

City of Corpus Christi

Tax Reinvestment Zone #2



February 21, 2017



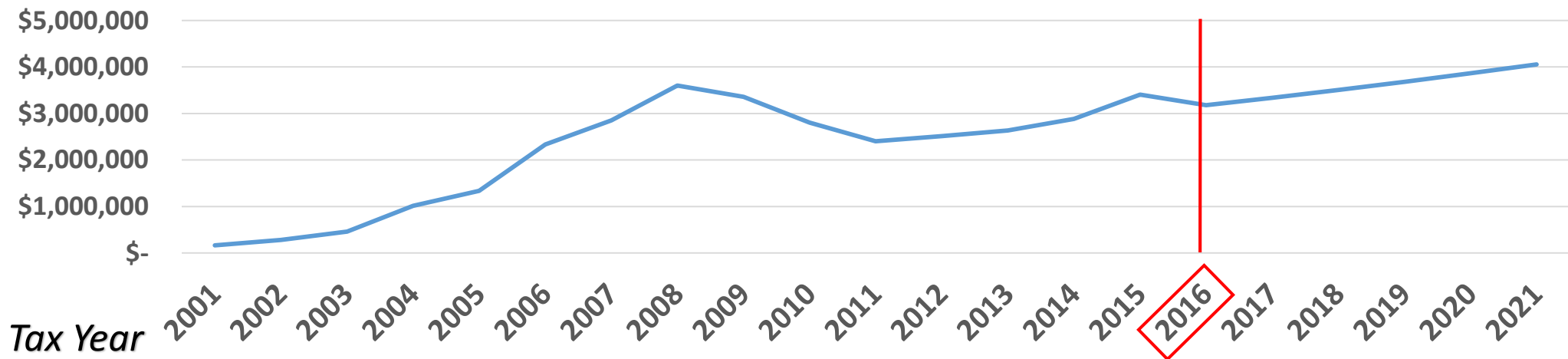
Financial Summary

TIF & TIRZ#2

2016 TIRZ#2 Fund Balance

Beginning Fund Balance 2016	\$6,992,623
TIF Collections 2016	\$3,405,001
Reserves (Dredging, Bonds, Maintenance)	(\$6,000,000)
<u>Available Funds</u>	<u>\$4,397,624</u>

Historical Collections - Tax Increment Financing (TIF)





Project Plan Amendments

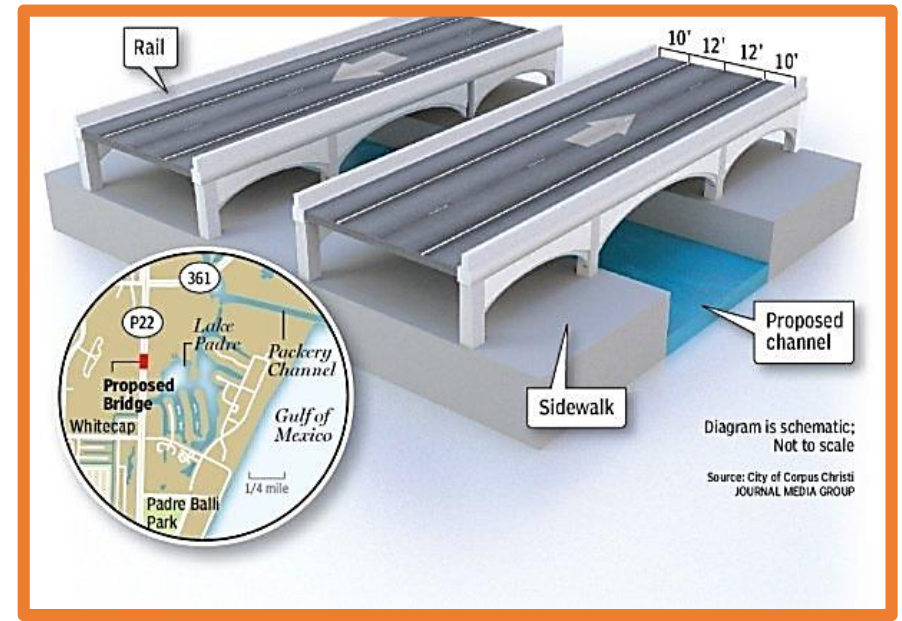
Park Road 22 Bridge

- Motion amending the Tax Increment Reinvestment Zone #2 City of Corpus Christi Project Plan to add the construction of two bridges on Park Road 22 between Commodores and Whitecap. The bridges will require up to \$4,000,000 of TIRZ #2 funding and will allow for travel over canals that are to be built by a third party developer in the area.

