



MINUTES
TOWN OF HILLSBORO BEACH
SPECIAL COMMISSION MEETING
October 9, 2020

12:30 P.M.

CALL TO ORDER, ROLL CALL, AND PLEDGE OF ALLEGIANCE

Mayor Deborah L. Tarrant called the meeting to order at 12:30 p.m. Roll was called with the Commission members and staff present via video as listed below.

Town Commission:

Mayor Deborah L. Tarrant
Commissioner Andrew R. Brown
Commissioner Barbara Baldassarre

Vice Mayor Irene Kirdahy
Commissioner Vicky Feaman

Town Staff:

Town Manager Mac Serda
DJ Doody, Town Attorney
Town Clerk Sherry D. Henderson, CMC

Town Manager Mac Serda shared the Governor's order allowing for online meeting and outlined the procedure to be followed. He explained the notice given and provided instruction on the Zoom system being utilized to host the meeting online. He further noted public comment was being accepted by email, as well as on the Zoom system.

Motion made by Commissioner Feaman, seconded by Commissioner Brown, to approve the agenda as presented. In a roll call vote, the **motion** passed unanimously. (5-0)

I. DISCUSSION & POSSIBLE ACTION

A. Discussion and Possible Action Concerning the Commercial Contract Between Winter Sun Investments, LLC and the Town of Hillsboro Beach to Purchase Property Located at 1205 and 1206 Hillsboro Mile, Hillsboro Beach, FL 33062

Mayor Tarrant explained the Commission was gathered to discuss whether to end the commercial contract with Winter Sun Investments, LLC regarding the purchase of the property located at 1205 and 1206 Hillsboro Mile, in light of the settlement agreement with

the City of Deerfield Beach.

Commissioner Brown added that the Deerfield Beach Commission had approved the settlement agreement with Hillsboro Beach the previous night, and since the settlement included construction easements, it settled the need to purchase property at this time.

Vice Mayor Kirdahy stated she would still like to see the Town purchase the property if it were within their financial ability to do so, as it was an important opportunity. She commended staff and legal counsel on the agreement with Deerfield Beach and noted it would be good for all of South Florida.

Commissioner Feaman added that she did not think it was the time to pursue the contract and stated she believed regional sand management was the way to go.

Commissioner Baldasarre stated she agreed.

Mayor Tarrant stated long-term benefits needed to go on the back burner for a few years. She noted the agreement was the first step to long ranging beach nourishment, but only the first step. Continuing, Mayor Tarrant expressed that she was pleased with the cooperation between the communities.

Motion made by Commissioner Feaman, seconded by Commissioner Brown, to cancel the contract between the Town and Winter Sun Investments, LLC. In a roll call vote, the **motion** passed unanimously. (5-0)

Mayor Tarrant asserted timing was everything, and thanked Winter Sun for their patience over the past year.

- B.** Consideration and Possible Action on the Notice of Appeal to Florida Supreme Court, Relating to Bond Validation Proceeding in Circuit Court of Broward Count, Case No.: CACE-203859

Motion made by Vice Mayor Kirdahy, seconded by Commissioner Baldasarre, to drop the appeal for the bond validation hearing. In a roll call vote, the **motion** passed unanimously. (5-0)

- C.** Consideration to Accept FEMA Funding for a Beach Erosion Mitigation Study and Update the Beach Management Plan. FEMA's Contribution will be 75% with a Local Match of 25%, Total Cost Anticipated to be Approximately \$100,000.

Mr. Serda stated the item was to give notice to the Commission that through Dr. Jackie Brower's efforts, the doors had been opened with FEMA for eligibility for mitigation funds in

relation to Hurricane Dorian.

Mayor Tarrant added that mitigation funds address the problem in ways other than just putting sand on the beach.

Dr. Jackie Brower and Tim Blankenship from Moffat & Nichol gave a brief *PowerPoint* presentation regarding the opportunity for FEMA mitigation funding.

Dr. Brower explained the Town had applied for public assistance for beach re-nourishment sand, and through that process had identified additional funding for a mitigation project. She stated the funding would be a match up to the sand funding of \$4.3 million for a mitigation project to support beach efforts.

Continuing, Dr. Brower stated FEMA had requested a study to identify mitigation opportunities and action steps. She noted the tasks staff would like to propose to FEMA included:

- Existing data review (including 2012 study)
- Analytical shoreline and volumetric change analysis
- Mitigation alternatives analysis and modeling
- Conceptual design of recommended alternatives and reporting

Dr. Brower noted the tasks would include meetings with FEMA and additional stakeholders such as the Army Corps of Engineers and alignment with the City of Deerfield Beach.

Continuing, Dr. Brower explained the solutions proposed from the 2012 study, and noted staff wanted to review additional options, including stabilizing the back-beach berm and dunes. She provided images of what was done previously and stated the 2012 study would be utilized as a starting point.

Dr. Brower shared that the feasibility scope in the study would go to FEMA for review. She noted the cost-sharing by the Town for the study itself was estimated at \$25,000, and that item was included in the proposed budget. She stated the first step was to let FEMA know the Town was interested.

Town Clerk Sherry Henderson read an email from local resident John Carson, which included a 45-page document dated February 2012 and attached comments. In his comments, Mr. Carson asserted updating the plan would do little to nothing to benefit the taxpayers. He stated citizens are ready for a natural beach, not an engineered one, and asked that funds be spent on things other than sand and permits.

Dr. Brower responded to the comments, noting the document was the same 2012 study she

had referenced in her presentation. She noted an update of the study was required to be eligible for FEMA funding. She added that the Town had relied on FEMA funds for the last three (3) beach nourishments so it was her advice that it was appropriate to make the updates.

Continuing, Dr. Brower asserted that the Town knows what happens if they continue status quo, but this was an opportunity to look at natural solutions beyond putting sand on the beach with the support of FEMA funding.

Mayor Tarrant stated Dr. Brower had heard Mr. Carlson's arguments before, because the Mayor had the same reservations. She asked why Hillsboro Beach was taking the lead on what sounded like a regional study and stated she didn't mind funding the study if the actions were actionable, but asserted the Town was not in a vacuum and did not have control over what happened on other beaches.

Mayor Tarrant added that she was looking for a regional approach, and the only way to do that was to have buy-in from all the players in the region.

Mayor Tarrant asserted that with all those issues, the Town had no choice because they relied on the FEMA money to support nourishment of the beach. She stated they had not had to go to the taxpayers for funding of a nourishment since the 2010 loan because of FEMA, and without FEMA additional taxpayer money would be needed.

Mayor Tarrant stated the Town needed to be prepared to accept the natural mitigation recommendations in order to continue with FEMA as a friend.

Mr. Serda asked that the Commission recognize that when they have applied for funding for past hurricanes, FEMA asked for the beach management plan as part of the submission. He noted this allowed for an update of the beach management plan update with FEMA underwriting 75 percent.

Mayor Tarrant stated the settlement with Deerfield Beach would be part of the foundation of the beach management plan moving forward. She noted it had been a tightrope to bring all of the pieces together at the same time, and said her recommendation was to accept the mitigation study and look at the cost as the update of the beach management plan which required update, anyway.

Commissioner Baldassarre asked what the study timeline was in comparison with meeting with Deerfield Beach and the first nourishment in cooperation with Deerfield Beach.

Dr. Brower stated there was flexibility on how to proceed and noted staff would work with the Deerfield Beach timeline as needed. She added that she did not believe they would need to wait for the first round of nourishment with Deerfield Beach before conducting the study.

Mr. Blankenship agreed there was some flexibility, and it would take time to get the funding established, but they would recommend moving forward with the study once funding was in place because the goal was to look at a long-range plan.

Commissioner Baldassarre asked if Deerfield Beach's management plan would be incorporated in the study.

Mr. Blankenship stated Deerfield Beach had published a study dated January 2020. He noted the copy he had was stamped draft, so he wasn't sure if there was more updated information, but that data and any recommendations included within would be included in the study.

Mayor Tarrant asserted that if it were a mitigation study, it should be conducted as soon as possible, not waiting for the nourishment.

Mr. Blankenship agreed that the study should move forward as soon as possible. He provided history regarding sequencing for integration of coastal structures and sand in beach management plans in other areas.

In response to a question from Vice Mayor Kirdahy, Dr. Brower stated dune management was not studied previously, but she was recommending that they look at dunes as well as other solutions which are not as structural.

Vice Mayor Kirdahy shared her personal experience with dune management on her condominium property and its benefits during past hurricanes. She stated she did not understand objections to dunes. Vice Mayor Kirdahy stated she did not want to ignore this funding and have FEMA ignore them when seeking hurricane funding in the future.

Mayor Tarrant stated she believed the dune pushback was an education matter, and if it were part of the recommendation, there would need to be a program sharing information with residents about why it was a good thing.

The Commissioners agreed by consensus to move forward with the study.

Mr. Serda stated he would communicate to FEMA that the Town was interested in pursuing the mitigation funding and completing a beach management study.

II. TOWN MANAGER REPORT

None.

III. TOWN ATTORNEY REPORT

Mr. Doody congratulated the Commission on the monumental development in the history of the Town regarding the Deerfield Beach settlement. He stated without the Commission's efforts, he did not believe the settlement would be a reality.

Mr. Doody stated he would draft a letter to Winter Sun exercising the Town's right to cancel the contract and would take action to end the appeal.

IV. TOWN COMMISSION COMMENTS & REPORTS

Commissioner Brown stated he had been busy since joining the Town Commission, and shared some of the achievements of staff, legal counsel, and the Mayor. He added that everyone had done an excellent job in providing the Commission with the information needed to make decisions.

Mr. Serda added his kudos to Mayor Tarrant, noting she had always provided the information needed throughout the process.

The Commissioners discussed the value of education throughout the beach nourishment project and planning for beach projects, along with all the things that go on behind the scenes to make the beach beautiful.

Mayor Tarrant asserted that in a beach town, it is very important that elected officials know about beaches. She added that the beach is a living, breathing thing.

V. PUBLIC COMMENTS

Jane Reiser thanked the Commission and staff for their time and hard work regarding the agreement with Deerfield Beach and the potential purchase of the 1205 and 1206 Hillsboro Mile property. She stated the stress was difficult, but the harassment of the Commission was deplorable. She added that she believed the purchase should be added to the back burner for the future.

VI. ADJOURNMENT

Motion made by Commissioner Baldasarre, seconded by Commissioner Feaman, to adjourn the meeting at 1:35 p.m. In a roll call vote, the **motion** passed unanimously.

ADOPTED THIS 10th DAY OF Nov., 2020

By: Deborah L. Tarrant
Deborah L. Tarrant, Mayor

ATTEST:

Sherry D. Henderson
Sherry D. Henderson, CMC
Town Clerk
11-10-2020



OCTOBER 9, 2020

SPECIAL COMMISSION MEETING

Town of Hillsboro Beach
1210 Hillsboro Mile
Hillsboro Beach, FL 33062

Town Clerk

From: Sea <seafont@comcast.net>
Sent: Friday, October 9, 2020 12:30 PM
To: TownClerk@TownofHillsboroBeach.com
Subject: FEMA Project
Attachments: 120305 Hillsboro Beach Hot Spot Management Study Presentation.pdf



*975 Hillsboro Mile
Hillsboro Beach, Florida 33062
954-781-7356, cell 954-778-4430
SeaFront@Comcast.net*

John Carlson at 975 says....,

The proposed feasibility study shall evaluate options and provide potential recommendations for ongoing and future management initiatives of the beaches and coastal infrastructure protection. This is another *been there done that* project.

Updating the current Beach Management Plan will do little to nothing in terms of benefiting Hillsboro Beach taxpayers. DEP does what they want regardless of opinion.

The appropriate coastal solution for the Project is already capped by the Deerfield Settlement Agreement and isn't going to change. Implementation of hard engineered solutions like coastal structures is patently outrageous. The Town already conducted a \$42,000.00 hot Spot Management Study in 2012 on engineered breakwaters and it was found to be not feasible nor permitable. Attached is a copy. Give that to FEMA together with a copy of our new SETTLEMENT AGREEMENT.

Please reconsider spending more taxpayer funds on anything other than sand and permits. Citizens are ready for a natural beach—not an engineered one.



COASTAL SYSTEMS INTERNATIONAL, INC.

Coastal Engineering

Waterfront & Marinas

Civil Engineering

Regulatory Permitting

Site Investigations

Marine Environmental

Construction

Destination Development



Hot-Spot Management Study Town of Hillsboro Beach



Prepared for:



Town of Hillsboro Beach
1210 Hillsboro Mile
Hillsboro Beach, Florida 33062

Prepared by:



Coastal Systems International, Inc.
464 South Dixie Highway
Coral Gables, FL 33146

February, 2012



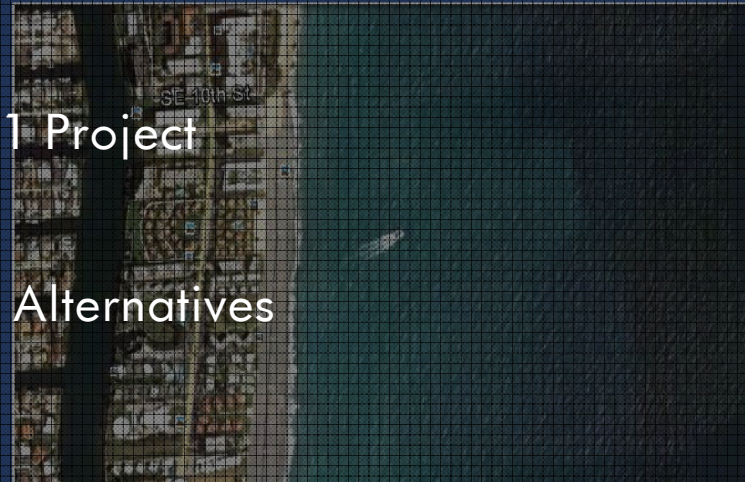
Presentation Outline

- Recap of November, 2011 Beach Workshop
- Review Scope of Work for Hot Spot Management Study
- Shoreline Stabilization Alternatives
- Numerical Modeling Approach
- Modeling Results – 7 Alternatives
- Environmental Permit Feasibility
- Recommendations



Recap of Beach Workshop

- Presentation at Beach Workshop – November 21, 2011
- Web Site <http://www.townofhillsborobeach.com/index.php?sec=82>
- 1997 Long Range Beach Renourishment Plan
- Three Beach Renourishment Projects
- Physical/Biological Monitoring of 2011 Project
- Boca Inlet Management
- Outlined Hot Spot Shore Stabilization Alternatives

