Beach Preservation Committee
9:00 a.m., Tuesday, April 21, 2026
1207 Palm Boulevard
City Hall Council Chambers

Public Comment:
All citizens who wish to speak during the meeting must email their first and last name, address and topic to Nicole DeNeane, City Clerk, at nicoled@iop.net no later than **3:00 p.m. the day before the meeting.** Citizens may also provide written public comment here: https://www.iop.net/public-comment-form

Agenda

1. **Call to order** and acknowledgment that the press and the public have been duly notified of the meeting in accordance with the Freedom of Information Act.
2. **Citizens' comments-** All comments have a time limit of three (3) minutes.
3. **New Business-** Applying the Beach Committee's new definition of a "healthy beach" at the 3 trouble spots and calculating required sand volumes for the upcoming renourishment project.
4. **Miscellaneous Business-** Next meeting: Thursday, May 7, 2026 at 9am
5. **Adjournment**

Recommendation to IOP City Council

1. Adopt new “healthy beach” definition
   - 200 feet of dry sand at highest tide
   - Measured from 2018 SCDES baseline or structure line (houses and pools), whichever is most seaward
   - Using the most recent 5-year erosion rates

2. Increase the planned renourishment project volume to 3MM cubic yards
   - Applying that new definition to the 3 critical IOP beach hot spots requires 546,000 more cubic yards than the 2.5MM permit max.
   - Sand will never be as inexpensive as now
   - This will cost the city/Wild Dunes an extra $4.1MM

Healthy Beach Goals

Minimize damage in a level 3 hurricane; ensure a recreational beach at all tides and seasons, and protect private property and structures.

Feature	Current Method (cy structure to closure)	New Method (200 feet of beach)
Primary Goal	Protect the house foundation	Protect the entire beach and property line
Tourism Risk of Decline	High; leads to “beach-less’ shores. Loss of tourism revenue	Low; maintains wide, attractive beaches
Risk of Property Values	Erosion leads to property value decline and flood insurance issues	Protects entire island residential property valued at $6.5 billion
Storm Buffer	Fails under extreme pressure	Minimize structural damage
Private Assets	Pools and yards often lost	Homes, pools, and land are shielded
Emergency Funds	~$4MM+ spending on emergency measures	Reduced emergency spending

Healthy Beach – *Defined in terms we understand and can 'see'*

- **Beachline**: SCDES 2018 baseline or structure line (houses and pools), whichever is most seaward
- **Healthy Beach Definition**: 200 feet from Beachline to Mean Highest High Water Line (MHHW)*
- **Renourishment Placement**: Sand placement will focus on areas of need, defined as those areas where:
  - There is a sand volume deficit currently, using Healthy Beach Definition, or
  - Where the protective healthy beach width is proposed to be less than 200 feet at the end of the project life
  - And the MWWH line* is experiencing erosion

**** Consider Arial photography method to overlay the wet line, taken in November and April at higher tide period, similar to Hilton Head practice.***

Renourishment Volumes

- Renourishment Volume = [Current Deficit] + [Advanced Fill] – [Current Excess]
  - Current Deficit: cubic yards of sanded needed to establish 200 feet between Beachline and MHHW line.
  - Advanced Fill: forecast erosion rate (using last 5 years) * project life (currently using 8 years)
  - Current Excess: Excess between current MHHW line and MHHW line if only 200’ from Beachline

Renourishment Volume Recommendation

- Minimum: use permit **max** for **each** of the 3 permitted reaches
- Recommended: additional 546,000 cubic yards (+$4.1MM) using new healthy beach definition:
  - South end: +352,000 cy ($2.6MM)
    - Larger deficit using new definition
    - 5 year erosion rate thru Feb 2025 (89k cy/yr)
  - North end: + 194,000 cy ($1.5 MM)
    - Larger deficit using new definition
    - 2018-2026 rate for advance fill numbers (150k cy/ft)
- Smooth out / extend Beachwood East area renourishment to 53rd Ave to create usable beach.
- Any future changes to volume or locations require town council approval