Estimated Total Project \$11 Million

Bond Funding (*Streets*)

- 2004 Streets Bond \$1.158M
 - *Special Election Nov 2nd 2004 - Proposition #1 \$68,350,000 for the construction of permanent street improvements throughout the City.*
- 2008 Streets Bond \$5.900M
- ***Total Committed*** ***\$7.058M***



Note: (1) Bids will open on February 8th 2017, **(2)** On 9.13.16 ISAC supported the use of up to \$4 Million dollars from the TIRZ #2 fund to go towards the construction of the bridge.



Project Plan Amendments

Packery Channel Monitoring Contract

- Motion recommending that City Council approve a five year Master Services Agreement between the City of Corpus Christi and Texas A & M University - Corpus Christi (TAMU-CC) for Packery Channel Monitoring in an amount not to exceed \$2,000,000 and authorize Task Order #1

Estimated Cost Task Order #1 \$333,631

Annual Task Order #1

• Winter Seasonal Survey (Feb/Mar)	\$ 94,516
• Spring Survey (Jun/Jul)	\$ 58,627
• Summer Survey (Sep/Oct)	\$104,602
• Event (Post Storm)	\$ 75,886

*Note: On 9.13.16 ISAC supported the city in instituting a multi year contract with annualized task orders
 On 1.11.17 ISAC convened a sub committee to further review this contract.
 In January 2017 the Watershore and Beach Advisory Committee supported the continuation of this contract*



Packery Channel Monitoring Support

The Packery Channel Monitoring Program Provides Guidance to The City of Corpus Christi based on Seasonal Assessment to Support the Operation and Management of the City investment in infrastructure that is Packery Channel and the Surrounding Beach, Channels, Wetlands, and Watershore Parks and Amenities

Packery Channel and the Local Beaches and Wetlands Support:

- Tourism (fishing, surfing, windsurfing, boating, sightseeing, beach etc.)
- Development (existing and future)
- Quality of life for residents (NPI and entire community)

The Monitoring Program Supports City Operation and Management:

1. Dredge Planning (Packery Channel)
2. Dredge forecasting (Packery Channel)
3. Navigation Safety (Packery Channel)
4. Beach Management (NPI and Mustang Island: see City Adaptive Beach Management Plan)
5. Beach nourishment obligations (NPI Seawall:CEPRA/TGLO agreement)
6. Beach profile survey obligations (NPI Seawall (CEPRA/TGLO agreement)
7. Monitoring Program and data required for FEMA reimbursement (NPI beach)
8. Data for application to planned and future projects in local waterways and canals
(Example: hydrodynamics related to proposed channel at PR 22)



Packery Channel Monitoring Support

- **Concern: How is beach erosion measured and is nourishment helping? How does the City manage the beach and permit obligations on NPI?**

Monitoring is necessary to document changes in erosion of the beach over time and for documentation associated with the following ongoing City obligations:

- CEPRA funded beach nourishment on NPI requires monitoring (beach profile surveys) of location of Beneficial Use of Dredge Material placement (BUDM during construction) (TGLO agreement)
- Bollard placement along NPI Seawall
Requires regular adjustment along beach that reaches width = 150 ft (TGLO agreement)
- *The City is obligated (CEPRA/TGLO) to have a plan to nourish and maintain the beach fronting the NPI to a width of at least 150 ft (200 ft design width)*

- **Monitoring Program Benefit:**

Seasonal measurement and analysis applied to:

- Measure shoreline position: ***Bollard placement/position*** adjustment
- Measure erosion: **Beach nourishment planning and coordination with dredge planning**
- Monitoring and analysis: component of ***City Adaptive Beach Management Plan Rev 2017***
- Annual data collection required for ***FEMA reimbursement*** eligibility



Project Plan Amendments

Six Pack Engineering Projects

- Motion amending the Tax Increment Reinvestment Zone #2 Project and Financing Plans by replacing Exhibit H with the document entitled Projects with Funds from Tax Increment Reinvestment Zone #2, which contains the current information as of February 21, 2017.

