



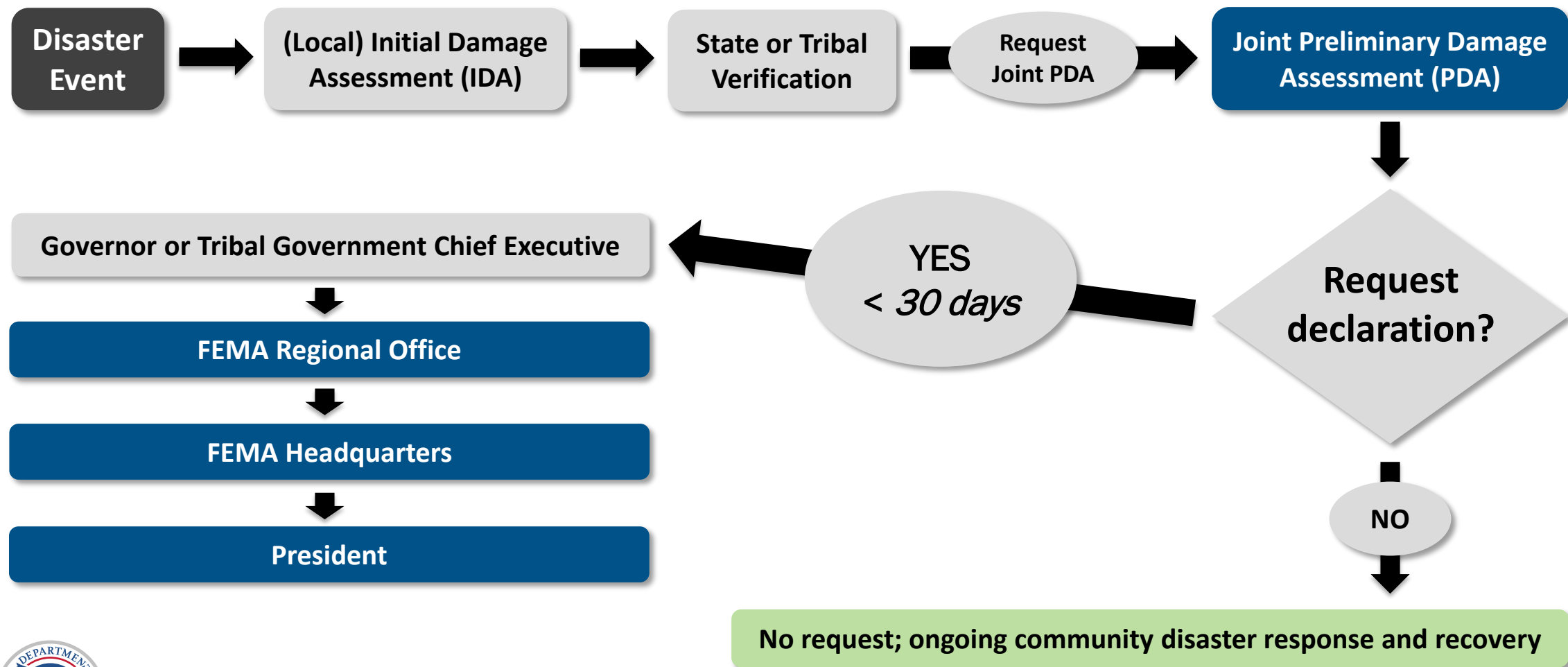
Pre- and Post-Storm LIDAR Surveying of Florida Beaches for Preliminary Damage Assessment

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Declaration Request Process



FEMA



Public Assistance Evaluation Factors

Estimated Cost of the Assistance*

- FY 2025 Per Capita Indicator: \$1.84 (state), \$4.72 (county)
- \$1 Million Minimum Damages

Localized Impacts

Insurance Coverage
in Force

Hazard Mitigation

Recent Multiple
Disasters

Programs of Other
Federal Assistance



FEMA



Preliminary Damage Assessments (PDA's)



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Preliminary Damage Assessments (PDA's)



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Preliminary Damage Assessments (PDA's)

