

**REPORT OF THE SHORE PROTECTION BOARD MEETING
HELD ON TUESDAY, DECEMBER 6, 2011**

I. CALL TO ORDER

The meeting of the Shore Protection Board was called to order on Tuesday, December 6, 2011, at 9:30 a.m. in Town Council Chambers.

II. ROLL CALL

The following members were present: Chairman E. Llwyd Ecclestone, Vice Chair Bobbie Lindsay Buck, Mr. Kane Baker, Mr. Pat Cooper, Mr. Gerald Frank, and Mr. Lee David Goldstein. Mr. Lewis Katz arrived later in the meeting.

III. PLEDGE OF ALLEGIANCE

Chairman Ecclestone led the Pledge of Allegiance.

IV. APPROVAL OF THE MINUTES OF THE OCTOBER 27, 2011 MEETING

Motion to approve the minutes of the October 27, 2011, meeting was made by Board Member Cooper, seconded by Board Member Goldstein, and approved by all members present.

Mr. Katz arrived at the meeting.

V. COMMUNICATIONS FROM SHORE PROTECTION BOARD MEMBERS

There were none.

VI. COMMUNICATIONS FROM CITIZENS - 3 MINUTE LIMIT PLEASE

Lewis Crampton, 2335 South Ocean Boulevard, co-chair of the Citizen's Association, spoke about the Erickson report and a possible compromise of Plan B.

Dick Raffo, 173 E. Inlet Drive, asked about the Isiminger & Stubbs Engineering (Isiminger) report and extension of the groins. Town Manager Peter Elwell responded that the Isiminger report did not relate to extending the groins in the north end. He reported that Shore Board had extensive discussion about rehabilitating the groins in Reach 2 and 3. He added that the Shore Board had requested additional analysis of how rehabilitation of the groins might provide further storm protection and be part of the long-term plan for the Town. Following further discussion on groins, Town Manager Elwell stated that groins were planned for the southern end of the Mid-Town project and the

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1 northern end of the Reach 7 project. He further stated that the Town was mindful of the
2 benefits of using groins and other structures where it could get permitting.

3
4 Board Member Katz spoke about the education and experience gained as a Shore
5 Protection Board member. He spoke about the plans that had been discussed for shore
6 protection and stated that before other plans are developed, the Board needs to know
7 what is needed to protect the island. He said the Town needed to be creative in looking
8 for funding of the plan including using its political clout with the federal and state
9 government.

10
11 **VII. APPROVAL OF AGENDA**

12 Chair Ecclestone amended the agenda to include a time certain of 1:00 p.m. for item VIII,
13 Review of Staff Response to the Report from Erickson Consulting Engineers.

14
15 **Motion to approve the agenda as amended was made by Board Member Cooper,**
16 **seconded by Board Member Goldstein, and approved unanimously.**
17

18
19 **IX. SOUTH END PALM BEACH RESTORATION (REACH 8) PERMITTING UPDATE**
20 **[Robert Weber, Coastal Coordinator]**

21 Larry Goldberg, 3360 South Ocean Boulevard, spoke about the split of Reach 8 by the
22 United States Army Corps of Engineers (Corps) into Reach 8 north (now attached to the
23 Reach 7 project) and Reach 8 south. He expressed concern that there would not be more
24 than an adequate effort to insure that the shoreline south of Lake Worth would get
25 protection. He asked the status of the Reach 8 project. Town Manager Elwell responded
26 that the pursuit of the critically eroded designation and the permit for Reach 8 were
27 continuing. He explained that the pursuit of the application for the beach restoration
28 project had drawn the decision of the Corps to require the Environmental Impact Study
29 (EIS). He said he believed it was a good thing for the Town that the Corps identified the
30 difference between the shoreline north and south of the Pier, and it would allow the Town
31 to place a significant amount of sand north of the Pier without an EIS. Regarding Reach
32 8, he advised that the Town would continue to work with the Corps, Palm Beach County,
33 and the Department of Environmental Protection (DEP) on the scope of the EIS work that
34 needed to be done. He requested the Board allow staff six weeks to work with the
35 regulatory agencies, better define the scope of work, and come back at the January 26
36 meeting with more detailed information and a recommendation on how to proceed.

37 Mr. Goldberg expressed his concerns with the Reach 8 project being broken into three
38 pieces, the work that has to be done for the EIS, and the County's control over the
39 project. He suggested that Lake Worth's decision to opt out of the placement of sand on
40 their beach be challenged because it disrupted the projects to the south of the Pier. Town
41 Manager Elwell reminded the Board that there were extreme environmental resources in
42 the Reach 8 area and it was extremely difficult to get a permit to provide the level of
43 protection that is needed. He stated that the Corps had the authority to require the Town
to do the additional work. A discussion followed.