Permit Vs. Healthy Beach, cubic yards

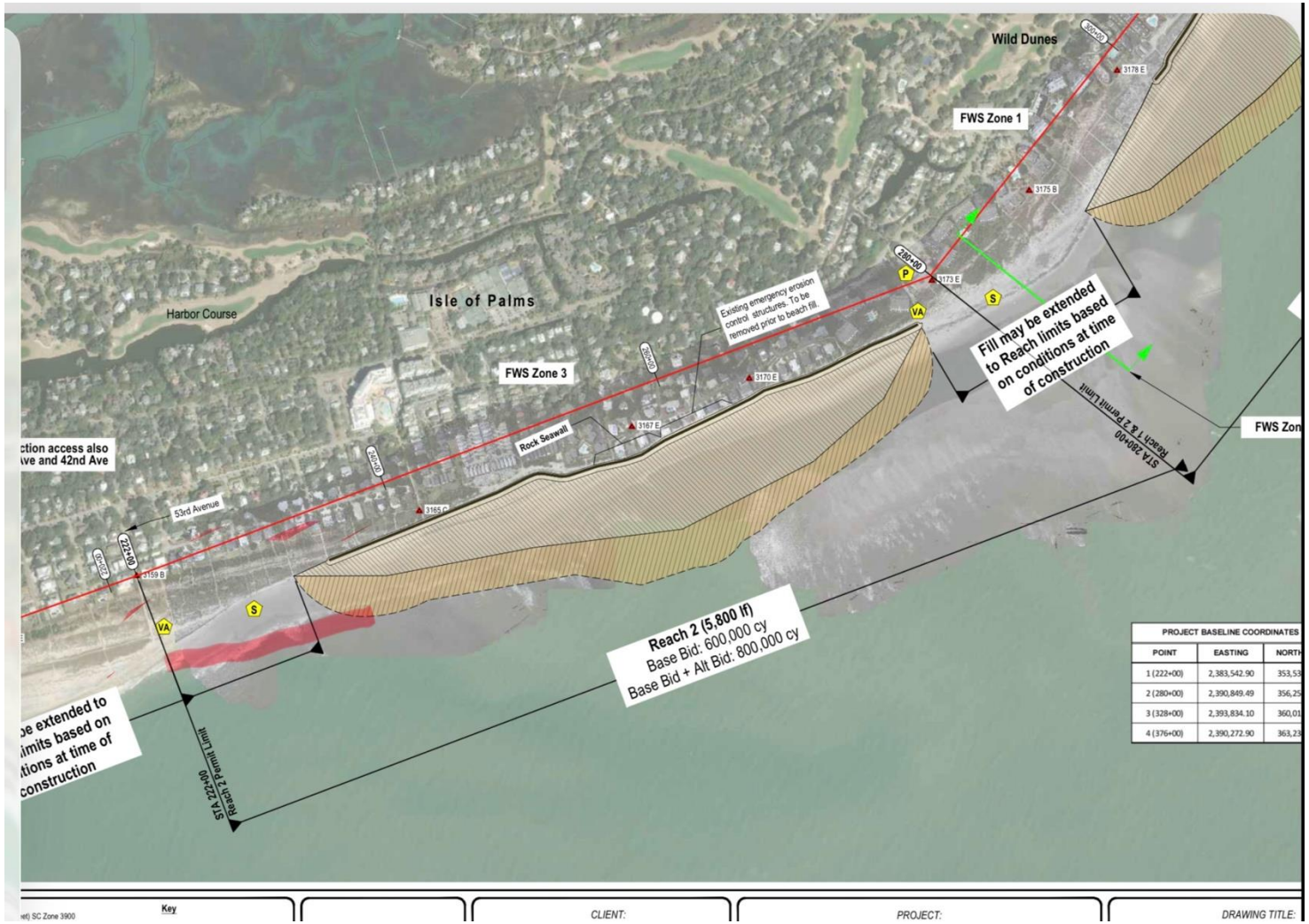
	Permit Maximum Case	Recommended Using Healthy Beach Definition	Comments
Wild Dunes	1,700,000	1,894,000	+194,000 ($1.5 MM) Smooth out placement thru to 53rd Ave.
South End	800,000	1,152,000	+352,000 ($2.6MM)
Total	2,500,000	3,047,000	+546,000 ($4.1MM)

Smooth out Beachwood East Reach Renourishment

Recommend extending renourishment to limit line to 53rd Ave.

Was erosional from shoal attachment

Establishes usable beach in interim until sand from north attaches.