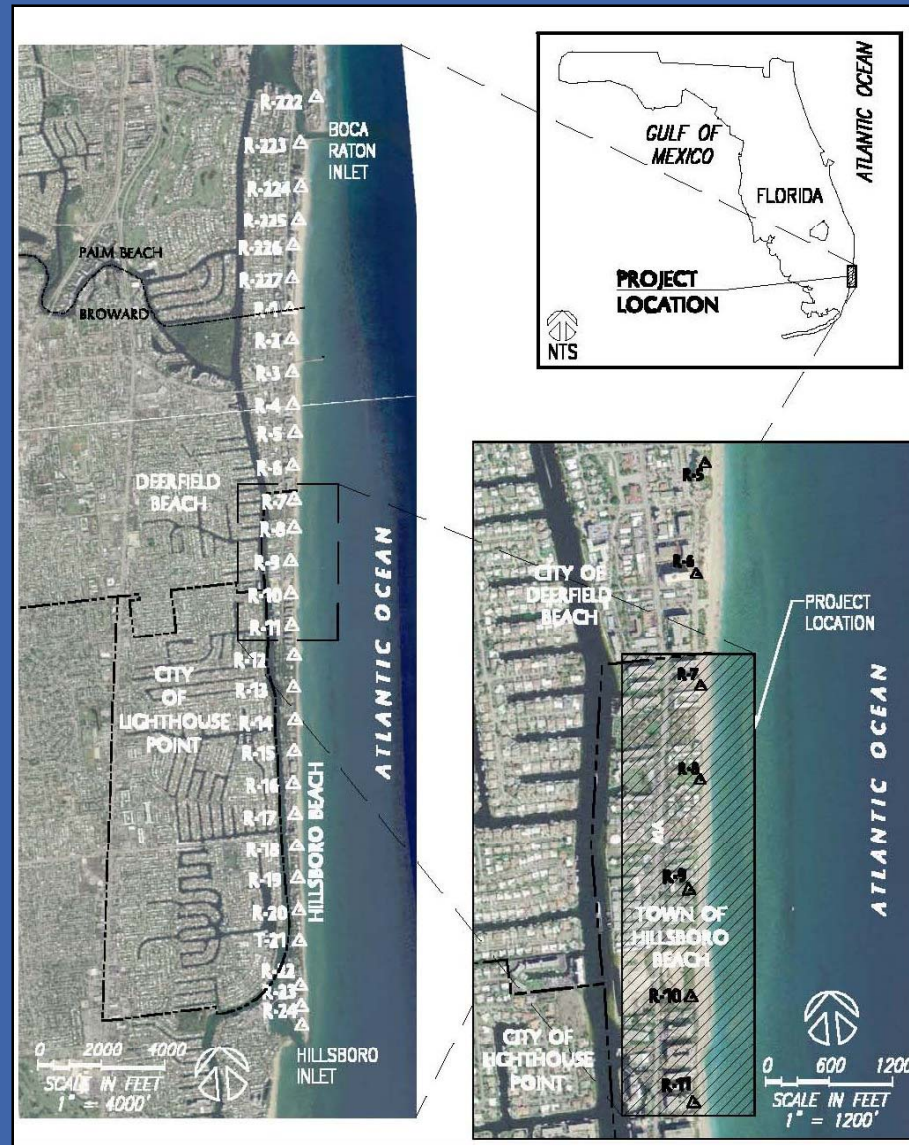




Hot Spot Management Study – Scope of Work

- Feasibility Study – Stabilization of Northern 5,000' of Hillsboro Beach
- Historical Data – Erosion “Hot Spot” Rates and Coastal Processes
- Review Southeast Florida Coastal Structures
- Numerical Modeling – DHI MIKE-21
- Numerical Modeling - Sediment Transport
- Calibration of Numerical Modeling
- Shoreline Stabilization Alternative Simulations
- Review Environmental Permitting Feasibility
- Recommendations and Report Preparation
- Workshop Presentation

