



Herb Beck Marina

Breakwater Condition Assessment and
Marina Entrance Dredging Assessment



Herb Beck Marina Overview





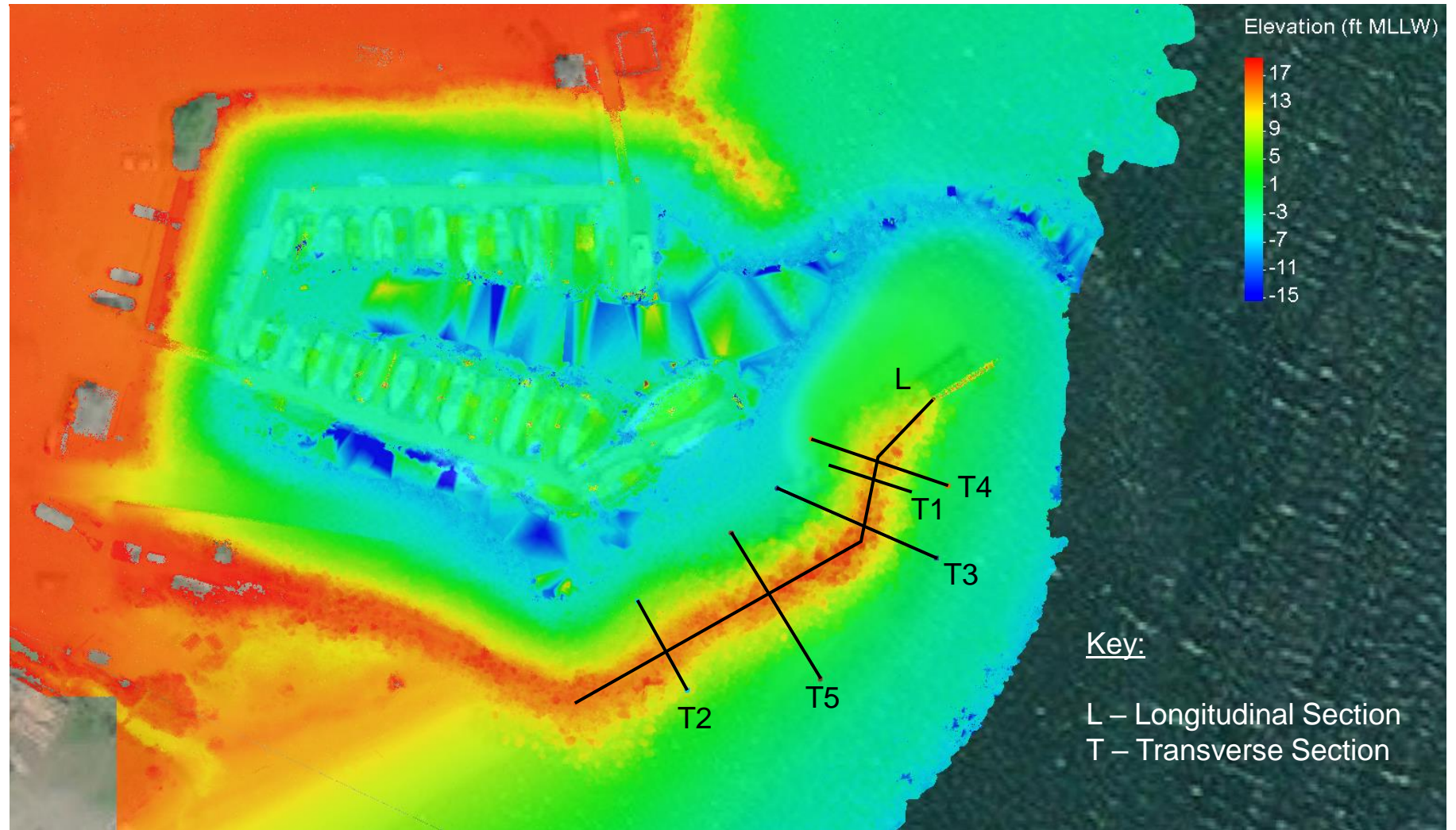
Breakwater Condition Assessment

February 23, 2023

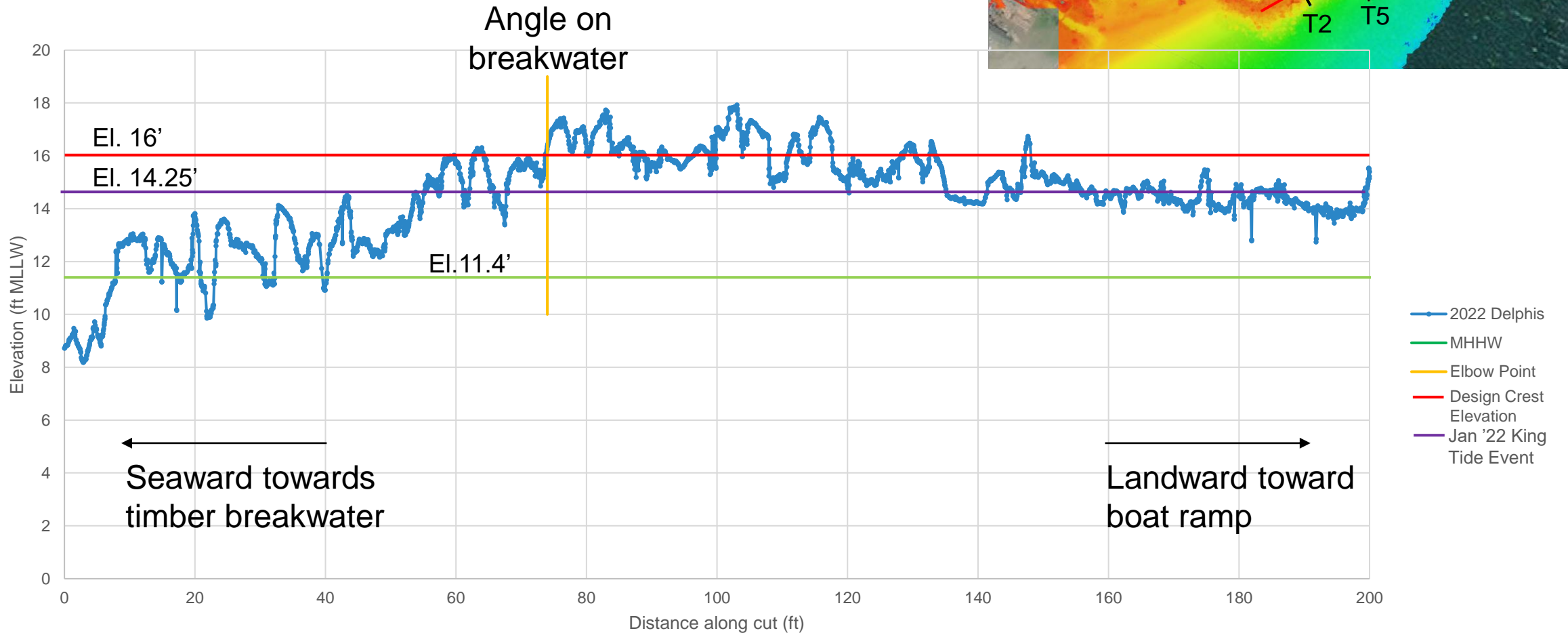
2022 Survey Data

Conducted by Delphis on July 12th, 2022.

- UAV (aerial drone) data collected
 - Dense point cloud of topographic information
- USV (bathymetry) data collected
 - Single beam survey, less dense data resulting in interpolation between data points/survey lines
- A quality review of the survey data was conducted prior to evaluating breakwater condition and conducting dredging assessment
- Data limitations noted in areas of sparse data due to presence of moored vessels.