Estimated Cost of Updated Six Pack Projects \$ 1,915,000

Six Pack Engineering Projects

- Restrooms & Showers \$ 1,000,000
- Mobi Mats (*ADA Access*) \$ 200,000
- Beach Maintenance Facility \$ 715,000

- *Pavilion (HELD FOR DISCUSSION)* \$ 1,000,000

Note: *On 12.6.16 Watershore and Beach Advisory Committee provided recommendations to ISAC
On 1.11.17 ISAC supported moving forward with WBAC Recommendations for:
Restrooms & Showers, Mobi-Mats, Beach Maintenance Facility*



Future Action

TIRZ#2 Meeting Outline 2017

- Meetings will be scheduled Once or Twice Annually
- Meetings will take place in the Morning on the 3rd Tuesday
- Special Meetings May be needed to review project plan amendments
- All Meetings will be scheduled to discuss:
 - Project Plan Amendments
 - Updated Financial Reports
 - Updates to Ongoing Construction Projects



BACKUP PRESENTATION TAMUCC MONITORING



Packery Channel Monitoring Program

Supporting the City of Corpus Christi in the Operation, Management, Maintenance, Restoration and Rehabilitation of Inlet/Beach Infrastructure and Coastal Resources

Prepared for:
TIRZ #2

North Padre Island Development Corporation,
Corpus Christi City Council and
The City of Corpus Christi

21 Feb 2017

Deidre D. Williams
Coastal Research Scientist

*Conrad Blucher Institute for Surveying and
Science
Texas A&M University-Corpus Christi*

Aerial Image, Oct 2016 Courtesy of Lanmon Aerial Photography



**CONRAD BLUCHER
INSTITUTE**
FOR SURVEYING AND SCIENCE



City of Corpus Christi



US Army Corps of Engineers

Packery Channel:

Original Purpose and Intent

“North Padre Island Storm Damage and Reduction and Environmental Restoration Project”

- **Original Intent (USACE and City of Corpus Christi Cooperative Agreement)***
 1. **“Provide sand for NPI beach to increase stability toward storm protection”**
 2. **“Provide a water exchange pass between Gulf and Laguna to reduce periodically high saline conditions and result in ecosystem restoration”**
- **Secondary Goal: Recreation and Development (City of Corpus Christi)*:**
Community amenity for City of Corpus
Supporting: recreation (including navigation), development, tourism,
and community quality of life

*** EIS United States. Army. Corps of Engineers, 2003.**

Packery Channel: Success to Date

Recreational Development based on Inlet/Beach Infrastructure

- Coastal infrastructure provides for: diverse community interests: Fishing, boating, surfing, relaxation, birding, windsurfing/kite boarding etc..
- Coastal Infrastructure supports and attracts development and tourism: Supports local economy

Out-Performed Design and Functional Expectations (Primary Goal)

- **Coastal Infrastructure provides for storm damage reduction on NPI:**
 - 50% of beach fronting NPI Seawall is stable (2009-2016)
 - 100% of beach along NPI project area is wider than before Packery

**Original Projection: Beach nourishment would completely erode within 3 years after placement without additional nourishment (EIS)*

- **Dredge Cycle Reduced based on Seasonal Monitoring guided deferment**
 - 5-yr Dredge Cycle