BRG: 312°NW (T) POS: 180.000000°S, 180.000000°W ALT: 20ft



N topsail
27 Sep 2019, 12:56:11



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Preliminary Damage Assessments (PDA's)



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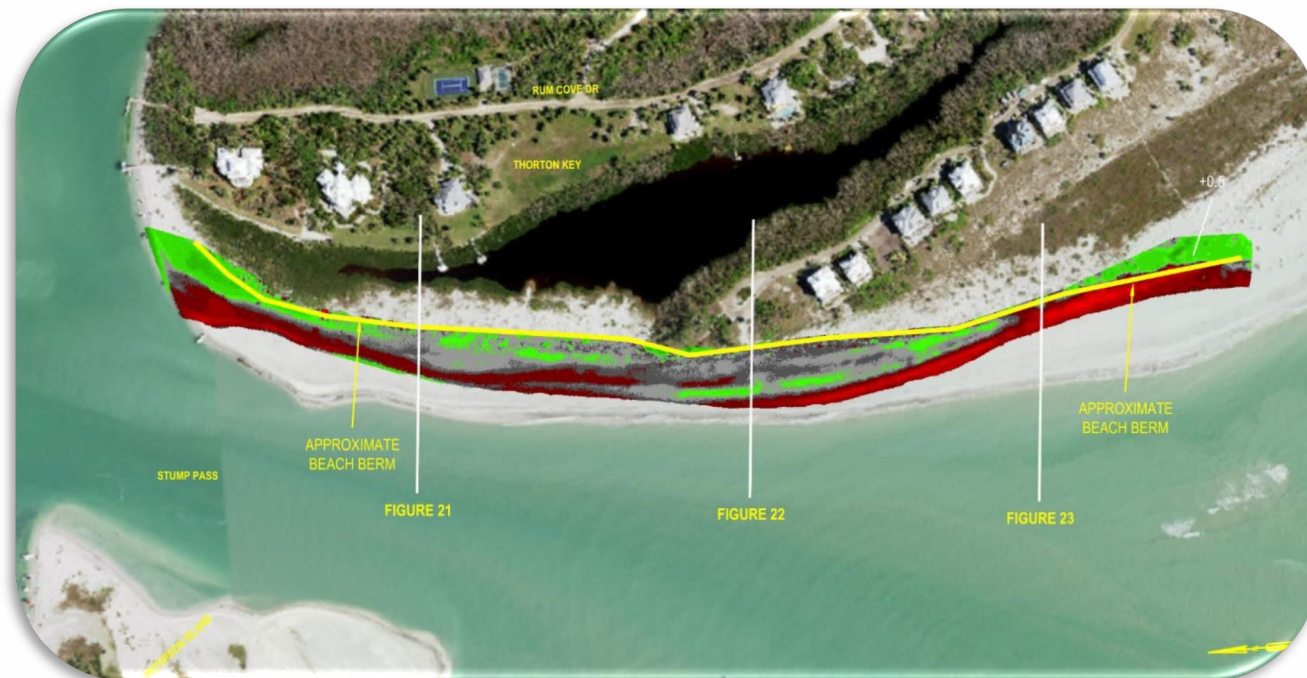


DEBRIS REMOVAL

MONITORING SERVICES



- FDEM asked DebrisTech to calculate total beach loss from the water's edge to the top of the nearest dune.