Town Manager Elwell stated that his intent was to meet with all the regulatory agencies and the County on refining the scope of work for the additional environmental work that needed to be done with an indication of the timeline and the cost and come back to the Shore Board with a recommendation at the January 26 meeting.

Motion was made by Board Member Goldstein and seconded by Board Member Frank to approve the recommendation as stated by the Town Manager. The motion was unanimously approved.

Board Member Cooper asked the state participation amount for the South End Palm Beach Restoration project (FDEP Grant No. 11PB3). Mr. Weber answered that \$4.8 million was appropriated by the State for the project. Board Cooper asked if the funds would remain as a result of the EIS project. Town Manager Elwell responded that if the Town ultimately moves away from the beach restoration application, does not pursue the EIS, and only does dune work south of the Pier, then the Town would likely forfeit the \$4.8 million for that Reach 8 project. He stated that the Town was trying to save the beach restoration work, if possible. Mr. Weber added that of the \$4.8 million, \$1 million would be retained for work north of the Pier.

Richard Hunegs, 3360 South Ocean Boulevard, asked how it was possible in Reach 1 and 2 to cover the hardbottom in those areas and jeopardize those resources but not get recognition in Reach 8 for the same process. Town Manager Elwell answered that there were no hardbottom issues in Reach 1 but there were a lot of impediments in Reach 2. He said it was challenge to the Town in designing the extended pipeline to minimize any coverage of rock but it was almost certain there would be some mitigation costs and permitting would be tough. He spoke about the narrowing of options in Reach 8 because of the history of the area. Mr. Hunegs asked that if the Erickson model and recommendations regarding higher quality sand would be a better approach to make to the Corps in an effort to ameliorate the issues in Reach 8. Town Manager Elwell responded that staff agreed with the Erickson report to use the best sand possible, and the current application for beach nourishment in that location was to use the inland sand from Ortona, which is better quality sand than an offshore source. Mr. Hunegs suggested the Town remain highly aggressive with the Corps for a satisfactory resolution in Reach 8.

Board Member Katz asked if there was an estimation of the areas that the Town expected to mitigate in Reach 2. Town Manager Elwell replied that the project was still in the early stage of design and it was not yet known how much would have to be mitigated. Paul Brazil, Director of Public Works, reported that the hardbottom had been mapped several time and was seasonal. He further explained that volume and discharge would affect the area that would require mitigation. Town Manager Elwell stated that the Board would be provided with the area that would have to be mitigated in Reach 2 and Reach 8 once the information was available. He said that the working estimate cost was \$1 million per acre.

Board Member Frank asked if money had been spent putting sand on the beach in Reach 2. Mr. Brazil replied that a small part of the north end of Reach 2 is a permit disposal area for the Corps and there had been dry beach placement in that area. Board Member Frank stated that Reach 2 has no protection other than the seawalls. He further stated that there had never been any beach restoration in that area and the only thing the Town may be able to do is an extension of the pipeline. Town Manager Elwell reported that a feasibility study had been done in Reach 2 and the outcome was that there wasn't a beach renourishment project that could be built in Reach 2 because of the hardbottom. He reminded the Board that the dune nourishment project for Reach 2 was dropped from Plan A. He stated that the only plans for Reach 2 were the benefit of the extension of the pipeline and the continued study of the possibility of doing some groin rehabilitation.

Board Member Frank spoke about the decision by the Corps and DEP to allow the Town to add a piece of Reach 8 to the Reach 7 project because it had been proven that sand would migrate from the Reach 7 project to Reach 8. He said progress is being made.

X. FURTHER CONSIDERATION OF DUNE PLANTING

A. Sea Turtle Nesting Monitoring for Dune Planting Activities [Robbin N. Trindell, Ph.D., Imperiled Species Management Section, Florida Fish and Wildlife Conservation Commission]

Robbin Trindell reported that the Florida Fish and Wildlife Conservation Commission (FWC) supports the Town's efforts to restore sand dunes. She clarified that the FWC does not have regulatory oversight of activities that occur on beach, such as dune planting, but does coordinate closely with the DEP as a commenting agency. She reported that dune plantings can occur during turtle nesting season but with a requirement that all the nests be marked and protected while the planting is ongoing. She further reported that there must be coordination with the marine turtle permit holder. She stated that FWC authorizes people to do the nesting survey work and mark the nests. She spoke about the requirements and restraints.

