



# Terminal Groin Committee Report

March 31, 2018

# FEIS Alternatives

1. No Action (Status Quo, nourishing with LFIX)
2. Abandon and Retreat (Not viable)
3. Beach Nourishment (LFIX and Bend Widener)
4. Inlet Management and Beach Nourishment
5. Short Terminal Groin and Beach Nourishment
6. Intermediate Terminal Groin and Beach Nourishment (Town's preferred option)

Really, there are only two choices:

- Continue nourishing as we have done for the past 15 years

OR

- Continue nourishing and build a terminal groin

Note: FEIS groin alternatives both require ongoing nourishment

# What have we done?

<b>East End Nourishment Projects (Stations 40+00 and below)</b>			
<b>Year</b>	<b>Completed by</b>	<b>Volume (CY)</b>	<b>Source</b>
2002	USACE	32,000	LFI Crossing
2004	USACE & THB	113,230	LFI Crossing
2006	USACE & THB	104,853	LFI Crossing & Smith Borrow Site
2008	USACE	100,000	LFI Crossing
2010	USACE	140,000	LFI Crossing
2011	USACE	32,000	LFI Crossing
2012	USACE	25,000	LFI Crossing
2014	USACE & THB	93,000	LFI Crossing
2017	USACE & THB	120,000	LFI Crossing
	Total Volume (CY)	760,083	
	Avg Volume/Year (CY)	58,468	

Note: The majority of these efforts have been Lockwood Folly Inlet dredging projects that have involved cost-sharing arrangement with other parties.

# What Has Been the Result



Note: FEIS Figure 7-63 confirms the east end was in better shape in 2012 than in 2000

# Pictures from March 28, 2018



Note: The yellow house with a green roof is Amazing Grace, the last house on the east end

# Pictures from March 28, 2018



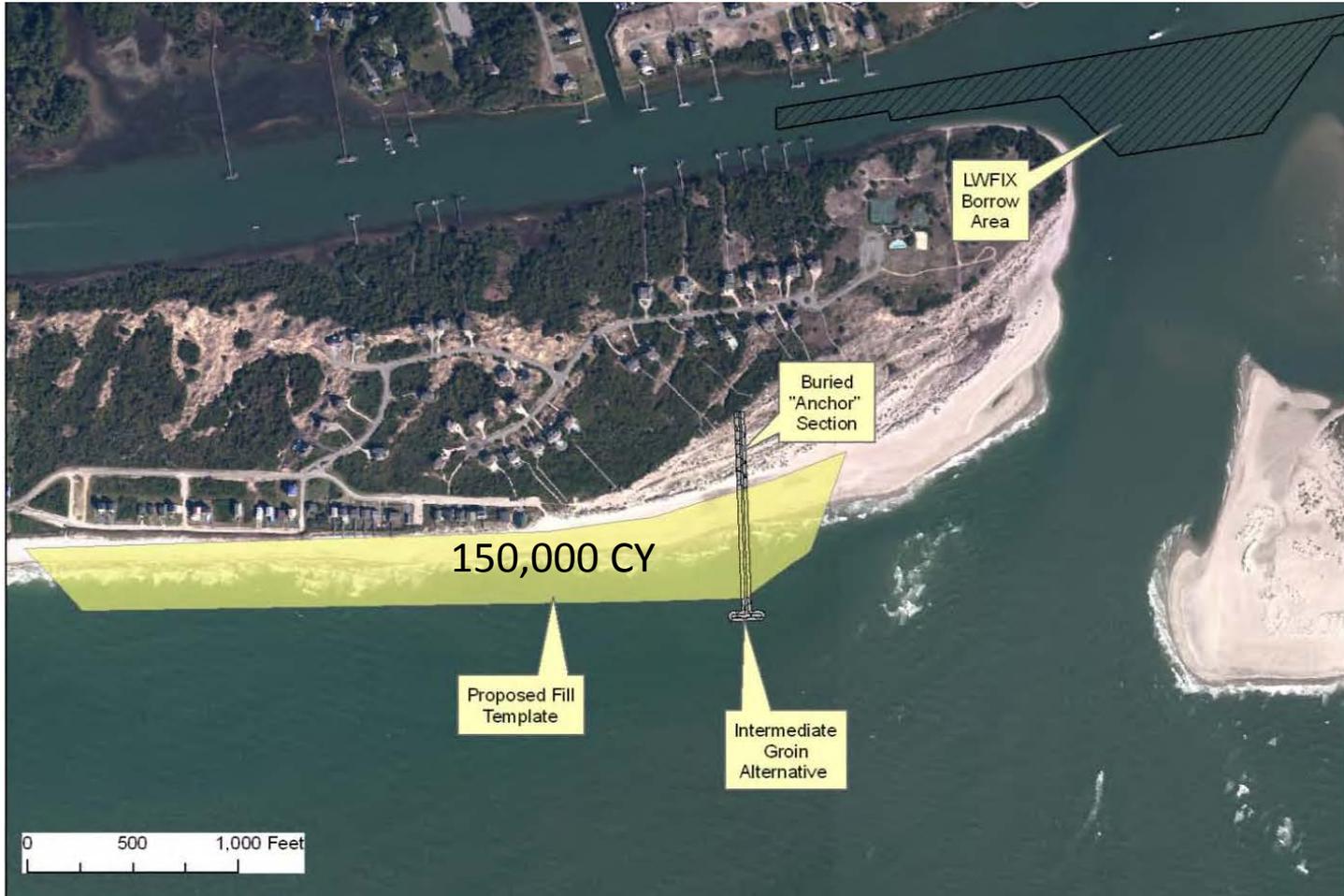
Note: Multiple new houses are now under construction

