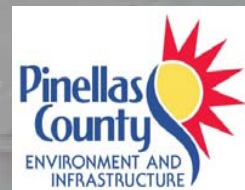


Honeymoon Island Erosion Control Project Performance during 2016 Tropical Season

Presented by:
Brett D. Moore, P.E., D.C.E.
Humiston & Moore Engineers

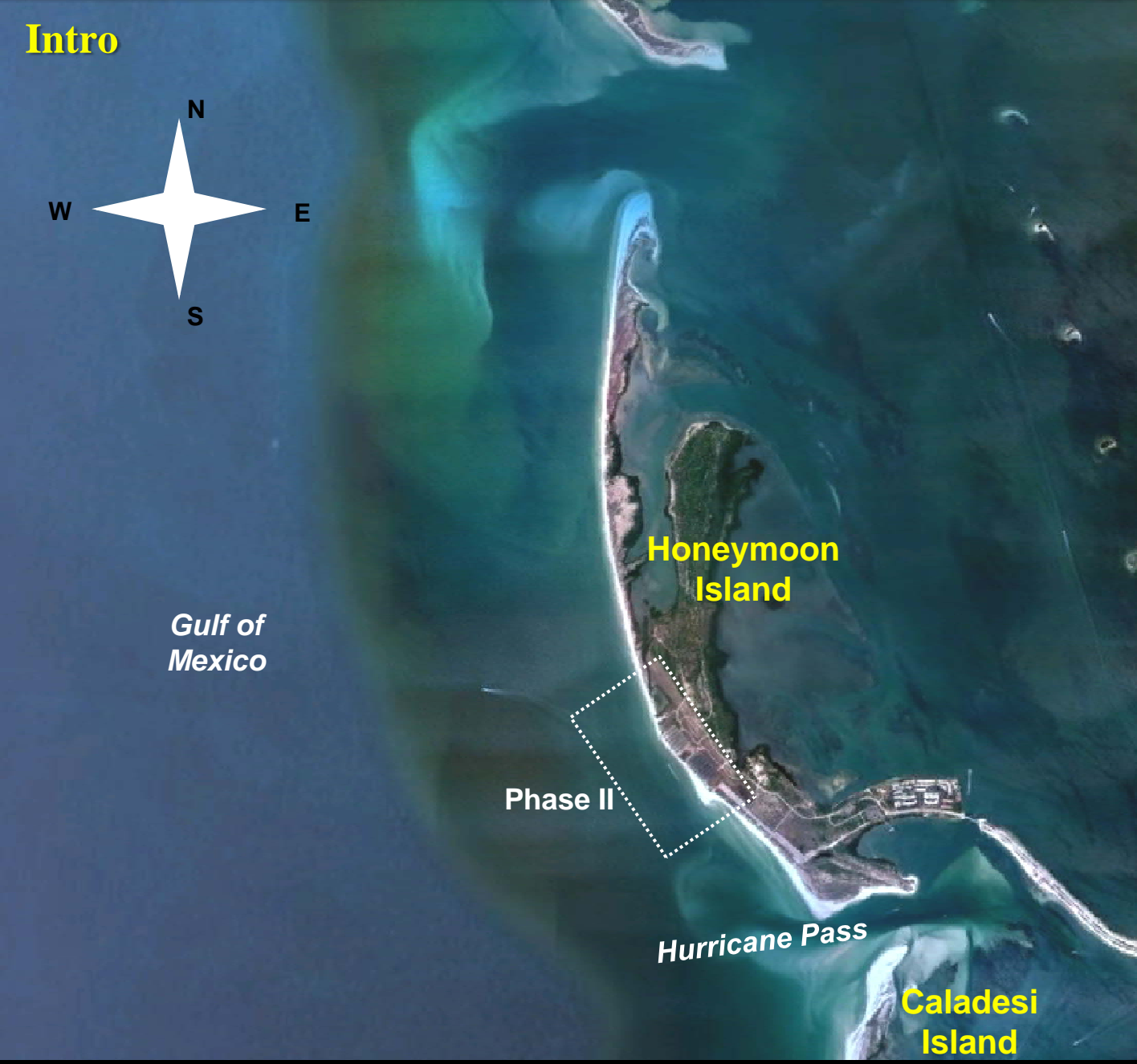
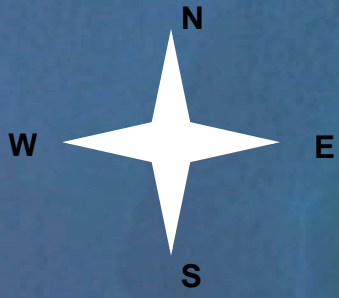
Florida Shore and Beach
Preservation Association