Chair Ecclestone asked the procedures for marking the nests. Dr. Trindell replied that only people who have had FWC training and a Marine Turtle Permit could do the surveying and marking. She stated that the FWC does not get involved in the relationship between the planter and the permit holder. She explained that in some places the agency (Town) reaches an agreement with the surveyor for a project or there can be negotiation, formal or informal, between the surveyor and agency to do the surveys. She said that the surveyors are volunteers and may have to hire people to do the extra work for a project.

Board Member Katz asked about the Habitat Conservation Plan (HCP). Dr. Trindell said that the HCP would be a good thing for sea turtles in the State of Florida and she believed there would be a little more flexibility when the Town wished to do dune restoration. She explained there would be a component that considers dune restoration with guidance and protection for entities. In response to a question from Board Member Katz, Dr. Trindell said that the FWC has a Coastal Wildlife Conservation Initiative which includes a

1 diversity of scientists that are involved with the wildlife of dunes and plant vegetation.
2 She explained that the FWC deals more with the wildlife aspect of dunes and not the
3 plants.
4

B. Overview of Dune Management Issues [Robert Barron, President, R.H. Barron Coastal Management and Consulting, Inc.]

5
6 Robert Barron of Coastal Growers, Inc. commented on the Florida Beaches Habitat
7 Conservation Plan (HCP) saying that not a single person involved in the development of
8 the plan was involved in dune conservation or plant conservation. He stated that in his
9 opinion the plan was about finding ways to make the animal protection component of
10 beach management a little bit more regulated. He reported that the DEP was now
11 considering a new general permit format for the issuance of permits for dune vegetation
12 and restoration. He explained that this would mean more delay, more cost and more
13 discouragement to people who are trying to husband coastal dunes. Mr. Barron spoke
14 about several issues including the impact of the Inlet, dune restoration policies, the
15 capture of sand by vegetation, new requirements for dune permits, concerns and cost of
16 marine turtle nesting surveys for small scale private projects, the impact of the DEP
17 revetment project north of Sloan's Curve, the benefits of dune plantings, and invasive
18 plants. He stated that the biggest problem was over regulation. He said that the Town can
19 fight the regulators politically to demand that a lot of the constraints on necessary coastal
20 management be based on real proven biological science.
21

22 Board Member Katz stated that the work done on Reach 6 around Sloan's Curve had
23 impacted the area of Phipps Park. He asked how it would be handled with the new Reach
24 7 project. Mr. Brazil replied that the Town was aware of it and Mike Walther, Coastal
25 Technology Corporation, was incorporating the information and previous work into his
26 design. He reported that there was a complete lack of sand for years in that area until the
27 Town started doing repetitive Mid-Town dune work. He added that the very large groins
28 immediately north of the revetment and the geometry of the shoreline changes impact the
29 area.
30

31 Board Member Katz asked Mr. Barron about the planting of sea oats when any work is
32 done on dunes. Mr. Barron said that the answer depends upon the individual situation. He
33 stated that he did not know anyone who chose to do a reasonably designed dune
34 restoration project where that investment did not return itself and improve sand holding
35 capability. He spoke about the movement of the sand.
36

37 Board Member Frank asked why the FEMA money received in relation to the dune work
38 and restoration of the beach did not include dune plantings. Town Manager Elwell
39 answered that FEMA money replaced what was lost from the infrastructure. He explained
40 that if a location could demonstrate it lost sand, plantings and dune walkovers, all would
41 be eligible for some portion of FEMA if they were in place before the storm. He stated
42 that, FEMA would not pay for enhancements to what had been in place before the storm.
43 He said that maybe in the future when the Town receives FEMA money to add sand, a
44 decision may be made to spend Town money to do plantings or other enhancements.

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Board Member Frank stated that the Board had previously discussed this issue and decided that any contract in the future would include planting.

XI. INTEGRATION OF TOWN'S COASTAL CONSULTANTS [Peter B. Elwell, Town Manager]

Town Manager Elwell spoke about the dialogue at the last Shore Board meeting between the various coastal engineers, the Shore Board members, and the public which resulted in a different and better recommendation for the Reach 7 project. He stated that the Board had asked for a method to encourage communication among the professionals on a project. He recommended the consultants who are involved in any active Town program be incorporated into the bi-monthly meetings with Jacobs Project Management Company to work through the issues of the various projects. He stated that this could be paid from the Public Works operating funds.

Board Member Katz commented that independence for a consultant was crucial and an independent consultant not on the list of approved consultants might bring some value. Town Manager Elwell responded that staff was open to the value that such people would bring to the process but the Town could not legally pay them for anything they may do.

