



## MEMORANDUM

**To:** Honorable Mayor, Vice Mayor & Commissioners

**From:** Hector Gomez, Town Manager 

**Date:** February 5, 2024

**Subject:** Field Observation Project (Bal Harbour Erosion) During December of 2023

Refer to attached Field Observation Report dated January 15, 2024, pertaining to beach erosion at Bal Harbour Village (Attachment "A" - *Field Observation Report dated December 18, 2023*).

Erosion from Bal Harbour Village works its way southward with sand being washed into Surfside. The Town of Surfside underwent heavy erosion due to severe weather experienced during the month of December 2023.

The next renourishment project for Bal Harbour is planned in early 2025. Miami-Dade County is working with U.S. Army Corps of Engineers on the project partnership agreement which would put in place a beach renourishment project for the Town of Surfside in the near future (Attachment "B" – *County email dated December 29, 2023*).

*Attachment "A" – Field Observation Report dated January 15, 2024*

*Attachment "B" – County email dated December 29, 2023*

## Field Observation Report

Municipality Name:	CC Project Number:
Village of Bal Harbour	77800
Date of Observation:	Time In / Out:
December 18 <sup>th</sup> , 2023	2:00 PM / 4:30 PM
Weather	Temperature:
Partly Cloudy	~72 deg. F
Submitted By:	Date of Report:
Ryan Winslow, E.I., M.Eng.	January 15, 2024

Cummins Cederberg, the coastal engineering consultant for the Village of Bal Harbour (Village) was tasked by the Village to conduct a beach damage assessment following severe weather experienced during the preceding week. Nearly consistent northeast winds in excess of 20 knots impacted the Village from December 12<sup>th</sup> through December 17<sup>th</sup>. Cummins Cederberg arrived on site on December 18<sup>th</sup> and performed a walkthrough of the Village's beach to assess potential damage due to consistent northeasterly winds.

The Bal Harbour beach segment was nourished in April 2022 as part of a federal project by the U.S. Army Corps of Engineers to replenish the segment's eroded beaches. The passage of Hurricanes Nicole and Ian in 2022 caused some beach erosion, which was documented in a previous Preliminary Beach Damage Assessment, dated November 10, 2022. Cummins Cederberg conducted its most recent quarterly scheduled walkthrough of the beach on October 16, 2023, where the beach segment was characterized by a uniform, gently sloping beach profile. **Photo 1** shows a comparison between the pre- and post-wind event conditions at the beach.

Following the erosion event, qualitative assessments of the beach and dune erosion conditions were made using the graphic illustration shown in **Figure 1**. The graph provides guidelines for the preliminary classification of beach and dune erosion experienced following a storm.

General issues frequently observed included scarping, partial burial of beach access mats (**Photo 2**), spotty dune grass coverage (**Photo 6**), litter and beach furniture storage in the dune (**Photo 7 / Photo 12**), and fence post burial or withdrawal (**Photo 3 / Photo 13**). An intermittent wrack line predominantly composed of octocorals, rope sponges, tube sponges, and upland vegetative debris was observed to have accumulated on the beach face (**Photo 4**), with some lighter wrack material reaching the dune. No wrack line was observed between public beach accesses 13 and 15, where beach erosion was most severe.

Starting at the south end of Bal Harbour at public beach access 1, damage to the beach was relatively minor and exhibited a wide, flat beach berm, which extended north to access 8. Erosion was also minor north of access 20, where the Bal Harbour Jetty appeared to provide ample protection against the northeast wave action.

Access 8-9: **Condition I.** Continuing north along the Village’s beach, a small scarp with a max height of about 20 inches extended for about 216 feet between beach access 8 and 9 (**Photo 5**).