Presentation Outline

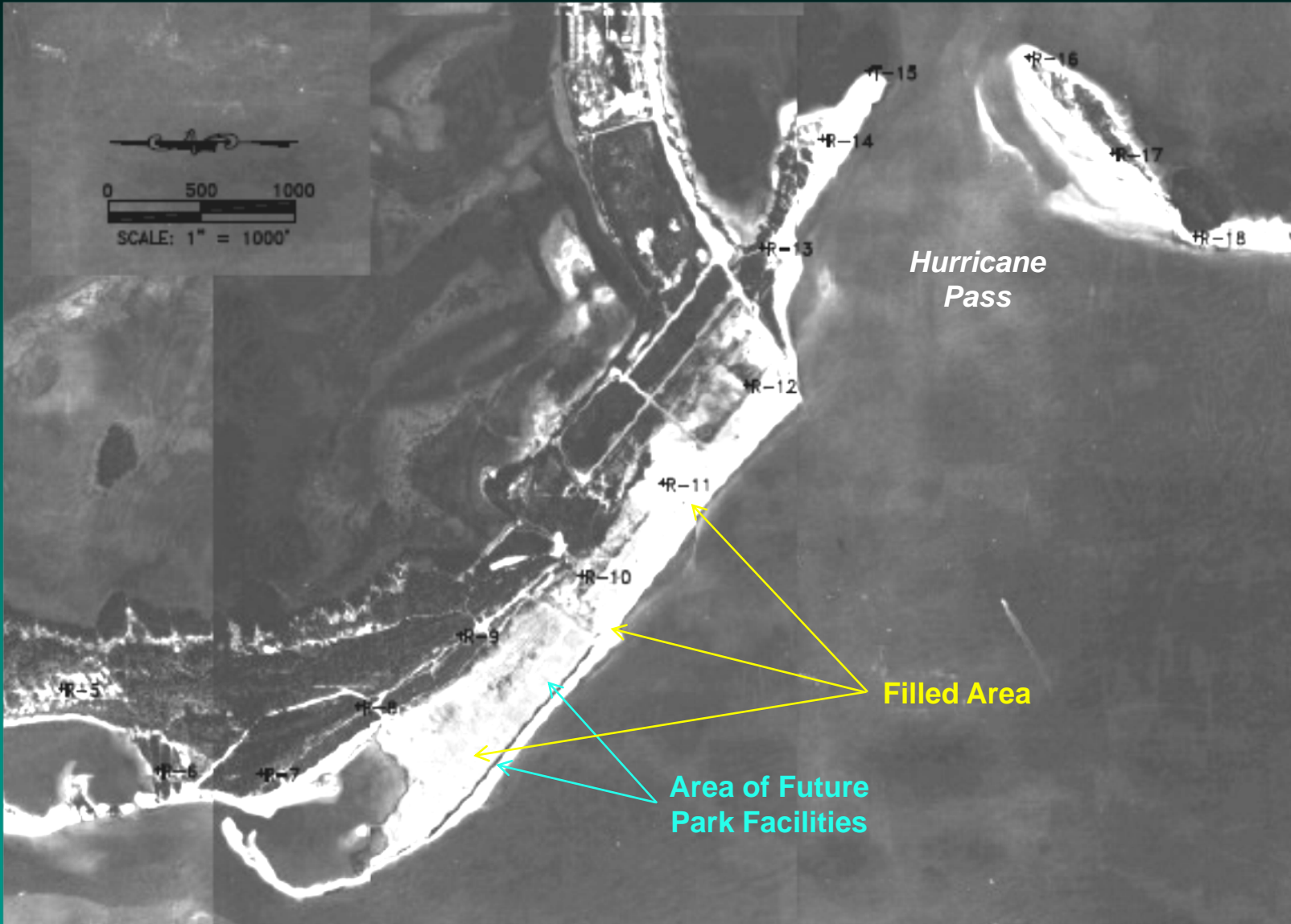
- *Background*
 - ***History of Park Headland***
 - ***Previous Shoreline Response to Beach Fill & Storms***
- *Erosion Control Project*
 - ***Upland Protection***
 - ***Sustainable Beach***
 - ***Transition from Chronic Erosion to Natural System***

