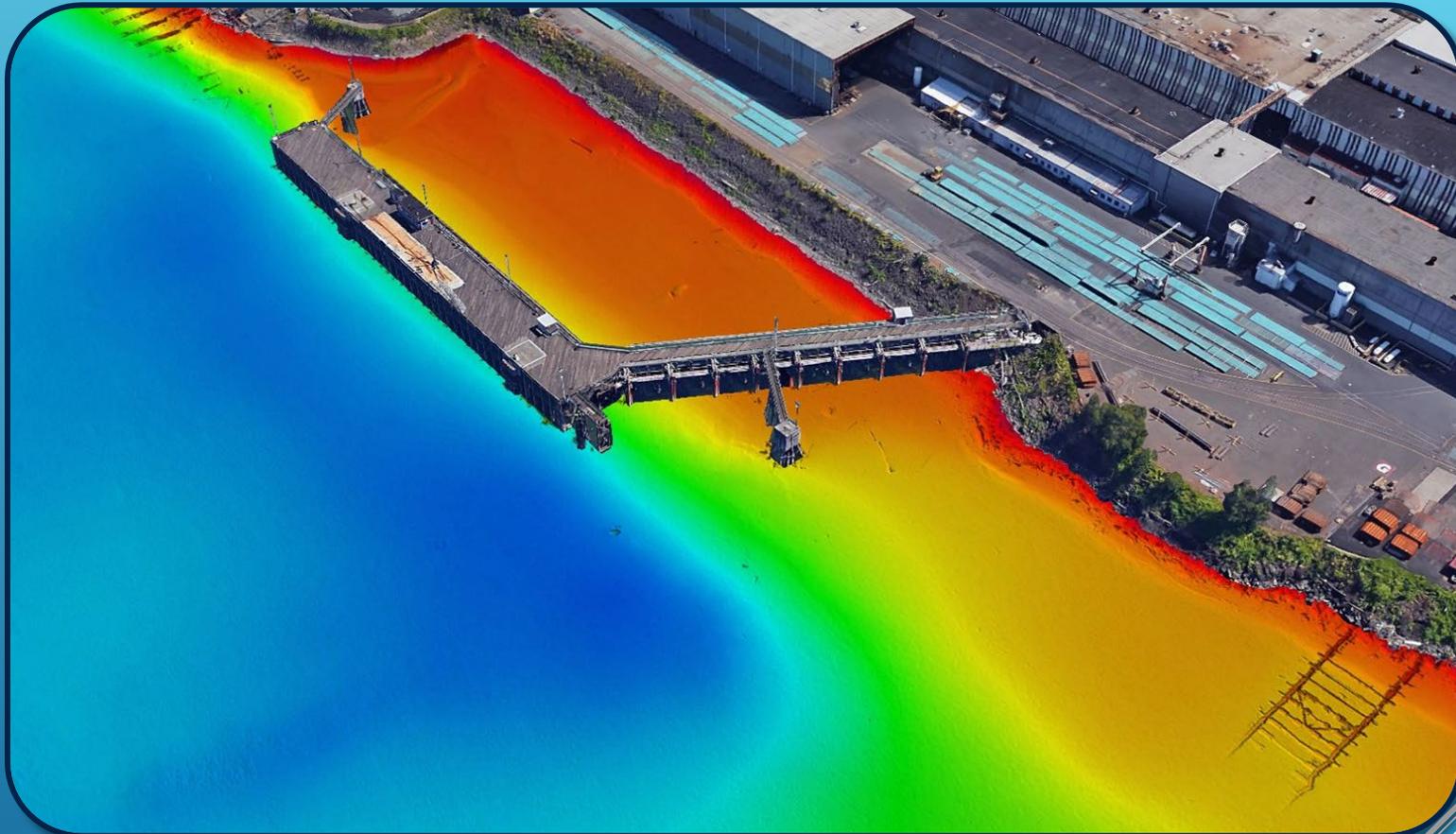


# TECHNOLOGY ADVANCES & PROJECT BENEFITS



Jason Magalen, P.E., C.H.

