

UPPER TOWNSHIP PLANNING BOARD

STRATHMERE DEANNEXATION MEETING MINUTES MAY 21, 2008

A special meeting of the Upper Township Planning Board was held at the Township Hall, 2100 Tuckahoe Road, Petersburg, New Jersey at 7:30 p.m. for the purpose of holding a public hearing regarding the Petition filed by the Citizens of Strathmere and Whale Beach to deannex a portion of Upper Township commonly known as Strathmere and Whale Beach from Upper Township and annex same to Sea Isle City, New Jersey.

CALL TO ORDER

SUNSHINE ANNOUNCEMENT

SALUTE TO THE FLAG

ROLL CALL

Present: Daniel Bready, William Brown, James Kelly, Curtis Corson, James Schroder, Duane Terwilliger, Susan Ragan, Mayor Richard Palombo and Chair Renee Scrocca.

Absent: Donald Kissling.

Also in attendance were Dean Marcolongo, Board Solicitor; Shelley Lea, Board Secretary and Stuart Wiser, Professional Planner.

SWEAR IN STUART WISER AS BOARD PROFESSIONAL

Dr. Stewart Farrell, 342 English Creek Road, Port Republic, New Jersey, was sworn. He testified that he has received a BS Degree in chemistry and has spent time with the US Army Signal Corp in Fort Monmouth. He received a PHD in geology in 1972. He currently works for the Richard Stockton College in Marine Science and Geology.

He testified that in 1984 the NJDEP asked him to undertake a monitoring program of the New Jersey beaches from Raritan Bay to Delaware Bay. This has bloomed into a full-time Institute of Coastal Research Center at the college where they do a great deal of projects throughout New Jersey. Their duties range from designing and building beach fills to finding how well various hard structures work as compared to the soft solution, or using either GEO Text style filled bags or sand placement.

Dr. Farrell began working for Upper Township in 1995. He listed the different towns they have dealt with currently or in the past. They have also worked with several marinas. Most recently they have worked with the NJDOT on dredge material management. They are also developing an assessment technique that will tell every municipality what level of storm will cause what type of damage.

Dr. Farrell prepared a power point presentation showing how the waves create erosion. One of the pictures was a house totally destroyed by a storm in Massachusetts. This storm resulted in a vertical sea cliff like the one seen recently in Strathmere and a lot of other places in New Jersey.

There are 2 major problems that have been identified in Strathmere. The entire length of the island is starved for sand. There is no new source of sand from a river or cliff. There is no deposit off shore in the ocean. The presence of sand exists at Corson's Inlet and Townsend's Inlet due to the tidal currents and ocean waves.

Strathmere's northern shoreline suffers from episodes in the variation and position of Corson's Inlet. The main tidal channel repeats every 7 to 9 years. The dune crest elevation is between 14 and 16 ft. The dune is narrow for the amount of protection you expect to get from it. The inlet channel on the other hand is variable piece of work. A slide was shown from 1/6/1920.

Dr. Farrell discussed the great sleet storm in 1920 that did a lot of damage to the NJ Coast. At that time there were 3 inlet channels in Corson's Inlet. The existing groins were in place in 1944 but he is not sure about 1920.

Dr. Farrell discussed the nor'easter of 1962 perhaps the storm of the 20th century in terms of damage to the NJ shore. The average wind speed was 38 miles an hour; the top wind speed was under the hurricane speed. This storm washed into the island and took a number of homes located seaward of Commonwealth Avenue. The whole Point of East Seaview Avenue survived the storm undestroyed. A photo from 12/16/1991 taken by the Army Corp of Engineers shows there was no problem whatsoever. This was probably due to the beach nourishment done in 1985 by the State in cooperation with the Township where 1.2 million cubic yards of sand were pumped from the inlet onto the shoreline. This was followed by the replacement of rocks at the seaward end of the timber structure in the southern part of the Strathmere shoreline.