Risk Analysis

- If south end high recent erosion continues (2022-2024 period), an additional 376,000 cubic yards ($2.8MM) would be needed over recommended volumes
  - 136k/yr erosion versus 89k/year 5 year rate assumed
  - If only max permit is placed and high erosion case occurs, the 800,000 cubic yards would erode in 5 1/2 years
  - Start groin analysis ASAP

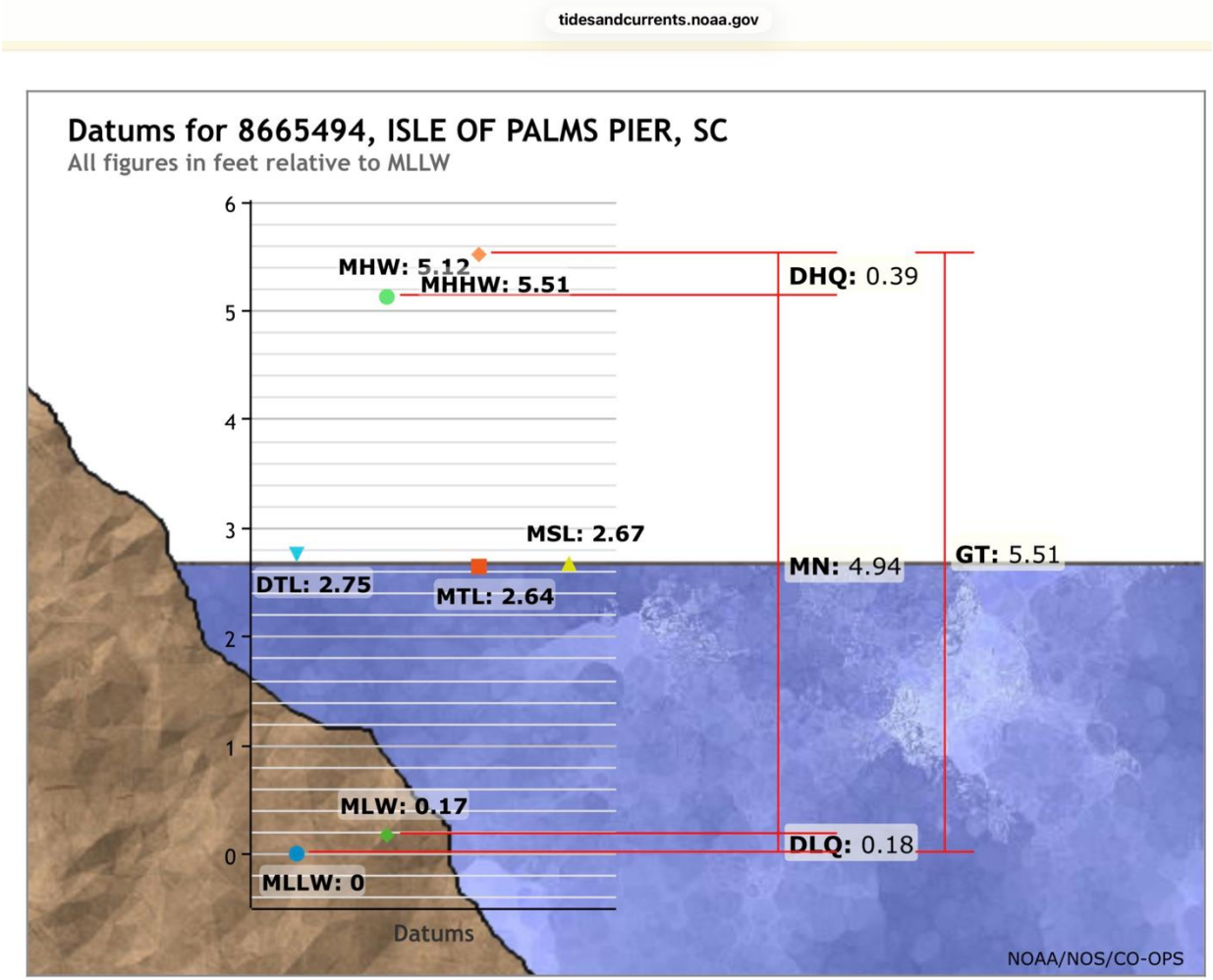
- Army Corp beneficial use volume of 300,000 is fine and known to erode faster. Recommend sand quality testing to inform erosion rate.