*Coastal Engineer / Hydrographer*

October 29, 2021

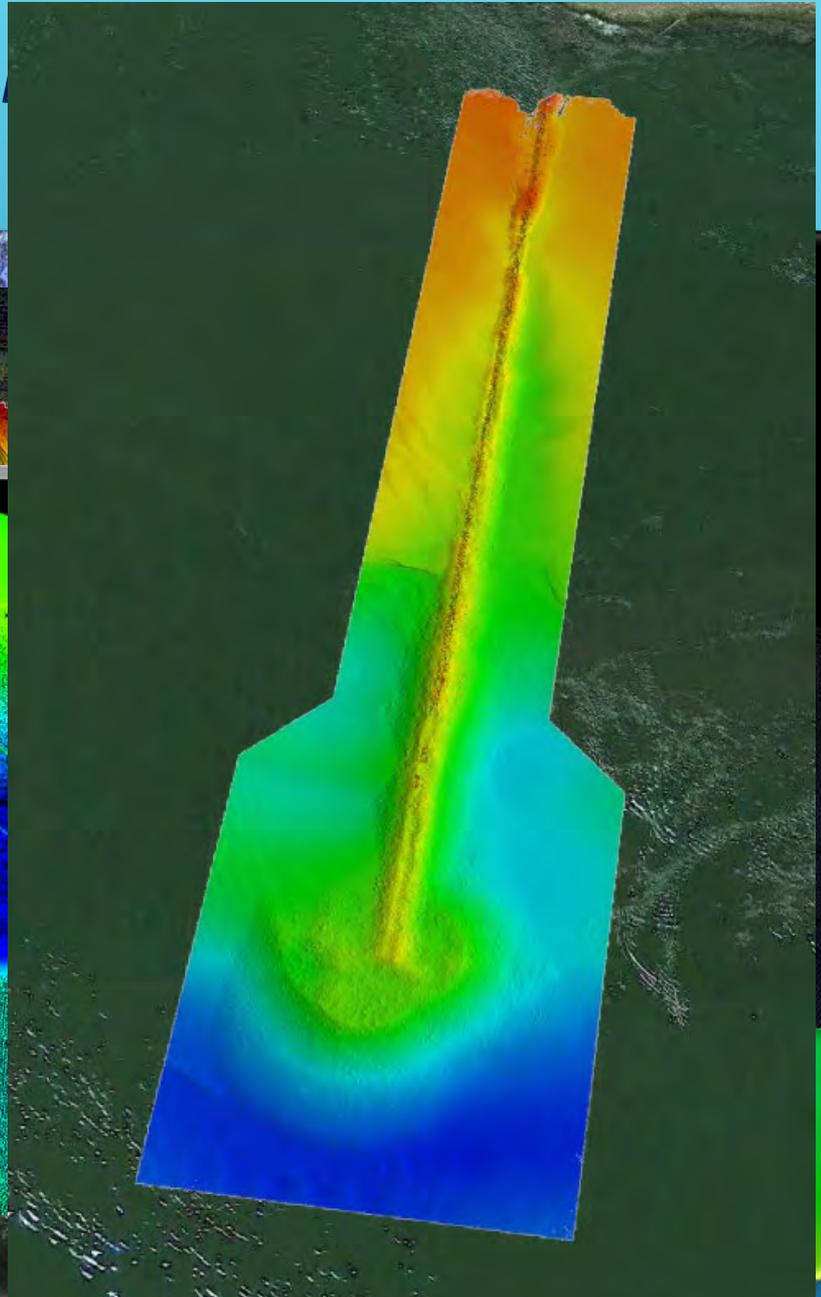
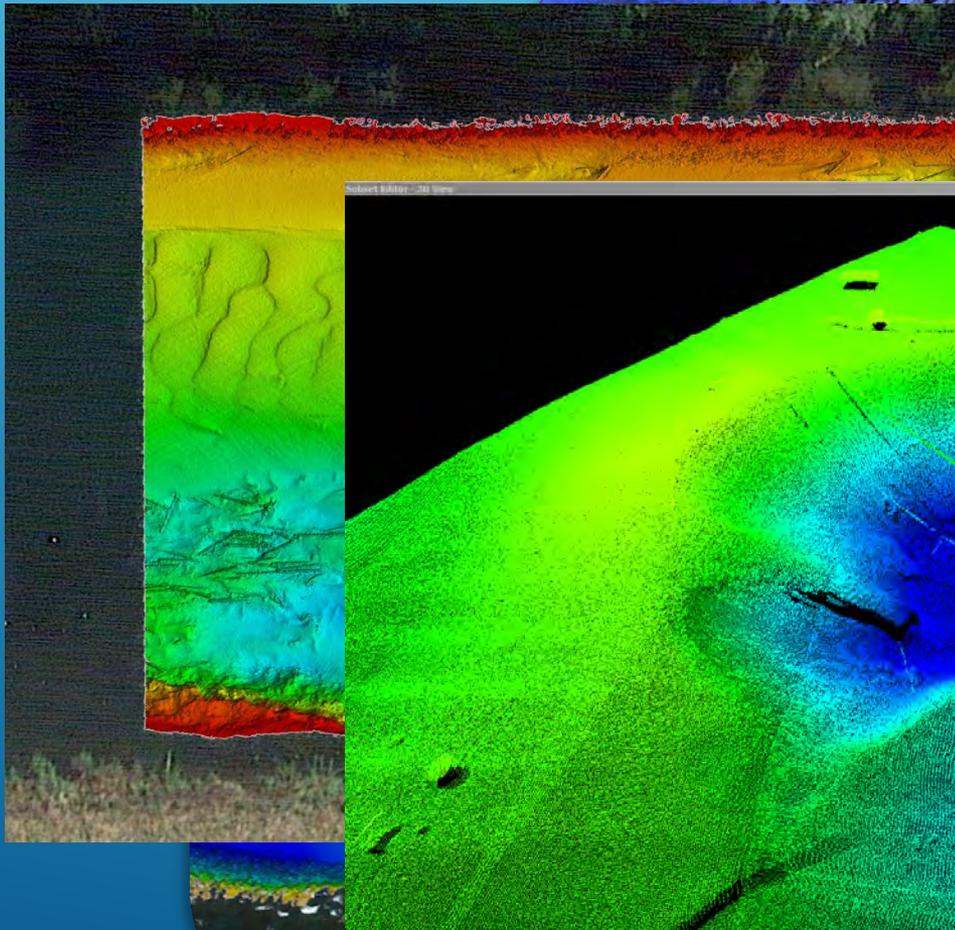