Shoreline Stabilization Options



Study Area – Northern Hillsboro Beach

Shoreline Stabilization Alternatives



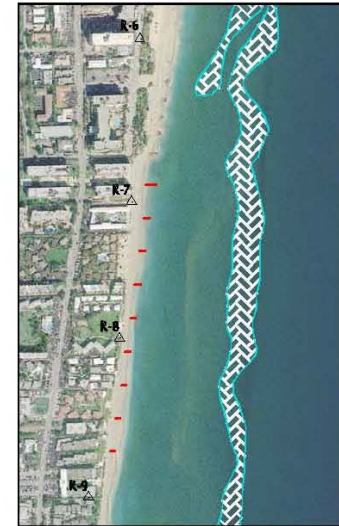
ALTERNATIVE 1



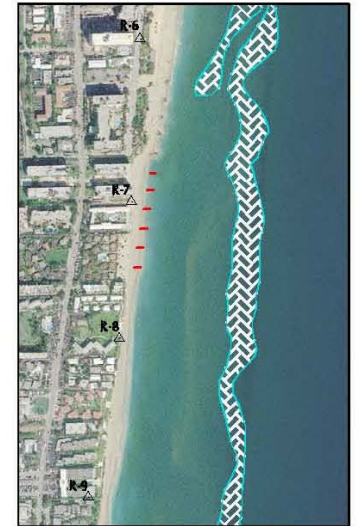
ALTERNATIVE 2



ALTERNATIVE 3



ALTERNATIVE 4A



ALTERNATIVE 4B



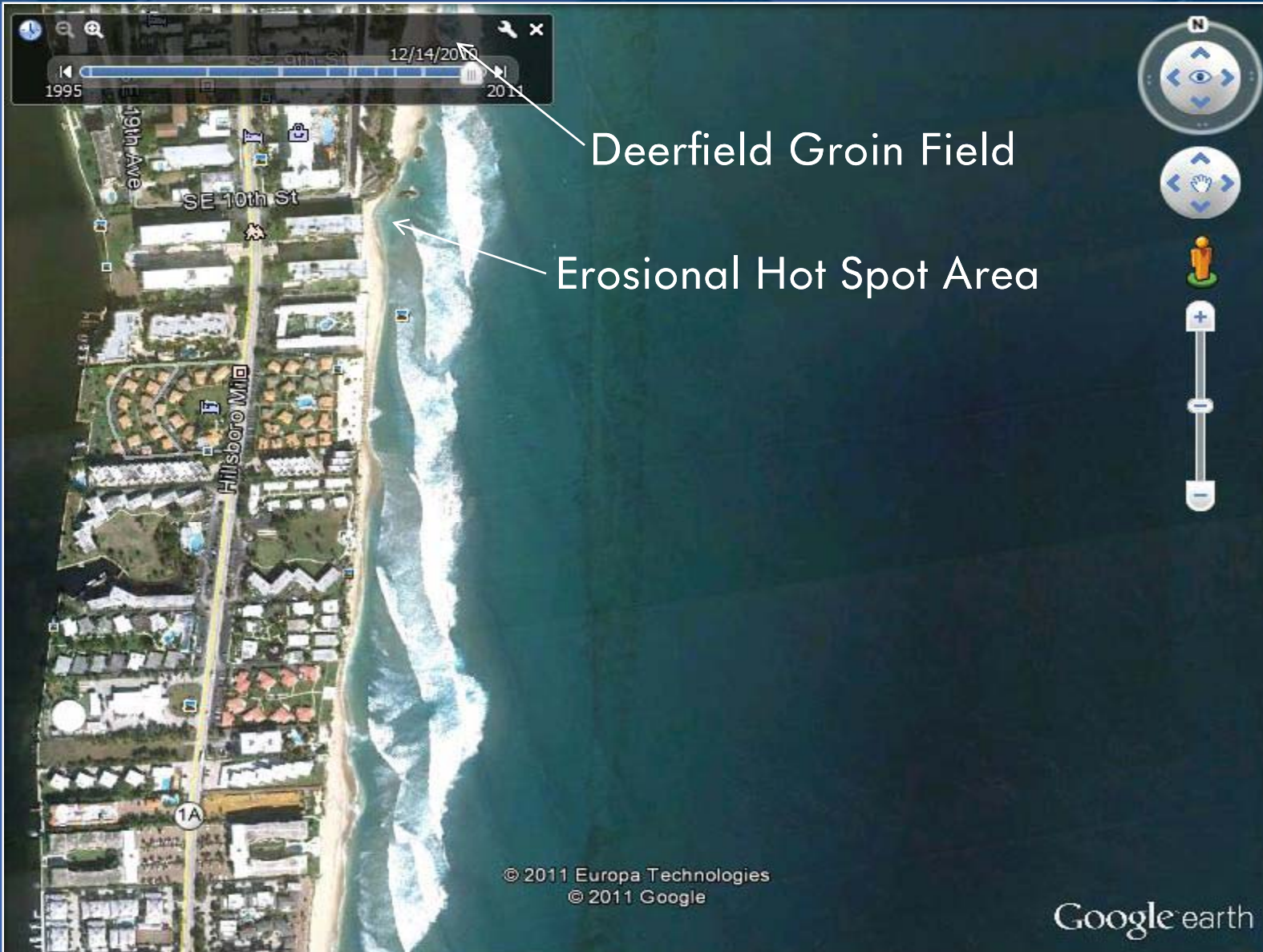
Shoreline Stabilization Alternatives



Alternative 2 – Continued Beach Nourishment



Shoreline Stabilization Alternatives



Alternatives 3 & 4 Groin Field Modifications

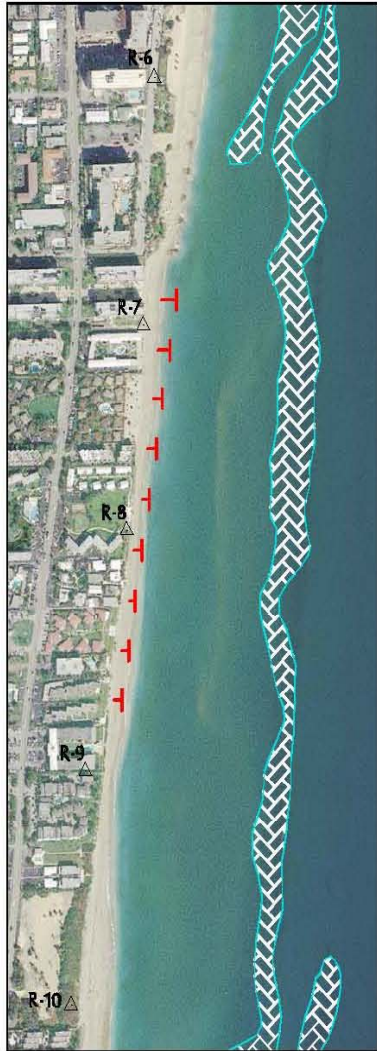


Shoreline Stabilization Alternatives

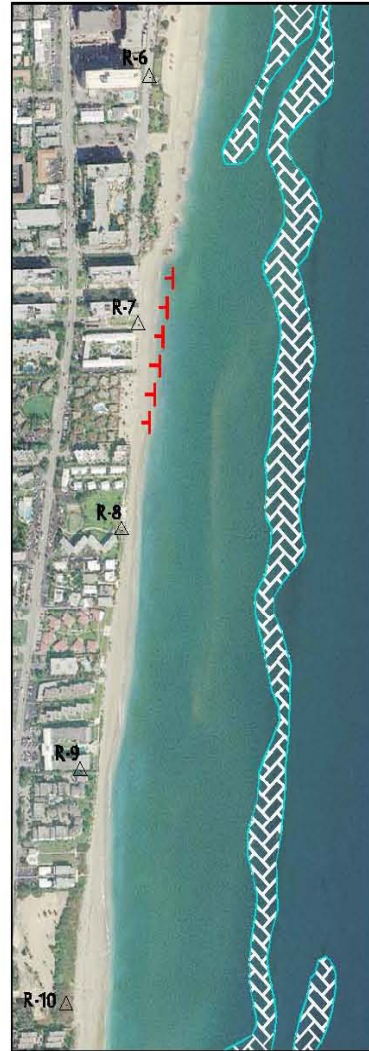


Groins

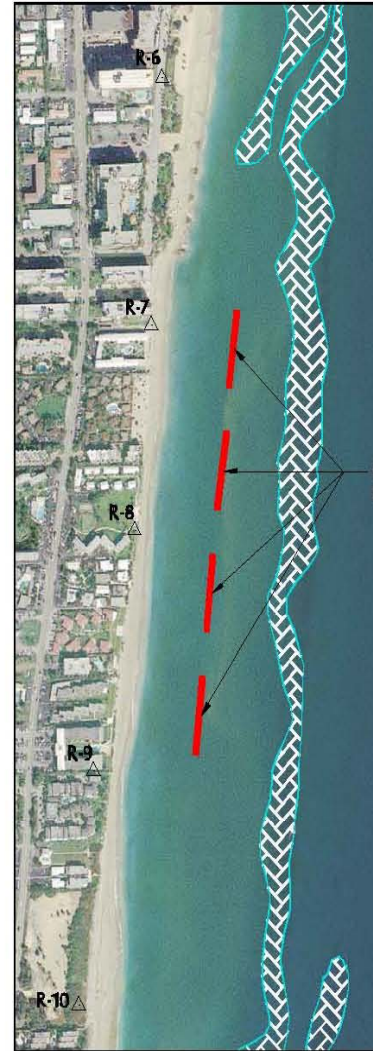
Shoreline Stabilization Alternatives



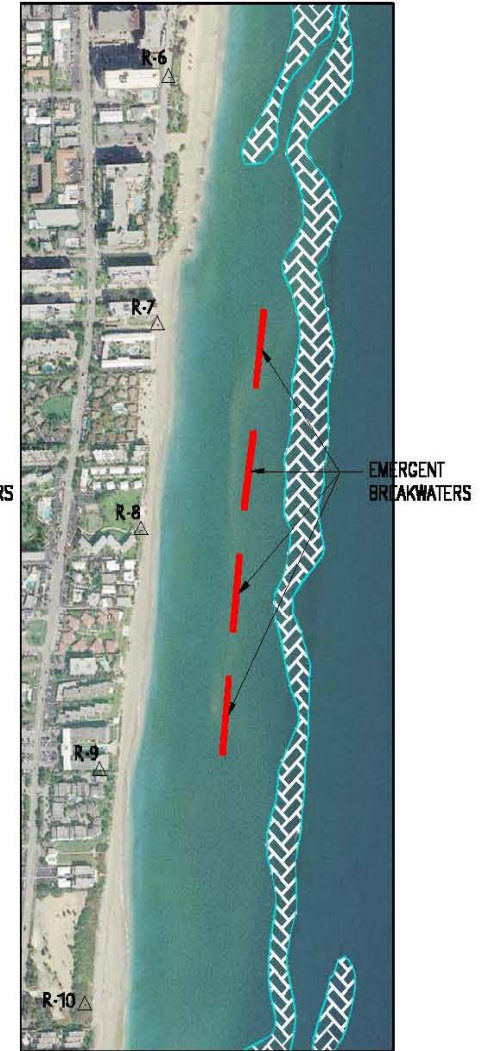
ALTERNATIVE 5A



ALTERNATIVE 5B



ALTERNATIVE 6A

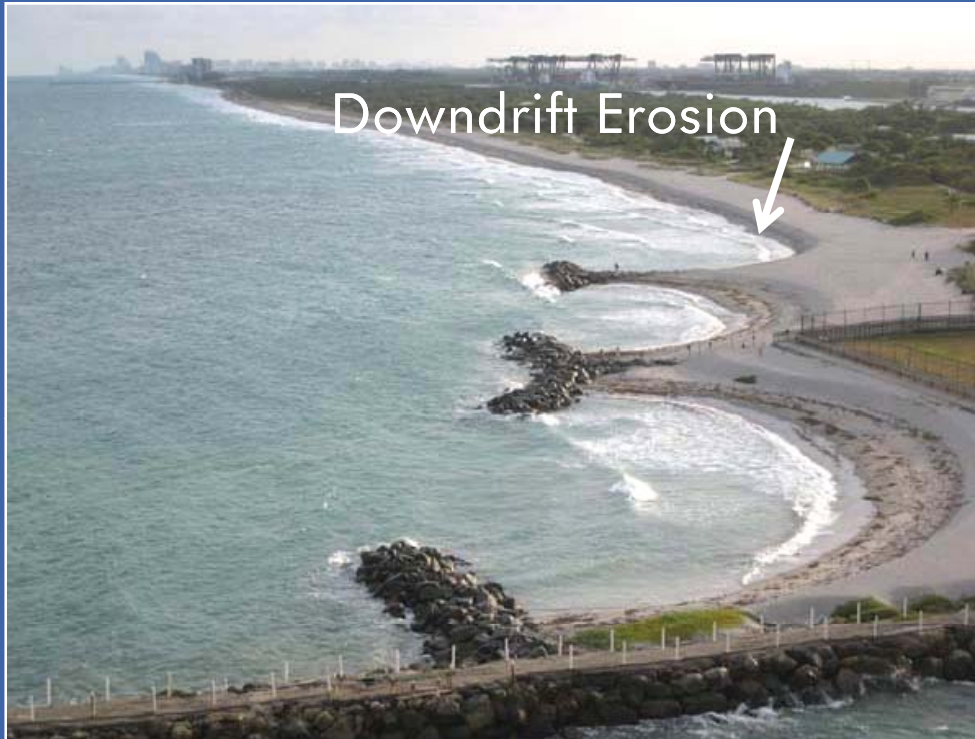


ALTERNATIVE 6B

Alternatives 5a-6b



Shoreline Stabilization Alternatives



- Lack of Bypassing at Port Everglades
- Affect performance of coastal structures
- County and Corps of Engineers evaluating beaches in John U. Lloyd Park

Alternative 5 - T-Head Groins



Shoreline Stabilization Alternatives

- 32nd Street Nearshore Breakwaters, Miami Beach, Florida
- Aerial Photo – Post Construction 2002
- Designed by Coastal Systems



Alternative 6 – Emergent Breakwaters



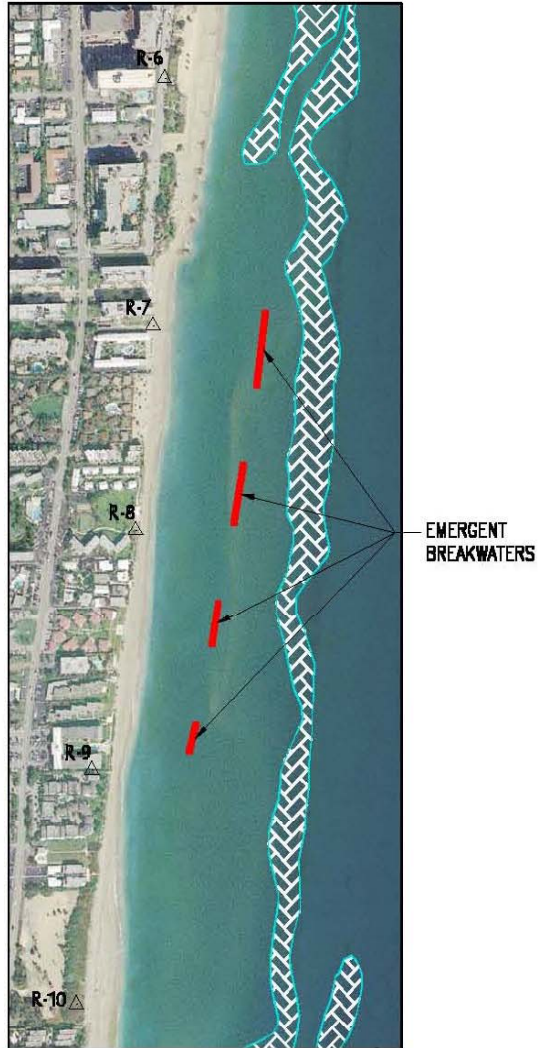
Shoreline Stabilization Alternatives

- 32nd Street Nearshore Breakwaters, Miami Beach, Florida
- Aerial Photo – 2011
- Coastal structures fully impounded with sand

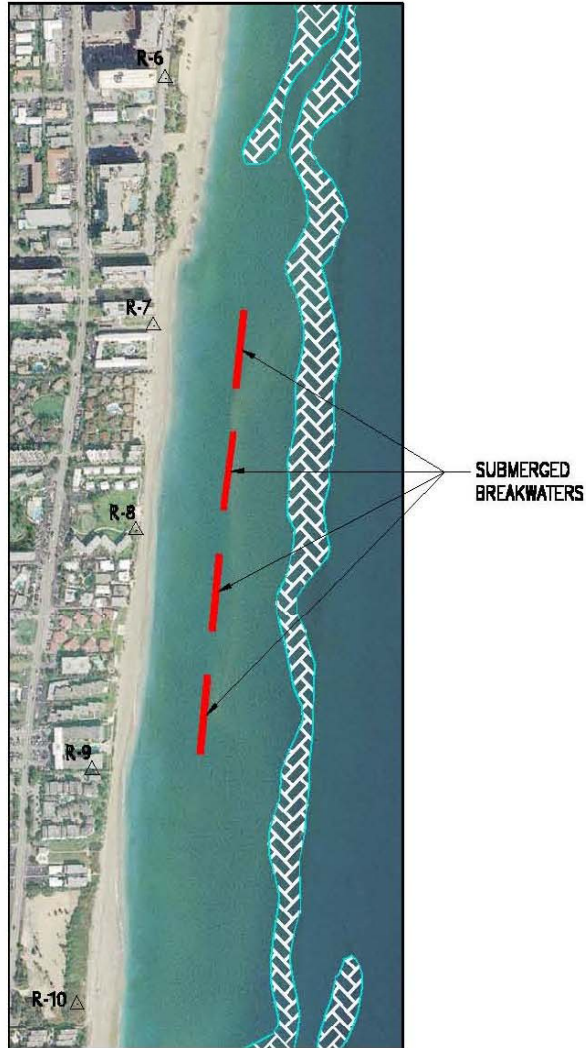


Alternative 6 – Emergent Breakwaters

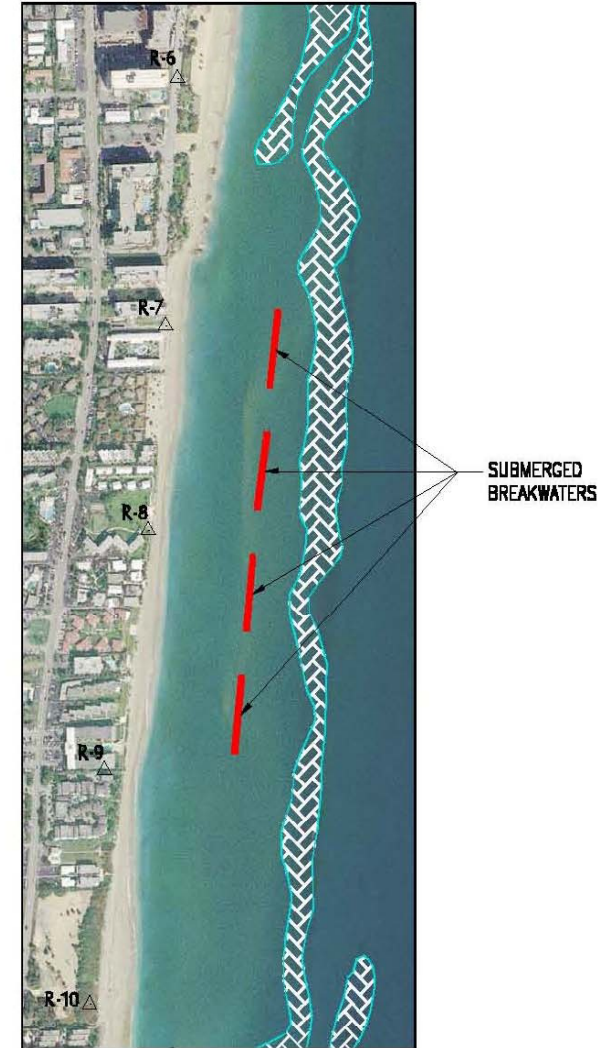
Shoreline Stabilization Alternatives



ALTERNATIVE 6C



ALTERNATIVE 7A



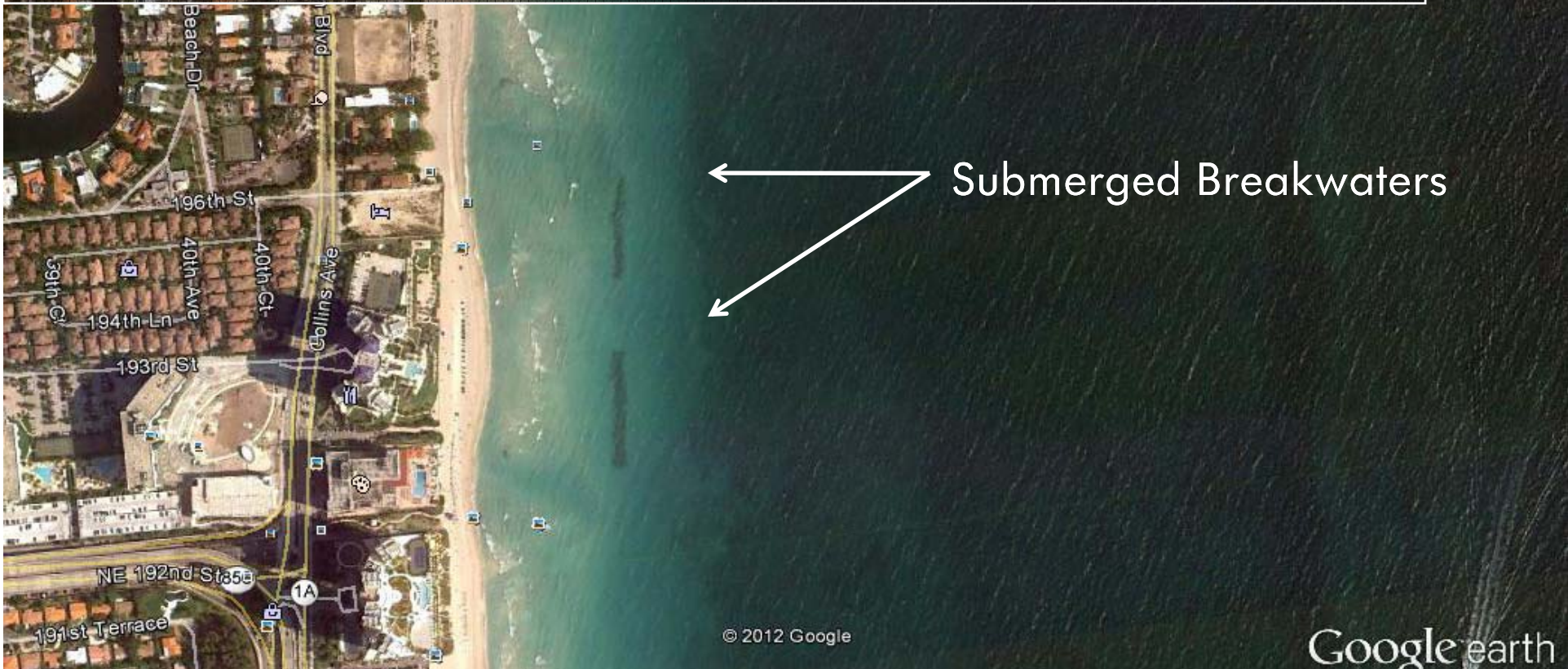
ALTERNATIVE 7B

Alternatives 6c-7b



Shoreline Stabilization Alternatives

- Submerged Breakwaters - Sunny Isles – Miami-Dade County
- Aerial Photo – 2011
- Designed by the Corps of Engineers and constructed in 2001

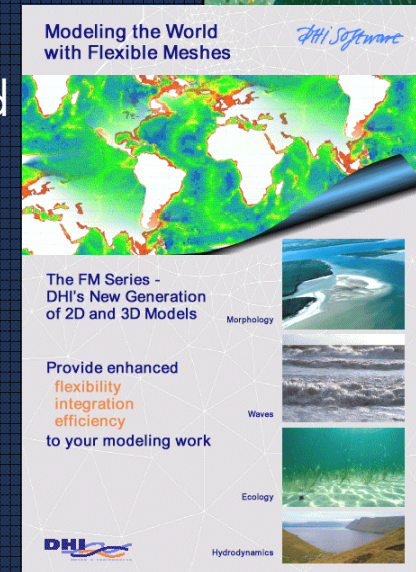
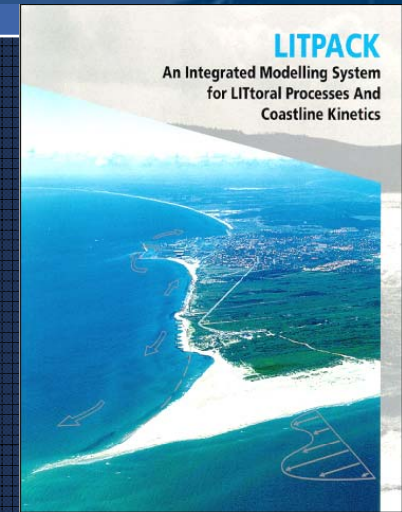


Alternative 7 – Submerged Breakwaters

- DHI MIKE-21 Complete suite of models for coastal studies:

Morphological Modeling
Wave Modeling
Sediment Transport
Hydrodynamic

- Assessment of long-term shoreline response to coastal structures
- 20 Years of Development
- All software undergoes continuous development and is verified not only by DHI but also by professional users worldwide
- No other modeling package has been used for as many coastal/marine projects around the world as MIKE-21
- Coastal Systems – early user in U.S. since 1999