Intro

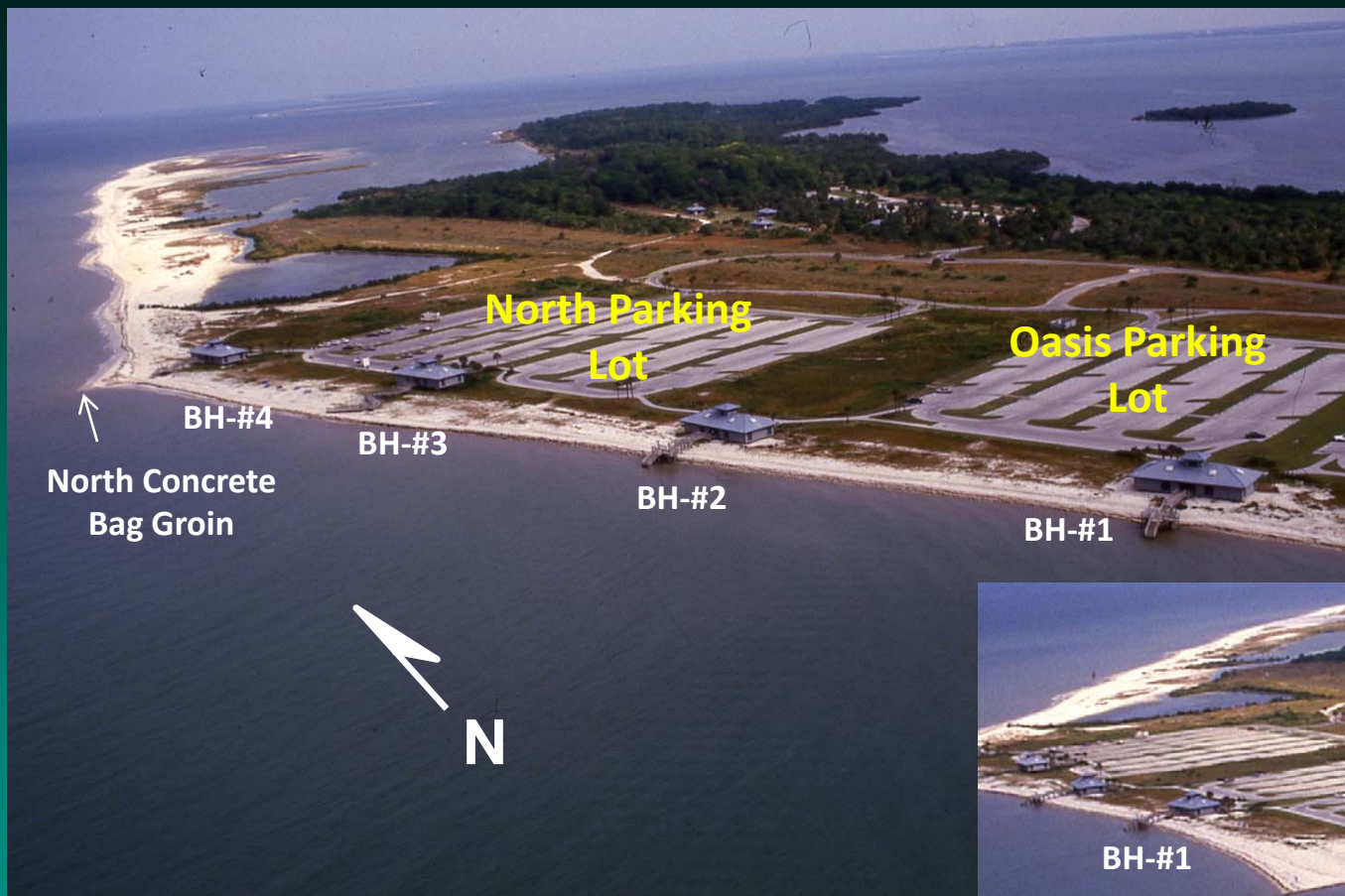
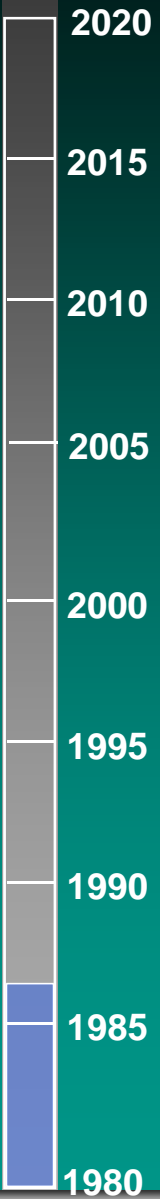


Location Map

Honeymoon Island 1971 - Fill



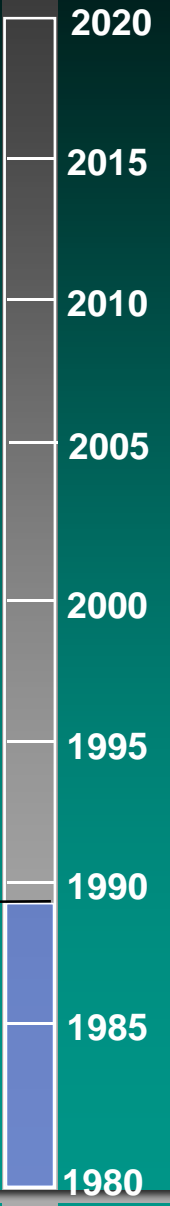
Honeymoon Island 1987



Park Improvements

- North Parking Lots
- Four Bath Houses (BH)

Honeymoon Island 3-1989



Honeymoon Island 3-1989

2020

2015

2010

2005

2000

1995

1990

1985

1980



Hurricane Pass

BH-#1

BH-#2

BH-#3

BH-#4

North Groin

N

Fill

Honeymoon Island 1991

2020

2015

2010

1989-1991

- Shoreline receded
- Walkways shortened

2005

2000

1995

1990

1985

1980

Fill



North Parking Lot

Oasis Parking Lot

BH-#4

BH-#3

BH-#2

BH-#1

Honeymoon Island 1995

2020

2015

2010

2005

2000

1995

1990

1985

1980

BH-#4

BH-#3

1991-1995

- Shoreline Recession at Parking Lots and South
- BH-#1 Relocated
- BH-#2 Relocated



Little Bayou

Honeymoon Island State Park

Honeymoon Island

Causeway Blvd

FIII



Honeymoon Island 2004

2020

2015

2010

2005

2000

1995

1990

1985

1980

1995-2004

- Continued Shoreline Recession at Parking Lots and Adjacent Areas
- BH-#3 Rubble Shoreline
- BH-#4 Rubble & Concrete Shoreline



Honeymoon Island 2004

2020

2015

2010

2005

2000

1995

1990

1985

1980



1995-2004

- Parking Lots – Vulnerable
- Mostly rubble beach.



- Concrete debris for shoreline protection near BH-#3.