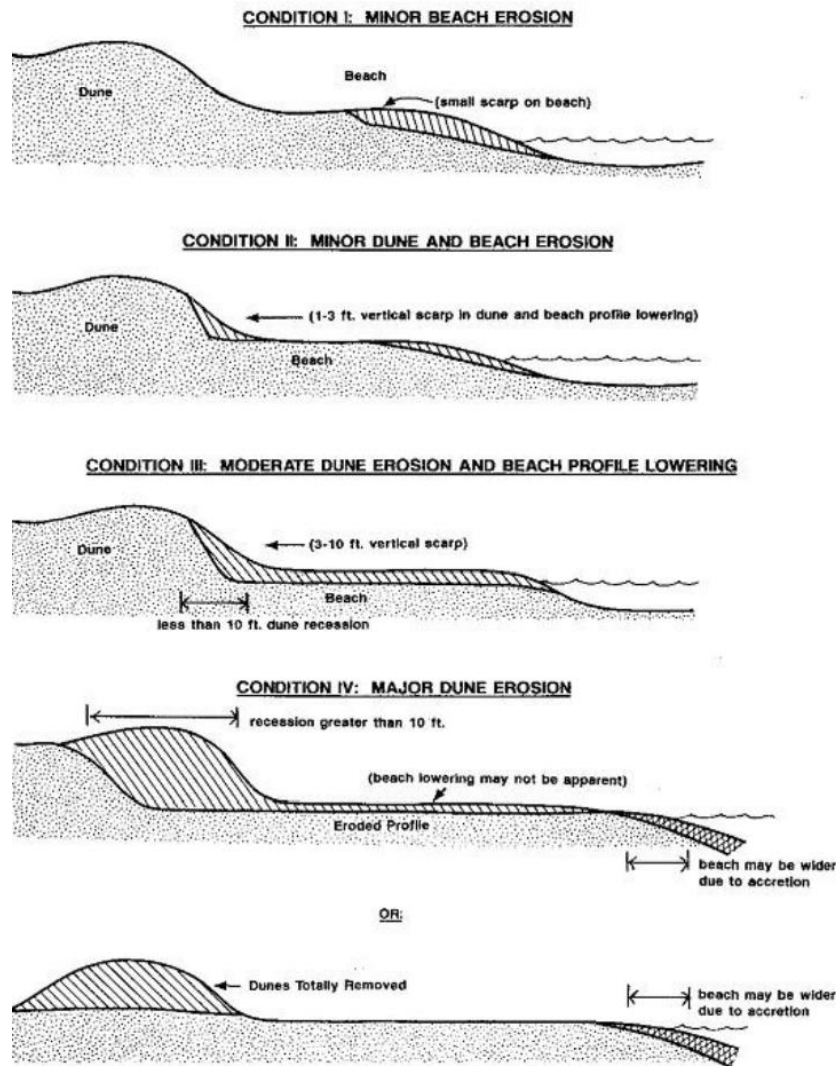
Access 9-14: **Condition II.** Around access 9, the small vertical scarp disappeared from the beach face and the flat berm transitioned into an upwards slope towards the dune (**Photo 9**). This slope progressively steepened to a vertical dune scarp at access 13, with visible dune grass roots.

Access 14-16: **Condition III.** Near access 14, the dune scarp height increased to beyond 3 feet, with the largest measured at 52 inches (**Photo 14**). Dune grasses near the scarp were uprooted and the majority of fence posts dislodged (**Photo 13**). Accesses 13-15 appeared potentially unsafe for some beach guests to traverse (**Photo 15**); the Village should consider closing these accesses or installing warning signage.

Access 16-19: **Condition II.** The scarp height abruptly decreased to below 3 feet in the vicinity of access 16 (**Photo 17**).

Access 19-20: **Condition I.** By access 19, the scarp had migrated sufficiently waterward of the dune such that dune grass roots were no longer seen protruding from the scarp. The beach scarp height was measured at 22 inches max (**Photo 20**).

A summary map outlining the extents of the observed beach and dune erosion conditions is provided in **Figure 2**.