**Original projection at 1-3 yr (Design reports, EIS)*

** Original Projections (COE EIS and Design Reports)*

Success to Date: Beach Nourishment

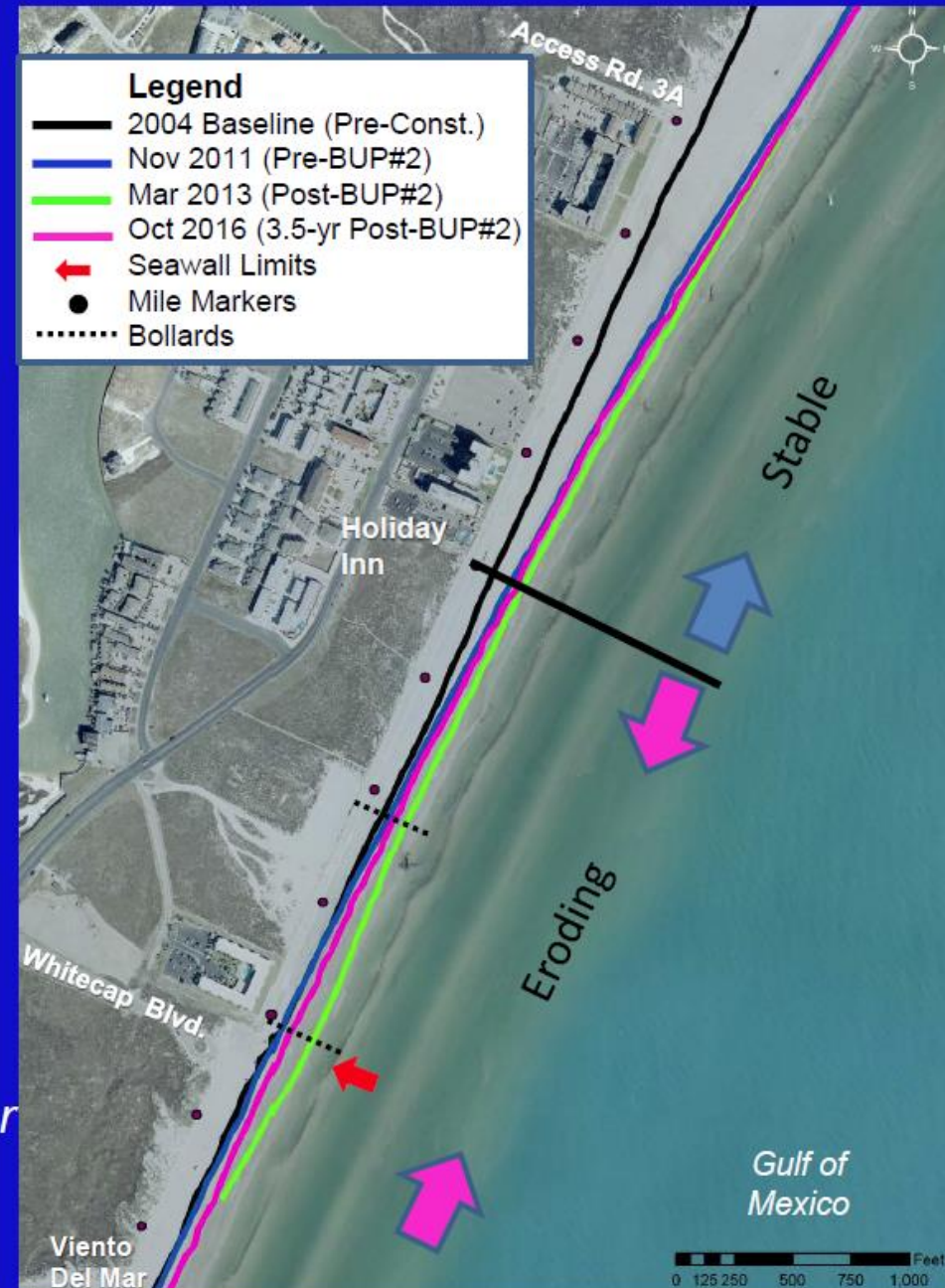
Out-Performed Design and Functional Expectations (Primary Goal)

- Coastal Infrastructure provides for storm damage reduction on NPI:

- > 50% of beach in project area is stable (2009-2016)

- 100% of beach along NPI project area is wider than before Packery

- *Original Projection: Beach nourishment would completely erode within 3 years after placement without additional nourishment (EIS)*



Packery Channel: Success and Project Longevity

Factors Contributing to Success to Date:

- **Research & Design, Engineered Design and Location**
- **Proactive Management supported by Seasonal Monitoring and Trend Analysis: Implemented due to foresight of City Council, TIRZ Committee and City Staff**



Why Proactive Management?

Why Was Proactive Management Important? Initially Many Unknowns and Controversy

Concern: Rapid shoaling, location of shoals, rate of erosion

Concern: Unmanageable cost of maintenance beyond predictions(1-3 yr)

Concern: COE concerns related to TX inlet performance related to downdrift erosion and rapid shoaling (Mansfield Pass, Aransas Pass, Surfside)

Concern: Conflicting expectations in reports and reviews

Why Still Important? Use as Forecasting Tool and Unknowns Continue

- **Dynamic Environment-** Inlet is evolving and changes are seasonal as well as annual
- **Apply Trends to Forecast and Guide Decision Making:**
 - Breaks in trends are alerts to possible concerns
 - Dredge forecasting
 - Dredge Deferment (seasonally assessed toward increasing the dredge interval)
- **Future Changes to the Channel System:**
 - Monitoring quantifies changes and impact to Packery Channel Infrastructure and canal system
 - New channels influence water velocity thus shoaling, and scour, stabilization
- **Data shows reality of seasonal condition and provides foundation for rapid deploy as needed such as post-storm or excessive shoaling**