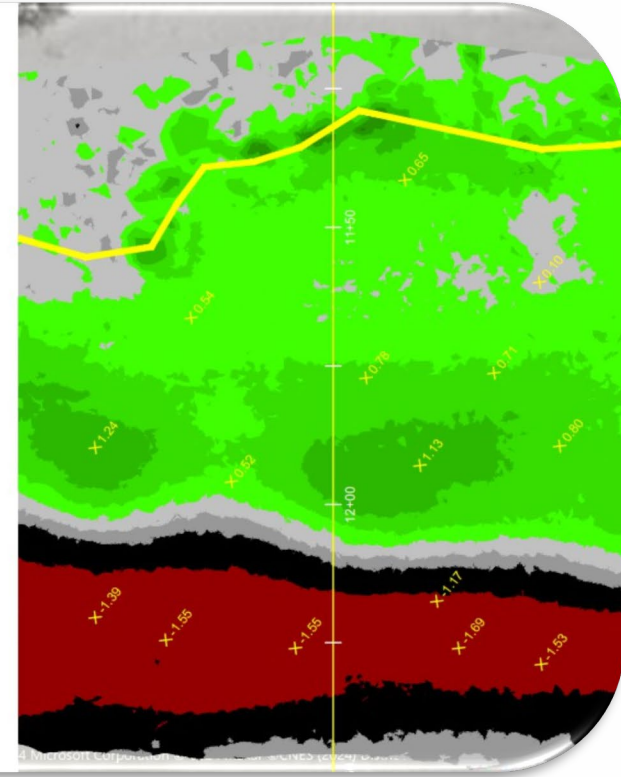
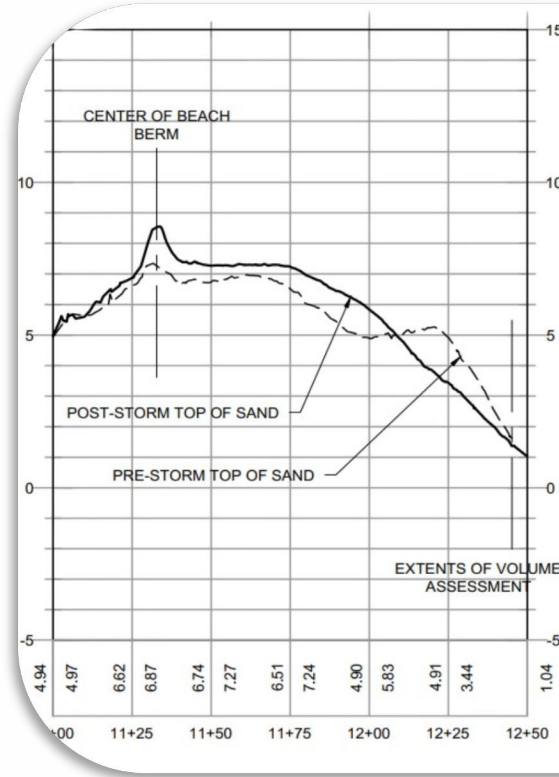




- DebrisTech used fixed wing aircraft and ground level Utility Terrain Vehicles (UTVs) equipped with LiDAR and hi-resolution cameras.



- Pre- and post-storm data was collected several days before and after storm impact and covered hundreds of miles of beach

