



## AGENDA MEMORANDUM

Action Item for the City Council Meeting September 10, 2024

**DATE:** September 10, 2024

**TO:** Peter Zanoni, City Manager

**FROM:** Robert Dodd, Director of Parks and Recreation  
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**Professional Service Agreement**  
**Survey & Assessment of Beach Erosion**

**CAPTION:**

Motion authorizing a professional service agreement for five months with Texas A&M University-Corpus Christi in an amount not to exceed \$58,124.00 for survey and assessment of beach erosion caused by Tropical Storm Alberto, with FY 2024 funding from the State HOT Fund.

**SUMMARY:**

On June 20, 2024, Mayor Paulette Guajardo signed a proclamation declaring a local state of disaster related to Tropical Storm Alberto. It was declared that Tropical Storm Alberto posed a threat of imminent disaster, including widespread/severe property damage, injury/loss of life, life threatening storm surge, damaging winds and heavy rainfall. Texas A&M University-Corpus Christi (TAMUCC), Conrad Blucher Institute for Surveying/Science, has agreed to provide professional services for an emergency beach survey/assessment of critical beach erosion (berm & dune) to preserve the footprint of the elevated parks and water access for the community.

This proposal outlines the post-storm assessment of the beaches along North Padre Island (NPI)/Mustang Island, specifically 1) the beach fronting the NPI Seawall and 2) beaches adjacent to Packery Channel on both Mustang/NPI that are in Corpus Christi jurisdictional boundaries and Packery Channel Project extents. The proposed survey does not include the beach segment north of Access Road 2. The beach segments specified above are actively maintained/managed by the City and are considered high-use by pedestrians and vehicles.

**BACKGROUND AND FINDINGS:**

Assessment is critical for informed beach nourishment planning, beach maintenance operations, as well as forward planning for the long-term resilience of Corpus Christi beaches that are so important to the community and tourism. In addition to documenting the erosion during Tropical

Storm Alberto, the survey/assessment also supports the City in meeting obligations such as TGLO guidelines, management of sand redistribution and management of a Pedestrian Safe Beach (bollard placement/relocation along NPI Seawall).

The assessment includes Shoreline Position and Beach Profile Surveys, and trend analysis that compares the proposed 2024 data to historic data. The survey will establish a new functional baseline that future surveys will be compared to following the recent nourishment that restored the design width along the NPI Seawall.

The Shoreline Position Survey supports short and long-term beach management planning and ongoing maintenance as per the joint City/Nueces County Erosion Response Plan (2012) and City of Corpus Christi Adaptive Beach and Dune Maintenance Plan (2015). The extent of this survey includes Mustang Island/North Padre Island (Fish Pass to 0.5 mile south of Bob Hall Pier). This survey will:

- Identify/document storm damage impacting berm width
- Calculate the rate of shoreline recession
- Identify storm driven change in beach width
- Identify/document limits of where the beach is < 150 feet wide to trigger and guide bollard relocation along NPI Seawall (Pedestrian Safe Beach).
- Document/define areas of focused erosion between profile transects to identify problem areas otherwise missed
- Document/define lateral limits of fillets where berm width is  $\geq$  250 feet on the north & south side of jetties in Sediment Removal Areas (SRAs) - Supports sand redistribution defined as removal/placement along the NPI Seawall
- Document/define hot spots of erosion requiring planning for restoration

The Beach Profile Survey supports the City in meeting obligations described in City Ordinance 028494 § 10-77 Vehicle-restricted areas and pedestrian safe areas, Environmental Impact Statement (EIS), TGLO (Coastal Erosion Planning & Response Act), Joint City/Nueces County Erosion Response Plan (2012) and Corpus Christi Beach & Dune Management Plan. The extent of this survey includes adjacent beaches along Mustang Island and NPI from north of Fish Pass to approximately 0.5 mile south of Bob Hall pier along previously occupied transects. This survey will:

- Identify areas of erosion/deposition (beach maintenance & management planning).
- Calculate rate of erosion/volume loss
- Calculate sand volume estimated to restore beach elevation & design width
- Can be applied by City Staff for post-storm documentation for FEMA reimbursement process or for alternate funding resources.
- Data & assessment supports City Beach Operations in beach management/planning
- Can be applied by City Staff for long-term, sand management strategies & beach nourishment planning over the post-storm recovery period.

The Professional Service Agreement will commence without delay once the agreement is executed and following the dissipation of other storms that may develop during the five-month contract term.

### **PROCUREMENT DETAIL:**

This procurement falls under a statutory exception within Local Government Code 252.022(a)(4) as these services are for personal, professional and/or planning services.

TAMUCC is currently providing technical assistance associated with erosion concerns at City Bayshore Parks and is familiar with the scope of services. By way of this procurement, it is believed that TAMUCC is the best choice for this survey and assessment.

**ALTERNATIVES:**

The Mayor and City Council may choose not to award the Professional Service Agreement. However, this would not support beach nourishment/maintenance operations, short/long-term beach management planning and would not align with current City Ordinance/policy.

**FISCAL IMPACT:**

Expenditures in the amount of \$58,124 with FY2024 from the SHOT Fund.

**FUNDING DETAIL:**

Fund:	1032
Organization/Activity:	13836
Department:	27
Project # (CIP Only):	
Account:	530000

**RECOMMENDATION:**

Staff recommend approval of the motion as presented.

**LIST OF SUPPORTING DOCUMENTS:**

Price Sheet  
Professional Service Agreement  
Presentation