R. J. CLARK 8/27/81

FIGURE 1. GRAPHIC ILLUSTRATING BEACH AND DUNE EROSION CONDITIONS



**PHOTO 1. BAL HARBOUR BEACH COMPARISON LOOKING SOUTH FROM ACCESS 17**



**PHOTO 2. BURIED BEACH ACCESS MAT (ACCESS 1)**



**PHOTO 3. BURIAL OF DUNE VEGETATION AND FENCE BARRIER (ACCESS 6-7)**



**PHOTO 4. TYPICAL WRACK LINE AND MATERIAL COMPOSITION**



**PHOTO 5. 20-INCH HIGH SCARP, ABOUT 216 FEET IN LENGTH (ACCESS 8-9)**



**PHOTO 6. PATCHY DUNE VEGETATION; BEACH FURNITURE ON DUNE (ACCESS 8-9)**



**PHOTO 7. LITTER IN DUNE (SOUTH OF ACCESS 11)**





**PHOTO 8. DOWNED FENCE POST NORTH OF ACCESS 11**



**PHOTO 9. STEEP SLOPE WHERE BEACH MEETS DUNE, SOUTH OF ACCESS 12**



**PHOTO 10. VERY STEEP SLOPE TO DUNE WITH HEAVY WRACK, NORTH OF ACCESS 12**



**PHOTO 11. VERTICAL SCARPING AT DUNE LINE (NORTH OF ACCESS 13)**



**PHOTO 12. BEACH FURNITURE STORED IN DUNE (ACCESS 14-15)**



**PHOTO 13. DISLODGED FENCE POSTS AND DUNE GRASSES (ACCESS 14-15)**



**PHOTO 14. LARGEST ESCARPMENT MEASURED (52 INCHES) BETWEEN ACCESS 14-15**



**PHOTO 15. EXPOSED POSTS AND UNSAFE BEACH ENTRY (ACCESS 15)**



**PHOTO 16. MAJOR SETTLEMENT OF ACCESS 15 BEACH KIOSK**



**PHOTO 17. BEACH EROSION AT ACCESS 16**



**PHOTO 18. BEACH FURNITURE STORED IN DUNE (ACCESS 17-18)**



**PHOTO 19. EXPOSED WOODEN PALLET AT DUNE SCARP NORTH OF ACCESS 18**



**PHOTO 20. BEACH SCARP NORTH OF ACCESS 19, MEASURED 22 INCHES MAX**



**PHOTO 21. SEDIMENT EROSION SOUTH OF JETTY**

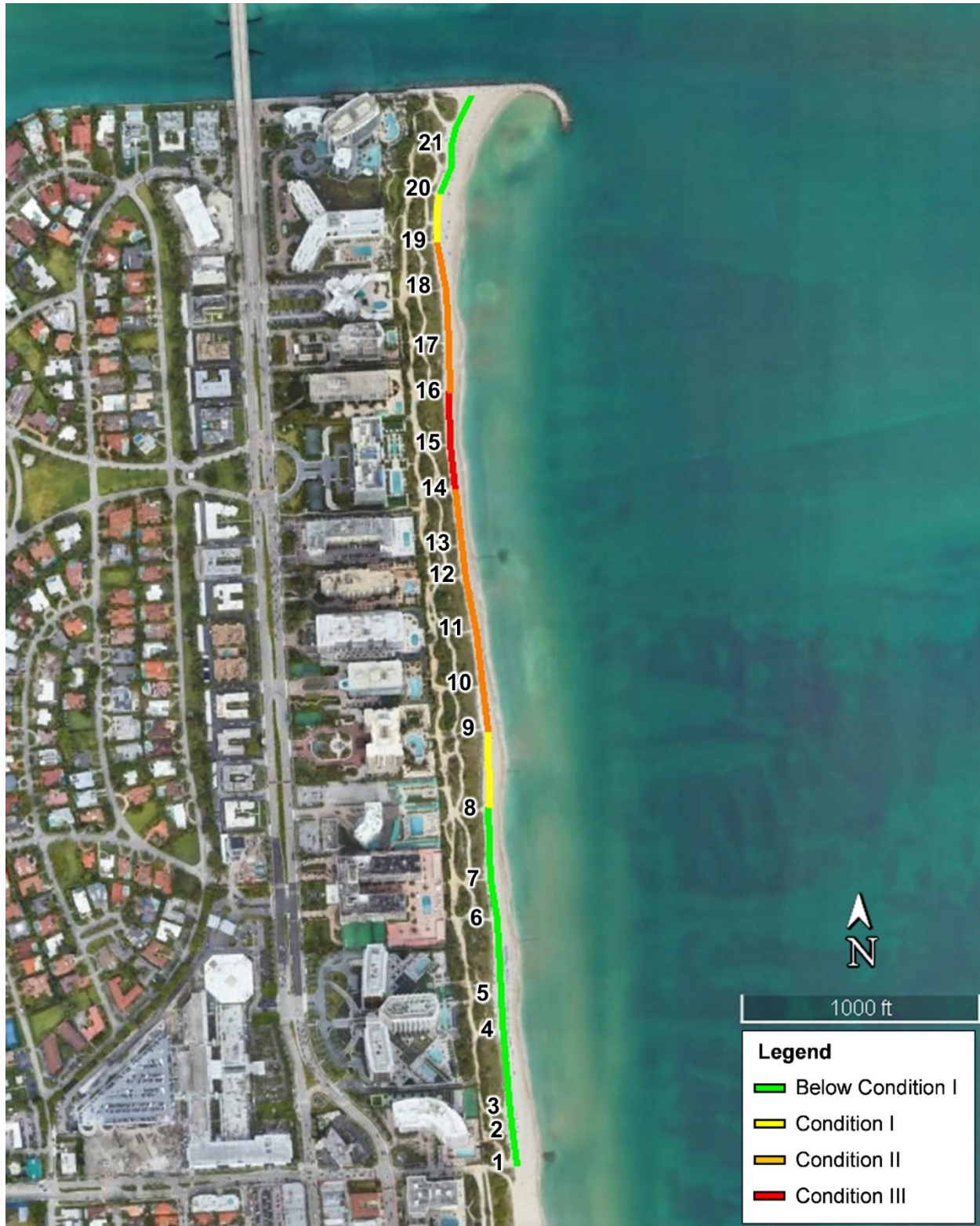


FIGURE 2. BAL HARBOUR BEACH AND DUNE EROSION CONDITION MAP



**From:** [Hector Gomez](#)  
**To:** [Irina Mocanu](#)  
**Subject:** FW: Beach Renourishment  
**Date:** Wednesday, January 31, 2024 5:35:26 PM  
**Attachments:** [Beach - Periodic Report on Beach Renourishment\\_04192022.pdf](#)

