**Field Data Collection**

* Data were collected from 02 January 2017 through 13 December 2017
	+ 39 survey days; 1,558 man-hours
* Sidescan = Teledyne Benthos C3D
	+ 200 kHz frequency
	+ Range of 50 meters
	+ 15% Overlap between transect
	+ Transect spacing of 85 meters
	+ Data collected in WGS 84
	+ Projected to UTM 14N
	+ Location Data: Ashtec dGPS receiver with Communication System International MBX-3 Differential
* Singlebeam = Biosonics DTX
	+ 120 kHz frequency
	+ Collected in Visual Acquisition
	+ Pulse rate = 8
	+ Pulse duration = 0.1
	+ Power Reduction = -9.2
	+ Transducer depth = 0.61 m
	+ Location Data = Garmin GA 29 GPS

**Data Post Processing**

* Sidescan
	+ Chesapeake SonarWiz V7
	+ Bottom track
	+ Empirical Gain Normalization
	+ Mosaic and output as 8-bit GeoTiff with 0.2 m-resolution
	+ WGS84 UTM 14N
* Singlebeam
	+ Processed in EchoView
	+ Bottom Line Selection
		- Min SV for pick = -9
		- Backstep @ -15 discrimination level
		- Peak threshold = -13
	+ Bottom Classification (to pull features)
		- Distance between intervals = 5 m
		- Background noise = -999
		- Bottom echo threshold @ 1 m = ranges from -60 to -40
	+ Depth corrected to MLLW in 1-hour intervals from nearest NOAA tide station = Port O’Connor 8773701

**DEM Creation (can be re-created from point data using different interpolation techniques)**

* Empirical Bayesian kriging
	+ Output cell size 50
	+ Logempirical transformation
	+ Exponential semivariogram
	+ 500 points in each local model
	+ Local model overlap 3
	+ 50 simulated semivariograms
	+ Standard circular search pattern
		- Radius of 100 m
		- Maximum neighbors = 500
		- Minimum neighbors = 100
		- Angle 45
		- Sector Type - 4

**Thematic Mapping**

* Manual interpretation based on sidescan imagery and depth, hardness, and roughness bottom features from singlebeam echosounder
* Accuracy assessment using a combination of petite ponar, dredge, and patent tongs
	+ 174 samples
	+ Accuracy for Oyster habitats > 80%