# HOW WELL DO YOU KNOW YOUR SITE?

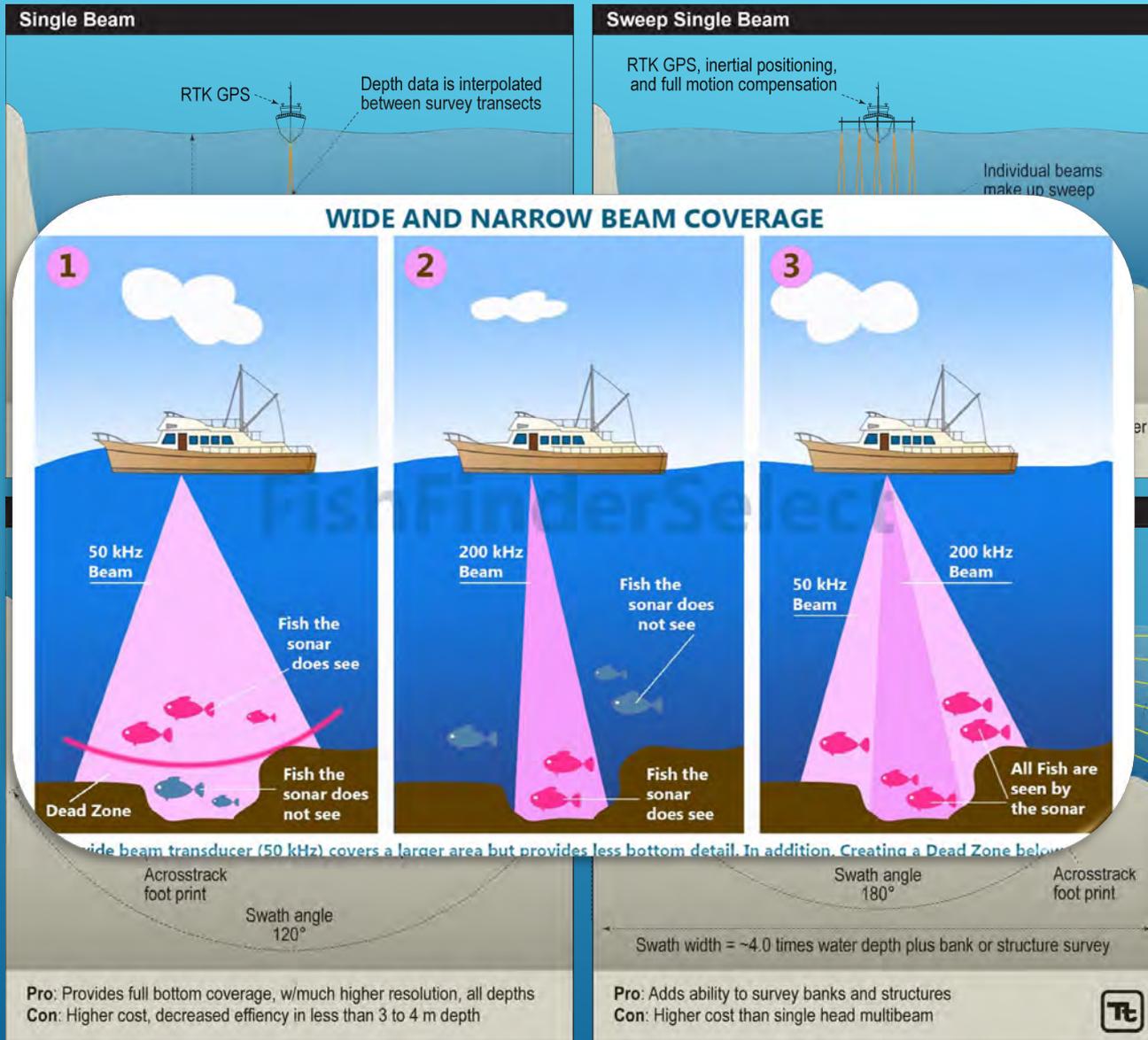
*DO SITE DATA EXIST? HOW RECENT?*

*WHAT ARE PROJECT GOALS?*