Longitudinal Section

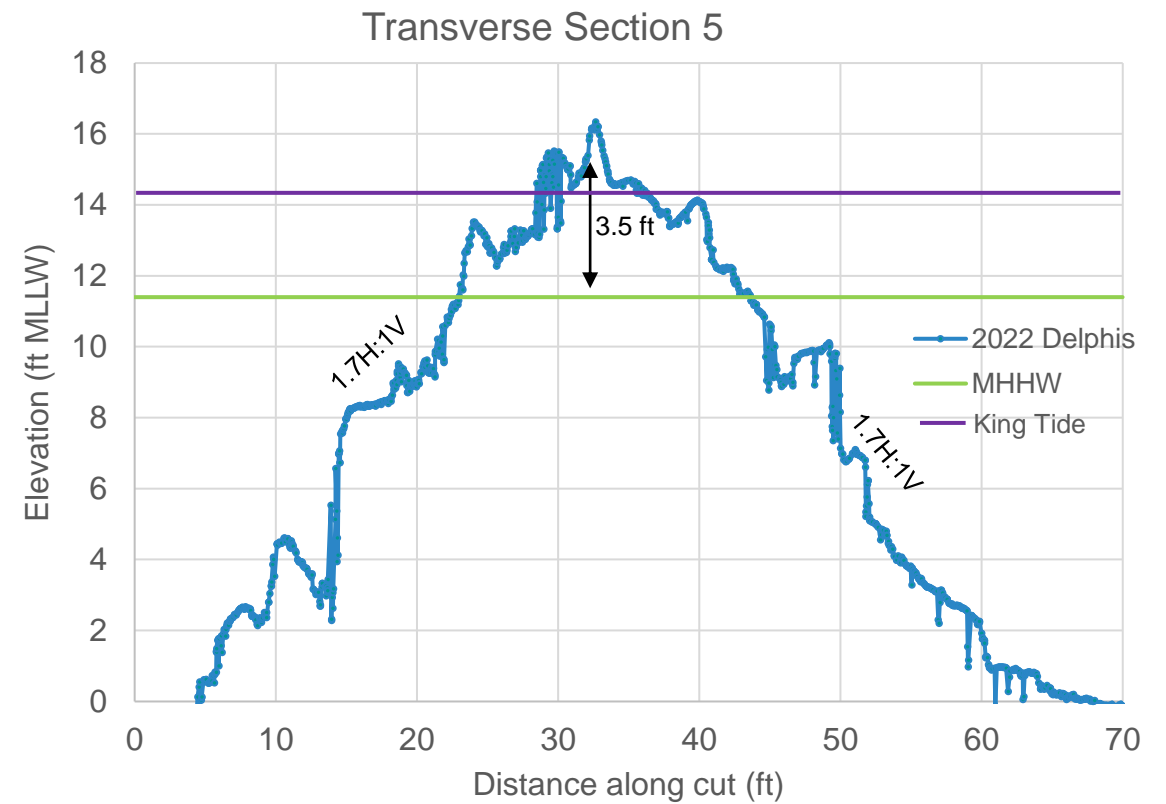
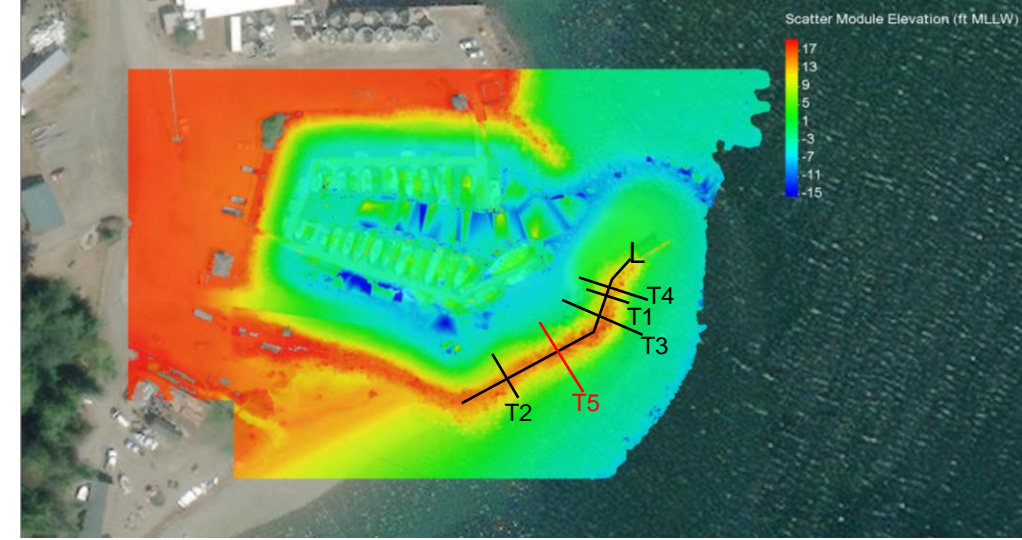