- Shoal attachment doesn’t occur

- Renourishment volume at far end near breach inlet may erode quickly
  - Spread out healthy beach volume consistent with bid drawing vs. add more sand on the end
  - Start groin analysis ASAP

Future monitoring: MHHW – mean highest high water; the higher of the two tides in a day

- Measure in November and April
  - Allow immediate feedback on hurricane season losses
- Capture MHHW ‘wet line’ on a ~5.5 foot tide day via arial photography*
- Memo: October 2025 severe erosion had tide of 6.8 feet



*Seek expert second opinion on monitoring methodology

Pre-read Materials

Deficit Cases, Per CSE:	SCDES Baseline	Structure Line	Management Line	Higher of SCDES Baseline or Structure
Reach 1	(326,109)	(87,849)	(326,109)	**(326,109)**
Reach 2	(114,116)	(18,329)	(330,681)	**(114,116)**
Reach 3	(39,585)	-	(374,495)	**(39,585)**
Reach 4	-	-	(806,469)	
Reach 5	(42,076)	(156,077)	(479,764)	**(156,077)**
Reach 6	(228,308)	(120,334)	(428,343)	**(228,308)**
Total Deficit	(750,194)	(382,589)	(2,745,861)	**(864,195)**

Deficits:	Deficit: Higher of SCDES Baseline or Structure
South	(440,225)
North	(384,385)
Total Deficit	(824,610)

Advance Fill	Adv. Fill (recent erosion)
South	712,000
North	1,600,000
Total	2,312,000

Future Excess: CSE Shoal Spread on North	(90,000)

Renourishment:	Healthy Beach Renourishment	Permit Max	Difference	Extra Cost - $MM
South	**1,152,225**	800,000	352,225	**2.6**
North	**1,894,385**	1,700,000	194,385	**1.5**
Total Renourishment	**3,046,610**	2,500,000	546,610	**4.1**