Monitoring and Analysis Provide for *Planning* instead of *Reacting*

Management and Monitoring History

- **Baseline and Construction 2004-Oct 2006:**
USACE (Galveston District and CHL/CIRP at ERDC)
- **Post-Construction Monitoring 2006-2008:**
USACE (Galveston District and CHL/CIRP at ERDC)
- **Post-Construction Monitoring/Management 2008-2016:**
City of Corpus Christi
- **Collaborators and Contributors (2008-2016):**
USACE (Current monitoring and hydrodynamic modeling)
Naismith Marine Services (developing cost-effective survey methodology supports analysis
TGLO (CEPRA) BUDM beach nourishment
Nueces County (MHT and AHT surveys)



Operating Budget 2017 within \$100 of Initial (2008/2009)

- Refinement of Methodology/Technology/Efficiency
- Historic knowledge of system since pre-construction
- Maintaining and building on early knowledge/technology foundations
- Only conducting focus directed surveys on an as needed basis

Packery Channel Monitoring Program: Annual Budget Total 2008-2017			
Contract/Amendment	Year(s)	Total with Event	Base Cost No Event
Amendment 12	2017/2018	\$329,290	\$255,393 (Proposed)
Amendment 11	2016	\$350,703	\$272,891
Amendment 10	2015/2016	\$277,084	\$288,953
Amendment 9	2015/2016	(\$105,248) applied from conserved funds from previous amendments 7/8	N/A
Total Year 2013/2014	2015/2016	\$382,332	\$284,953
Amendment 8	2014/2015	\$349,755	\$271,943
Amendment 7	2013/2014	\$314,389	\$246,497
Amendment 6	2012/2013	\$293,400	\$230,600
Amendment 5	2011/2012	600.00	N/A
Amendment 4	2010/2011	\$325,517	276,484
Amendment 3	2009/2010	\$299,900	N/A
Amendment 2	2008/2009	\$11,020	N/A
Amendment 1		\$61,715	N/A
Original Contract		\$241,487	
Total Year 2008/2009	2008/2009	\$315,222	N/A

Dredge Deferment Savings

Dredge Deferment based on Trend Analysis (Seasonal Surveys)

- **Concern: Channel will shoal rapidly and dredging will be required 1-3 yr**
 - Studies Recommended Dredge Cycle (1-3 Cycle):
Estimated Savings to City: \$ 6 to 18 million
- **Monitoring Program Benefit:
Differed Dredging based on Monitoring Guidance**
 - Actual Dredge Cycle (5 yr Cycle):
Cost: < \$ 2 million (est. at 3 million 2017)
 - Conservation of funds for future (savings for hurricane impact)
 - Fewer Dredge events = Limited impact on community beach and inlet users
 - Fewer Dredge events = Limited impact on tourism