Honeymoon Island Phase I Project

2020

2015

2010

2005

2000

1995

1990

1985

1980

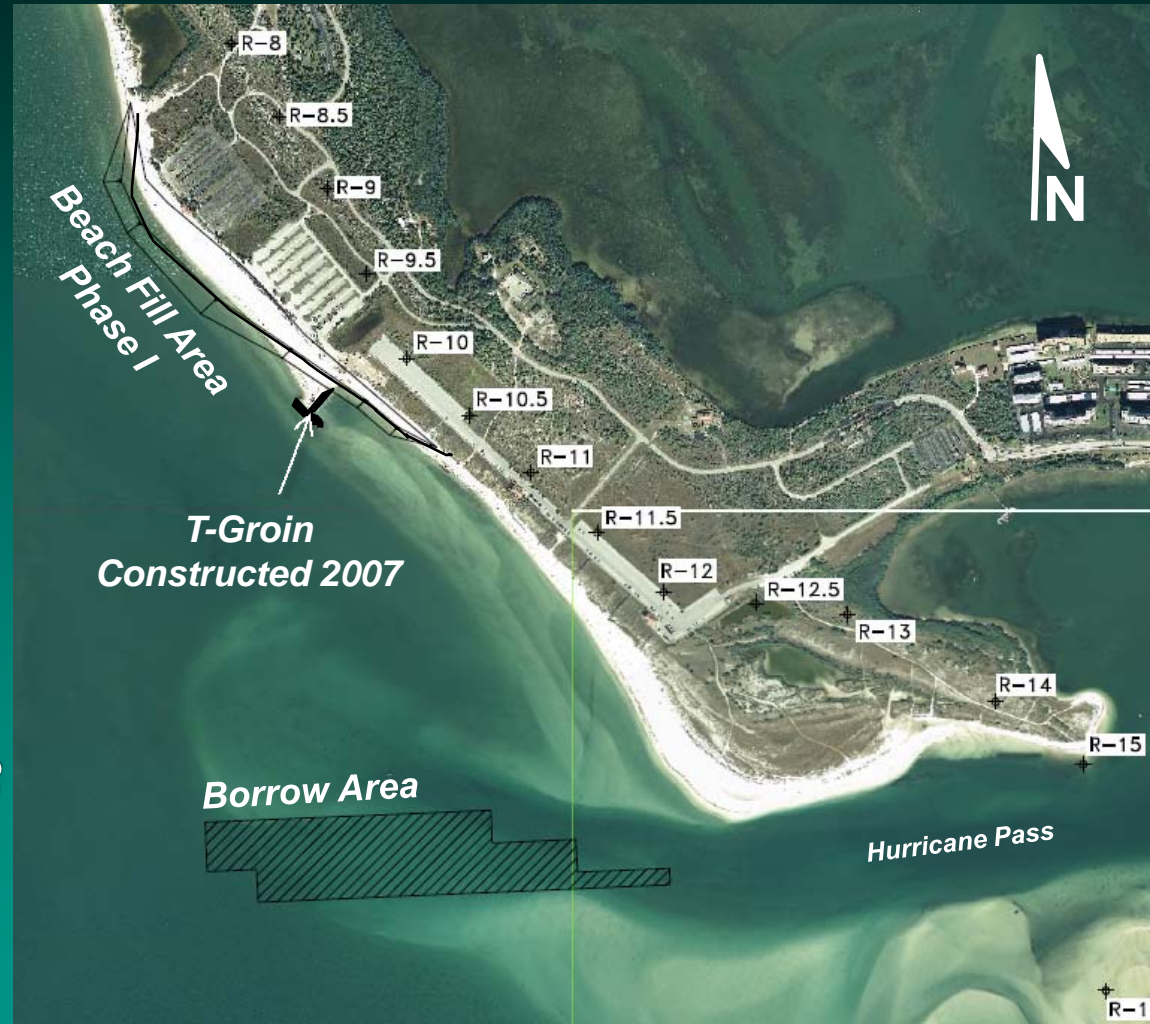
Phase I

Fill

- *150,000 CY placed between R-8 to R-10.5*

- *T-groin Constructed*
- *One T-groin, fill, monitor*

- *Construction from Aug. 2007 to Jan 2008*



Honeymoon Island 09-11-2007

2020

2015

2010

2005

2000

1995

1990

1985

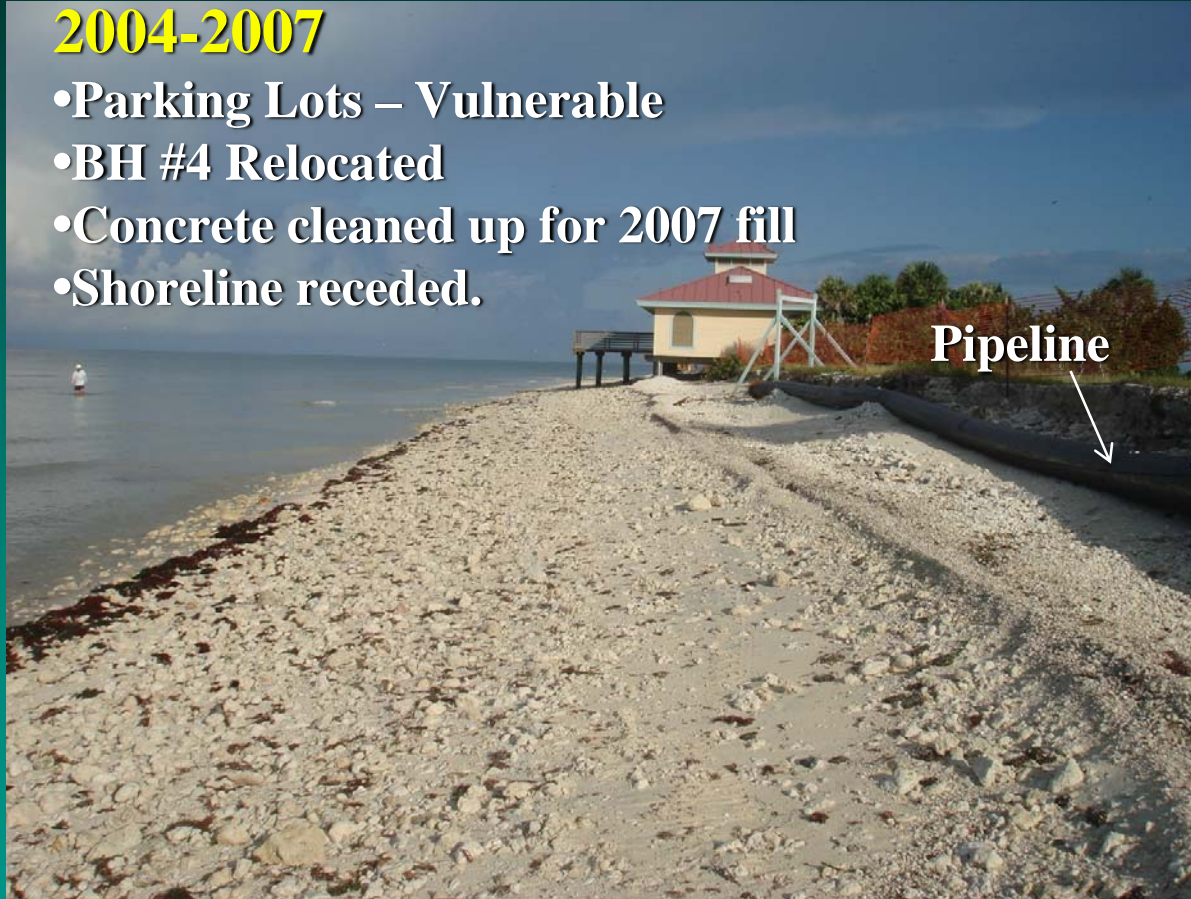
1980

Phase I

Fill

2004-2007

- Parking Lots – Vulnerable
- BH #4 Relocated
- Concrete cleaned up for 2007 fill
- Shoreline receded.



Honeymoon Island 09-11-2007

2020

2015

2010

2005

2000

1995

1990

1985

1980

Phase I

Fill

2004-2007

- Area seaward of north parking lot