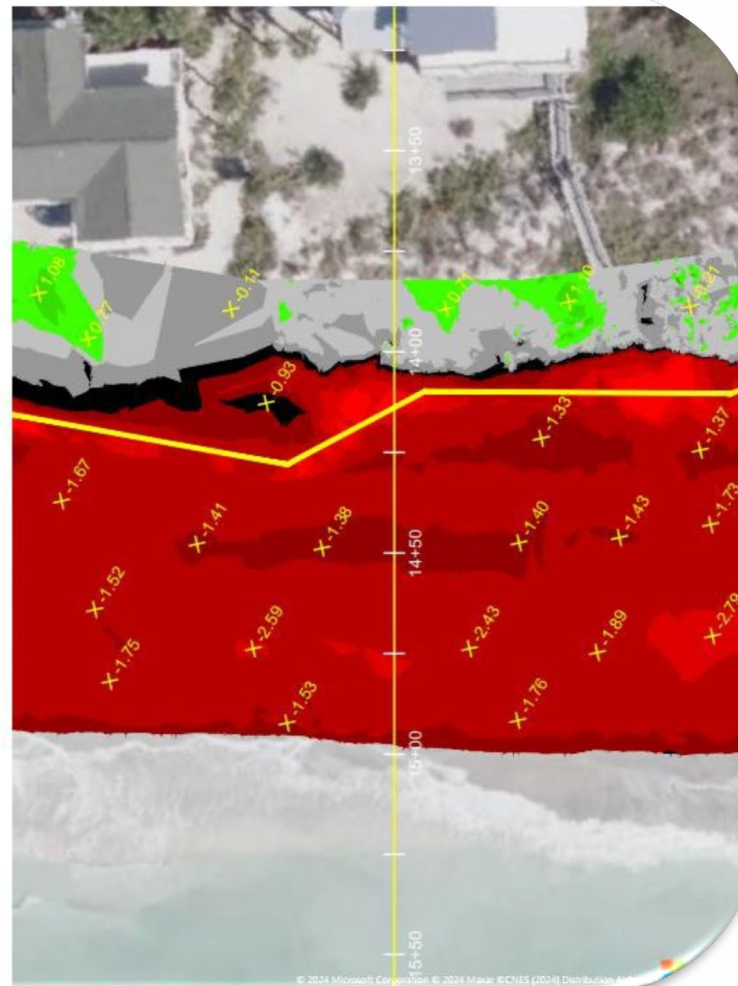
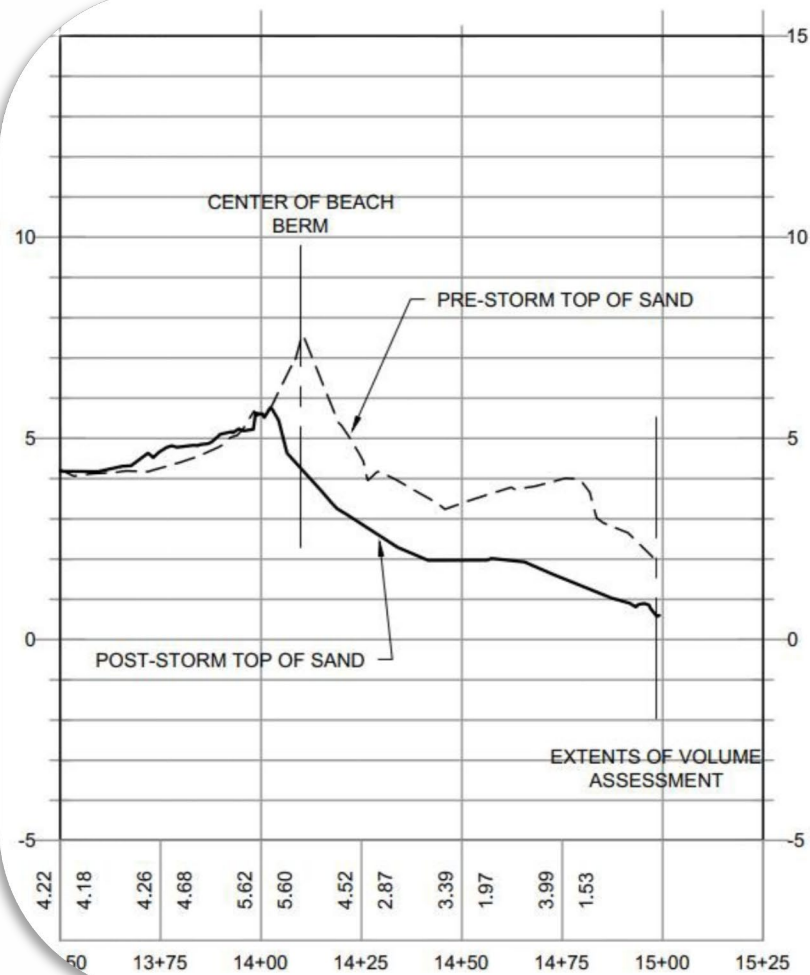


- Ground control points collected by a ground level team were used to analyze the pre- and post-storm data.



- The collected data was post-processed and georeferenced to the ground control points.
- Digital terrain models (DTMs) were made using the ground classified point clouds.