Transverse Sections



January 2022 King Tide Event
Estimated water level ~ 14.25 ft MLLW

Mott MacDonald

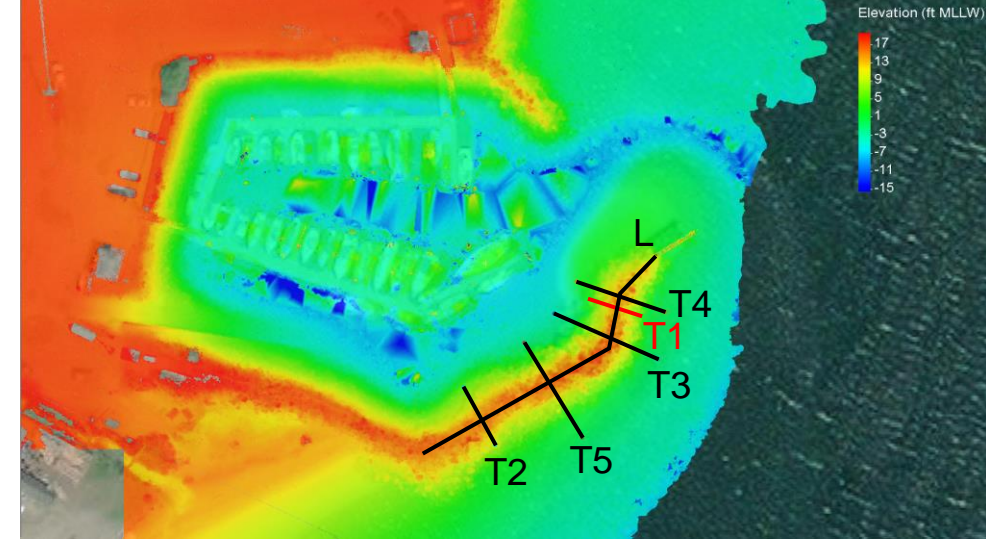


Transverse Sections

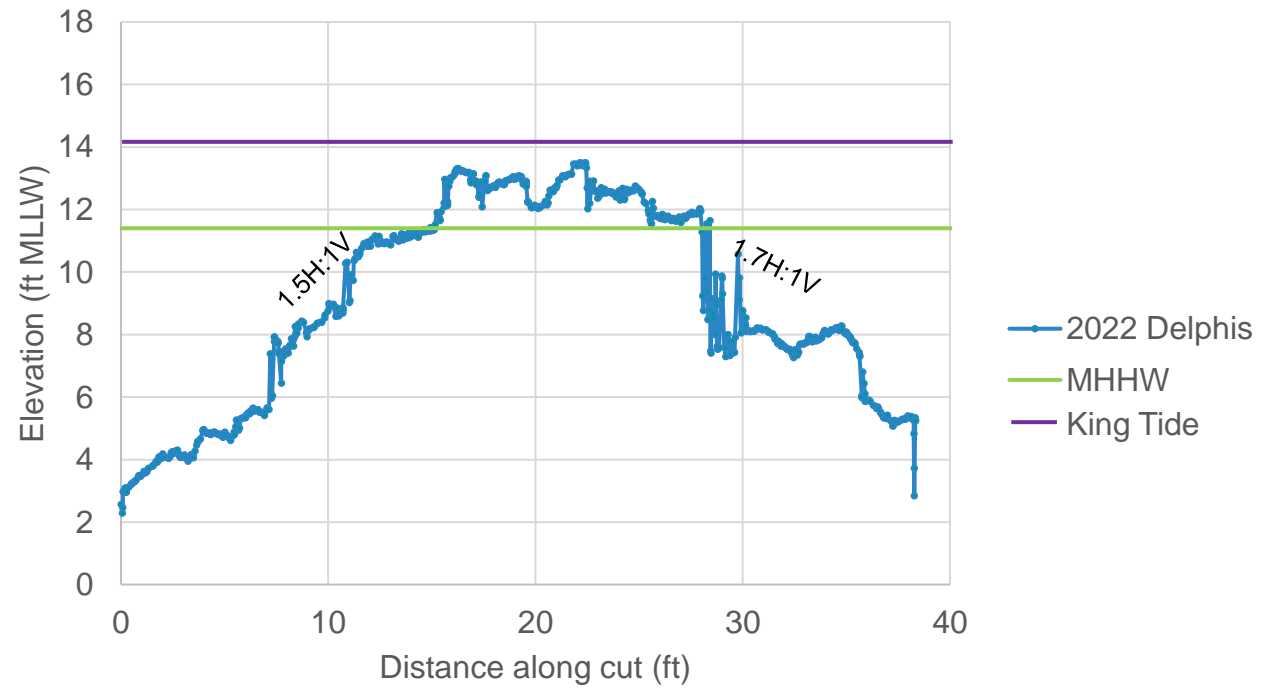


January 2022 King Tide Event
Estimated water level ~ 14.25 ft MLLW

Mott MacDonald



Transverse Section 1



Drone Photos



Condition Assessment Results

	Good	Fair	Poor	Inconclusive
1. Marina – Floats			X	
2. Marina – Gangway		X		
3. Marina – Piles		X		
4. Marina – Boat ramp		X		
5. Rock BW – Slopes			X	
6. Rock BW – Crest			X	
7. Timber BW			X	
8. Armor Stone – Condition		X		