- Concrete cleaned up for 2007 fill
- Shoreline receded.



Honeymoon Island Phase I: Pre vs Post

2020

2015

2010

2005

2000

1995

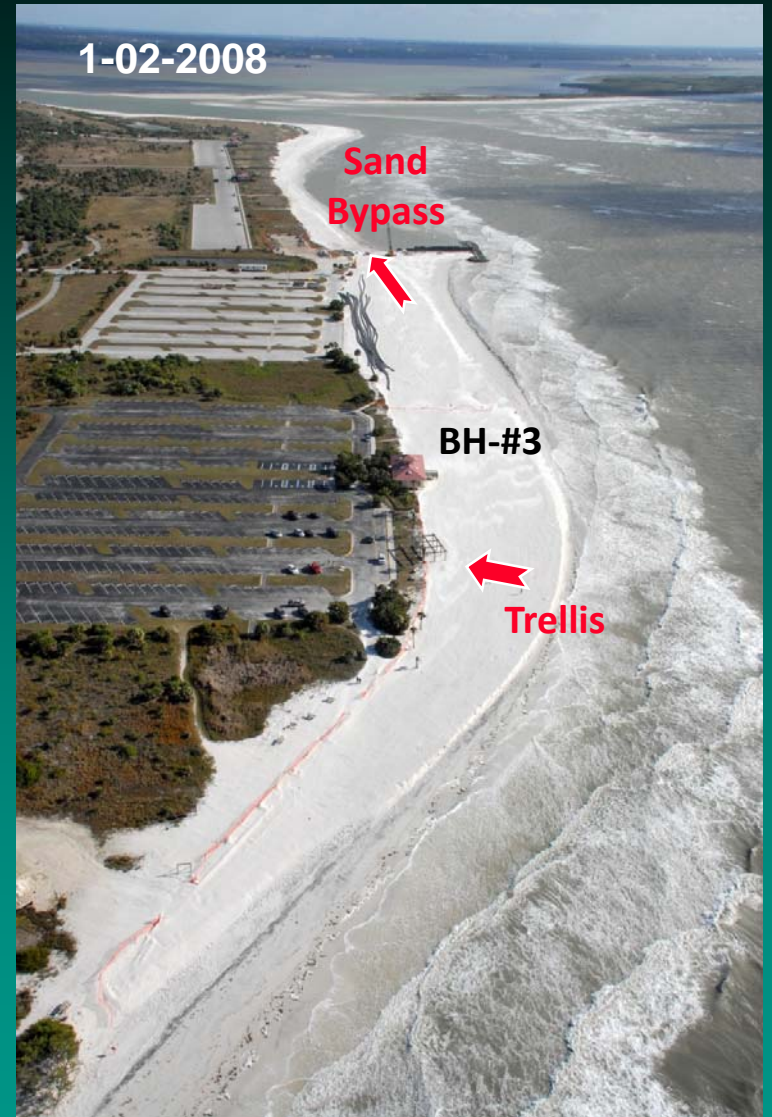
1990

1985

1980

Phase I

Fill



Honeymoon Island 03-09-2008

2020

2015

2010

2005

2000

1995

1990

1985

1980

Phase I

Fill

2007-2008 Post Fill

- Looking south at area of north parking lot.
- BH-#3 in background.
- Beach fill eroding, headed to the south



Honeymoon Island 12-01-2009

2020

2015

2010

2005

2000

1995

1990

1985

1980

Phase I

Fill



2009 Post Fill

- Looking south at BH-#3 center of north parking lot just prior to relocation.
- North Parking Lot sustaining damage.
- Shoreline continues to recede.