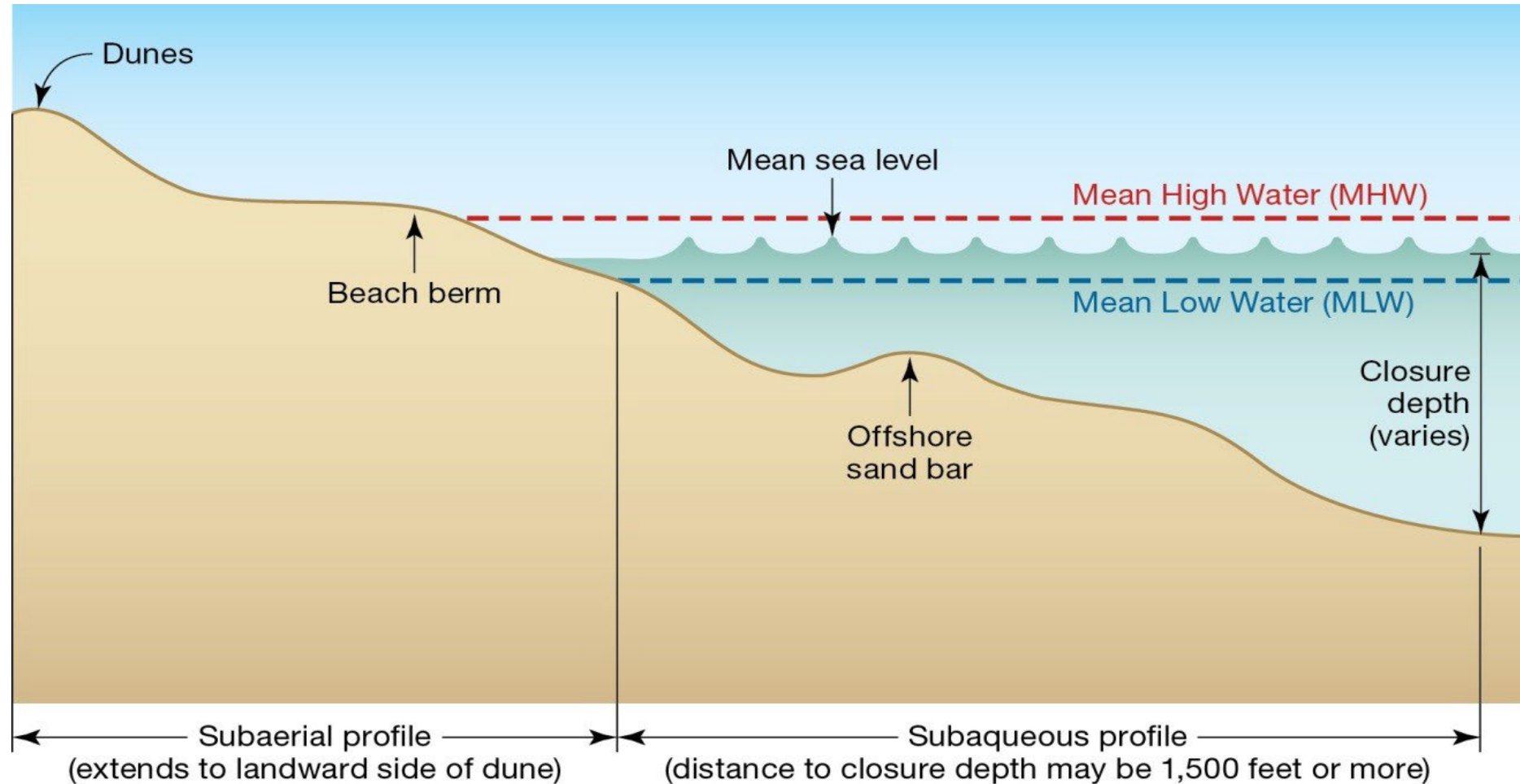




- Comparing the pre- and post-storm DTMs allowed for volumes (in Cubic Yards) to be captured.



