Data Collection & Product Report for 2020 Seed Project: Topographic Signatures of Barrier Island Vulnerability

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Data Collection Summary:

Collection Dates, Flights:	1 flight on November 29, 2021 (DOY 333)
Aircraft, Equipment:	Aero Commander 500-B (N161BL), Optech Titan (14SEN340)
Flight Plan Parameters:	Flying Height: 600 m AGL, Speed: 140 kt, Overlap: 50%
Equipment Parameters:	PRF: 150 kHz, Scan Frequency: 25 Hz, Scan Angle: ± 30°
Collected Area:	61.3 km²

GNSS Reference Station Summary:

Station Name	Operating Agency	Control Coordinates [ITRF2014 (EPOCH:2021.9146)/Ellipsoid]
GSE2	NCALM	26°09'46.47683" N, 097°20'25.17461" W, -16.590 m
GSE4	NCALM	26°09'46.08824" N, 097°20'25.41055" W, -16.991 m

Data Processing Summary:

Data Adjustments:	Line-by-line roll/elevation correction, project elevation shift of -1.113 m
Ground Classification:	Two iterations of gentle ground determination, manual classification of misclassified ground
Elevation Model Generation:	Elevations values calculated from Kriging

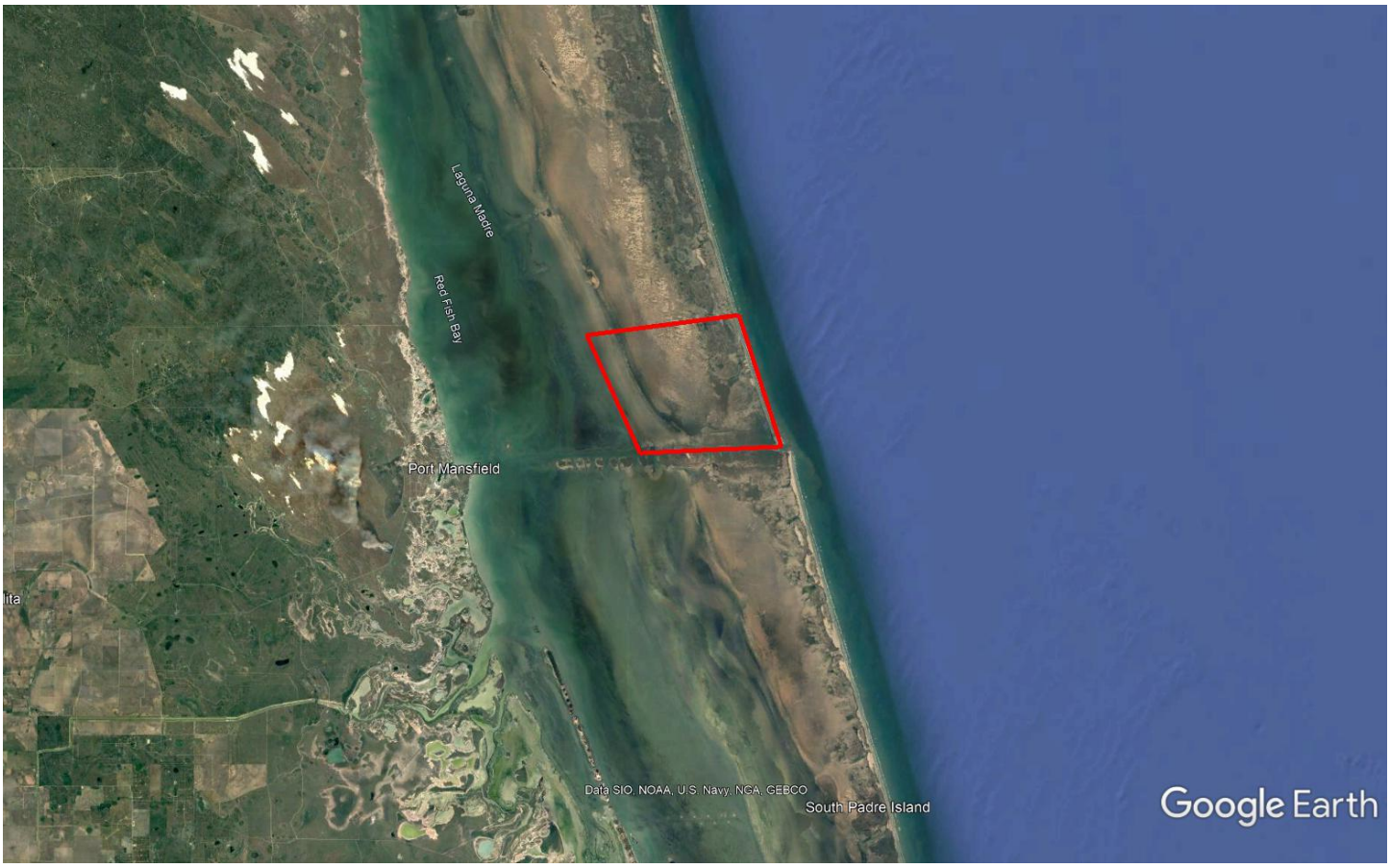
Data Accuracy Summary

Strip-to-Strip Average	0.028 m
GCP Residual RMS	N/A

Data Product Summary:

Horizontal / Vertical Datum:	WGS84 / orthometric
Projection / Units:	UTM Zone 14N / meters
Point Cloud Tiles:	1000-m × 1000-m tiles in LAS format (Version 1.4) with non-ground (1), ground (2), low point (7), and high point (18) returns. Any water penetration was not corrected.
Bare-Earth Elevation Model:	ESRI FLT format @ 1.0-m & 0.25-m resolutions from classified ground points
Bare-Earth Hillshade:	ESRI-created raster @ 1.0-m & 0.25-m resolutions
First-Surface Elevation Model:	ESRI FLT format @ 1.0-m & 0.25-m resolutions with canopy
First-Surface Hillshade:	ESRI-created raster @ 1.0-m & 0.25-m resolutions

Area of Interest:



Location of survey polygon

The requested survey area consisted of one polygon located on Padre Island, east of Port Mansfield, TX. The polygon enclosed approximately 39.2 km^2 (15.1 mi^2).