Dr. Farrell reviewed what has happened to the shoreline up to now. By 1999 the structures at Seaview Avenue were exposed as shown in the photo. The Township brought in truckloads of quarry sand from the mainland and built a dike to defend the rest of the dune and what uplands were being threatened by erosion. This event triggered the intervention with the DEP and the second beach nourishment project consisting of 465,000 cubic yards of sand from Seaview to almost Jasper. They were in charge of periodically surveying to show what the quantities of sand were doing. This information was provided in the annual report along with photos.

He discussed the 2 nor'easters in 1998 that together did serious damage. He showed slides taken after the 1.2 million cubic yards of sand were placed on the beach in 1984 and after hurricane Gloria in 1985. There was also a slide taken after the 2001 fill that was placed as far as the groin south of Jasper Avenue. Another slide taken 5/16/08 shows the new steel bulkhead.

Dr. Farrell testified that the Department of Agriculture suggests planting fences in a zigzag so winds from multiple directions will hit a section of the fence perpendicular and drop their sand. Also, the fence should be placed between a third and a half the distance of the seaward slope of the sea face. Steel and pressure treated poles are not recommended but cedar 2 x 2's can be used. There are also plastic products available.

Dr. Farrell indicated that a harder structure could not be placed at the inlet since the New Jersey Land Trust owns the land. The deed states there can be no construction of hard structures only placement of sand in the event of storm erosion.

Starting in 1989 six and a half million tons of sand was pumped onto Ocean City. Storms, waves and nor'easters tend to bring sand down the shorelines to Corson's Inlet. Enormous amounts of sand are in the shallows just off the State Park on the Ocean City side. All that material is trying to push the inlet channel south towards Strathmere. This is making Strathmere's problem worse.

Dr. Farrell indicated that during their survey of the land on May 13th there was no dune damage at Williams Avenue. The damage started about 600 ft. south and rapidly got worse toward Seacliff Avenue and Seaview Avenue.

Dr. Farrell stated that the width of the beach determines the size of the dune that could be built. After the 2001 beach fill the Township was responsible for putting up the fence and planting the dunes. There was no dune in front of Tecumseh at that time. After the beach fill there was a row of snow fencing installed and the dune began to accumulate substantially. Last weeks storm cut into the toe of that dune and up the toe slope not quite to the crest. The crest is still there. It is about 30 ft. of good solid dune back to the bulkhead. In the south end of the island there was a dune already existing although there is no width to the beach. It was not compromised by the storm events other than right at the houses on the seaward of Jasper. There the houses sit where the dune used to. There was a dune there and the houses were built in it. The dune was moved onto the beach and in front of the houses and closer to the wave action. He feels the Township has done an adequate job at protecting Strathmere. Mr. Farrell described the information found in the 1996 Recognizance Study, paid for solely by federal funds. The document contains almost anything you would need to know about designing, and rehabbing the groins. The length of the groin, the height of the groin, and the slope of the new beach are very key critical elements to make them work together and not against each other. The groin is typically built first and then the beach fills immediately after.

Dr. Farrell stated that if the dredge in Ocean City could magically extend the pipe down and pipe in a half million yards of sand it would solve the problem temporarily. The sand would work for about 5 years and hard structures about 35 to 50 years.

In answer to a question by Mr. Corson, Dr. Farrell stated that the problem could be mitigated by keeping the second inlet filled and not letting it open and also not letting the sandbar create the gap so that the tidal current flows next to the shoreline.

There was discussion about using the sand from the inlet for the beach replenishment project. Dr. Farrell stated that the DEP would not allow anyone to disturb the potential habitat of certain fish and clams beds.

Solicitor Marcolongo marked the 26 slides from the power point presentation as P-2.

There was a short break at this time.

Dr. Farrell testified that the Township extended a considerable amount of local funding and time and effort on the 2001 beach fill project. It is time now to do something and the Township is taking steps to do so. They have hired Stockton to prepare quarterly reports and to appear before the governing body and address particular situations. He put together a document beginning in 1995 stating everything they have done at the Township's request. The document consisting of 4 sheets was marked P-3.