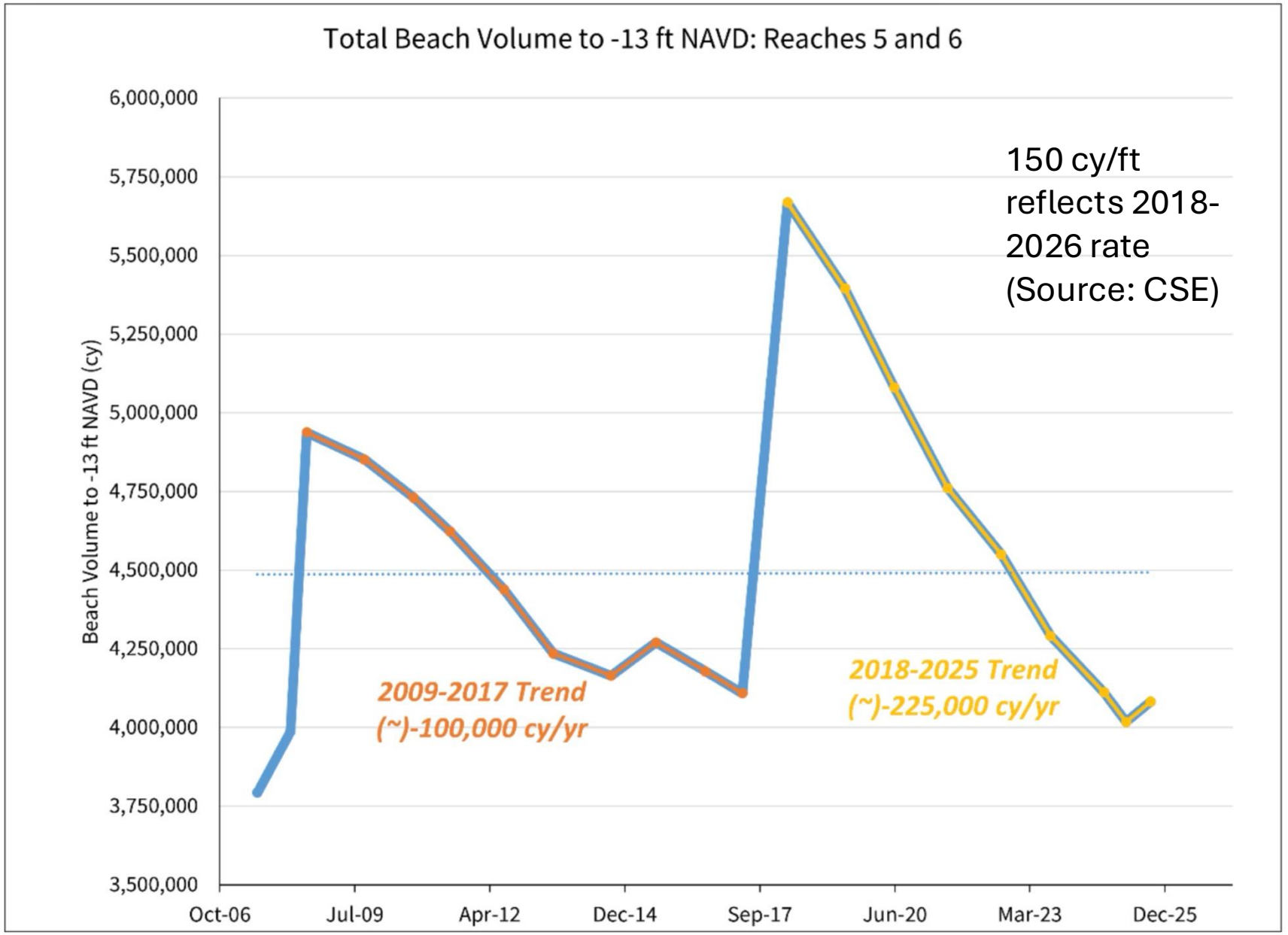
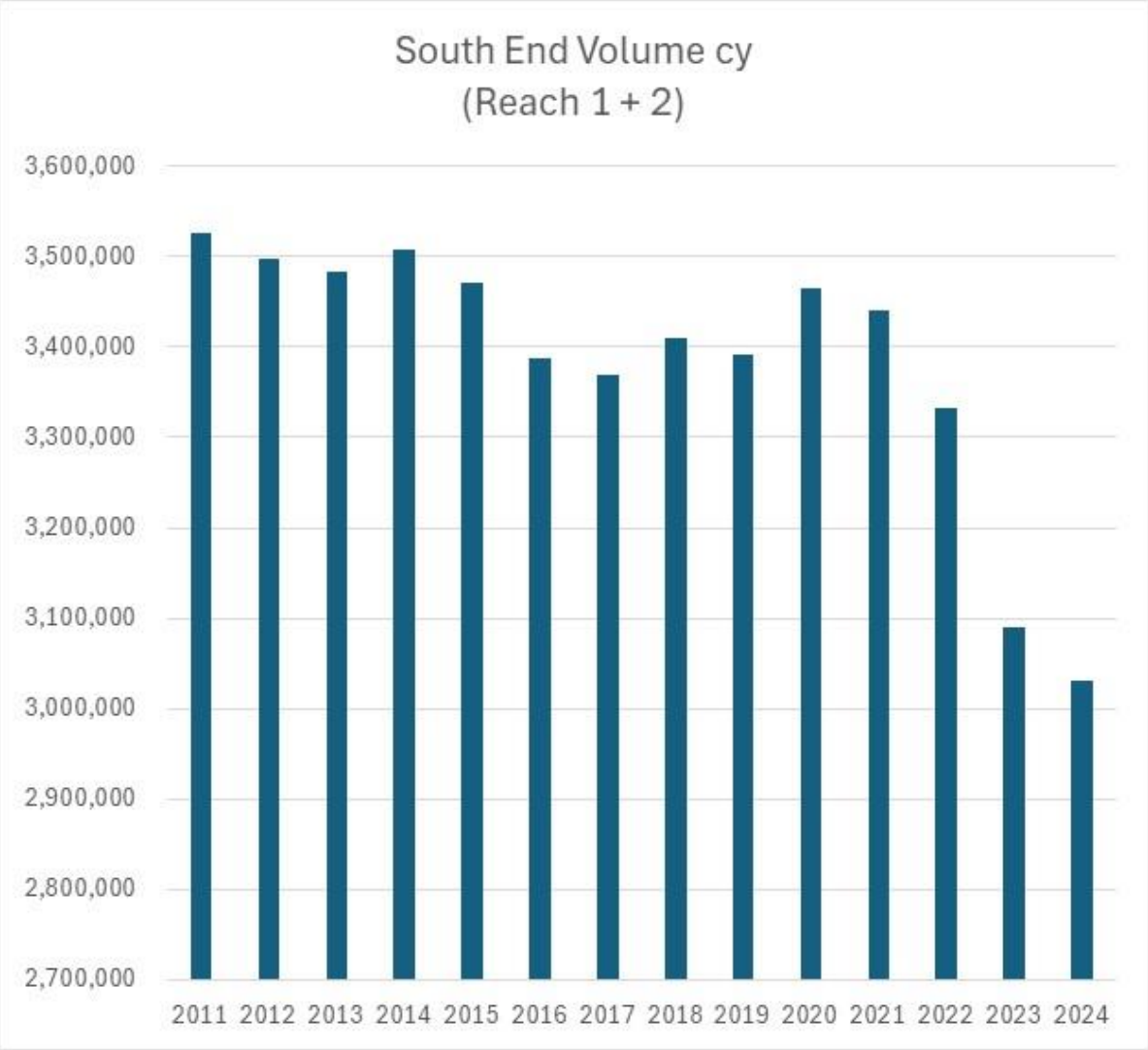