Honeymoon Island 03-02-2011

2020

2015

2010

2005

2000

1995

1990

1985

1980

Phase I

Fill



2010 - 2011

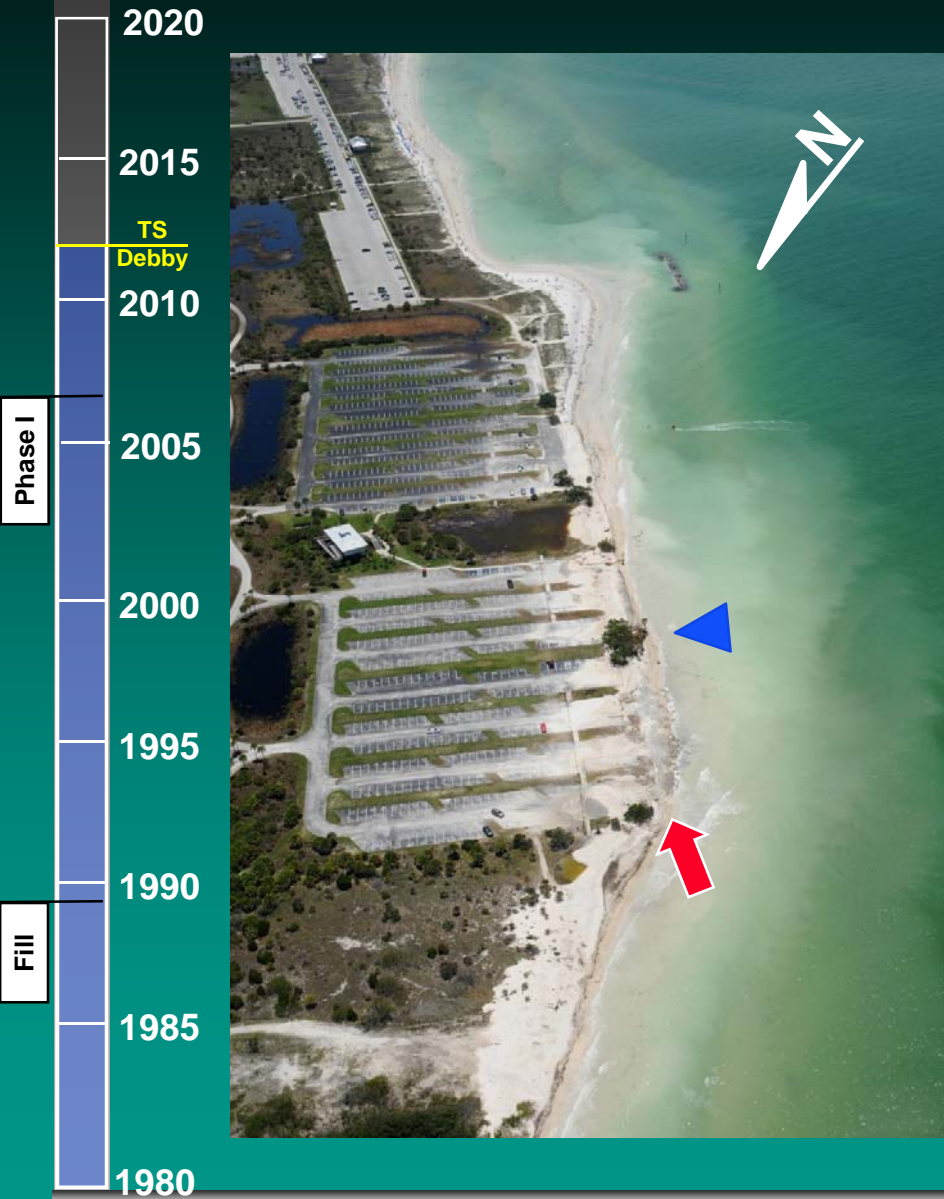
- Looking south at north lot.
- Temporary 1-ton sandbags.
- Shoreline continues to recede.