Board Member Katz questioned if nine consultants was the correct mix. Town Manager Elwell replied that the Town has used most of the consultants with a couple of firms explicitly identified for peer review. He reminded the Board that less than a year ago there had been a thorough review of the consultants and there was a unanimous conclusion that the Town was managing its resources in the right way. Board Member Katz suggested an annual review. Town Manager Elwell responded that typically the consultants are renewed every 3 or 5 years. Mr. Brazil cautioned that the life of project from the beginning of permitting through construction was a long time and there would be no continuity if the consultants were changed each year.

Board Member Goldstein asked about a consultant, such as Ms. Erickson, paid for by a group of concerned citizens, attending the bi-monthly meetings. Town Manager Elwell replied that it was right for such people to be hired privately and to attend public meetings and represent those interests, but it was different than the sharing of ideas and challenging of recommendations or analysis within the team of consultants the Town had assembled. He stated that the representation of private individuals is best done in a public setting.

Motion was made by Board Member Goldstein that since it had been three years since the consultants were hired, that a review of the consultants be conducted at the earliest possible time. The motion was seconded by Board Member Katz.

Vice Chair Lindsay Buck agreed with the review. Board Member Frank advised against removing any consultant currently working on a project. Town Manager Elwell clarified that the recommendation was for a consultant selection process. He requested the Board

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1 allow staff time to review the recommendation and come back to the Board with a
2 recommendation.

3
4 Chairman Ecclestone requested the Town Manager come back to the Board in January
5 with a recap of the projects for each consultant.

6
7 In response to a question from Board Member Cooper, Town Manager Elwell stated that
8 the contracts with the consultants were typically one year with an ability to renew for up
9 to five years. He further stated that he would be prepared at the January meeting to have a
10 specific recommendation and specific timeline for the review. Board Member Cooper
11 remarked that there was a process for the review, it had been thoroughly discussed and
12 approved earlier in the year, and now it was being discussed again.

13
14 **The motion to review the consultants was approved unanimously.**
15

16 **XII. SHORELINE CONDITION ASSESSMENT [Robert Weber, Coastal Coordinator]**

17 Mr. Weber gave a power point presentation on the shoreline condition comparing
18 November 2009 conditions (the last time there were conditions similar to the current
19 conditions, i.e. northeaster for an extended period of time) to November 2010 and today
20 (November 2011). He spoke about the benefits of the Ortona sand with increased storm
21 protection that was not in place last year. He reviewed areas that had lost elevation and
22 showed erosion stresses due to the northeasters.

23
24 As requested by the Board at the previous meeting, Mr. Weber reported that a consultant
25 had performed dune elevations comparing the slope of the beach at the southern portion
26 of Phipps Ocean Park to that of the Reef Condominium. He reported that the slopes were
27 about the same.

28
29 Mr. Weber stated that the Reach 6 beach had lost more elevation and there was not a lot
30 of sand which meant there would not be a lot of sand moving into Reach 7. He said this
31 information would have to be kept in mind when designing the project for Reach 7. He
32 explained that there were a lot of coastal processes (revetment, groins, and rocky
33 beaches) north of Reach 6 causing the issues with the shoreline.

34
35 Mr. Weber showed vibracore pictures from the South End Sand Search and said they
36 were very encouraging.
37

38 **VIII. REVIEW OF STAFF RESPONSE TO THE REPORT FROM ERICKSON COASTAL**
39 **ENGINEERS AND FURTHER DISCUSSION REGARDING THE TOWN'S COASTAL**
40 **MANAGEMENT PLAN [Peter B. Elwell, Town Manager, and Robert Weber, Coastal**
41 **Coordinator]**

42 Town Manager Elwell reminded the Board that the recommendations on Plan B with the
43 one change of an additional analysis of groins in Reach 2 and been held in abeyance until
44 the completion of the review of the report from Erickson Consulting Engineers (ECE).

1
2 He stated there were significant points of agreement to the ECE report and some areas of
3 disagreement on minor and fundamental items. He said there were three fundamental
4 issues that were the foundation of the consideration to the other details:
5