Good/Excellent

: Only minor deterioration or defects/only slight imperfections

Fair/Marginal

: Moderate deterioration/deterioration clearly evident but structure is sound

Poor/Failed

: Serious deterioration in portions of structure/general failure

Inconclusive

: Additional data is needed



Good



Fair



Poor



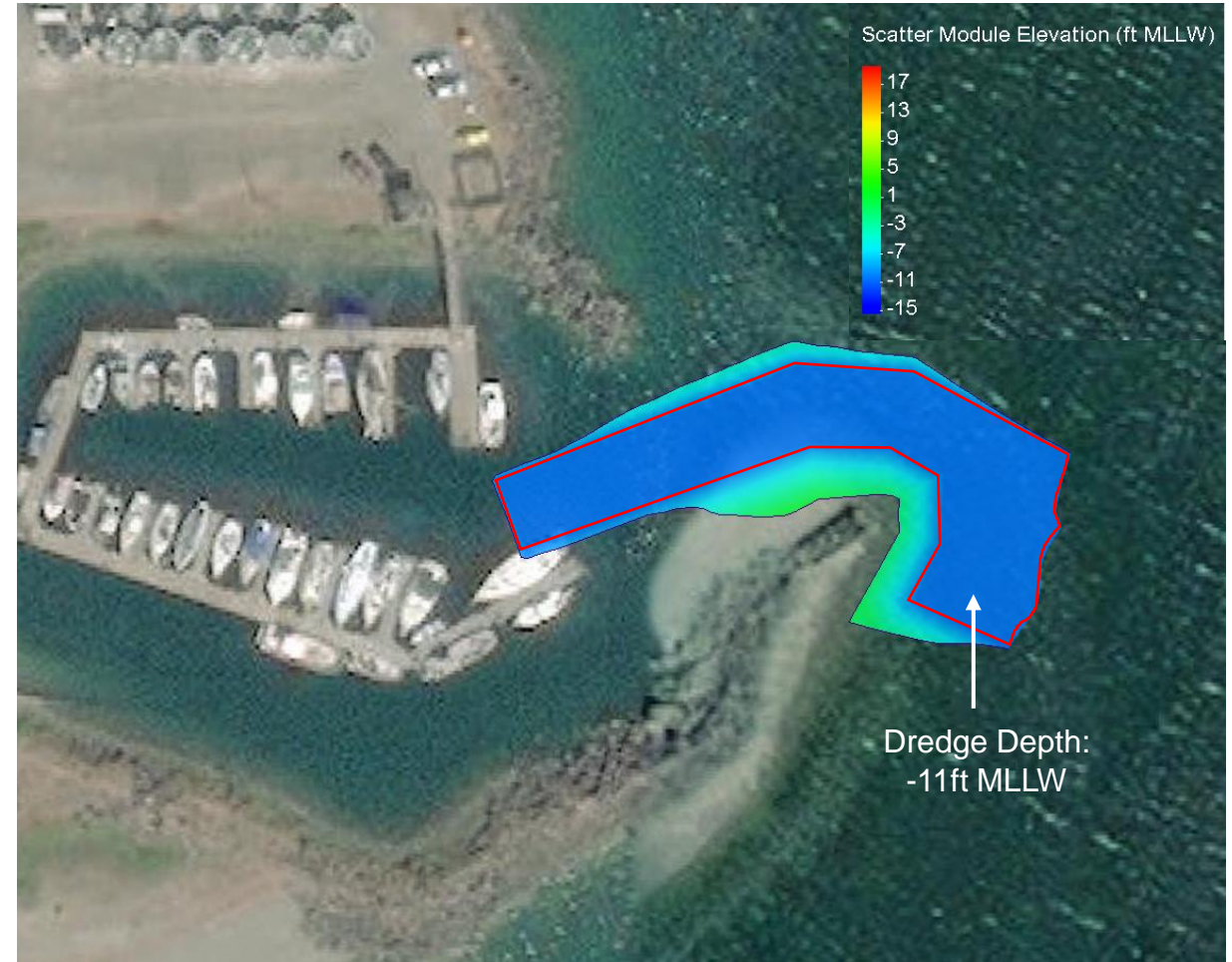
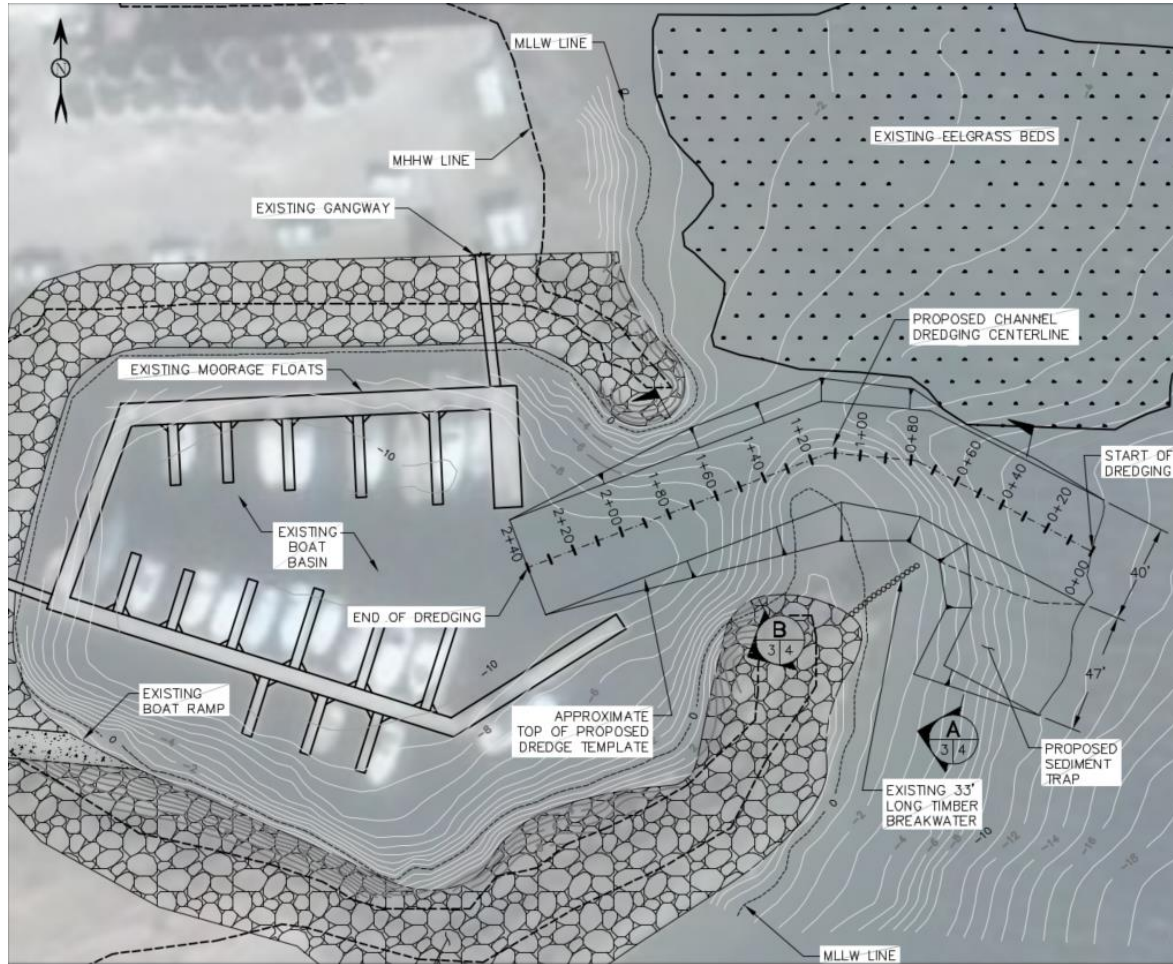
Inconclusive