Packery Channel Monitoring Program

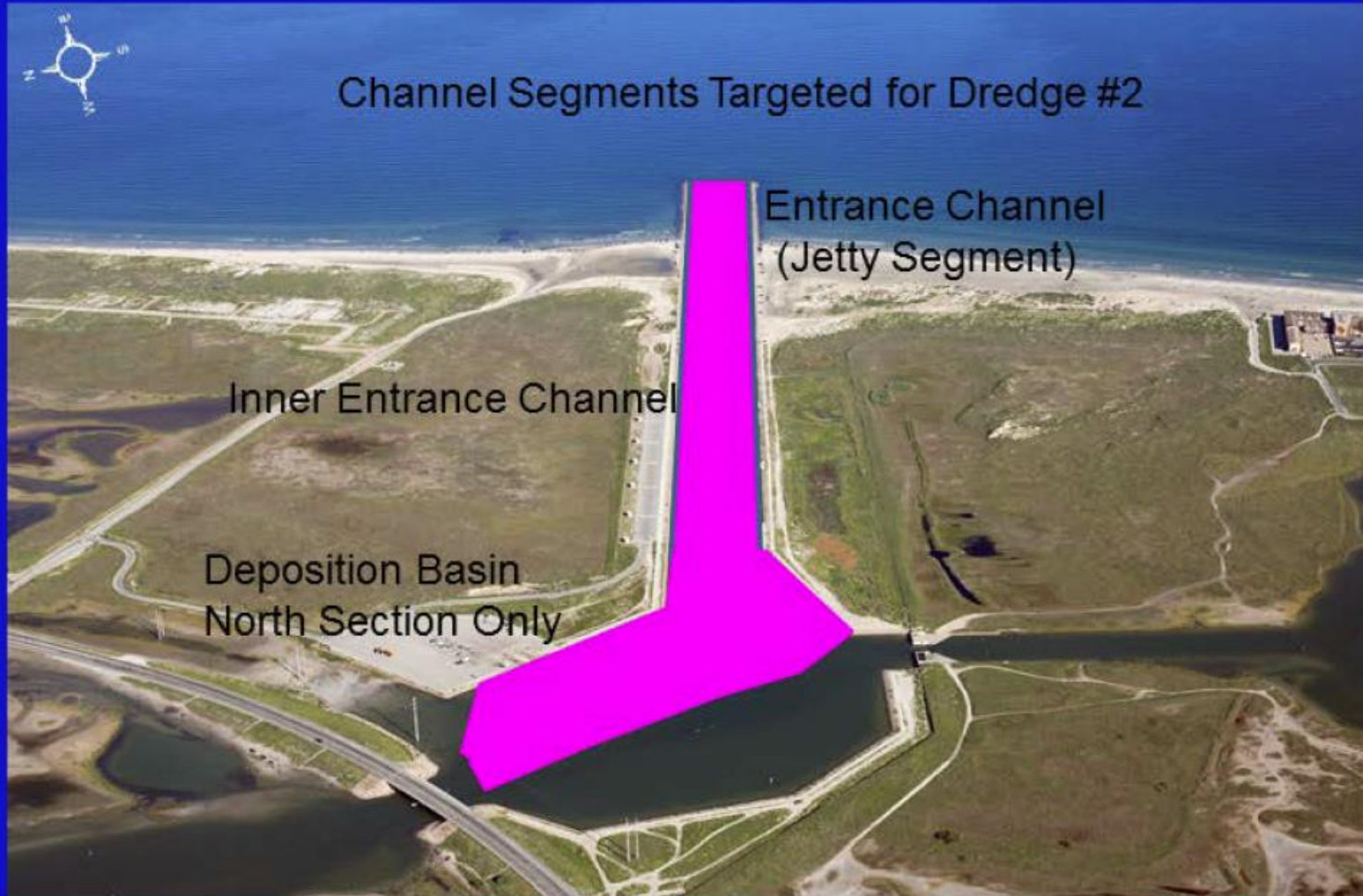
Key Components

- **Seasonal Monitoring/Survey of Channel (Applied to Trend Analysis)**
 - Dredge Planning (rate of shoaling, id change in shoaling trends)
 - Dredge Deferment
 - Navigation Safety (warnings issued as needed)
- **Annual Monitoring/Survey of Wetland and Inner Channel**
 - Environmental Planning and Documentation
- **Provision for Pre- and Post- Storm Monitoring**
 - Funding allocated and leadership in place for rapid mobilization as needed/directed
 - If No Event Needed- Funds are conserved (re-applied following years)
- **Seasonal Monitoring/Survey of Beach Profile and Shoreline Position**
 - Maintain FEMA reimbursement eligibility (Hurricane impact)
 - Guidance for beach operations
 - Nourishment and bypass planning
 - Adherence to CEPRA agreement with TGLO (NPI Seawall)
- **Adaptive Beach Management Strategies (Trend Analysis Guidance)**
 - Supports City of Corpus Christi's Adaptive Beach Management Plan (provided to TGLO)
 - Critical guidance for high profile management areas NPI Seawall and adjacent to Inlet
- **Real-Time Access Water Current Velocity (Packery and GIWW at JFK)**
 - Navigation safety- Issuance of Advisories
 - Application to model forecasting as needed
 - (Example Application: Planning for influence of new canals/channels)