- 6 1. In the sharing of public information, ECE made valid suggestions on ways the Town
7 could do better, make information more readily available to the public, and make it
8 available in a format that is more understandable to the public. The Town will keep
9 working to find ways to improve this area.
10
11 2. A significant difference is the approach to the plan and the best approach to take. The
12 ECE report was expressed as if the Town were starting from scratch and/or presented
13 in a setting where the idea was to understand coastal engineering and to understand
14 the basic principles of how to do it right. The Town is almost three decades past that
15 stage. The Town had the Comprehensive Coastal Management Plan (CCMP) in 1986,
16 an update in 1998, peer review in 1999, more than 10 years of experience in
17 implementing the update, and the Shore Protection Board sitting for two-to-three
18 years defining and redefining what should be done. It has been understood that
19 choices need to be made beyond just what science will tell us will provide the best
20 protection. Using adaptive management, as recommended by Woods Hole when they
21 did the peer review in 1999, taught the Town that it needed to learn from its
22 experiences on the shoreline and apply that knowledge to the next project. Adaptive
23 management also meant there are financial and environmental permitting constraints
24 that are central to the decision making as the program moves forward.
25
26 3) ECE recommendations would involve double the amount of sand as compared to Plan
27 B which would cost tens of millions of additional dollars. Groin work had been
28 recommended in the ECE report which would be costly. The scale of the sand would
29 result in impacts to the near shore environment. Plan B focuses on feeder beaches and
30 putting larger slugs of sand into the places that could take it, such as Mid-Town and
31 Reach 7, and not cause a negative environmental impact. This limits the extra cost of
32 mitigation.
33

34 Town Manager Elwell stated that from a financial point of view, the Erickson plan is
35 unaffordable for the Town and the cost is greater than Plan A with all items included. He
36 asked what elements should be incorporated into Plan B to strengthen it. He stated that
37 seawalls are always the last line of defense, they do provide some protection and it is
38 prudent to give them consideration to the value of protecting the upland areas. He
39 explained that the Town's measure of adequate shore protection was whether all the work
40 done seaward of the seawalls, together with the seawalls, would provide sufficient
41 protection to the landward side of the seawalls. He further explained that the ECE
42 recommendation was that the level of storm protection would be measured as protecting
43 those seawalls from harm because they are the last level of defense. He expressed
44 concern that the ECE recommendation was a primary driver of several of the other
45 conclusions, most impactful of which requires a lot more sand in front of the seawalls in
46 order to protect the seawalls instead of allowing a lesser amount of sand and the seawalls

1 to provide the protection to the upland improvements. He stated that including or not
2 including the seawalls would make tens of millions of dollars difference in the scale of
3 the program that would be appropriate and defensible.
4

5 Board Member Frank said there were two main items: money and things that the Town
6 does not feel could get permitted. He suggested that those things that could not get
7 permitted should be crossed out.
8

9 Vice Chair Lindsay Buck spoke about the experience the Board had gained over the last
10 few years and the evolution of the shore protection plan. She stated that the seawalls had
11 to be considered as part of the protection of the upland properties. She further stated that
12 she would like to see sand placed in front of the seawalls but it was not practical given
13 the budget restraints. She said that Plan B encompasses those things that the Town can
14 accomplish and permit. She spoke about the sand transfer plant and the extension of the
15 pipeline to help the north end of the reaches, the obligation to fill the groins at Mid-Town
16 and its positive impact on the southern reaches, feeder beaches, difficulties with
17 permitting of structures, and the need for a structure at the north end of Reach 7. She
18 stated that Plan B was a good start, it would evolve over the next ten years, and it covered
19 all the areas the Board had cited as problem areas with possible exception of Reach 2
20 because the Town was relying on a settlement with the USACE to help with the
21 extension of the pipeline. She said she was comfortable proceeding with the budget and
22 taking the things from the ECE report that were good and incorporating them into the
23 plan
24

25 Karyn Erickson, Principal Engineer, Erickson Consulting Engineers, responded to the
26 Town Manager's comments regarding the ECE recommendations. She stated it was
27 important to create a drawing of the Town with the level of protection for each area, what
28 comprises that 15 or 25 year protection, and the protection when the erosion nears the
29 line. She spoke about adaptive management. She also spoke about the need for at least a
30 three or five year volume of protection in front of seawalls if they are going to be a line
31 of protection from a storm event.
32

33 Regarding sand volumes, Ms. Erickson reported that the administrative law judge agreed
34 that consideration be given to the natural effect of grain size that holds up to high storm
35 events. She explained that by placing finer sand and using the background sand that had
36 been renourished, there was lower and lower performance and the overfill factors and
37 cost of the projects would be higher. She suggested it would be more effective dollars to
38 look at sand from the Bahamas with a higher fall velocity and more stable grain size. She
39 also suggested more cores be taken from the borrow sites to find the coarsest strata for
40 placement on the sensitive beaches which would save money.
41

42 Ms. Erickson stated that while the Town had been in the planning stage for 20-30 years, it
43 had been in the construction stage for only 16 years and was on the learning curve with
44 the complexities of the shoreline. She spoke about compromises made in the fifth or
45 seventh year of permitting and the lessons learned, particularly in Reach 7 and Reach 8.
46 She also spoke about structures saying that when costing out the 20-50 year life of the

1 structures and the sand and renourishment, it was not that expensive. She stated that there
2 would be an obligation to filling the structures. She further stated that she was an
3 advocate of phasing structures and not building more than what was needed.
4