Worldwide Representative Project Applications of MIKE-21 and LITPACK:

- Thyboron Denmark – submerged groin extension (2005)
- Colywyn Bay Beach – Portugal (2011)
- Comandatuba Beach Resort – Brazil (2009)
- Piera, Greece – (2004)
- Artificial Reefs – German Baltic Sea Coast (2011)
- Coastline of Morocco
- Greys to Sunset Beach – Western Australia (2010)



Florida Project Applications of MIKE-21 and LITPACK:

- St. Lucie County Shoreline Study (2010)
- Town of Palm Beach Groin Study, Palm Beach County (2011)
- Indian River County Sector 3 Beach Nourishment (2008)

Projects Modeled by Coastal Systems:

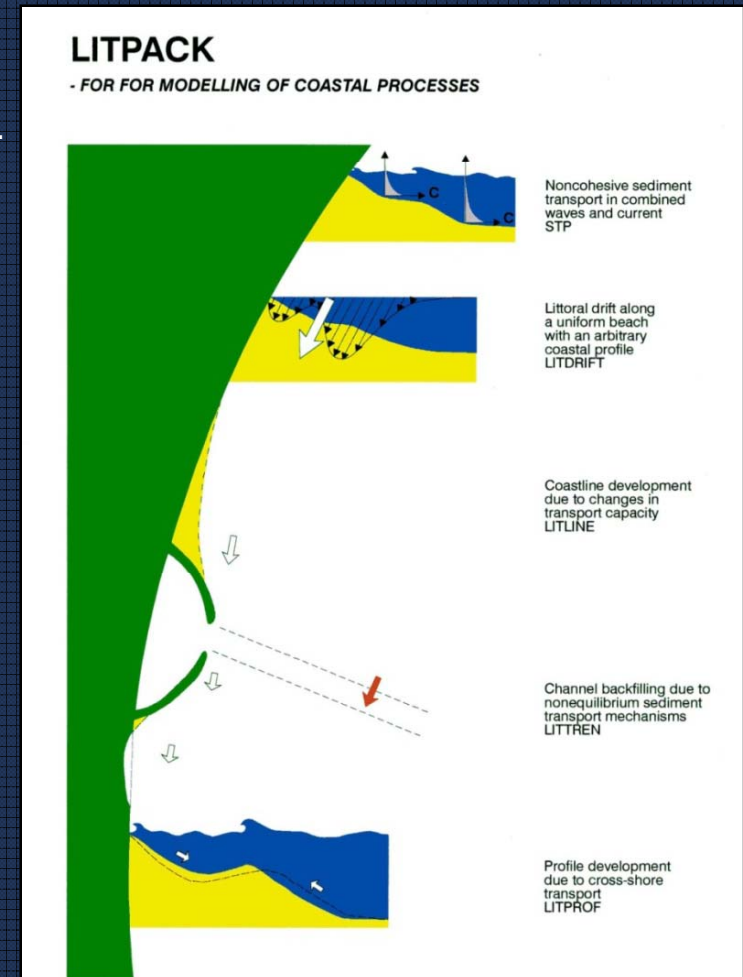
- Town of Palm Beach South End Beach Restoration (Reach 8), Palm Beach County (2011)
- Singer Island, Palm Beach County (2002)
- Miami Dade County, Bakers Haulover Inlet to Government Cut (2004)

LITLINE Modeling Summary

- LITLINE Module Part of LITPACK from DHI that includes STP, LITREN and LITPROF modules
- LITLINE Calculates coastline evolution for sediment transport
- Simulates the following shoreline and coastal structures:
 - Groins
 - Jetties
 - Revetments
 - Offshore (emergent) Breakwaters

Design of Optimization of coastal engineering projects

Efficient Simulation of Complex Coastal Problems





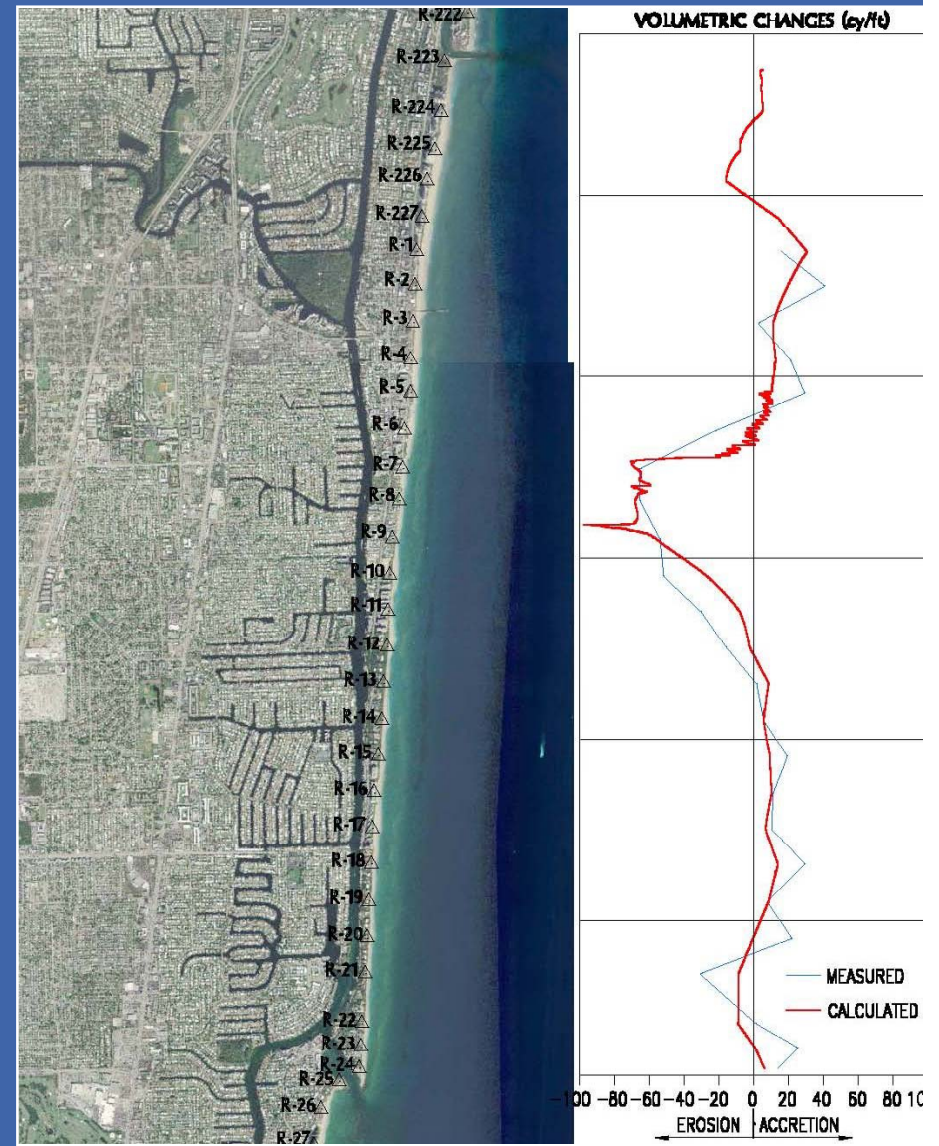
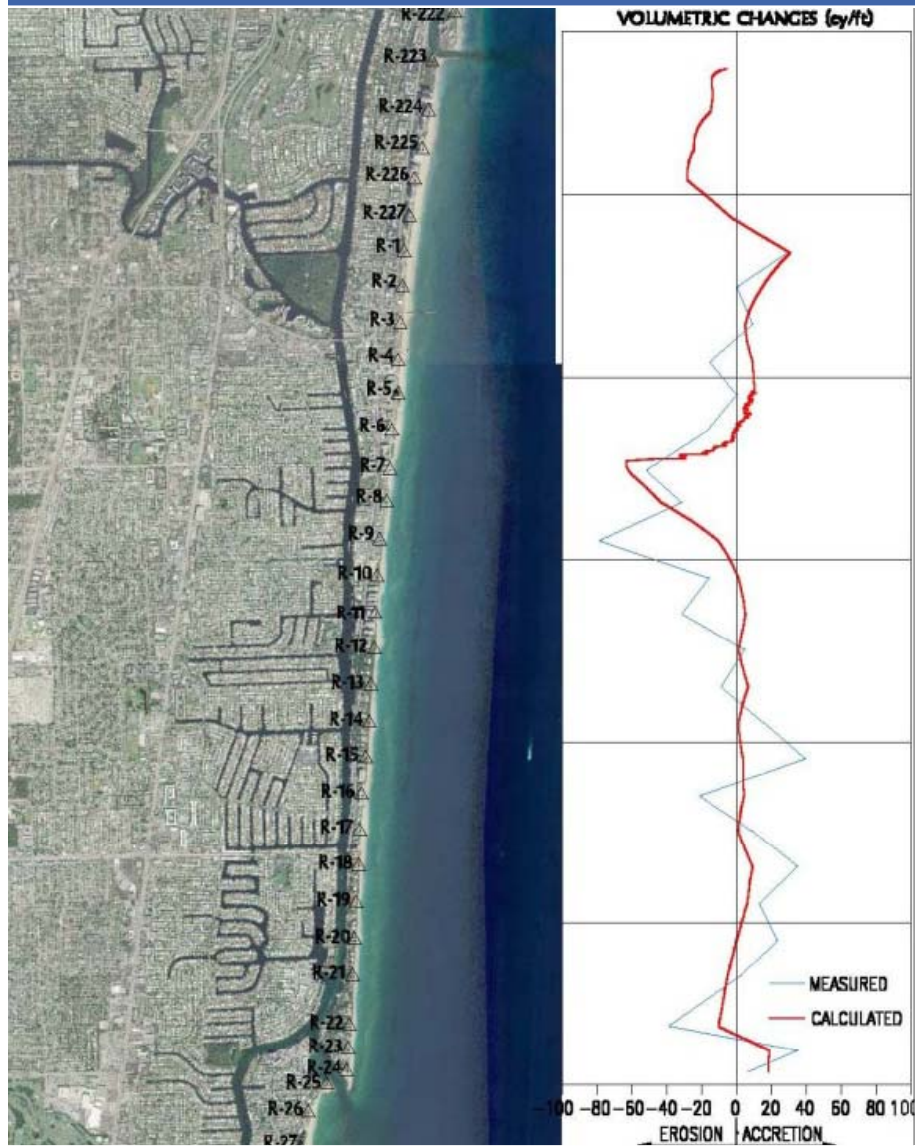
Numerical Modeling Approach

- Calibration Years 1999 – 2002 (3 years of data)
- Calibration Years 1999 – 2007 (8 years of data)
- LITLINE Calibration – **replicate measured data**
- Calibrate longshore sediment transport rates, historical shoreline positions, and volumetric changes
- LITLINE Note: assumes normal, annualized processes and continued bypassing at Boca Inlet



LITLINE Calibration

Numerical Modeling Approach



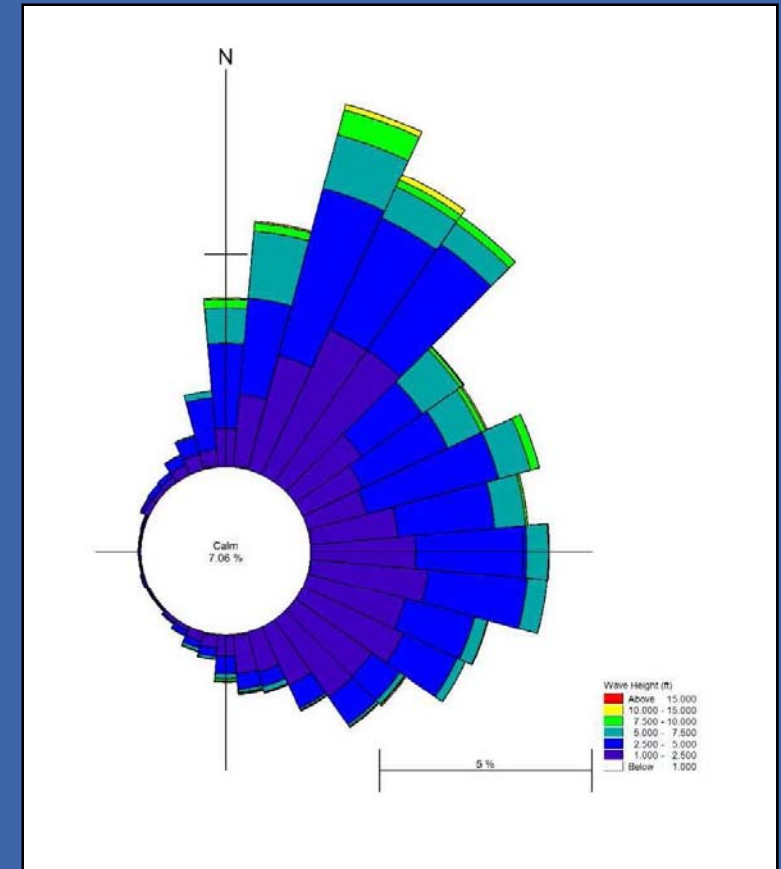
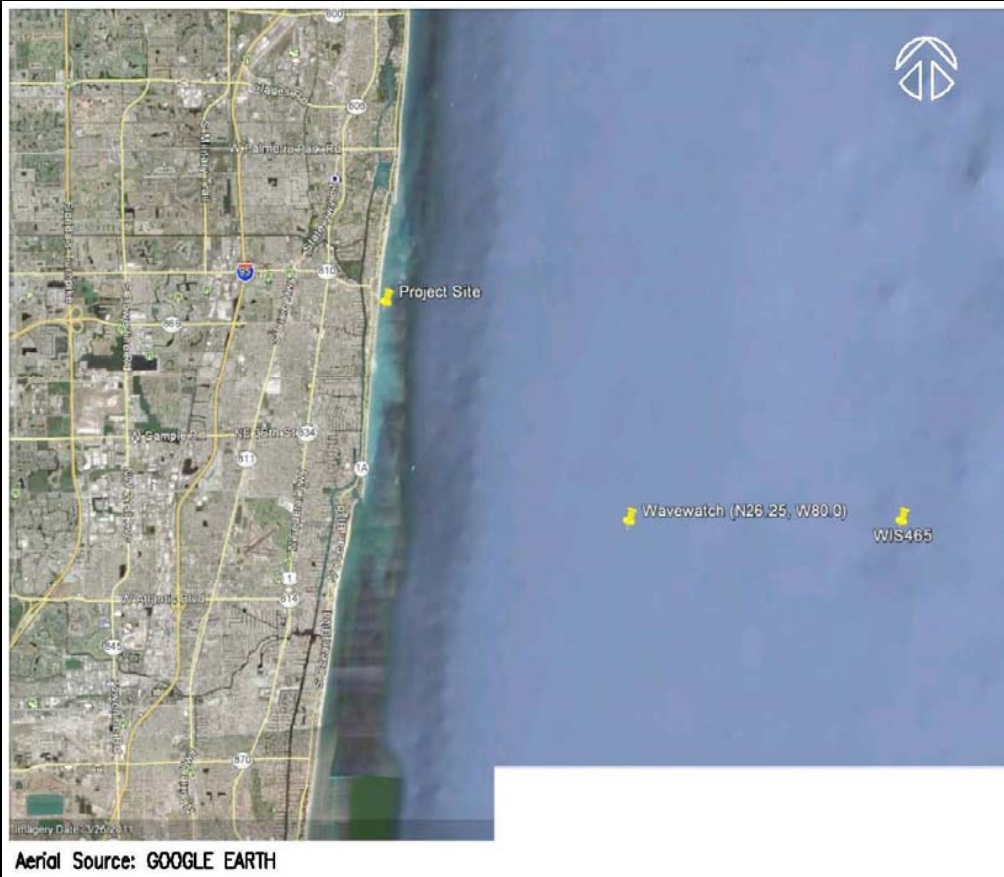
LITLINE Calibration