# Pictures from March 28, 2018



Note: This is the western extent of terminal groin project area

# Proposed Terminal Groin



“Nourishment events would place ~100,000 to 150,000 cy of sand (26.2-acre fill footprint from the dune out to the toe of fill) on the east end of Holden Beach every four years. “

Source: FEIS

# Groin and Fillet Visualization



The thick yellow line represents the groin rocks, the thin yellow line represents the dry sand beach fillet that will be maintained by ongoing nourishment efforts over the next 30 years.

# Cost of the Terminal Groin

	<b>Year 0</b>	<b>Every 4th year</b>
Groin construction	\$2,500,000	
Nourishment of fillet	\$1,050,000	\$1,050,000
Mobilization / Demobiliation	\$750,000	\$750,000
Monitoring/Survey/Permits	\$227,000	\$227,000
	<b>\$4,527,000</b>	<b>\$2,027,000</b>

- Annual monitoring costs will be \$132,000 in the years between nourishment projects
- Can not use Special Obligation Bonds or non-voted General Obligation Bonds
- Paying the annual costs out of BPART would deplete the current balance and more than use up all of the Town's annual funding ear-marked for beach nourishment
- Without using BPART, first year costs would require a tax increase of 38 cents (to 60 cents per \$100 assessed value - a 173% increase from the current total tax rate of 22 cents, which includes the recent increase for the Central Reach project)
- Overall average cost of \$1,150,000 per year equates to a 9.64 cent (44%) property tax increase for the next 30 years

Source: FEIS Appendix H , starting on page 9-20; all figures are in current dollars

Tax increases calculated based on current tax base and collection rates

## The Terminal Groin Nourishment Efforts Will Be In Addition to What We Are Currently Doing Now

*“It is assumed that the combination of nourishment-related dredging events and interim USACE navigation dredging events would maintain dredging regimes in the LFIX and inland LFI channels that are similar to those associated with ongoing federal dredging operations.”*

The above statement from the FEIS has been interpreted to mean that the Lockwood Folly inlet dredging activities would continue independent from the nourishment required for the terminal groin. It is assumed that the Town would also continue to pursue the same cost-sharing opportunities associated with this dredging.

Pros and cons of just continuing what we have been doing for the past 15 years – without a groin

Pros:

- Dramatically Less Cost
- Significantly Less Risk
- Greater Flexibility

Cons:

- No guarantee future east-end nourishment will always be continued
- East-end dry sand beach will likely be significantly less than the what the groin fillet would provide

## Pro: Dramatically Less Cost

- No upfront groin construction costs, initial fillet nourishment, or ongoing monitoring costs
- Less expensive nourishment efforts due to cost sharing arrangements (e.g., no mobilization costs)
- Less expensive nourishment due to ability to utilize near shore placement
- No need for a tax increase to perform the nourishment (based on the past 15 years)

## Pro: Significantly Less Risk

- High confidence of success since based on actual past results, including storm effects
- No risk of downstream erosion
- No threat of being sued
- No potential future requirement to remove a groin

## Pro: Greater Flexibility

- No 30-year commitment to nourish the fillet every 4 years @ \$2M; funds can be spent elsewhere on the strand, if needed.
- No required nourishment timing based on a trigger; nourishment can occur based on opportunities to share costs or “piggy-back”
- No requirement to dedicate funds for potential removal of a groin

# HBPOA Resolution

RESOLVED, that the membership of the HBPOA urges the Board of Commissioners of the Town of Holden Beach to: (i) continue with the same very successful and very cost-effective east end beach nourishment and Lockwood Folly Inlet strategies as have been in place for the past 15 years; (ii) stop spending the Town's money and resources in pursuit of the Terminal Groin Project; and (iii) withdraw the Town's pending Federal permit application and not apply for State permits (reserving the ability to re-apply at a later date, subject to USACE consent).