Marina Entrance Dredging Assessment

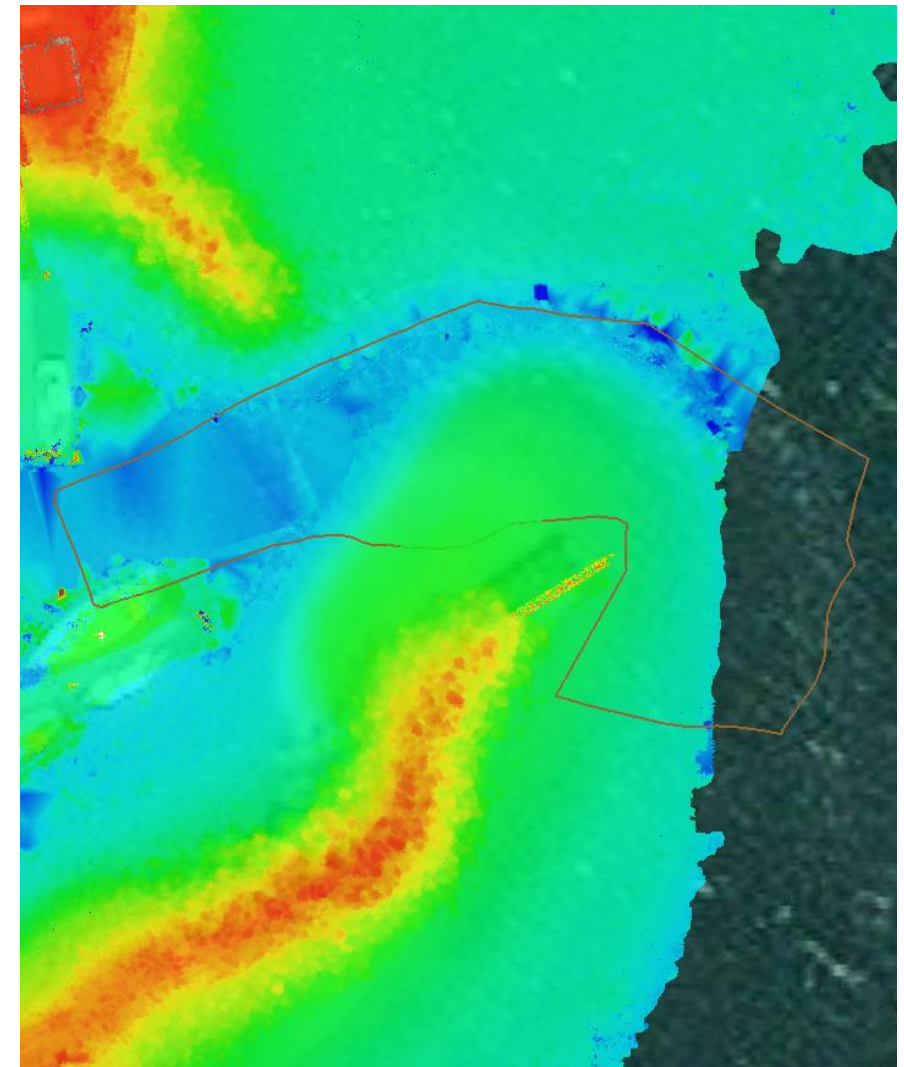
February 23, 2023

2009 Dredge Prism



2022 Survey

- Collected at -3.6' tide elevation (MLLW) on July 12th, 2022.
- Conducted post-processing analysis to interpolate over sparse single-beam areas to create a continuous surface.
- Data limitations noted in areas of sparse data. Data should not be used in these areas without proper understanding of limitations.