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**From:** Pisani, Alberto (RER) <Alberto.Pisani@miamidade.gov>  
**Sent:** Friday, December 29, 2023 3:43 PM  
**To:** Hector Gomez <hgomez@townofsurfsidefl.gov>  
**Subject:** Beach Renourishment

[**NOTICE:** This message originated outside of the Town of Surfside -- **DO NOT CLICK** on links or open **attachments** unless you are sure the content is safe.]

Hector:

Attached is the last beach report to the County BCC. I am working on the next one that should go to the BCC in April or May of next year. These can be accessed here:

<https://www.miamidade.gov/govaction/search.asp>

The next renourishment is planned for Bal Harbour in early 2025, we are currently working with the Corps on the project partnership agreement. Surfside will benefit from this sand.

There will likely be another renourishment in Bal Harbour and Surfside when the Corps builds the groins that are planned for Bal Harbour. Again, we are working with the Corps to complete the project partnership agreement for this project, could be late 2025 or early 2026. Will know a better timeline once we have the agreement in place.

Thanks

**Alberto Pisani, P.E., ENV SP**

*Sr. Professional Engineer*

Department of Regulatory and Economic Resources

Division of Environmental Resources Management

Water Management

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# Memorandum



**Date:** April 19, 2022

**To:** Honorable Chairman Jose “Pepe” Diaz  
and Members, Board of County Commissioners

Supplement to  
Agenda Item No. 2(B)(1)

**From:** Daniella Levine Cava  
Mayor

A handwritten signature in blue ink that reads "Daniella Levine Cava". The signature is written in a cursive, flowing style.

**Subject:** Supplement - Periodic Report on Beach Renourishment – Directive No. 160503

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This supplement is an update to item 2B1 which was originally on the April 5, 2021 Board meeting and which describes project activities completed through November 2021. During that meeting, Commissioner Higgins requested that the report be deferred and be updated with information about project activities from November 2021 to the present. Those updates have been incorporated into this supplemental report and are described below:

**The Dade Supplemental Track C, or the Bal Harbour Nourishment via Baker’s Inlet Complex,** placed approximately 175,000 cubic yards of sand to address critical beach erosion along the Bal Harbour beachfront from Baker’s Haulover Inlet to 96<sup>th</sup> Street. The beachfront was renourished with sand dredged from shoals near Haulover Inlet in Biscayne Bay and with sand trucked from upland mines. The contract was awarded in July 2021 and a public meeting was held on October 12, 2021. Field construction activities began at the end of November 2021 and construction was completed in April 2022.

**The Dade Supplemental Track D, or the Sunny Isles Truck Haul,** placed 269,944 cubic yards of sand trucked from upland mines to address beach erosion along Sunny Isle Beach. The Army Corps evaluated the rehabilitation of the submerged breakwaters in Sunny Isles Beach and decided not to include it under this contract or as a stand-alone contract at this time. The contract was awarded in January 2021 and construction was completed in March 2021.

**The Dade Supplemental Track E, or the Miami Beach Renourishment,** plans to place approximately 830,000 cubic yards of sand from upland mines to address beach erosion along Miami Beach. The contract was awarded in July 2021, a public meeting was held on October 7, 2021, and construction activities began at the end of November 2021. Sand placement is estimated to be completed by March 2023.

Further evaluation of the use and implementation of submerged or emergent coastal structures will be an increasingly important strategy as we work to protect the County’s beaches from erosional forces and protect our public investment in beach renourishment projects. Miami-Dade County’s Department of Regulatory and Economic Resources, Division of Environmental Resources Management (DERM) has retained the services of GHD Services, Inc., a coastal engineering firm, to consider alternative means to retain sand along all of the County-managed beaches, as well as re-evaluate the performance of existing structures such as the breakwaters at 29<sup>th</sup>-32<sup>nd</sup> Street and make recommendations on sand retention in that area. Recommendations for sand retention in the area of the breakwaters at 29<sup>th</sup>-32<sup>nd</sup> Street are estimated to be completed by November 2022.

The area between the breakwater structures is also scheduled for a 10,000 cubic yard sand placement, as needed, after the Army Corps Supplemental Contract E is completed. We currently have the FDEP and local regulatory authorization to implement the placement. The FWS Biological Opinion was issued to the Army Corps in April 2021. We are still pending the issuance of the Army Corps permit which was requested in June 2020.