkhead at the railroad property which was over 100 years old and deteriorating.

There was some discussion regarding what would happen when the wind turbine was decommissioned. Mr. Wood stated that was another issue but the submarine cable would not have to be decommissioned. It was designed to last approximately 100 years and could be used for another project, if needed.

This project was a prototype project. Most current wind turbines were about 3 MW – 4MW in size but this turbine was 5MW in size.

Ann Hayward Walker reiterated that the Board’s discussion this evening was not whether or not to approve the wind turbine itself but the area where the cable would come ashore. Russ Dunton stated that he was surprised that we would have to approve this since it was only dealing with cable coming through a hole in the bulkhead. Tom Bonadeo stated that he had several discussions regarding this issue and the area between the existing bulkhead and shoreline was an intertidal zone and creatures were living in the area. It was recommended that the Wetlands Board review the issue. Tom Bonadeo asked ESS to describe how they were planning to do this work.

Mr. Roger Hill stated that the cofferdam was an independent structure which would stand on its own behind the existing steel bulkhead and would be constructed with minimal impact to the shoreline. Mr. Hill described the steps to construct the new bulkhead and bring the submarine cable from the seaward side of the new seawall and pulled through the new bulkhead directly to the underground transition vault to be secured and spliced with the upland cable system.

Tom Bonadeo asked about a dewatering plan to remove groundwater from the area. Mr. Hill stated that groundwater would be pumped out according to the Virginia erosion and sedimentation (E&S) rules.

Tom Bonadeo stated that after a review of the application, the Board should consider the following strengths and weaknesses of the application:

Strengths:

1. The design of the bulkhead installation should minimize the disruption to the harbor during construction.
2. The existing rubble would be replaced with a stable and secure bulkhead that should eliminate washout in this area. The detail of the installation methods had been well thought out.
3. The repair of the old bulkhead would help stop unauthorized dumping in the area.

Weaknesses:

1. The intertidal zone behind the current bulkhead was approximately 50' long. This eroded bulkhead allowed surface sediment to wash through the bulkhead rather than being filtered.
2. There would be some small loss of intertidal zone behind the bulkhead most of which was marginal. The economic impact of this project far outweighs that small area.

Tom Bonadeo stated that the staff recommendation was to permit the installation of the submarine cable through the bulkhead in accordance with the provided installation procedures and with the proper E&S measures on the upland.

There were no other questions or comments from the attendees. Tom Bonadeo stated that he had not received any written comments from the neighboring property owners or members of the public.

Wayne Creed commented that with the 50' of new bulkhead, it would make the remaining bulkhead look really bad. Russ Dunton stated that he did not see any direct impact on the area and felt that if the railroad had the resources, they would replace the remaining bulkhead. It was an industrial area and any wetlands behind the bulkhead were inconsequential. If the E&S measures were followed, there were no issues with the project.

**Motion made by Russ Dunton, seconded by Jim Weiner, to approve the installation of the submarine cable as presented provided the applicant followed the State's E&S measures. The motion was unanimously approved.**

#### **OTHER**

Tom Bonadeo informed the Board members that there would be a presentation at a later date regarding LIDAR data which was information compiled by the Nature Conservancy, the USGS and others using lasers which were dropped down over the Eastern Shore to map the elevations of various locations to an accuracy of +/- 6" vs. the old maps where the accuracy was +/- 7". This data would eventually be made available to the public. The biggest use of this data would be in inundation mapping to determine flood prone areas. Tom Bonadeo presented a map of Cape Charles with different colors designating the various elevations. The biggest value would be the updating of FEMA maps. He would be working on a presentation to give to the Town Council in the future.

**Ann Hayward Walker adjourned the Wetlands / Coastal Dunes Board Meeting at approximately 7:25 p.m.**

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Chairwoman Ann Hayward Walker

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Town Clerk