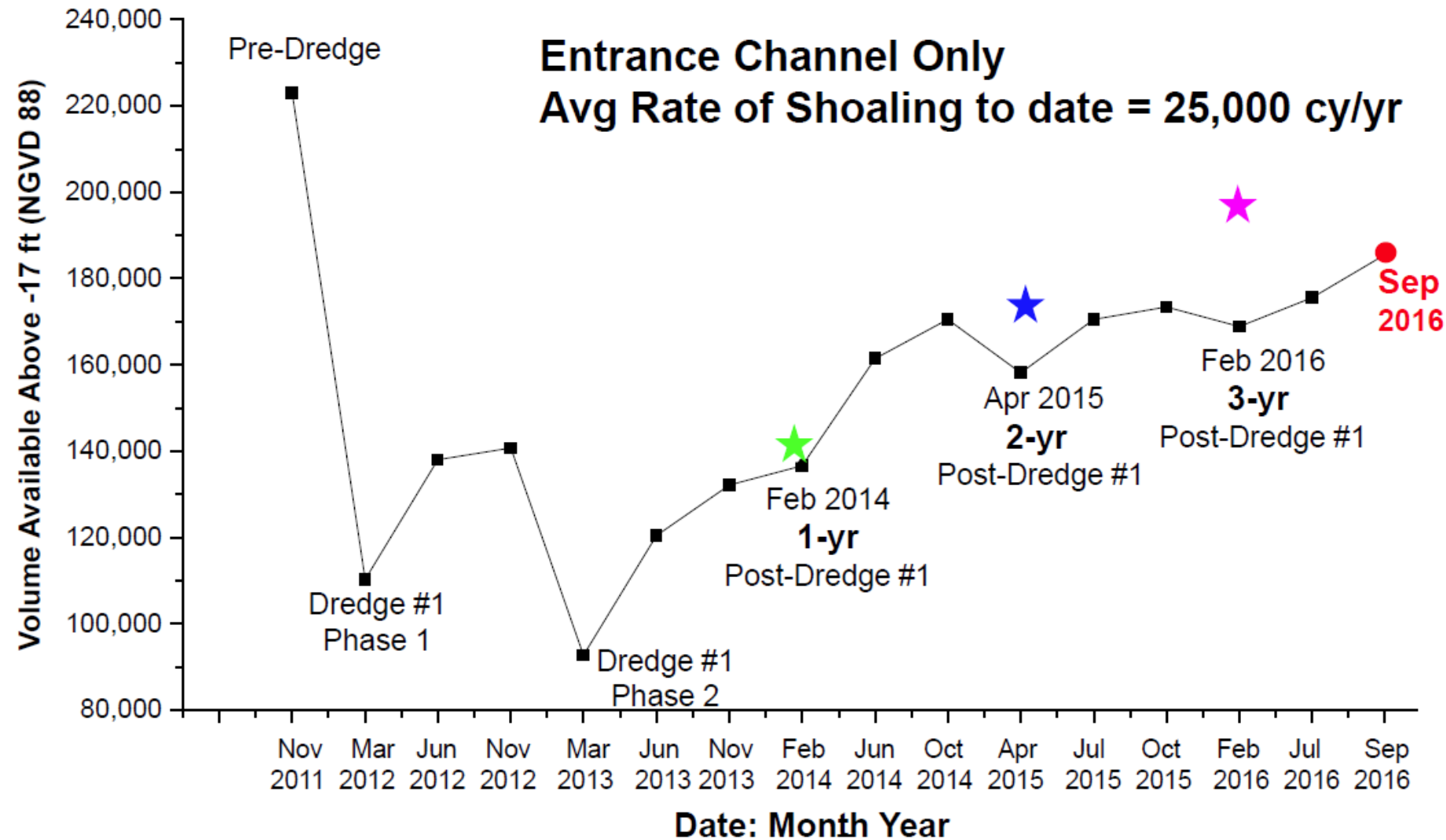
Benefits of Packery Channel Monitoring Program

Dredge Planning and Deferment

(Trend Analysis and Seasonal Surveys)



- ★ Volume 1-yr Post-Construction (Aug 2007)
- ★ Volume 2-yr Post-Construction (Sep 2008)
- ★ Volume 3-yr Post-Construction (Sep 2009)



Packery Channel: Managing Success of Past and Applications to Future Management Issues

Managing Continued Growth
of Beach Width at Inlet



Packery Channel: Managing Success

Past: Out-Performed Design and Functional Expectations

Future Management Concern:

- Manage continued > in beach width
- Redistribute to the north and south where needed (NPI Seawall)

Potential Solution for North Packery:

- Bypassing sand adjacent to inlet
- Redistribution northward where needed

Benefit:

- Reduce potential for > inlet shoaling via wind and Gulf water current
- Apply to nourish eroding NPI beach
- Can be conducted during dredge or independent