5 Ms. Erickson asked for a month to review the staff response to her report and to give a
6 report in January.
7

8 Board Member Cooper asked if Bahamian sand could be permitted in Palm Beach. Ms.
9 Erickson responded that it could be permitted if it came over dry. She spoke about the
10 environmental issue with the sand. She suggested that Bahamian sand be "kept on the
11 table" because of its quality, durability and performance.
12

13 Board Member Cooper asked about mitigation issues and the cost of putting sand along
14 all the seawalls in Town. He asked the source of the sand. He expressed concern with the
15 potential cost. Ms. Erickson replied that the first step was moving more sand into Reach 2
16 by the bypass and the monitoring of the volume and its positive effect on the beach. She
17 explained her recommendation regarding the building of dunes over the seawalls. She
18 stated that the value of coarse sand was that it stacked up at a steeper slope. She said she
19 believed that rather than using Ortona sand, it would be better to find and identify coarser
20 sand within the two borrow sites. She stated that her approach would be to put a volume
21 of sand in front of the seawalls, even if it had to be replaced every three years for selected
22 structures. She explained that as the beach gradually advances on both sides, sand can
23 progressively be added that would be beneficial to the structures.
24

25 Board Member Cooper asked Ms. Erickson if she had reviewed the groin analysis. Ms.
26 Erickson replied that she had looked at the reports from Isiminger and Coastal Tech. She
27 reported that there were some key groins by Coastal Tech that could have elevations,
28 their impermeability and porosity reduced, to have some holding capacity that that could
29 create a 25' wide beach. She said it would be worthwhile for the small amount of money.
30 She spoke about the possibility of a demonstration project using a small pre-fabricated
31 geo-tech style material.
32

33 Chair Ecclestone thanked Ms. Erickson for her report.
34

35 Madelyne Greenberg, 3350 South Ocean Boulevard, addressed the Board on behalf of
36 Richard Hunegs, asking if the correct size granules were used for Reach 8 would it be
37 possible to forestall the rapid encroachment of the hardbottom. Ms. Erickson answered
38 that grain size could accomplish a much reduced impact on the near shore hardbottom.
39 She suggested that the agencies be involved in the design phase. Ms. Greenberg asked if
40 the ECE recommendation was ignored for reasons of cost, would it be reasonable to
41 expect the project would have to be repeated. Ms. Erickson answered that if the Town
42 doesn't spend some level of money optimizing the grain size in projects that could be
43 built in Reach 8, substantial money would have to be spent later to build seawalls and to
44 look at options that may be precluded because no action was taken due to the hardbottom.
45 Mr. Brazil reported that the Reach 8 project was being designed with truck sand which is
46 some of the coarsest material that can be obtained and some of the most expensive sand.

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1 He said that coarser sand is being used to minimize the impact to the hardbottom but
2 there would still be impacts and mitigation. He stated there were limitations to how much
3 sand could be placed regardless of the coarseness. Vice Chair Lindsay Buck stated that
4 all members of the Board agreed with the need for a larger grain size.
5

6 Board Member Frank questioned the compatibility of the Bahamian sand to Palm Beach
7 sand. Ms. Erickson reported that a project was built in Miami using Bahamian sand but
8 the Federal government does not reimburse for projects with foreign sand. Mike Jenkins,
9 Coastal Engineering Team Leader, Applied Technology & Management, Inc. (ATM),
10 stated that the DEP current position was that Bahamian sand would not be considered
11 except in Monroe County because it is similar and it may be considered for Miami-Dade.
12 He added that DEP had made the determination that for counties north it was not
13 consistent with the sand rule and they would not consider it at this time. He said his
14 professional opinion was that the Town would not be able to get a permit for Bahamian
15 sand.
16

17 Ms. Erickson spoke about the costs of sand from the Turks and Caicos. She suggested the
18 sand could be mixed 50/50 with sand from the borrow sites. She suggested the Town
19 approach Governor Rick Scott rather than DEP.
20

21 Penny Cutt of Coastal Systems International cautioned that if the Town pursues the use of
22 foreign sand there was a high likelihood that the Corps would require an EIS to analyze
23 and assess any potential environmental effects of using the foreign sand.
24