Numerical Modeling Approach

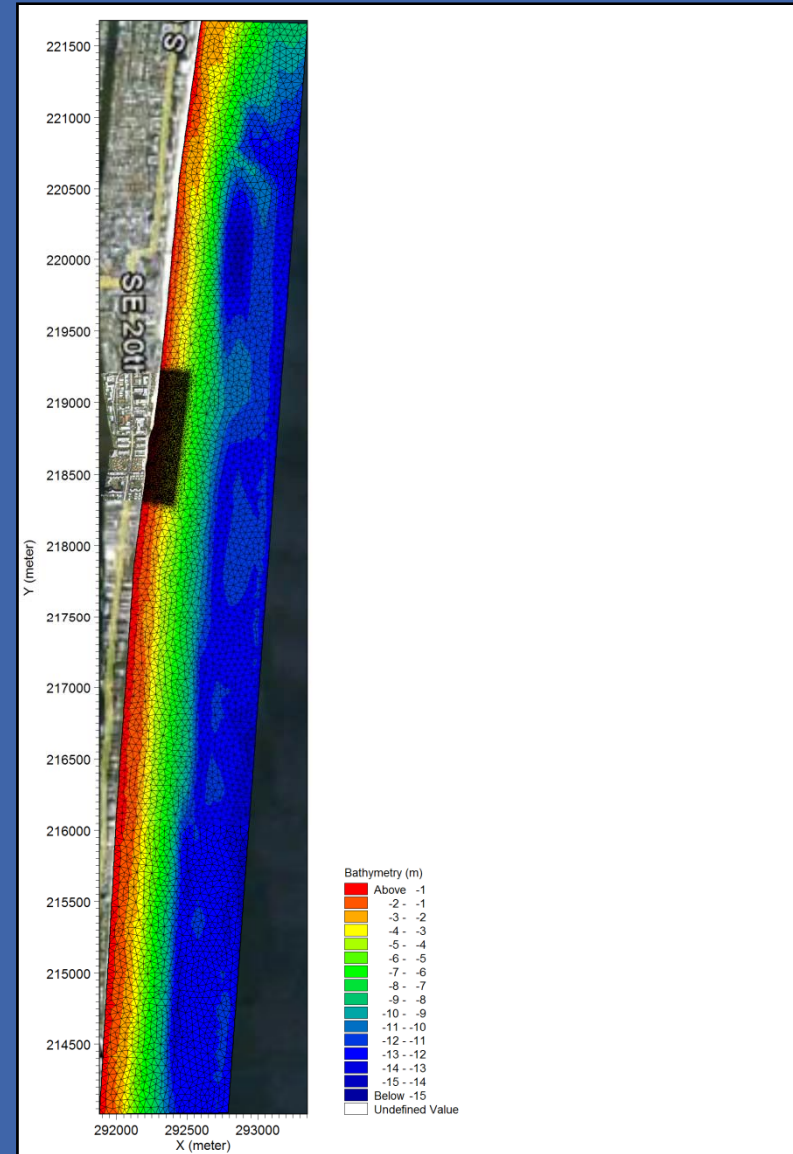
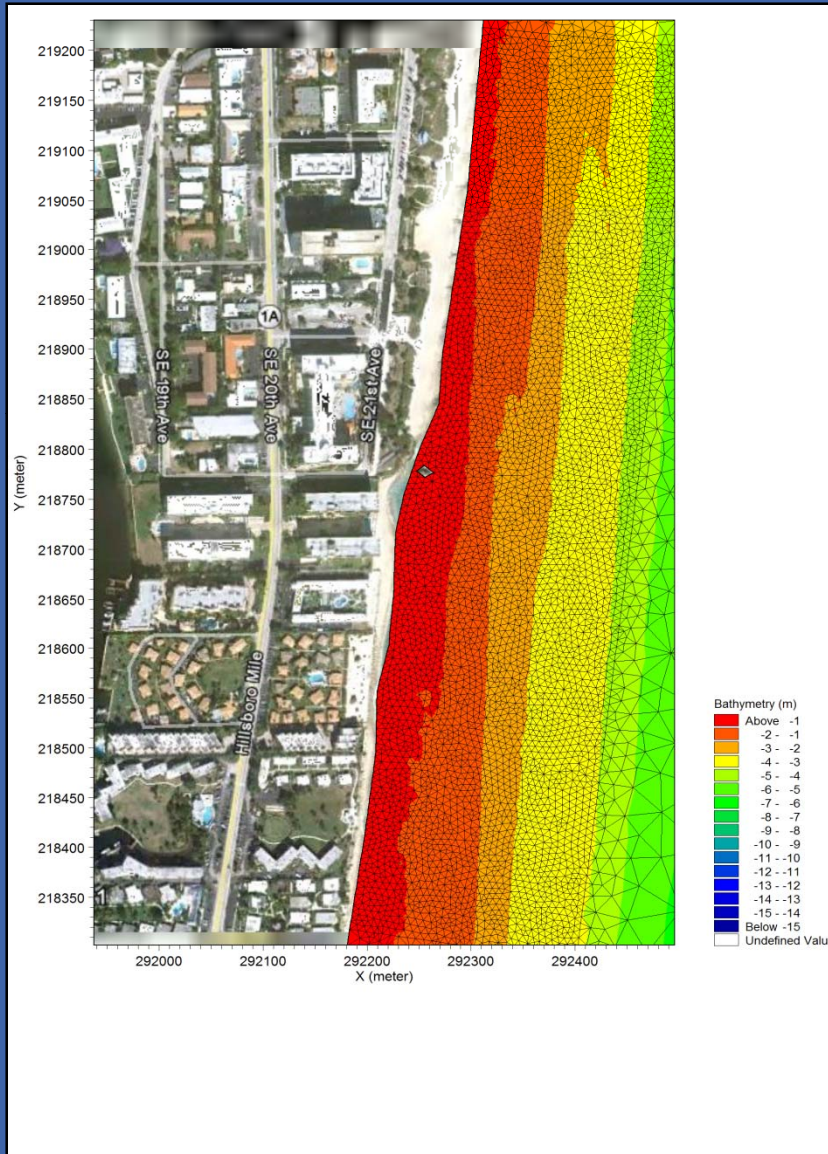
- Submerged Breakwaters not simulated with LITLINE Model
- Utilized MIKE 21 SW wave model coupled with HD (hydrodynamic model)
- Results of the nearshore wave and current modeling input into sediment transport model to estimate sediment transport rates

Numerical Modeling Approach



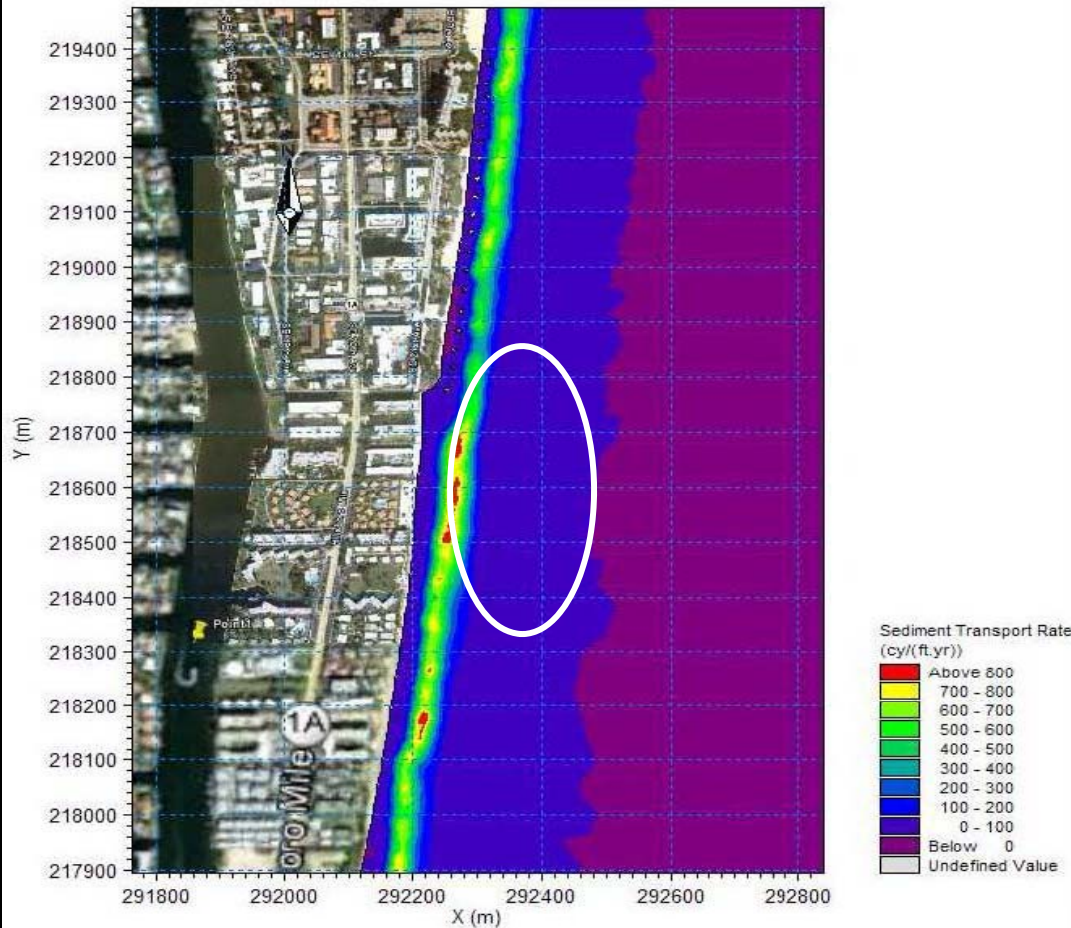
Wave Rose - Statistics from WIS 1980 – 1999 (19 years data)

Numerical Modeling Approach



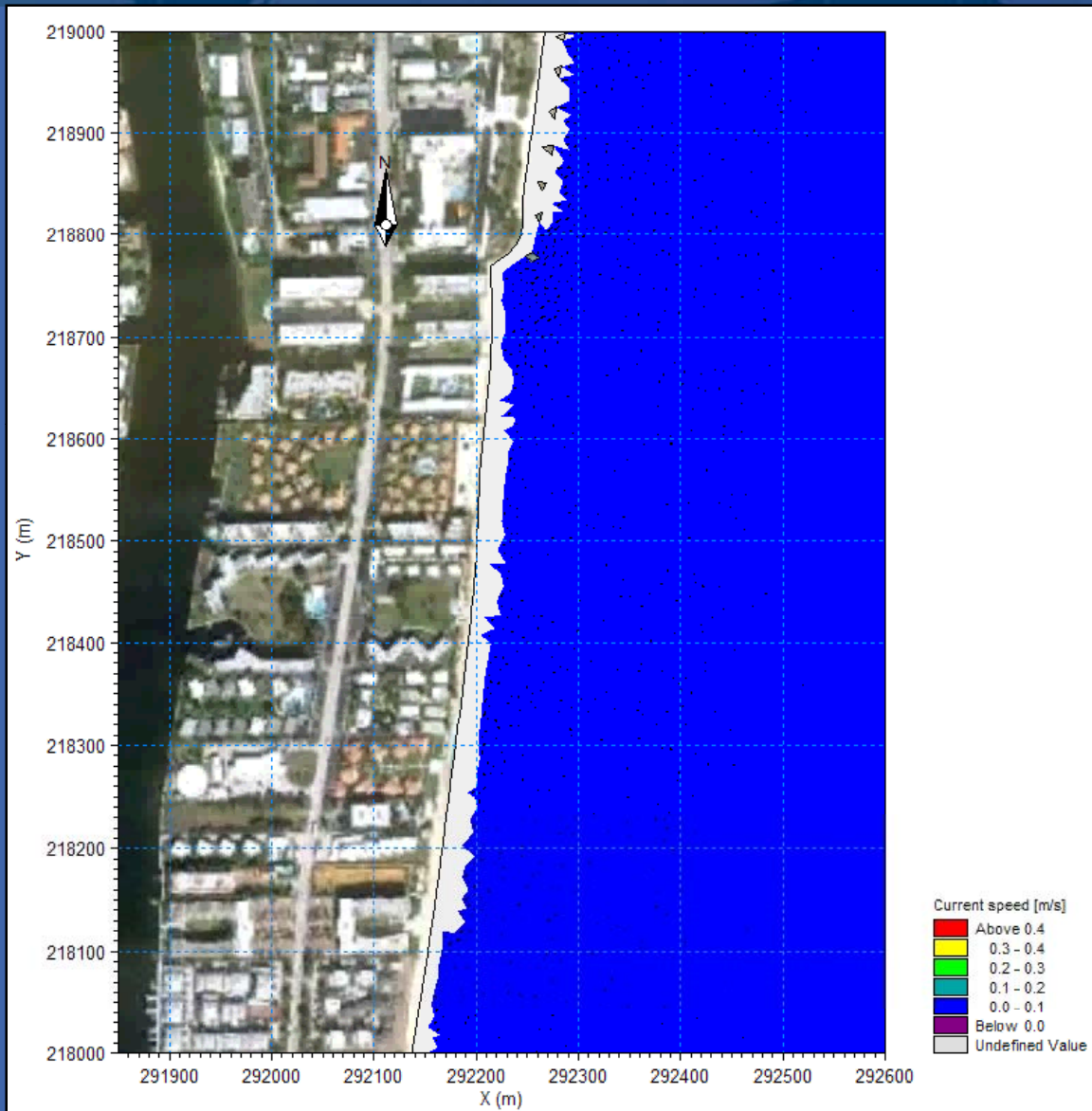
MIKE 21 Model - Mesh and Bathymetry

Numerical Modeling Approach



- High Sediment Transport Rate
- MIKE-21 Simulation Results consistent with beach measured data