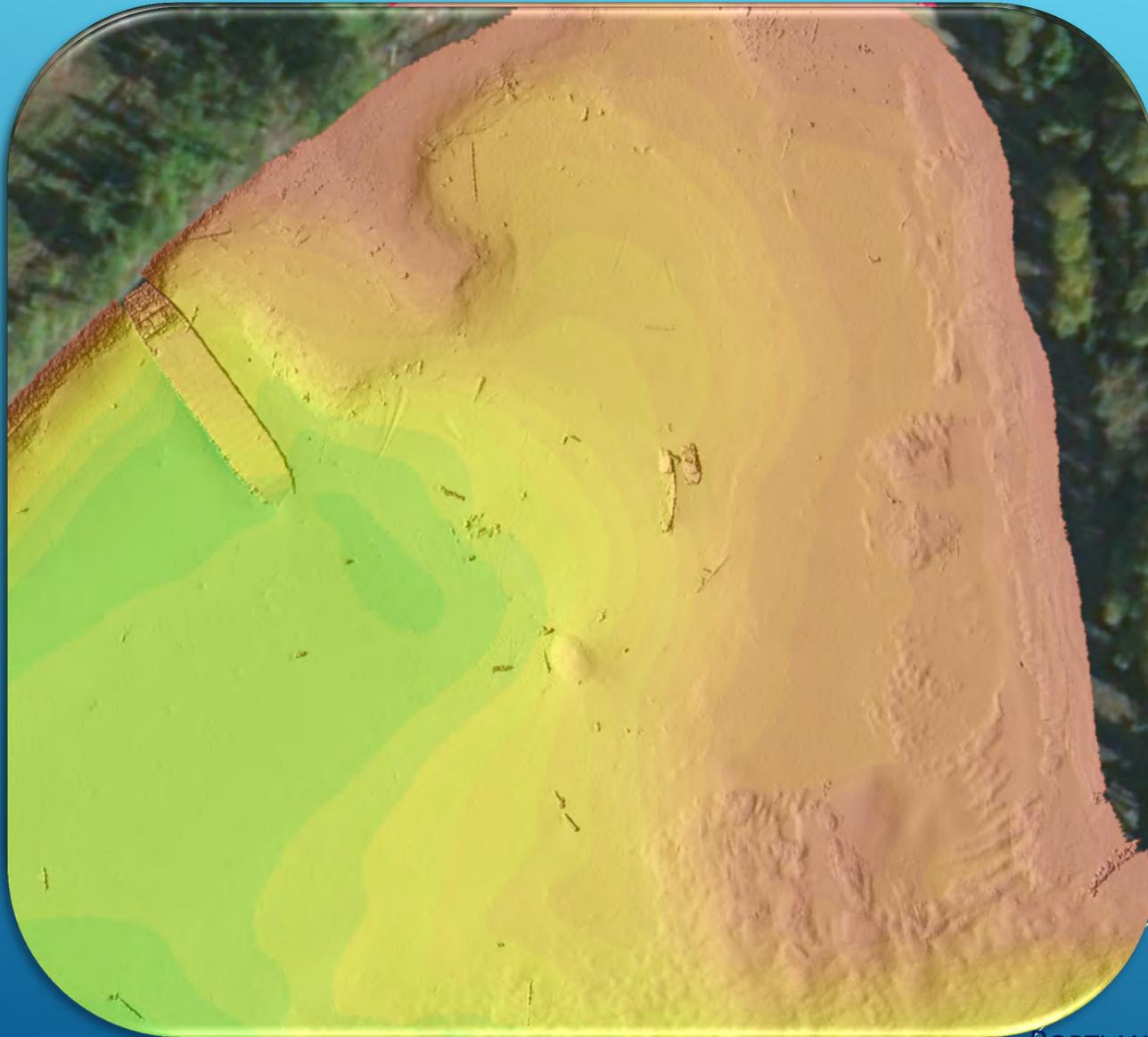
*WHAT ARE THE SITE-SPECIFIC PROBLEMS?*



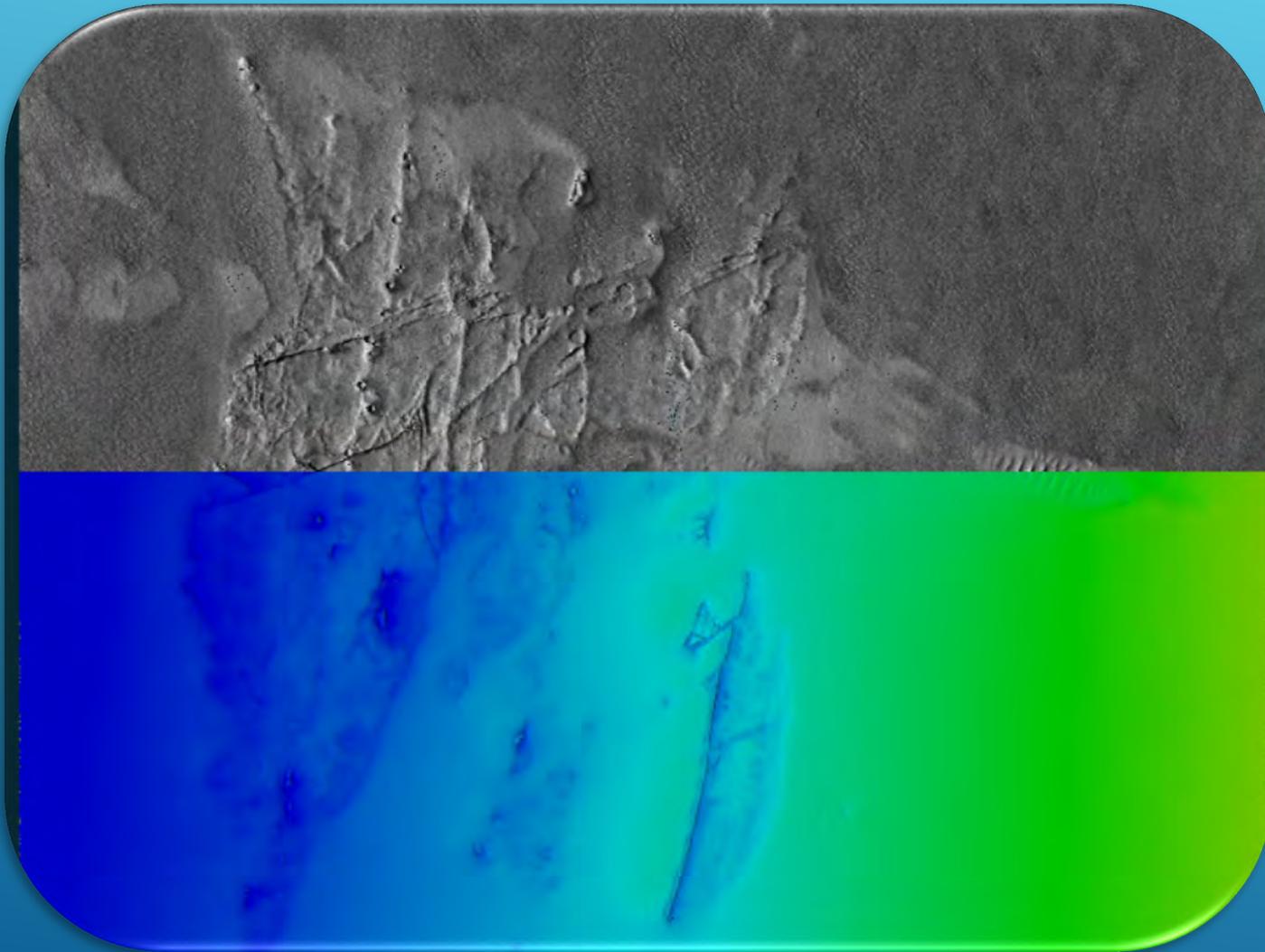
# TECH IS NOT NEW, BUT NOT ALL SONARS ARE THE SAME