FIGURE 4.17. Total beach volume history of the eastern end of the island since 2007. The graph illustrates the overall erosional trend along Reaches 5 and 6 between nourishment projects.

South End Erosion

Long term erosion less relevant as future trend of sand loss expected, per second opinions



Erosion Rates:
30k/year: Long term erosion
56k/year: Since 2018
70k/year: Permit assumption by CSE
89k/year: 5 year erosion rate (thru 2/25)
136k/year: High erosion period recently (2022-2024)

Advanced fill ranges:
240,000 (30k/yr)
448,000 (56k/yr)
560,000 (70k/yr)
712,000 (89k/yr)
1,088,000 (136k/yr)

Healthy Beach Deficits using higher of SCDES Baseline or Structure Line

Island Deficit Volume	
Management Line (cy)	
Reach 1	-326,109
Reach 2	-330,681
Reach 3	-374,495
Reach 4	-806,469
Reach 5	-479,764
Reach 6	-428,343
Total	**-2,745,861**
SCDES-BCM Line (cy)	
Reach 1	-326,109
Reach 2	-114,116
Reach 3	-39,595
Reach 4	0
Reach 5	-42,076
Reach 6	-228,308
Total	**-750,204**
Structure Line (cy)	
Reach 1	-87,849
Reach 2	-18,329
Reach 3	0
Reach 4	0
Reach 5	-156,077
Reach 6	-120,334
Total	**-382,588**

East-End Deficit Volume	
Management Line (cy)	
Reach 5a	-233,766
Reach 5b	-126,652
Reach 5c	-119,345
Reach 6a	-1,303
Reach 6b	-157,913
Reach 6c	-269,127
Total	**-908,107**
SCDES-BCM Line (cy)	
Reach 5a	0
Reach 5b	-11,570
Reach 5c	-30,506
Reach 6a	0
Reach 6b	-45,413
Reach 6c	-182,894
Total	**-270,384**
Structure Line (cy)	
Reach 5a	0
Reach 5b	-56,334
Reach 5c	-99,743
Reach 6a	0
Reach 6b	-43,011
Reach 6c	-77,323
Total	**-276,411**

Healthy Beach = 200’ from “BCM” Red Dash

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South Beach measurements March 21 (5.8’ tide)

Location	Beach: Toe of Dune to Wet Line	Beach if put dune back	Comments
104 Ocean	Zero	Zero	Will lose property at higher tide
100’s (Sand bag area)	Almost zero	Zero	Need dunes re-established. Keep sand bags for 6’ tides in April
2nd Ave	46 feet	26 feet	No dunes. Sandbags. Have lost private property
3rd Ave	83 feet	63 feet	Insufficient dunes.
6th Ave *	50 feet	35 feet	Insufficient dunes
7th Ave. *	70 feet	50 feet	Insufficient dunes
Grand Pavillion (March 14)	Over 200’ but can see it has eroded recently		
Wild Dunes hot spots	Zero	Zero	Ocean club; Beachwood east

Emergency cost avoidance ~ $4MM+

Cost - $	Comment
300,000	Beachwood east sand scraping
250,000	Sandbags for south end
unknown	Collins Engineering dune restoration, 100 -314 Ocean Blvd
1,250,000	Sand scraping south end
322,000	CSE emergency management oversight
200,000	Sandbags Beachwood East
800,000	Shoal management, Ocean Club, Seascape, Beachwood East
Unknown	Private resident spend: extra sand bagging, dune restoration due to Army Corp delays (~10 families), pool repair costs, vegetation install
$3,122,000-4,000,000	Total