Estimated Annual Sediment Transport Rate from MIKE-21 Modeling



Current Simulation – Existing Conditions

- 10-year simulation
- No sandy beach remaining
- Erosion to the seawall

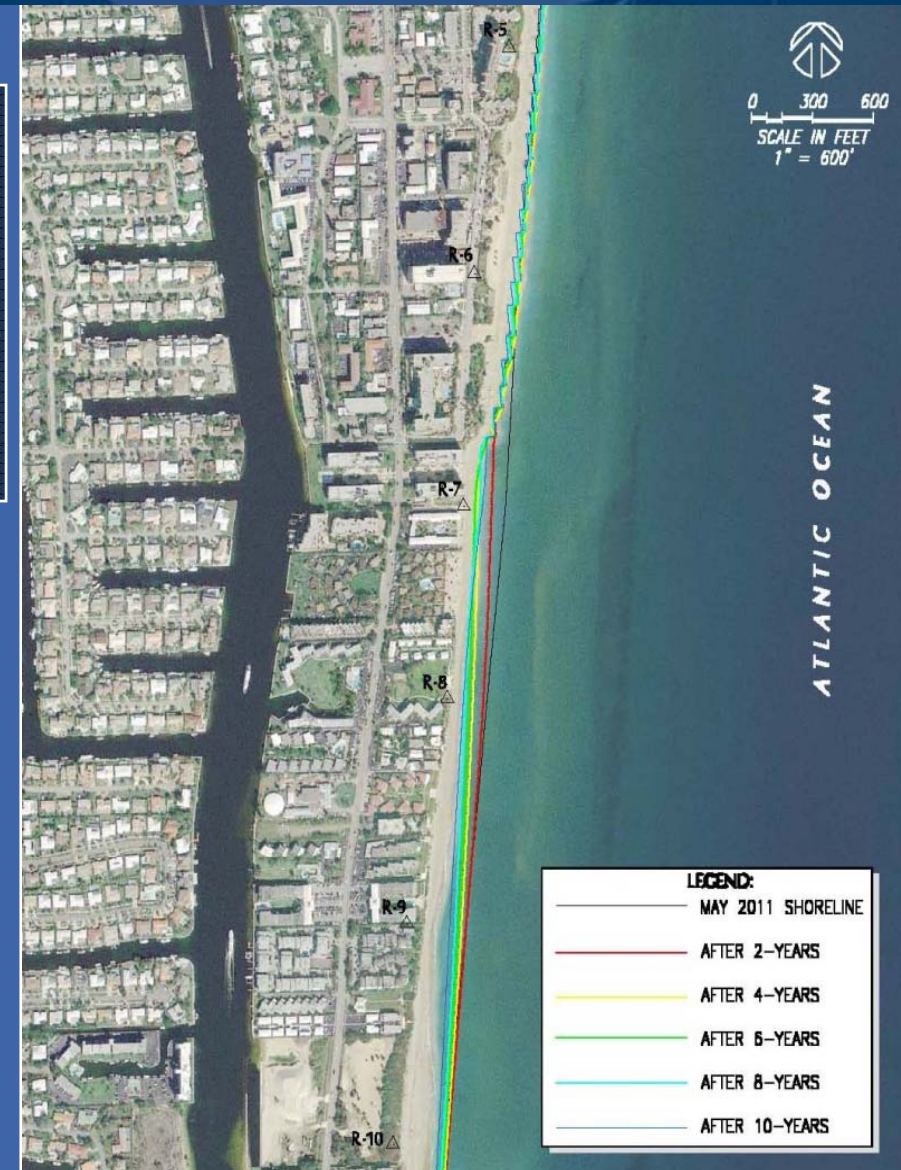


Option 1 – Do Nothing



Modeling Results

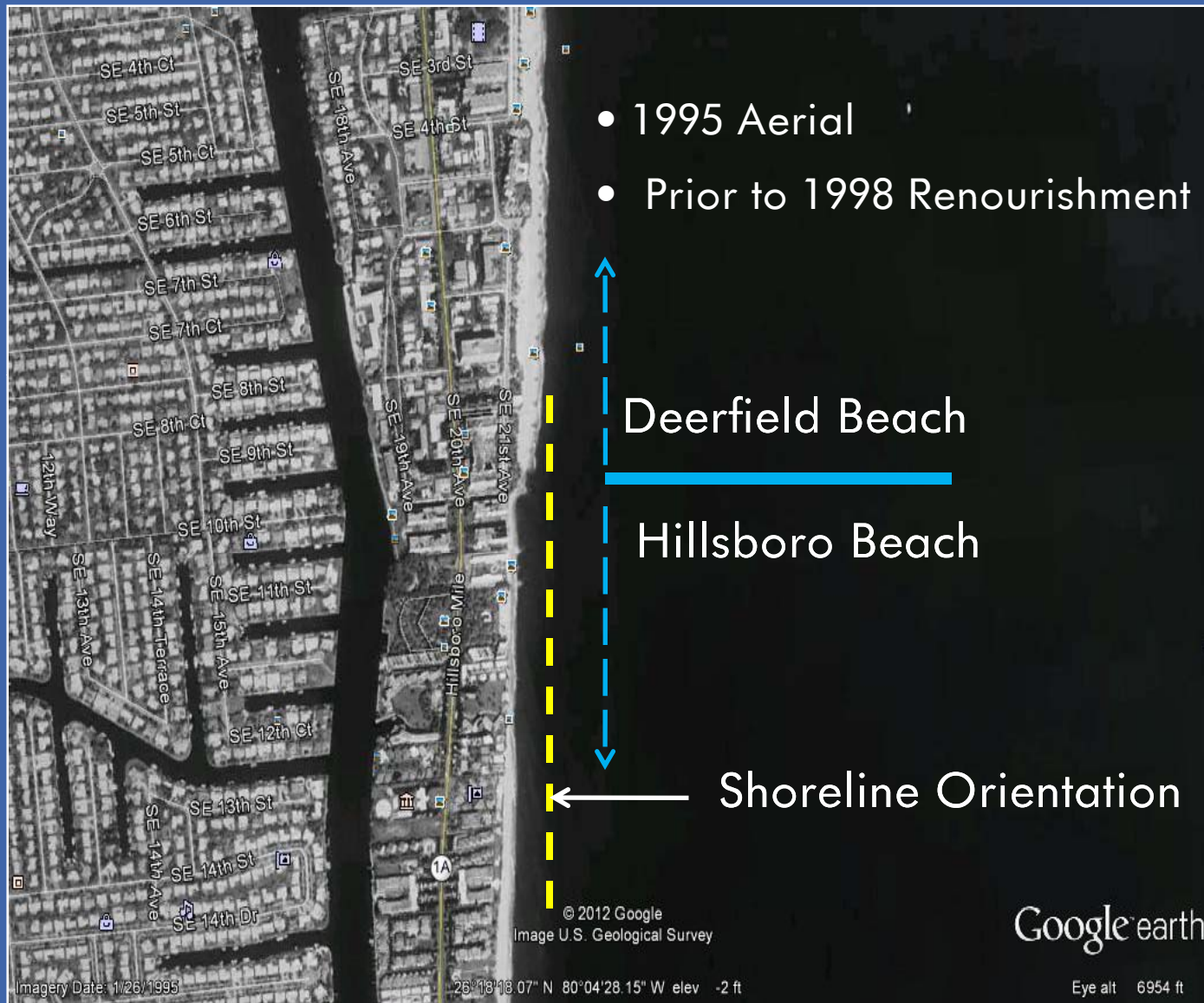
- 10-year simulation
- Renourish every 4-6 Years
- 1997 Long Range Plan – every 8-10 years
- Viable Alternative