# WHAT IS HIGH-RESOLUTION?



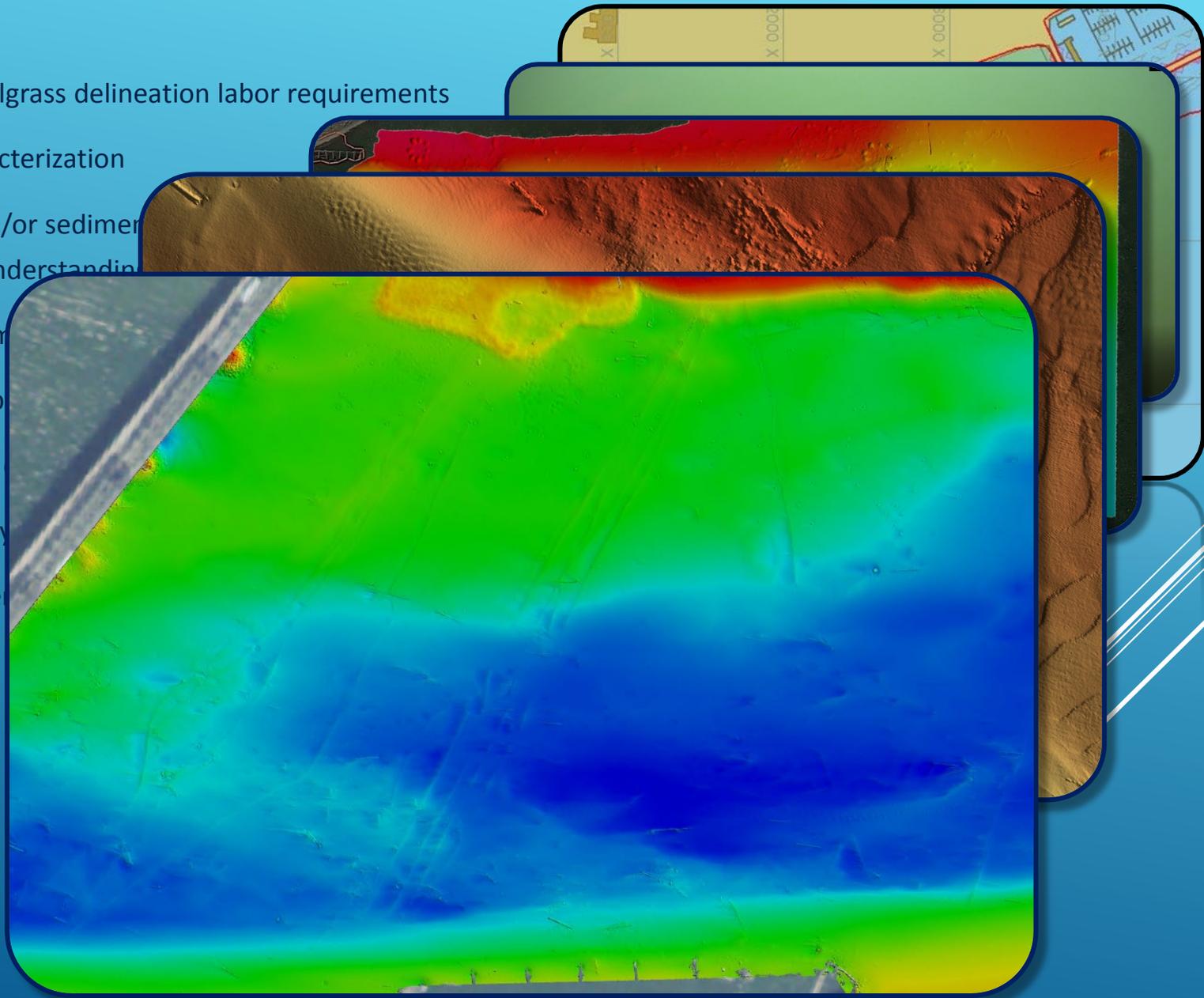
# COMPLEMENTARY DATASET



ONSHORE

# HOW MIGHT HIGHER-RESOLUTION DATA IMPROVE PROJECT FLOWS AND OUTCOMES?

- ▶ Decreased eelgrass delineation labor requirements
- ▶ Habitat characterization
- ▶ Hydraulic and/or sediment conceptual understanding
- ▶ Focused sediment
- ▶ More justifiable
- ▶ Identification
- ▶ Exposed utility
- ▶ Rock placement
- ▶ Safety!