Dr. Farrell testified that Stockton began working with the Township in 1995. Their tasks are to establish monitoring profile sites for a topographic profile or cross section of the land from the site over the dune, down beach, and into the water to a depth of 16 ft. off shore. They survey 6 locations from Seaview down to First Avenue in Sea Isle. This is done quarterly. They calculate the sand volume that comes or goes from the dunes, from the beach offshore and any erosion to the dune. They take photographs and include them in a report. They maintain the database for the Township. They have been involved in the aerial photography interpretation on where the shoreline had moved from 1977 to where it was in 1995. He gave a "B" grade for the Township's reaction to the needs of Strathmere as they have arisen.

Sea Isle City was given permits in the mid 1990's to construct 2 groins at one time and a third one at 93rd Street. They had no problem obtaining the permits since there were no deed restrictions and it was municipal property. There were also 3 groins built in the south end of Strathmere. Permits were obtained when the engineer got together with the State and a cooperative State aid agreement developed for the funding of the project. He stated that the crisis in Sea Isle in 1994 at 92nd Street was equivalent to the Seaview Avenue problem today in Strathmere.

When asked what grade he would give the Township for dune maintenance he responded that the dunes get sporadically fenced. Any type of wood fence is good. The fence should be installed in a zigzag pattern with 10 ft. spacing. The fence is still working as long as it is not lying flat on the ground.

Dr. Farrell gave the Township an "A" for the 3 groins that were constructed in the south end. They get no grade for the north end since nothing has been done. The groins are not working, as they were intended because they have deteriorated. He feels that permits could be obtained to repair the existing structures. He is not sure if repairing the structures would be a benefit or if the Township would be wasting there money. If the tidal channel were blocked the Township would not have to worry about the groins.

Dr. Farrell testified that the Township's beach fill project has been accepted but not funded. The project is ready to go to construction if congress authorizes construction funding. The Water Resources Development Act of 2007 was passed with limited beach project money. He referred to the New Jersey Shore Protection Study completed in 1996.

Dr. Farrell discussed the design plan for the beach "For Typical Cross Section For The Selected Plan For Strathmere" where a dune is created. The beach ends up being 270 meters wider than it is today and approximately 3 ft. higher in elevation than today. It would start tapering at the park lands and continues all the way down to Townsend's Inlet at the terminal groin at 93rd Street. If the project is a go it is for all of Ludlum Island. Assuming that they get the easements from the private property owners who own the high tide line and that the State and the locals come to an agreement in regards to State Aid. It is also assuming that congress authorizes the 14 million dollars they estimate this to cost. If one property owner holds out the project is condemned. Another option is still that the State does a replenishment on their own.

The document referred to by Dr. Farrell was marked Exhibit P-4.

Dr. Farrell explained there is municipalities that do a management plan scenario. They determine that each nourishment is a required option for a coastal town in New Jersey, with a limited sand supply and a rising sea level and a very active valuable set of real estate land. With these 3 things going for them they have essentially said were going to develop what is called an "*improved beach*" according to Federal Emergency Management criteria. They lay out the ground required to call you an *improved or engineered beach*. A design plan is made with the help of the Corp of Engineers feasibility study and by using what other municipalities have done before them. They then adopt a resolution that memorializes the plans. Then you would try to acquire as many partners as possible such as the county and federal government. If the federal government agrees the project would cost eight and a quarter cents on a dollar. The State of New Jersey says that if you do a project they would participate if certain conditions are accepted. You are required to pass an ordinance or resolution agreeing to monitor this project. Stockton College will make sure the criteria are within the parameters of a storm protection barrier for the citizens and their infrastructure. When the criteria are met they will take the necessary steps to maintain and orchestrate a contract to bring it back to design specifications. If you do that and take a real punch in the nose from a great storm FEMA will determine it to be an *improved beach* and will pay to restore it to the condition it was before the storm. Avalon received 1.3 million dollars in FEMA funds that they put towards mobilization and repairs. A presidential declaration is needed for reimbursement.