Option 2 – Continued Beach Nourishment



Modeling Results

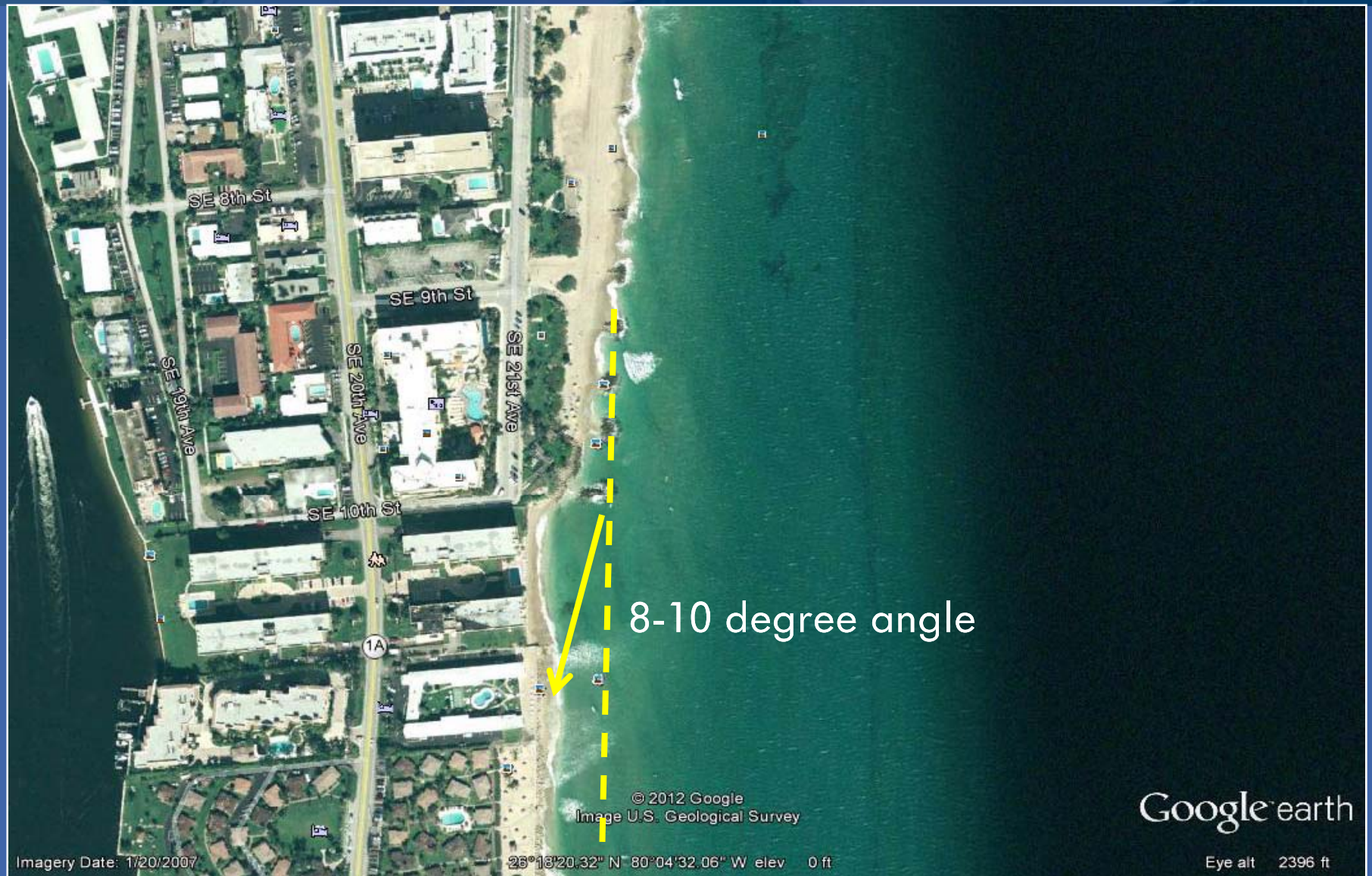


Option 3 & 4 Groin Modification Approach





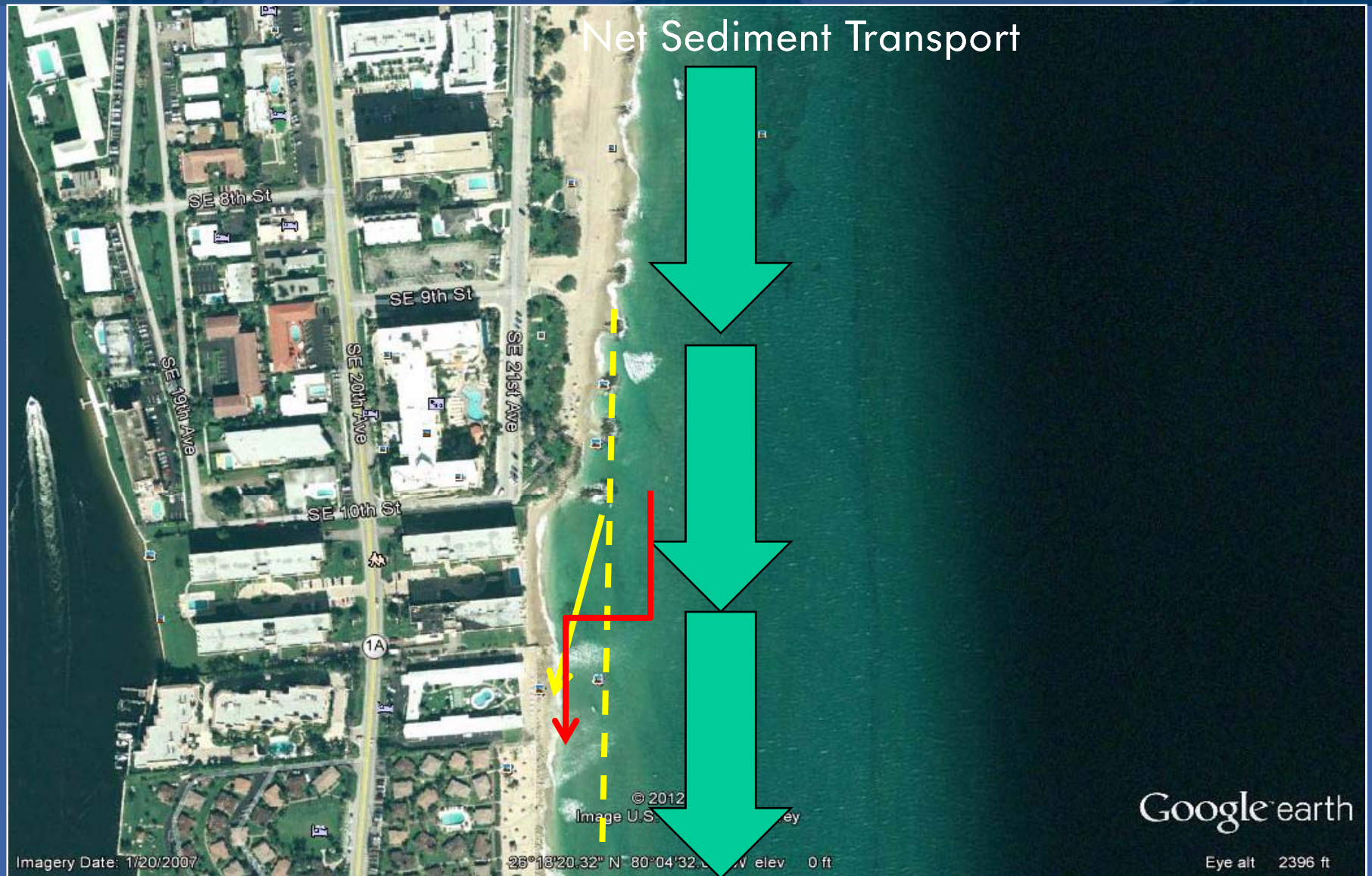
Modeling Results



Option 3 & 4 – Groin Modification Approach



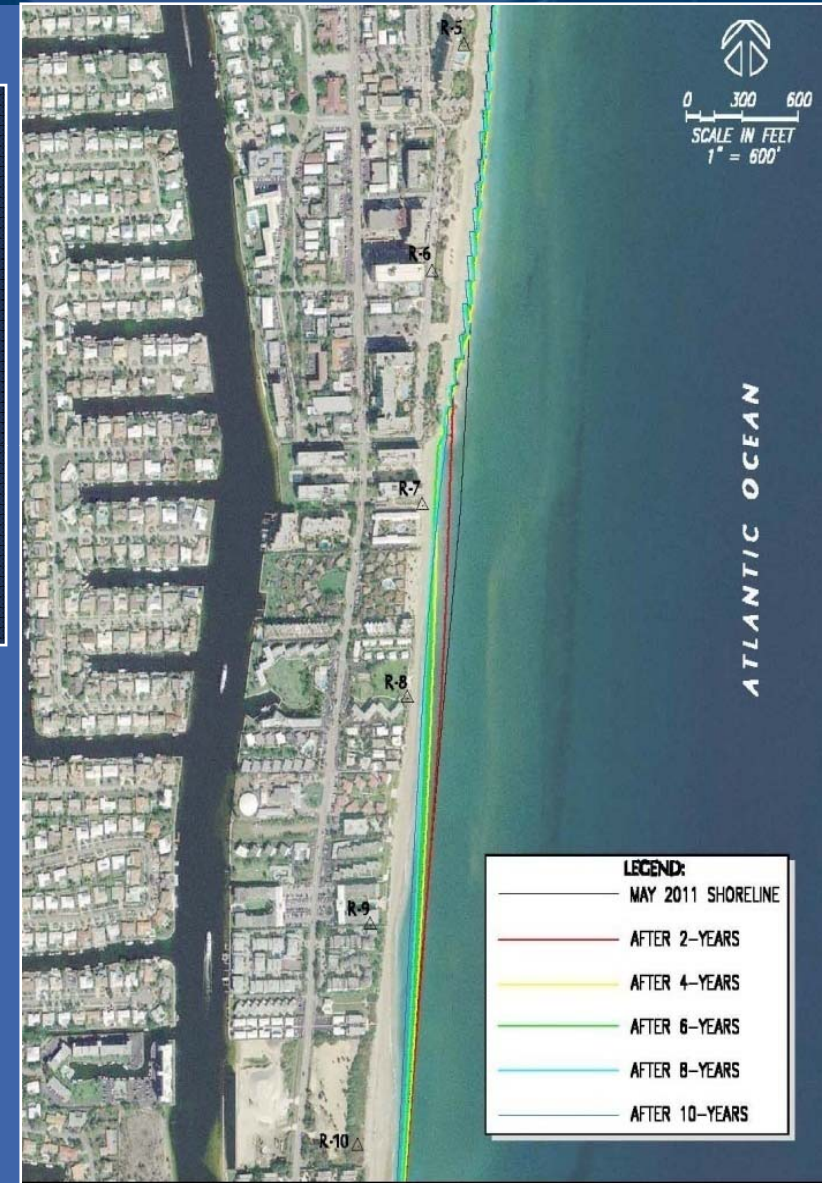
Modeling Results



Option 3 & 4 – Groin Modification Approach

Modeling Results

- 10-year simulation
- Taper southern 5 Groin Structures
- Modify approximately 25% of the groin field
- Still have to nourish beach every 4-6 years
- Not a viable Alternative

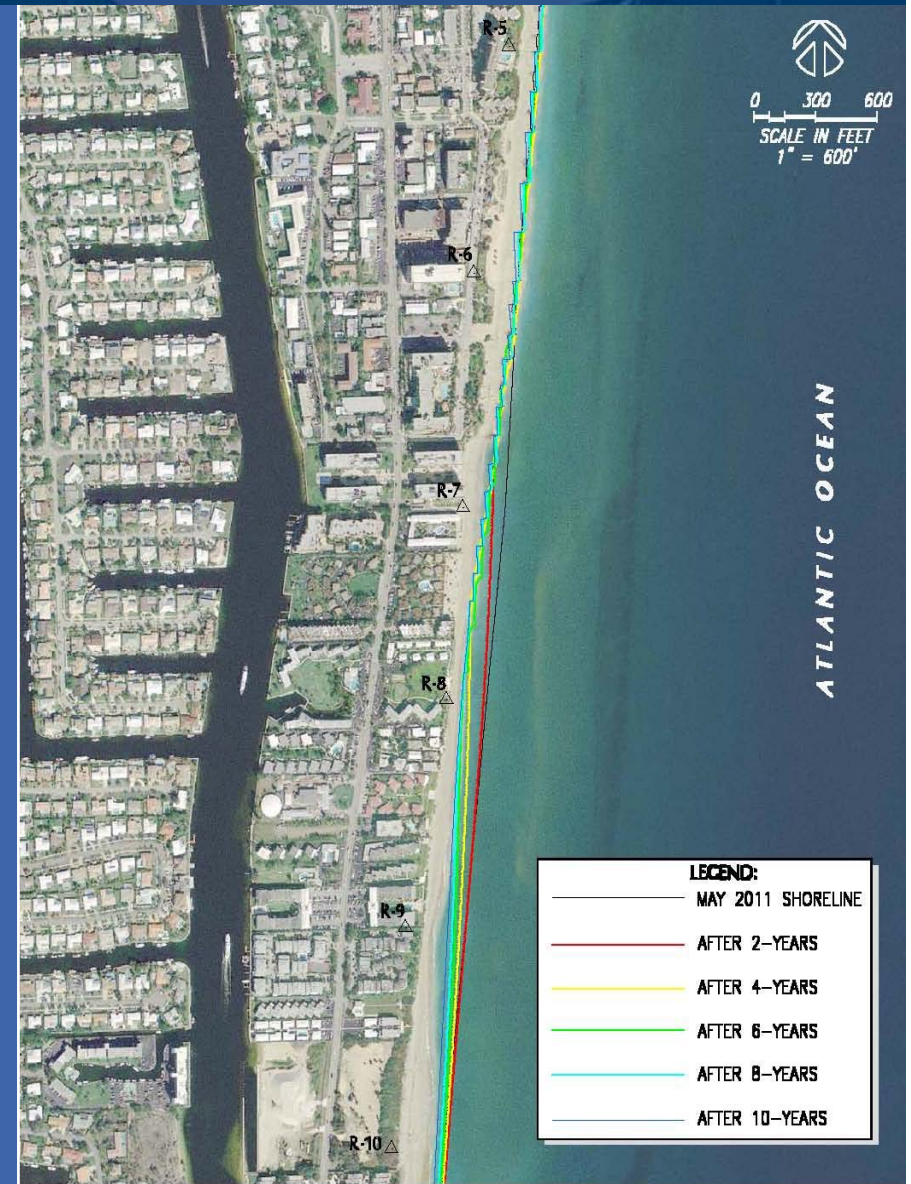


Alternative 3 – Modify Deerfield Groin Field



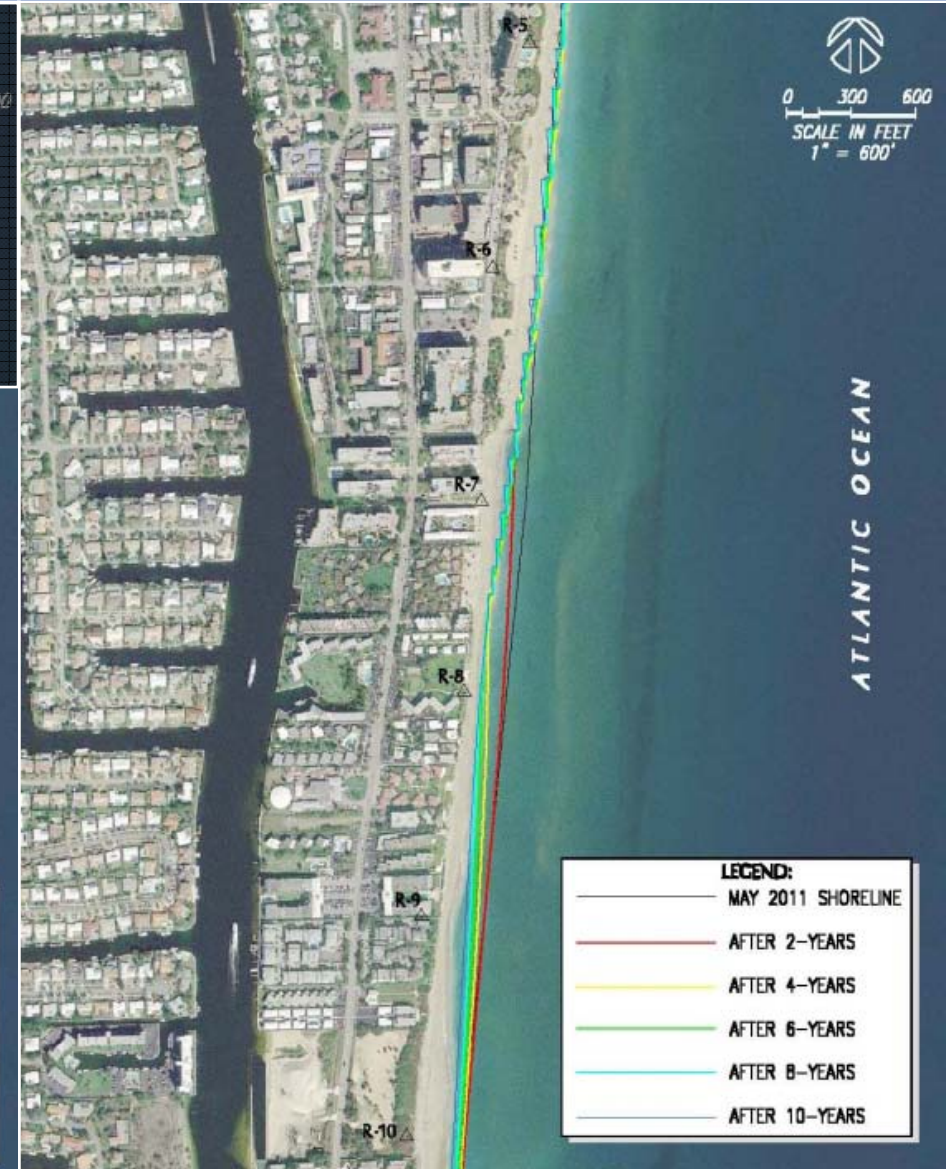
Modeling Results

- 10-year simulation
- Construct 9 groins – tapered (Alternative 4a)
- Construct 5 groins – tapered (Alternative 4b)
- Transfer of "Hot Spot" further downdrift (south)
- Still have to nourish beach every 4-6 years
- Not a viable Alternative



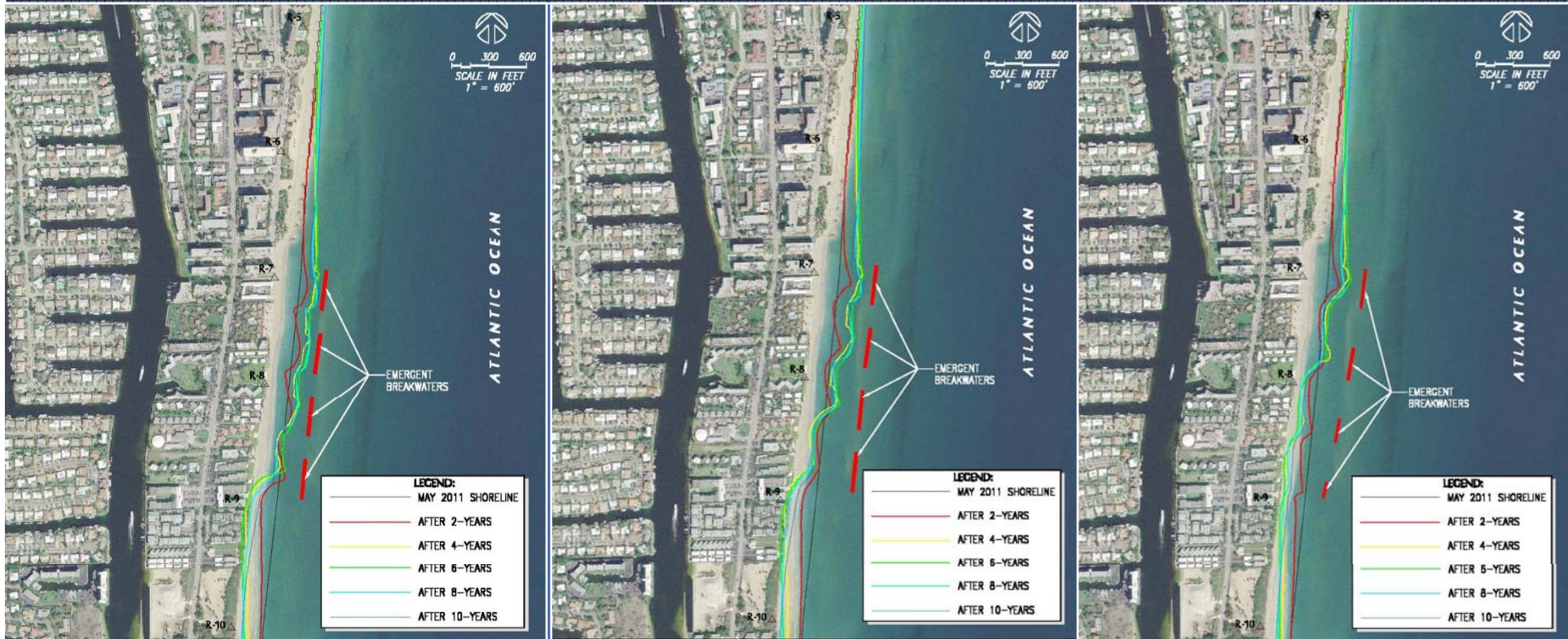
Alternatives 4a & 4b – Groin Field Extension into Hillsboro Beach