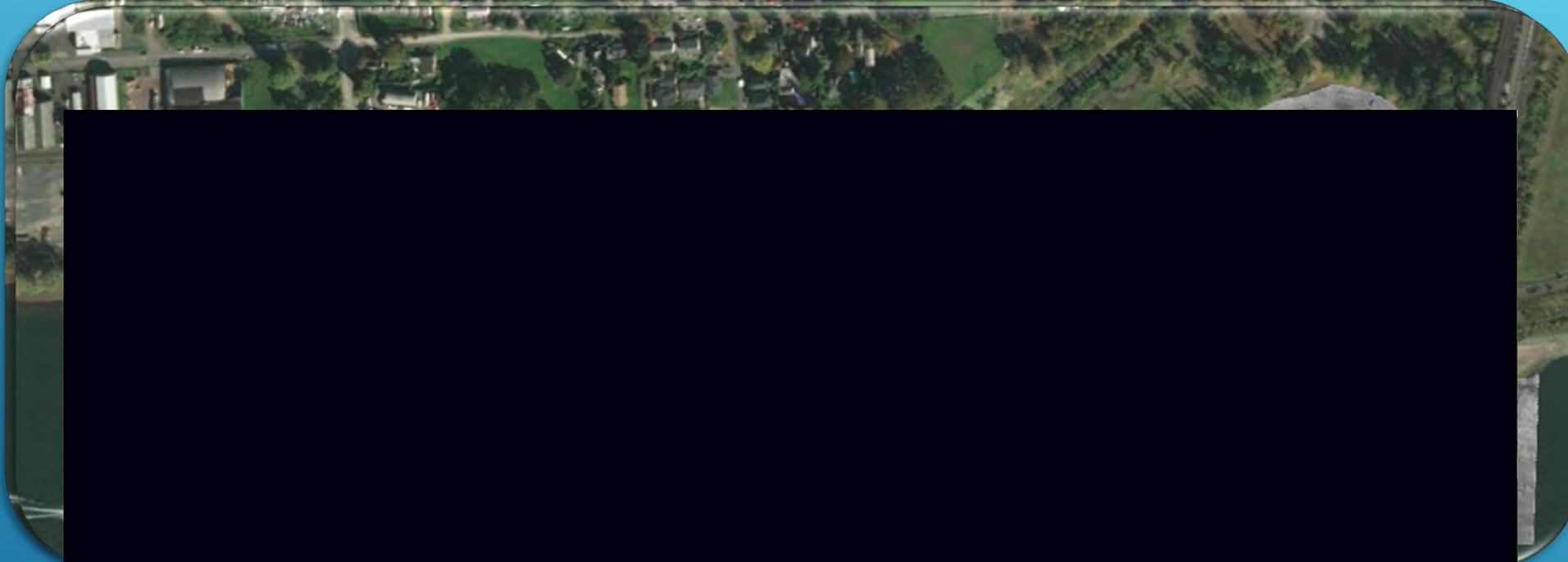


# PROJECT - WILLAMETTE RIVER

- Debris/Hazards
- Surface Sediment Differences / Characterization
- Selective sediment coring

Pre-Project  
Planning

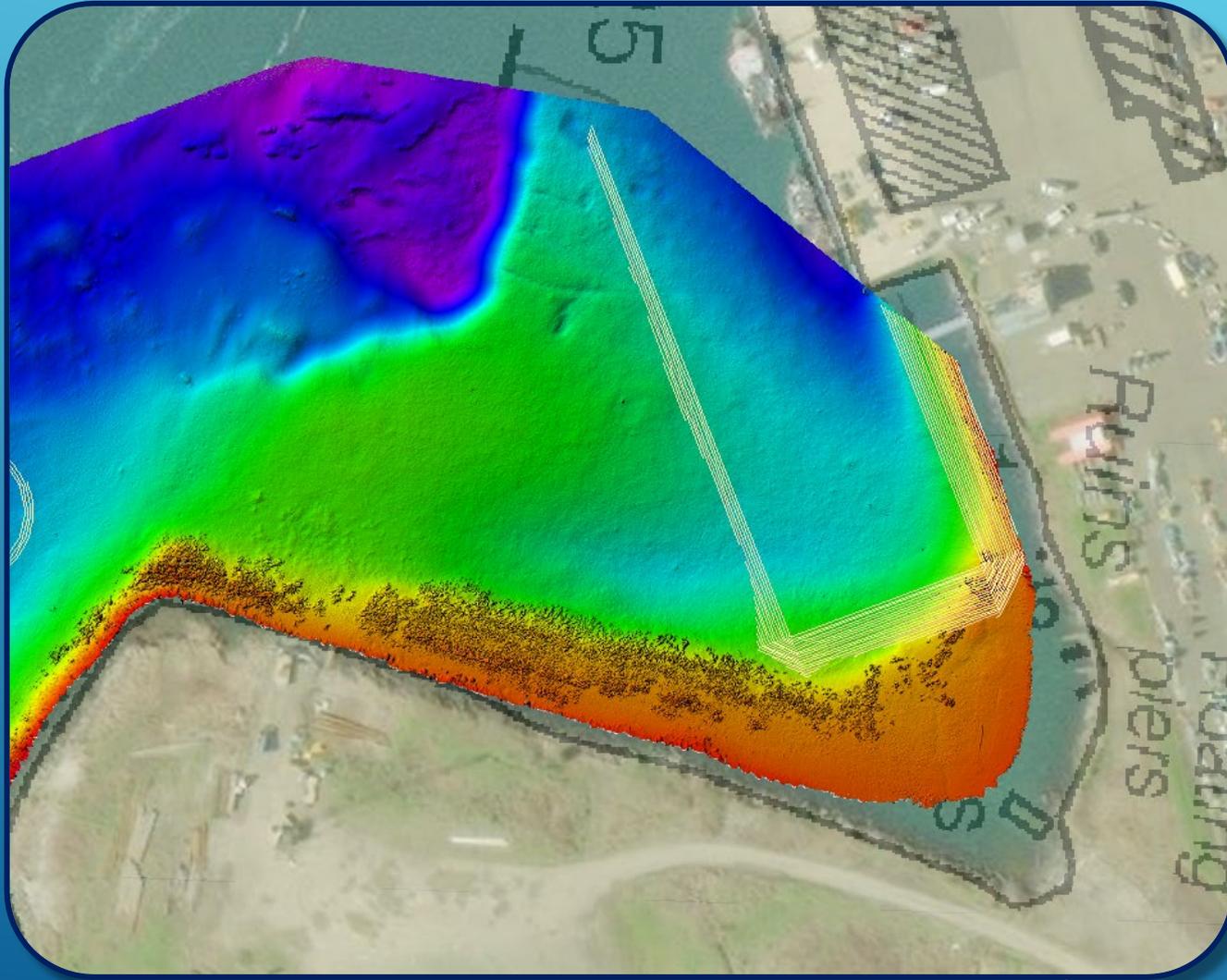
Environmental  
Remediation &  
Restoration