Incident-Related Sand Loss (FEMA Beach)

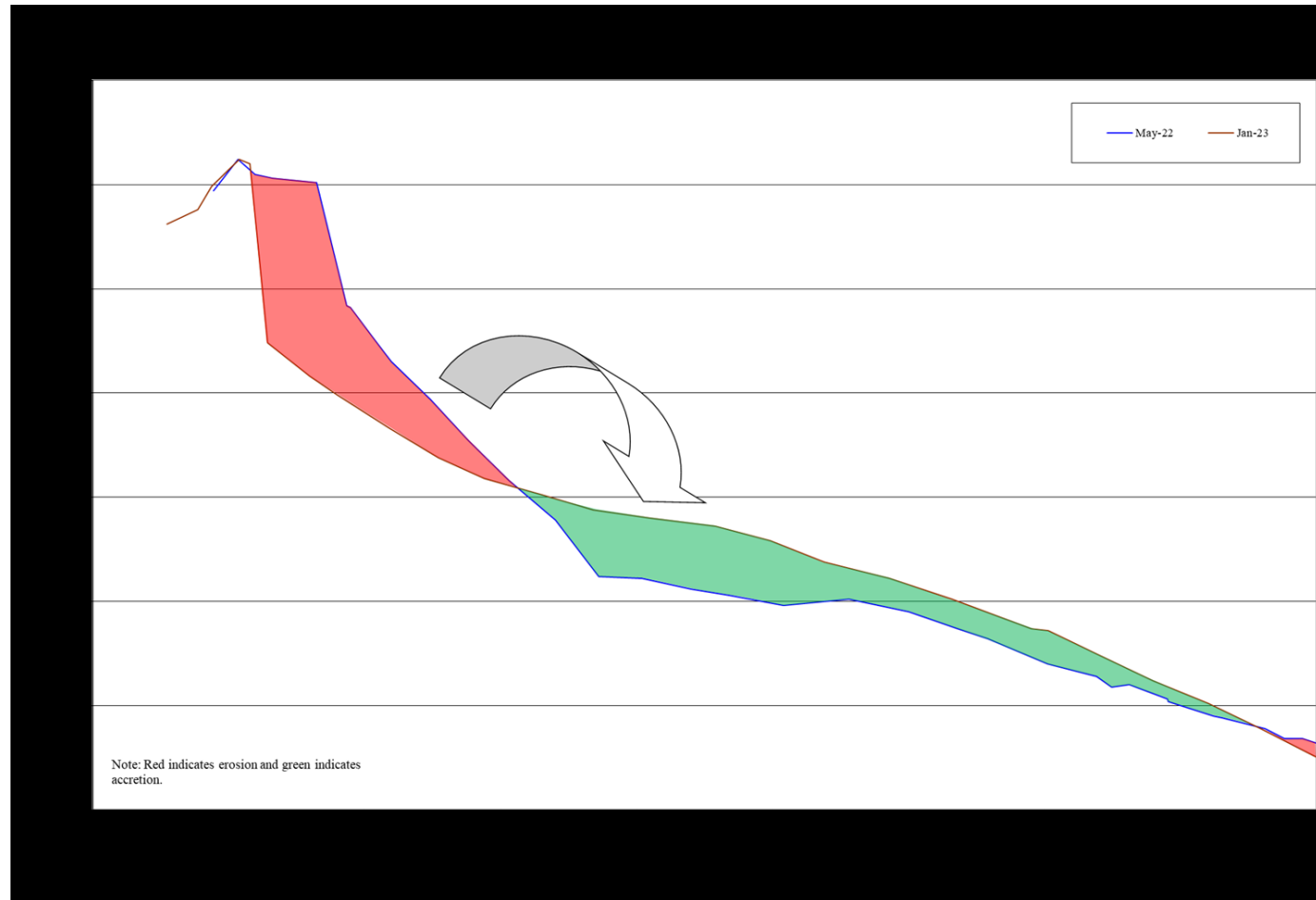


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Closure Depth Issues



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LiDAR and Bathymetric Surveys for Debby

PROJECT	LiDAR	SURVEY
S. Manasota Key	-33,890	-32,705
N. Manasota Key	-15,280	-14,868
CCECP UBF	-140	-12,411
CCECP NBF	-2,190	-1,335
CCECP SBF	-48,580	-303



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Potential Solutions...

- Bathymetric LiDAR
- Satellite Derived Bathymetry (SDB)



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Questions



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