During cross examination by Ms. Bittner, Dr. Farrell testified that he usually testifies before Township Committee to present the annual report and the beginning of the annual contract. He agreed that the 2 problems with Strathmere are the inlet associated problems and the fact that the island is naturally deficient in sand. He first discovered these problems in the fall of 1971. He first informed the Township of the problems in 1999.

He was involved in the beach fill project in 2001 with the Township and the NJDEP. He agreed that sand nourishment is only temporary and is needed every 5 to 10 years depending on the rate of erosion and the volume.

Dr. Farrell testified that 465,000 cubic yards of sand were used during the beach fill. The rate of erosion accelerated rapidly in early 2007. Things went down hill very rapidly during that summer. Ms. Bittner read a statement in the 2006 annual report. Dr. Farrell testified that the statement read by Ms. Bittner is true, however most of the area referred to is not Upper Township rather Sea Isle. This is a low, narrow beach with a GEO tech style core dune in it that was installed in 1996. This area has been low naturally and deficient in sand since the nor'easter in 1962. He stated that everyone including Sea Isle is hoping for the federal project to proceed.

Dr. Farrell testified that he gave the Township a "B" not an "F" for their reaction and response to critical issues involving coastal protection through storm damage and responding to further damage from future storms. He stated that Longport does not do as well as Upper in these categories. It has been said that all the sand is going to the Wildwood's but North Wildwood is currently in the process of State approval and permitting for beach nourishment for almost 3 million yards of sand on the north end of the city. He gives most of the towns in Cape May County an "A" given their proactive success. He would say that Upper Township and Sea Isle City have pretty much done similar action for similar problems over the years.

Dr. Farrell stated that Dr. Weigle is an engineer that consults Sea Isle City and provides written reports and guides some of the process that Walker Previti then puts into action.

Dr. Farrell testified that he is not an engineer but has engineering experience. He testified that its not mandatory to consult with a coastal engineer in designing timber groin refurbishment. The municipal engineer is capable of creating the design and specs since they are reviewed by the DEP. He testified that he is familiar with the new steel bulkhead that was just installed. He has not seen the design specifications but knows how it was built. The steel sheets can withstand very high impacts. How far they are drilled into the ground depends on the impact. Dock builders can install this type of bulkhead without any engineering intervention.

Dr. Farrell does not have a contract with Sea Isle City, someone else does their sand monitoring. He testified that the Planning Board asked him to testify at tonight's meeting but he is not being compensated. He believes the Township pays Stockton about \$12,000 a year for their services.

Dr. Farrell testified that when he mentioned that blocking the channel would make the problem go away he didn't mean the main channel but the subsidiary channel right in front of the beach. There are 2 things that could be done like filling it in with sand or building an impermeable structure across it so that the tidal current would have to go around. Both options are feasible but the second option requires enormous permitting

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issues there is the deed restriction. He discussed the option of blocking the channel with the Township Engineer in October 2007. He foresees no hurdles in blocking the channels with sand except for obtaining permits from the Corp and the State and funding issues. This is separate and apart from the Army Corp project that he referred to earlier.

Dr. Farrell stated that Ocean City has a 50-year maintenance contract with the Army Corp of Engineers as part of their 1989 beach nourishment project. This is cycle number 7 in their re-nourishment maintenance activities. Maintenance is hard to come by this particular year in congressional funding. One of the problems is that the dredges are scarce since they are working in Louisiana and the Gulf Coast.

Dr. Farrell further testified that the old timber groins would not be a safety hazard to boaters but could be to swimmers.

Dr. Farrell testified that he sent an email to Paul Dietrich this morning in response to a question about their observations on May 13 and 15 in regards to any storm damage to the municipal dune, the beaches and Seaview Avenue. The 1 1/2 page document lists where the problems are. They took photographs that he will give to the Township if they didn't take their own. The other part of the email was to advise him of any sessions or meetings with the DEP about what to do if there is another nor'easter.

The next meeting was scheduled for June 17, 2008 at 6:00 p.m.

The meeting was adjourned at 8:55 p.m.

Submitted by,

Shelley Lea