# PROJECT - YAQUINA BAY

Capital Dredging

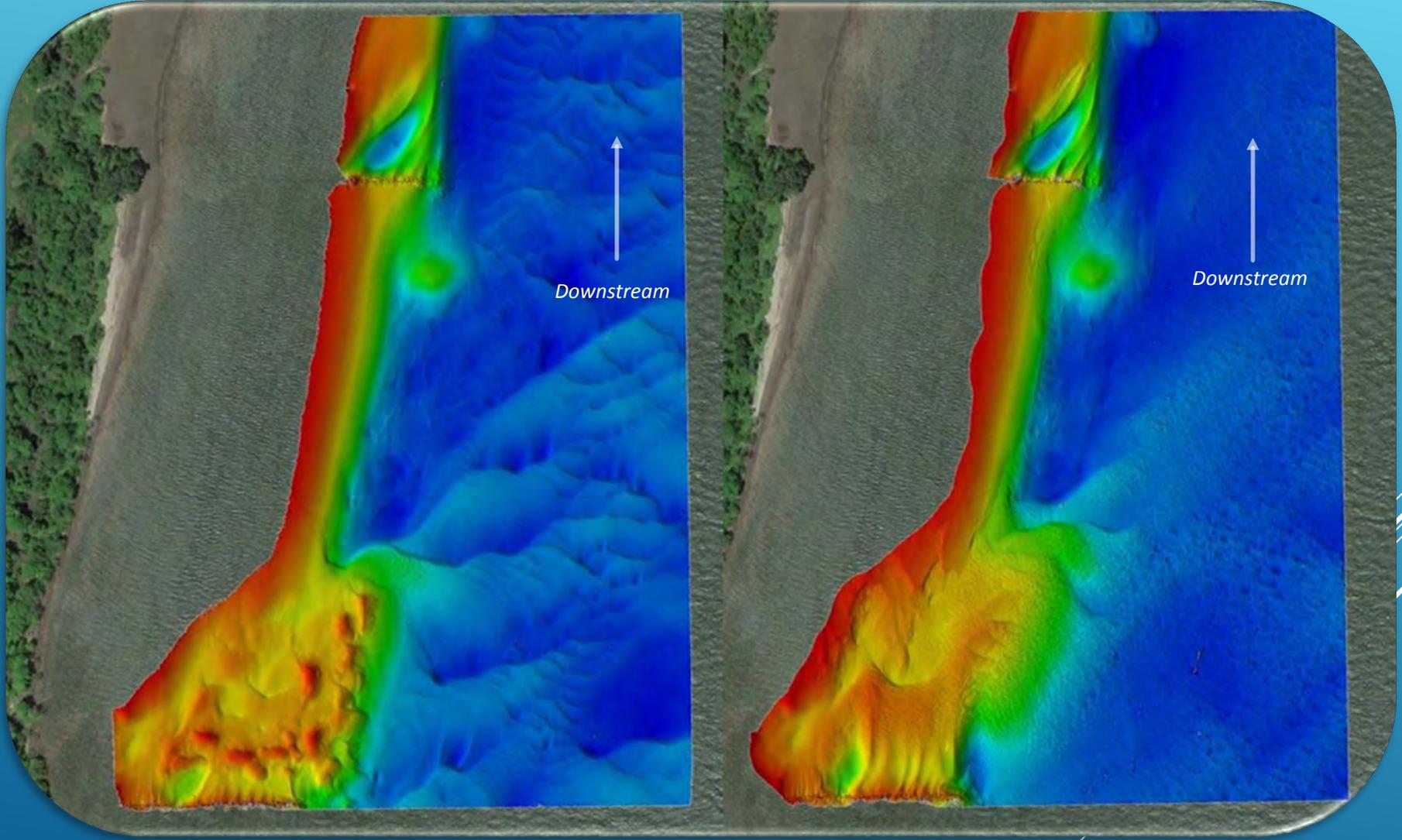
- Project encroachment to sensitive area