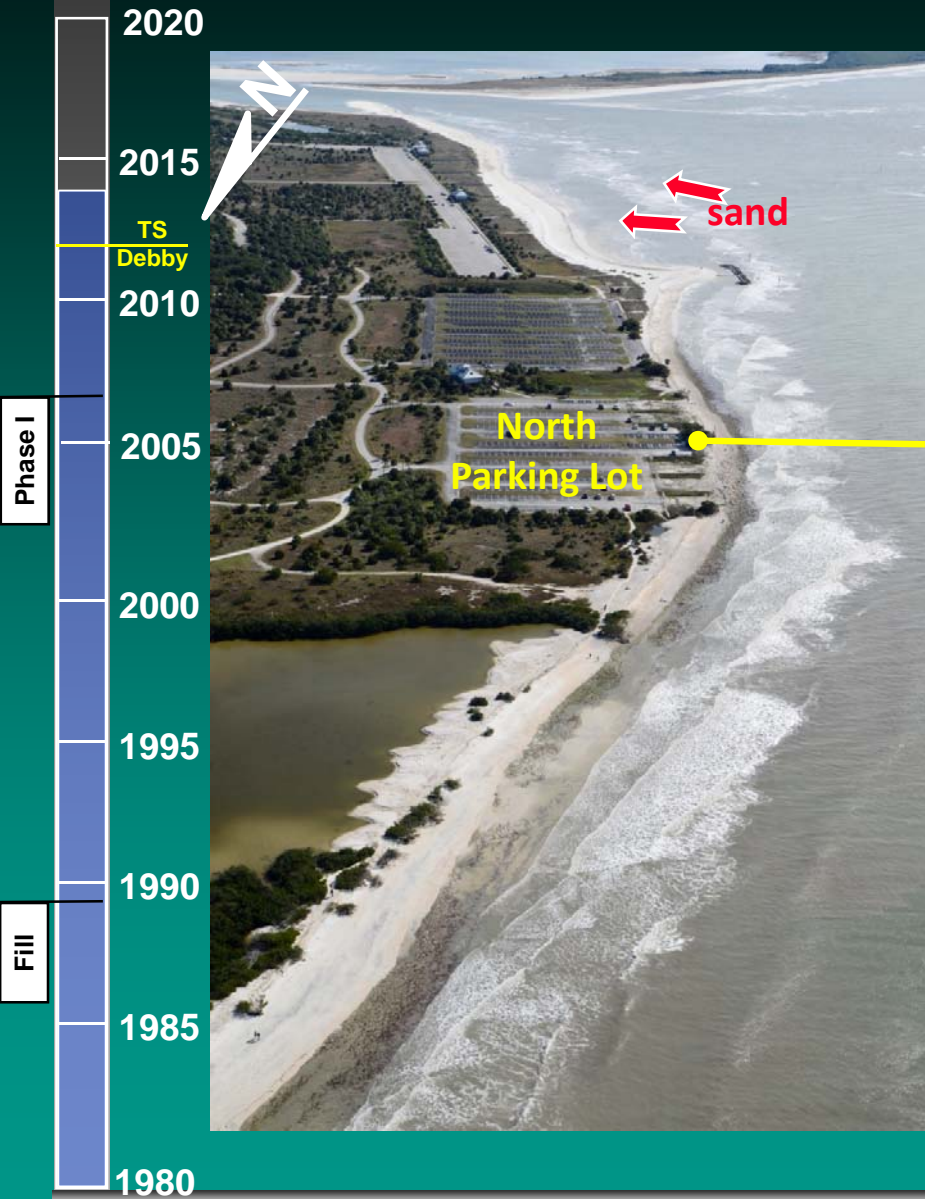
Honeymoon Island 07-01-2012

2011 – 2012 Post TS Debby

- Looking south at north lot.
- Temporary sandbags gone .
- Shoreline continues to recede.
- Parking lot failing.



Honeymoon Island 01-03-2014

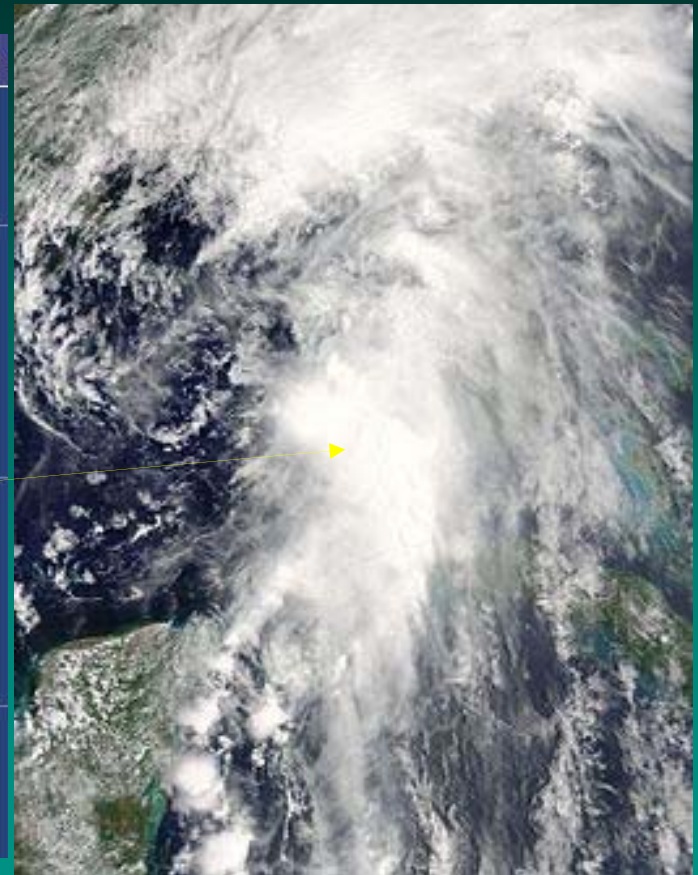


2012 – 2014

- Continued Recession,
- Damage,
- No beach in north area.