25 Town Council Member Richard Kleid, 2660 South Ocean Boulevard, reported that it was
26 his understanding that Plan B would look at the groins in Sloan's curve area, overload
27 sand in Reach 7 and a renourishment of Reach 7, continue that renourishment into Reach
28 8 to the northern part of Lake Worth bridge, place the most coarse sand possible within
29 certain parameters and the ability to get permitting, and place no sand in Reach 8 in the
30 southern area but do a dune restoration periodically. He asked Ms. Erickson for a critique
31 of that particular project and what the Town should be doing differently that is
32 permissible and affordable. Ms. Erickson responded with respect to Reach 7, she believed
33 there was agreement to the approach of identifying coarser sand and structures. With
34 respect to Reach 8, she suggested that coarser sand be identified and used in the original
35 configuration or similar to Plan A. She said dune projects were a remedial/interim action
36 and a permit application should be pursued for a dune project.
37

38 Town Council Member Kleid asked the consequences of doing the original project and
39 placing sand in Reach 8. Mr. Weber replied that the Town was still on course for the
40 permitting as outlined in Plan A. He reported that it was his understanding there could
41 only be one permit application for a particular area at one time. He explained the
42 difference between the current beach restoration project and a dune restoration project.
43

44 Town Manager Elwell commented that the question of how to move forward to the next
45 step in the permitting for the Plan A style beach restoration project in Reach 8 would be
46 further considered by the Shore Protection Board at its January 2012 meeting. He added

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1 the majority of the sand proposed for Reach 8 would go into the area north of the Pier
2 because that is where a larger quantity of sand could be placed without environmental
3 constraints.

4
5 Vice Chair Lindsay Buck left the meeting.
6

7 Town Council Member Kleid asked if it was possible to follow Ms. Erickson's
8 recommendation to do the Reach 7 project and also place sand on the beach in Reach 8
9 with dune restoration. Town Manager Elwell responded that the EIS (Environmental
10 Impact Statement) was the issue that needed to be addressed. He said that the current plan
11 was for a Reach 7 project with structures in the northern part and the Reach 8 project
12 with a relatively large amount of sand north of the Pier and a smaller amount of sand
13 south of the Pier. He reported that the Town would now need to do an EIS for the area
14 south of the Pier. He said the question was the cost and time of addressing the EIS.
15

16 Ms. Erickson asked if the template that provides for sand in the berm area as well as the
17 beach face would be included in the permit that is now being pursued for south of the
18 Pier down to and including the condominium at 3360. Mr. Weber answered that he
19 believed there was a transition point around the R132 area where the taper goes from a
20 small modest dune and berm to a dune only. He stated that the permit application for
21 Reach 8 was for 100% Ortona sand. There was discussion on sand sources.
22

23 Ms. Erickson suggested that, if the sand from the borrow site was quality sand, to include
24 both sand sources (Ortona and the borrow site) as alternative sand sources. Town
25 Manager Elwell reminded Ms. Erickson that the segment of beach being discussed was
26 the only segment in Town not designated by DEP as critically eroded. He reported that an
27 issue in prior permitting for that segment was whether or not it was acceptable to the
28 State to use part of the limited amount of offshore sand, whatever quality, to be placed
29 into an area that the State doesn't feel is critically eroded. He further reported that the
30 State was willing, under the right circumstances and design parameters, to use the Ortona
31 sand in that segment of the beach. Ms. Erickson asked if the Town had considered asking
32 for a significant erosion condition. Ms. Cutt addressed the question about the use of two
33 different sand sources concurrently. She stated that the agencies would not give a permit
34 for choices; however, the proposed sand source could be changed. She cautioned that a
35 change from an upland source to an offshore source would be a more involved
36 modification. She spoke about the positive aspects of using the Ortona sand source and
37 the REI process.
38

39 Chair Ecclestone asked for clarification regarding the location of Reach 8 and if two
40 projects could be submitted at the same time. Ms. Cutt answered that two projects could
41 not be submitted at the same time for the same segment of beach. Town Manager Elwell
42 explained that the boundary between Reach 7 and Reach 8, as set forth in the prior
43 CCMP, was the Ambassador Condominium. He said there is a segment of Reach 8 north
44 of the Lake Worth Pier which is complicated from a technical and community
45 understanding perspective. He reported that at an appropriate time in the future a proposal
46 would be made to consider the area north of the Pier as part of Reach 7 and Reach 8

1 would be the portion of beach south of the Pier. He explained that the Town was still
2 trying to obtain a permit for a beach project that would be for all of Reach 8 (except the
3 very south end) starting at the Ambassador with a larger amount of sand north of the Pier
4 and a smaller amount of sand south of the Pier. He further explained that the state and
5 federal government were agreeable to what was proposed for north of the Pier but south
6 of the Pier there were issues that would take time and money. He said the issue would be
7 discussed further in January.
8