# PROJECT - COLUMBIA RIVER (PORT KALAMA)

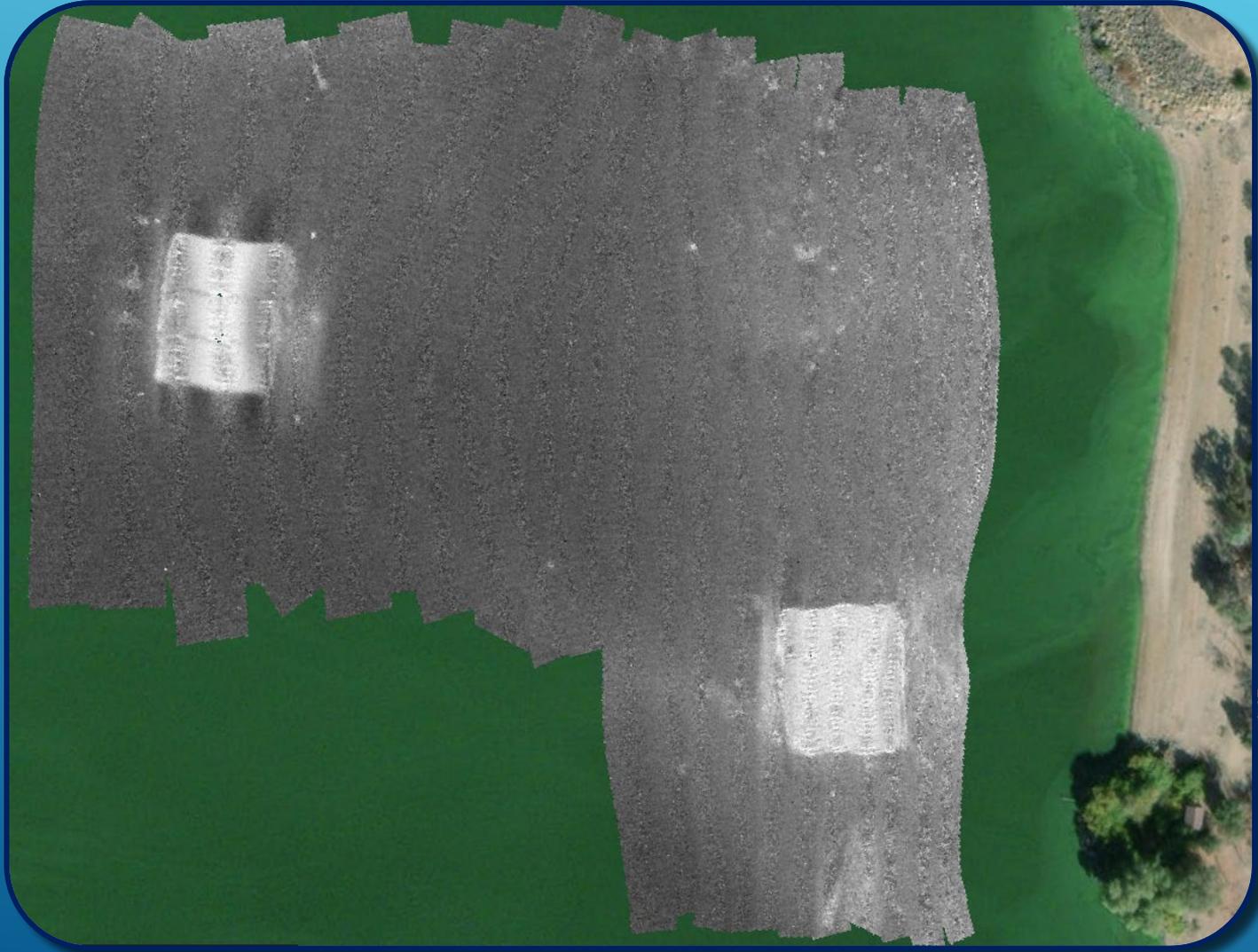
- Pile Dike Performance
- Dispersal Speed and Direction

Dredge Disposal  
Monitoring

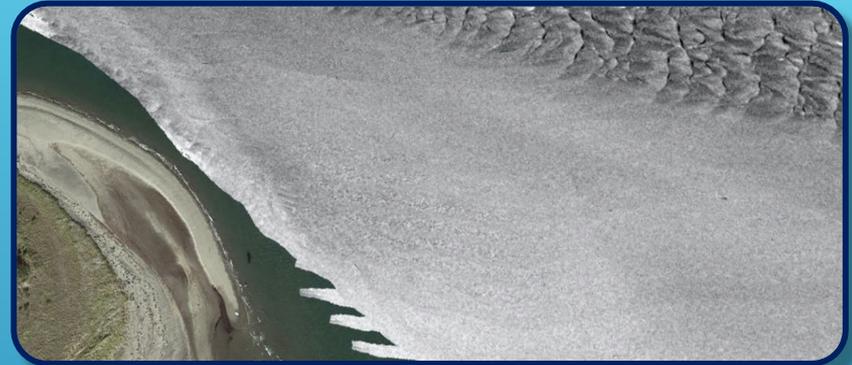
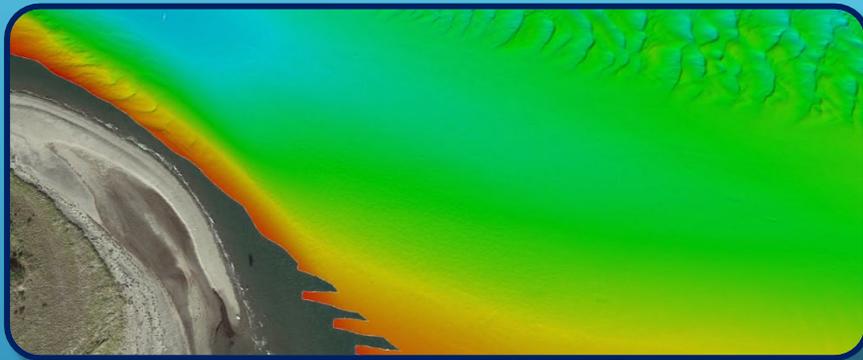


# PROJECT – CLEAR LAKE (CA)

- Sediment Texture Differences
- Cap Placement Verification



# TAKE-HOME MESSAGE(S)



- 1) May not always make sense to request (and pay for)
- 2) Data are (relatively) cheap
- 3) More-recently collected site data benefits may outweigh the costs
- 4) High resolution, accurate, and precise data is paramount – ask for it

# THANK YOU

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