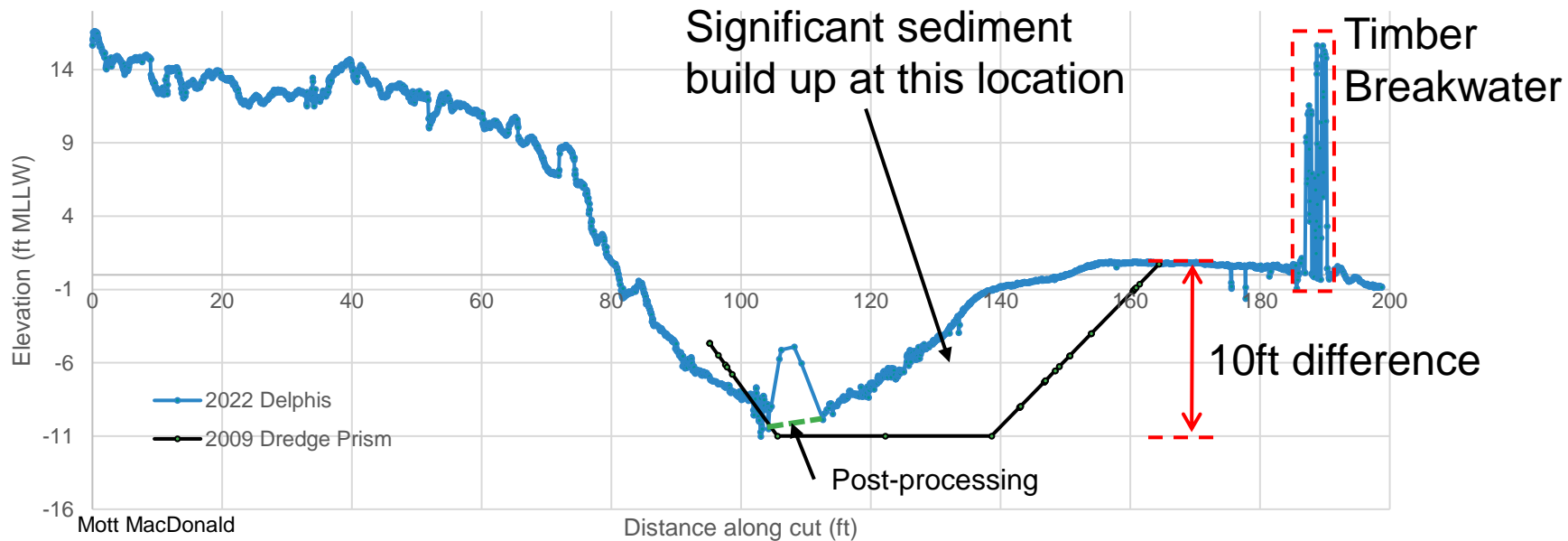
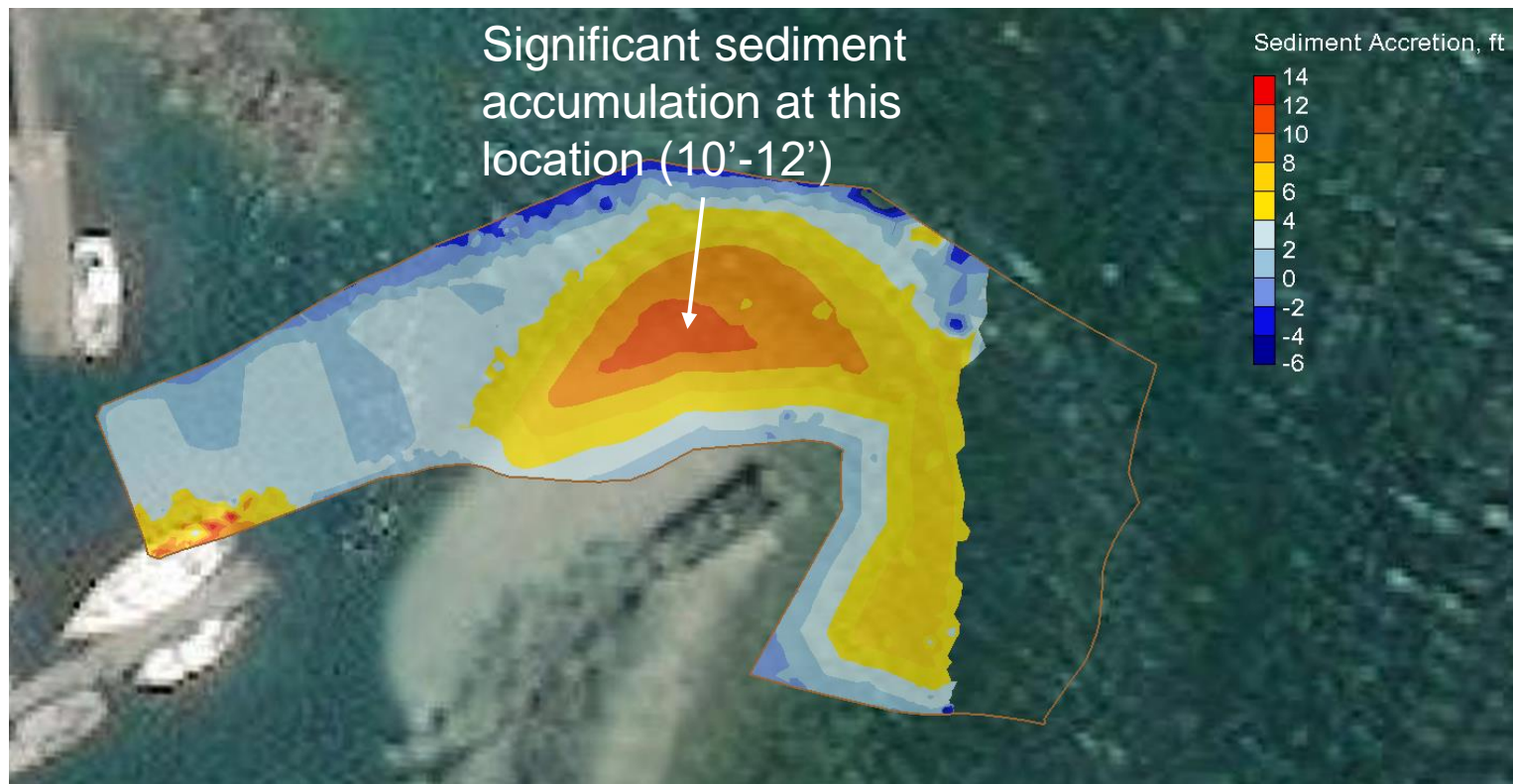


2022 survey data with overlay of 2009 dredge prism outline

Sedimentation Analysis

- Estimated by comparing the 2022 survey surface to the 2009 dredge prism
- Preliminary estimated dredge volume: 1,700-2,000* CY

*not including overdredge





Thank you