9 Lewis Crampton, 2335 South Ocean Boulevard, asked how long it would take to
10 understand the new environmental requirements and the additional cost. He said that it
11 seemed that some elements of Plan A could be put back in Plan B. Town Manager Elwell
12 replied that the issue would be discussed at the January 26 Shore Board meeting. He
13 explained that staff was optimistic regarding the EIS because a lot of analysis of the
14 environmental resources and potential impacts south of Pier had already been done. He
15 cautioned there would still be a delay and extra costs.
16

17 Town Council Member William Diamond, 220 Wells Road, asked when the Town
18 Council would consider how to pay for the plan. Town Manager Elwell responded that
19 the Shore Board was operating under the Council's prior direction that projects would be
20 paid for when permits were obtained. He added that it was his understanding that Town
21 Council wanted to first receive Plan A or Plan B and then give consideration to the
22 funding decision. He stated his expectation was to give the recommendation from the
23 Shore Protection Board to Town Council within the next few months.
24

25 Ms. Erickson responded to Ms. Cutt's comments about two sand sources. She stated if
26 the Town designates the dune projects as emergency dune projects, she believed there
27 could still be a beach nourishment project as a separate application. She recommended
28 Reach 7 and Reach 8 be separated at the Pier to simplify the permitting and clarify the
29 coastal process issues. She reported that different borrow sites could be identified and
30 ranked until there was clarification regarding the sand source that could be used. She said
31 that the clear advantage of using off shore sand was that it was hydraulically placed so
32 the sand grains were compacted and erosion was significantly reduced.
33

34 Ms. Cutt explained the EIS process. She reported that the EIS being done by Palm Beach
35 County was a regulatory EIS and would require an independent contractor paid by the
36 County and Town but answering to the Corps directly. She further reported that an EIS
37 only points out the options and environmental effects and other effects such as financial,
38 ecological, and archeological; it does not make a decision or a recommendation. She
39 stated that a no action alternative had to be considered as part of what had to be done for
40 an EIS. She further stated that another option that needed to be considered was not
41 permitting any structures but just placing sand. She said that the proposed action of
42 putting the sand to stabilize the portion of Reach 8 or the area south of the Lake Worth
43 Pier had to be considered in the EIS currently being done in order for the Corps to accept
44 it. She added that the Corps would require that the options be thoroughly vetted and
45 evaluated. She explained that the amount of work to be done and the cost of the EIS
46 should not be much of an increase but the time for completing the EIS would increase

1 because of the evaluation of the structural alternatives. She concluded that the EIS
2 document is not going to recommend a solution; it would only lay out everything that
3 must be considered. Town Manager Elwell stated that at the next meeting the Shore
4 Board would receive a report on the conversations with the County and the regulatory
5 agencies regarding the specific scope that needs to be accomplished and the expected
6 time and cost.

7
8 Ms. Greenberg asked about the benefit of a designation of significant erosion. Ms.
9 Erickson answered that significant erosion does not consider whether there are a certain
10 number of upland structures threatened but looks specifically at erosion, whether it is
11 chronic and whether it had increased in the last 15-20 years. She suggested it would be
12 worth discussing with the DEP.

13
14 The Shore Board members thanked the coastal engineers who were present. Board
15 Member Goldstein stated that the meeting had been very informative and he liked the
16 open session dialogue. Board Member Katz agreed that it was an excellent example of
17 consultant engineers not agreeing with each other but, at the end of the day, all wanting
18 the same thing for the Town.
19

20 XIII. TOPICS FOR FUTURE MEETINGS

21 January 26, 2012

- 22
- 23 1. 2012 Schedule of Meetings
 - 24 2. Offshore Dredging Technologies Overview
 - 25 3. South End Sand Search Results
 - 26 4. 2011 Townwide Sediment Budget Review (Including Erosion Rates Discussion)

27 Chair Ecclestone announced that the next meeting would be held on January 26, 2012.
28 Town Manager Elwell reported that in addition to the topics printed on the agenda the
29 consultant selection process and a further review of the EIS would be included.

February 23, 2012

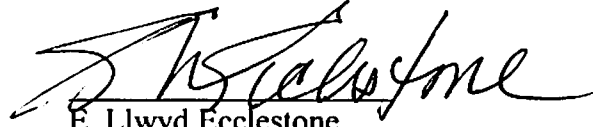
- 27
- 28 1. Review of the Town's Depth of Closure
 - 29 2. Resident Workshop for Sand Transfer Plant Phase II Project

REPORT OF THE SHORE PROTECTION BOARD MEETING
HELD ON TUESDAY, DECEMBER 6, 2011

XIV. ADJOURNMENT

Chair Ecclestone adjourned the meeting at 2:49 p.m.

APPROVED:



E. Llwyd Ecclestone
Chairman

Shore Protection Board Backup Docs 12-06-11