- 10-year simulation
- Construct 9 T-Head Groins (Alternative 5a)
- Construct 6 T-Head Groins (Alternative 5b)
- Still have to nourish beach every 4-6 years
- Not a viable Alternative

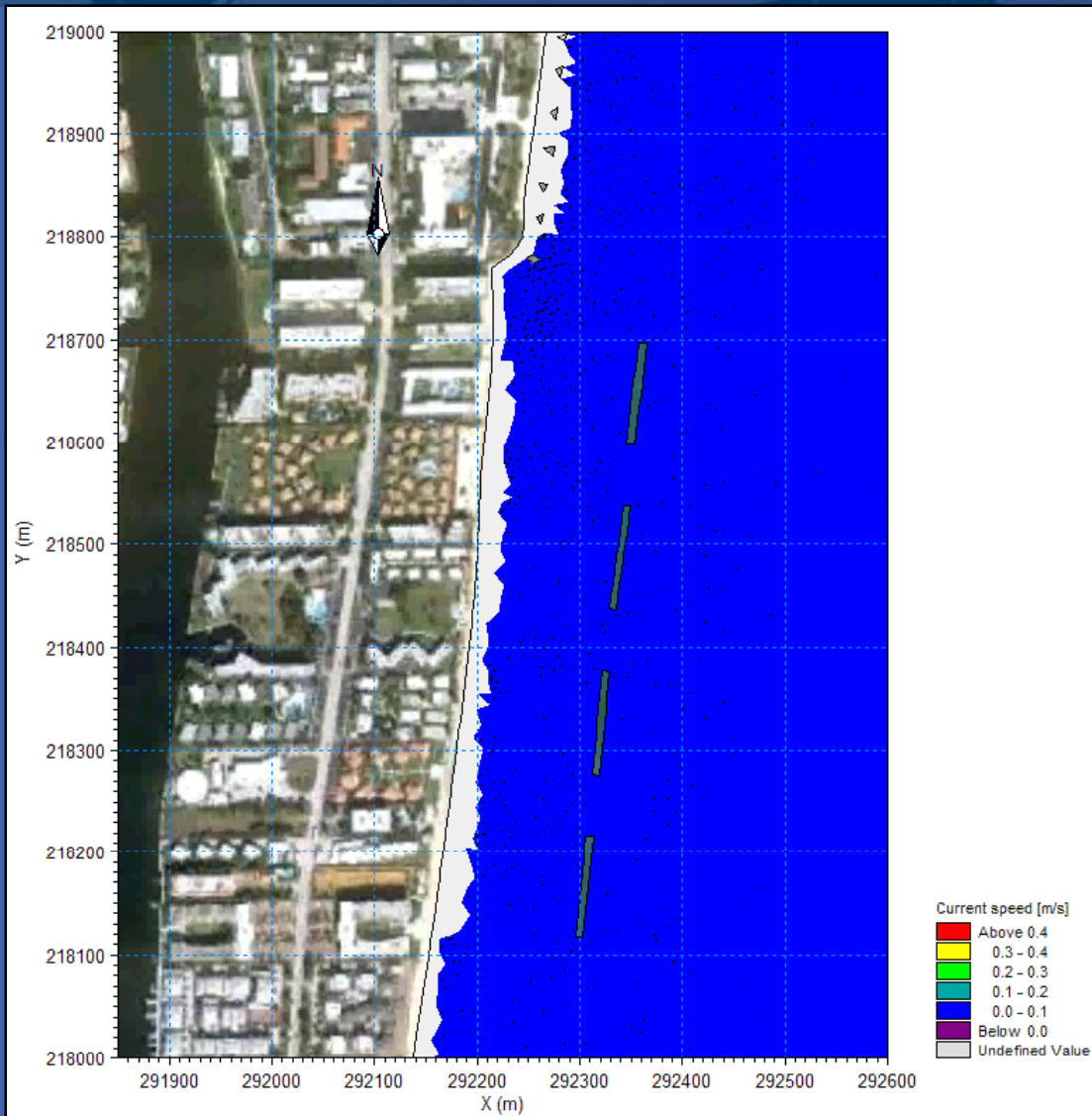


Alternatives 5a and 5b – T-Head Groins into Hillsboro Beach

- 10-year simulation
- Construct 4 variations of nearshore (emergent) breakwaters
- All options – transfer of hot spot further downdrift (south)
- Still have to nourish beach every 4 years
- Not a viable Alternative

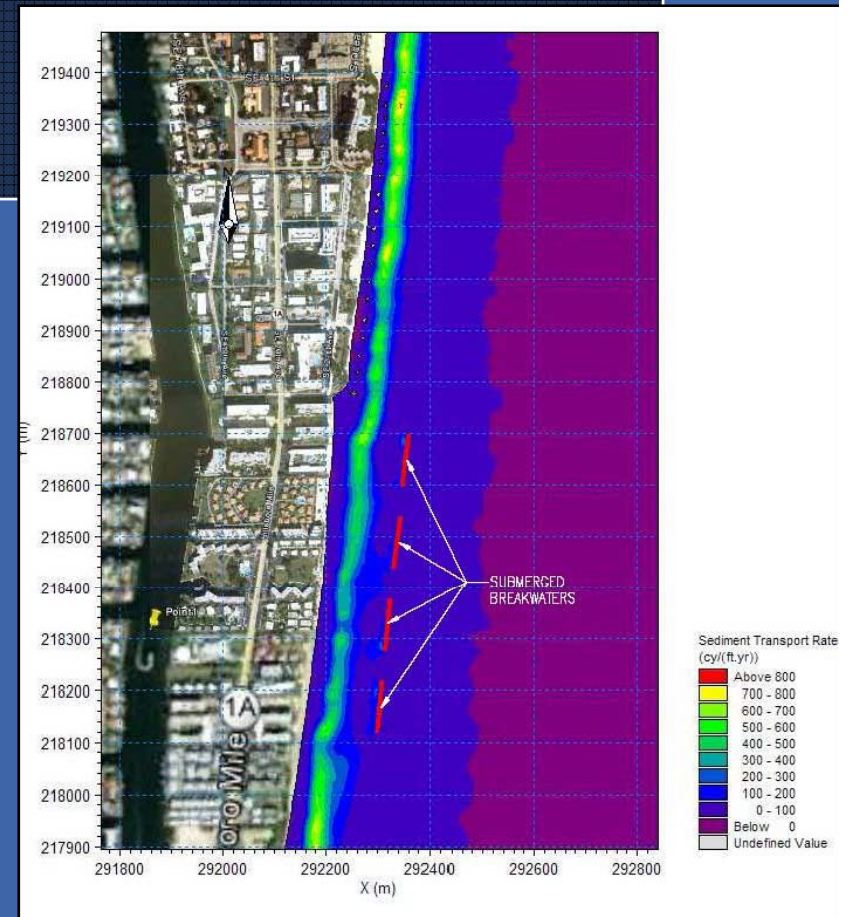
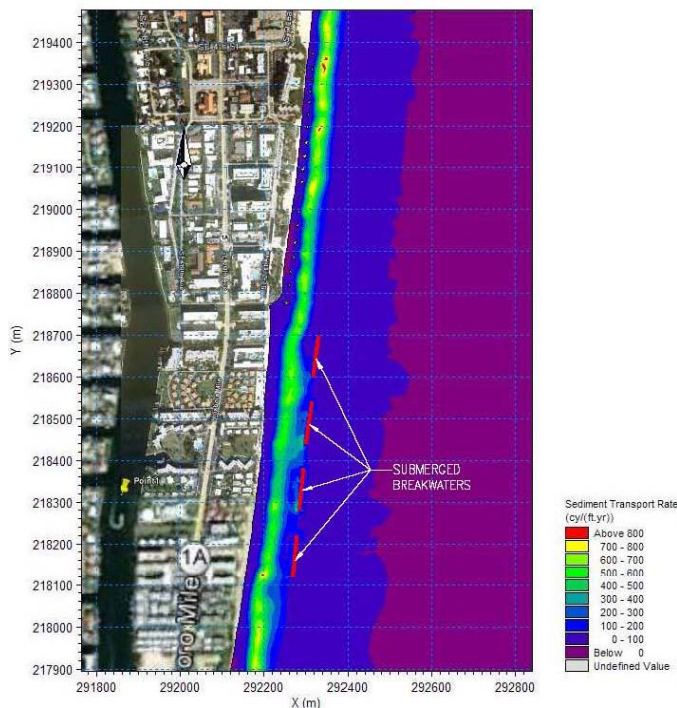


Alternatives 6a – 6c – Nearshore (Emergent) Breakwaters

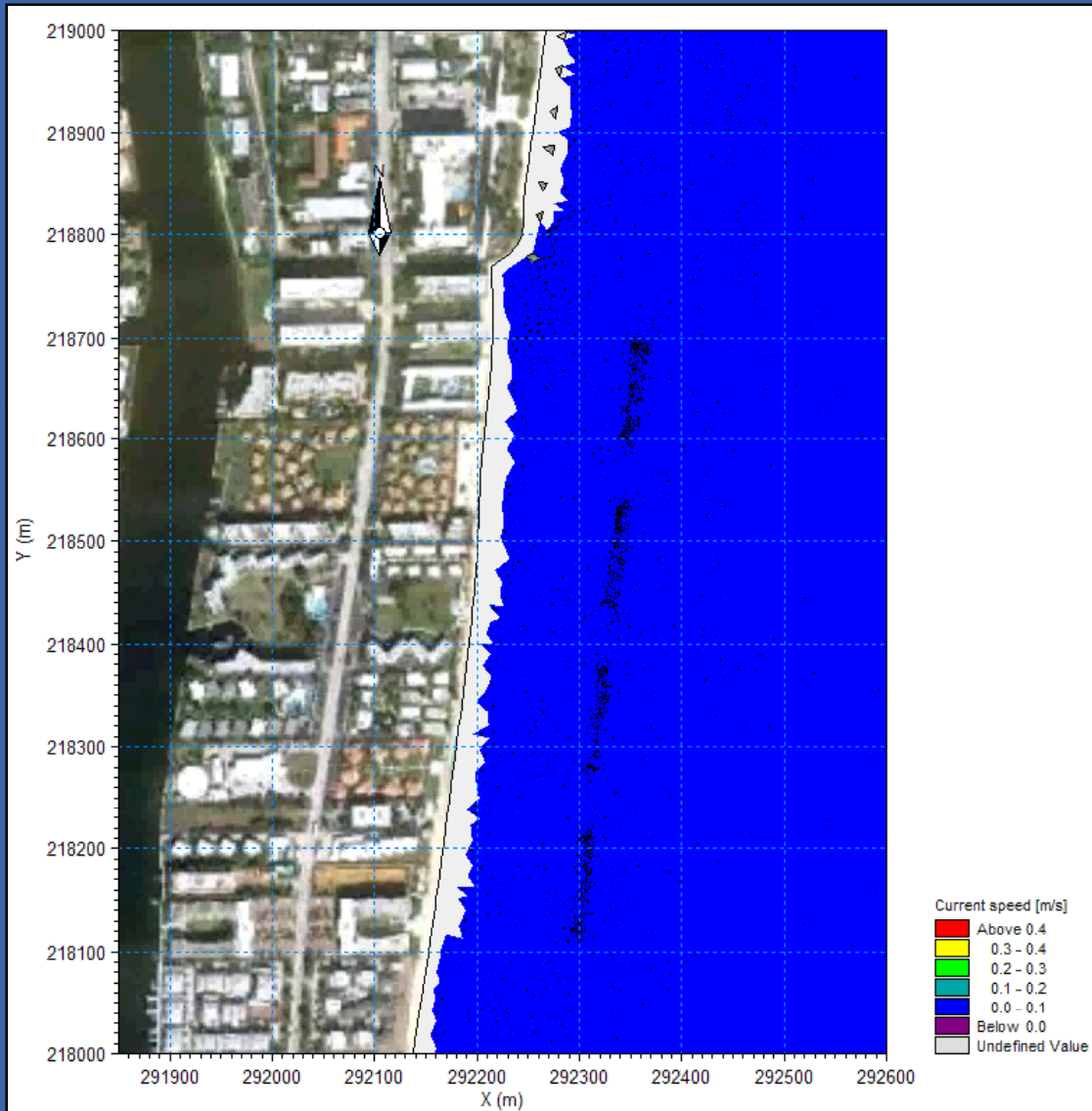


Alternative 6b – Current Simulation

- Construction of 4 submerged breakwaters
- Simulated with coupled MIKE-21 SW and HD Models
- Reduce sediment transport 20% for Alternative 7b
- Minimal downdrift impacts
- Viable Alternative



Alternatives 7a & 7b - Submerged Breakwaters



Alternative 7b – Current Simulation

- Summary of Modeling Results – Viable Alternatives

Twelve Alternatives Simulated with coastal process numerical modeling

- Viable Alternatives:

Alternative 2 - Continued Beach Renourishment

Alternative 7b – Submerged Breakwater



Environmental Permitting Feasibility

- Joint Coastal Permitting – federal and state agencies with jurisdiction (U.S. Army Corps of Engineers, Florida Department of Environmental Protection)
- Broward County EPGMD Permit
- Environmental Permits were issued for the 2011 beach renourishment project
- Anticipate 1-2 year process
- Avoidance of impacts to nearshore hardbottom
- Sand Source

Alternative 2 – Continued Beach Renourishment



Environmental Permitting Feasibility

- Section 5 and 6 of Report
- Joint Coastal Permitting – federal and state agencies with jurisdiction (U.S. Army Corps of Engineers, Florida Department of Environmental Protection)
- Broward County EPGMD
- Coastal structures difficult, if not impossible, to permit in Florida
- Precedent projects in Florida – areas with high erosion or at inlets
- Extensive opposition to permits can be expected from certain commenting agencies and NGO's
- Estimated Time Frame 3-6 years

Alternative 7b – Submerged Breakwaters

- Alternative 2 Continued Beach Renourishment
 - Evaluate Sand Sources – upland and offshore
 - Economic Analysis on nourishment Frequency, sources of funding
- Alternative 7b Coastal Structures
 - Conduct Pre-Application Meetings with Agencies
 - Outline a strategy for funding, design/permitting
 - Support needed – lobbying and legal
 - Cost/Benefit analysis for coastal structures
 - Detailed Numerical Modeling and Coastal Engineering



COASTAL SYSTEMS INTERNATIONAL, INC.

Coastal Engineering

Waterfront & Marinas

Civil Engineering

Regulatory Permitting

Site Investigations

Marine Environmental

Construction

Destination Development