Tropical Storm Colin June 2016

2020
Phase II
2015
TS
Debby
2010
Phase I
2005
2000
1995
1990
Fill
1985
1980



Honeymoon Island Pre & Post Colin

2020

2015

2010

2005

2000

1995

1990

1985

1980

Phase II

Phase I

Fill

TS
Debby



Hurricane Hermine September 2016

2020
 Phase II
 2015
 Phase I
 2010
 2005
 2000
 1995
 1990
 Phase III
 1985
 1980

2020

TS
 Hermine

2015

TS
 Debby

2010

2005

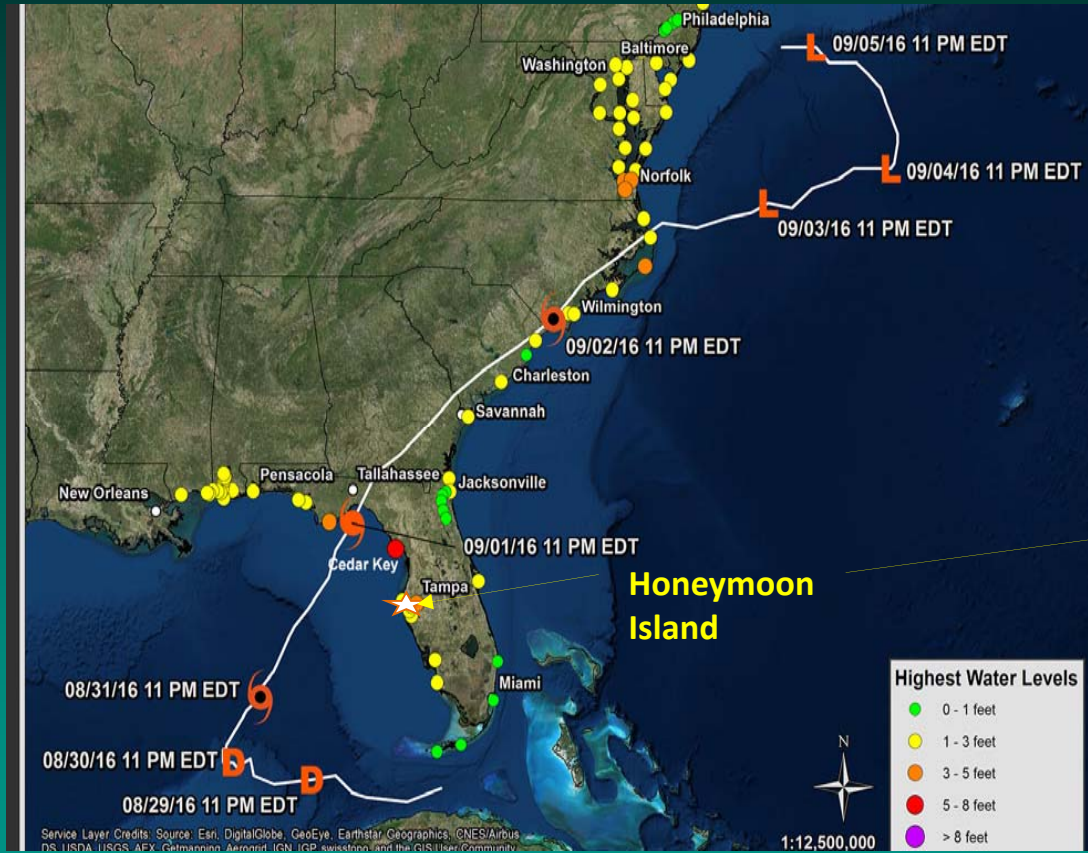
2000

1995

1990

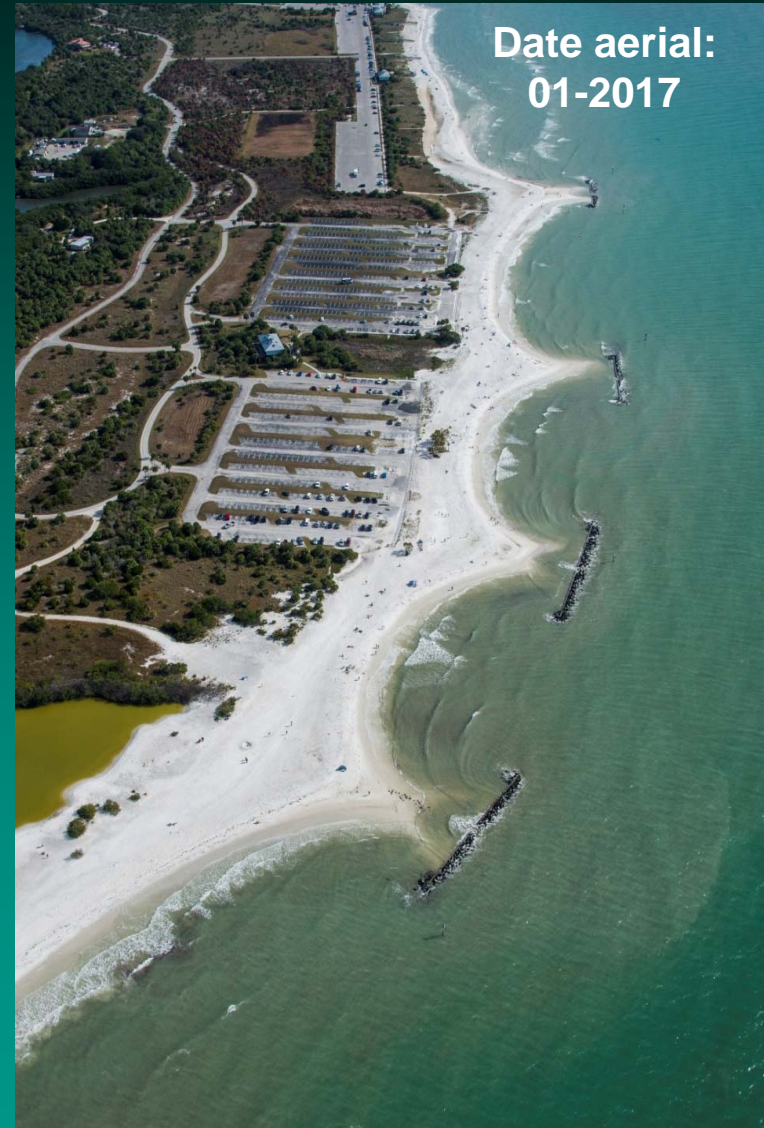
1985

1980



Honeymoon Island Post Hermine Erosion/ Recovery

01-2017



09-2016

08-2016

Honeymoon Island 1-21-2017

**Pre-construction
3-12-2014**



**4 Months Post Storm
1-21-2017**



Area of Dune Construction

Closing Remarks

9-04-2016



1-07-2016



- ✓ Upland Protection
- ✓ Establish Active Beach
- ✓ Enhanced Beach Recovery Along Headland