

# Ocean City Inlet and Harbor Scour Hole and Sediment Modeling

## U.S. Army Corps of Engineers



U.S. Army Corps of Engineers, Engineer Research and Development Center (ERDC)

### Goal

Improve understanding of regional current movements and sediment transport changes over time.

What issues are you seeing?

Fill out a comment card!

### How are currents moving and changing in region over time?

#### Methods

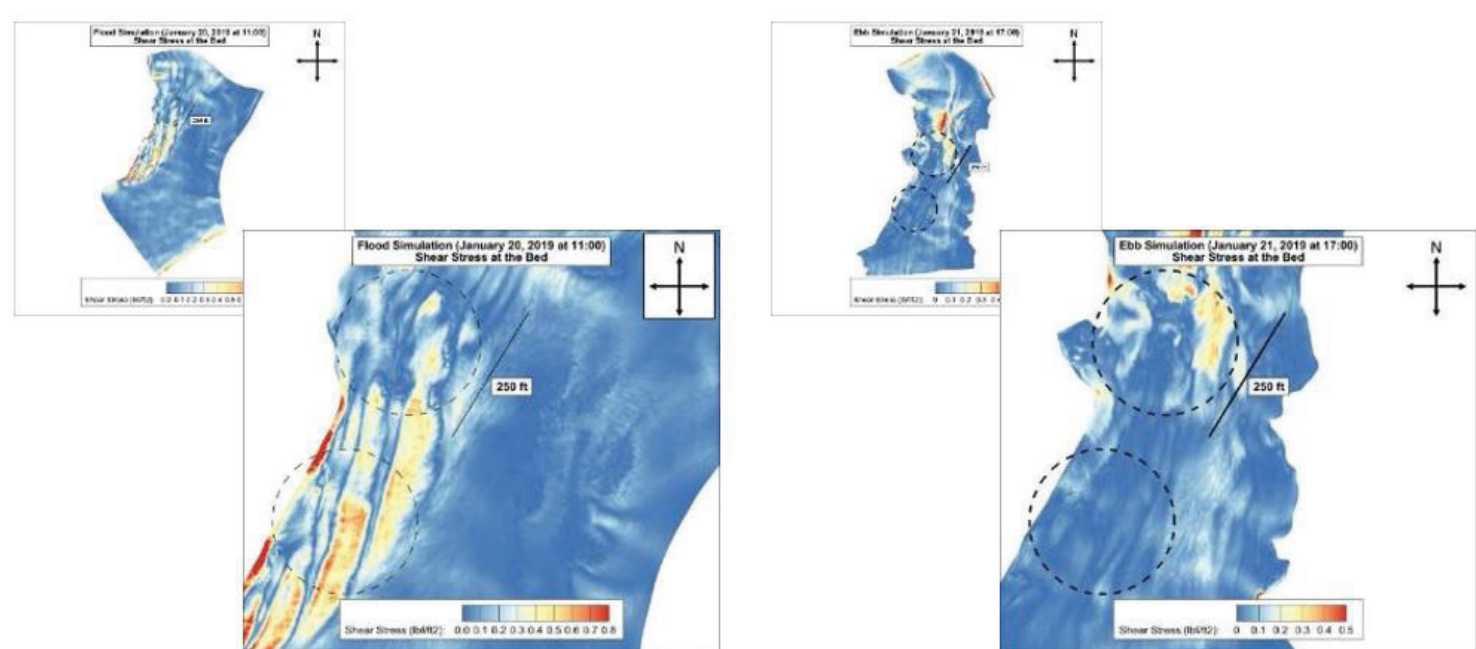
Gages to measure waves, currents, water levels, conductivity/temperature and turbidity were deployed for approximately 8 weeks during the field investigation.



Red = Scour due to alternative  
Blue = Shoaling due to alternative

### 3D Modeling Results

- Results indicate where the scour hole is most likely to grow.



Shear stresses – flood condition

Shear stresses – ebb condition

Red = high Blue = low

### 2D and 3D Hydrodynamic and Sediment Transport Models

#### Models help answer the following:

- Causes and sources of shoaling in inlet
- Causes of scour hole migration
- Short-term sediment trends with various alternatives

Potential engineering projects are simulated in the models to ensure they would effectively keep sediment out of the channel and not negatively impact other areas.