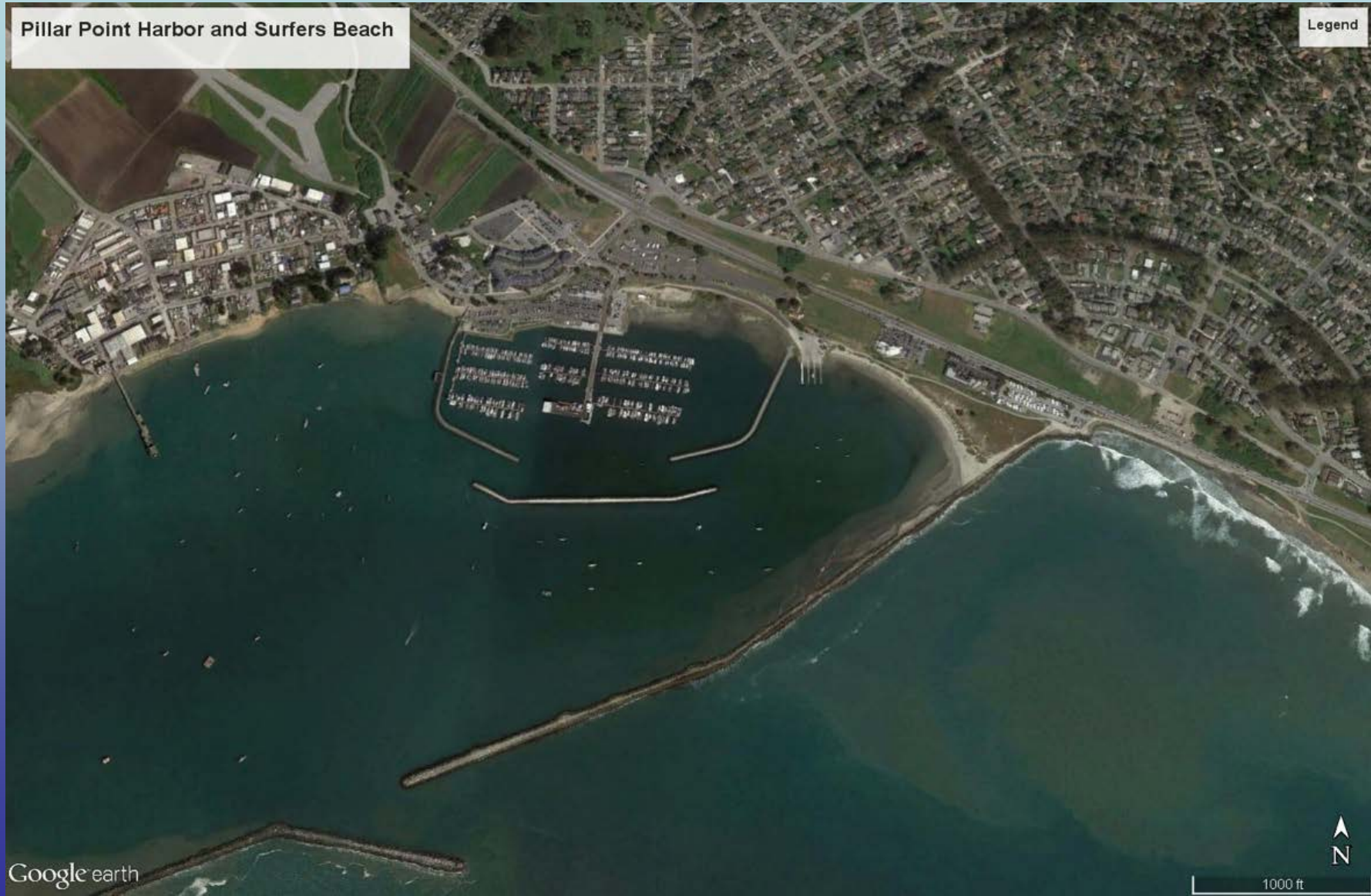


Update on the Pilot Surfers Beach Restoration Project



**Brad Damitz, Consultant to San Mateo County Harbor District
Greater Farallones National Marine Sanctuary Advisory Council Meeting
HMB Yacht Club – August 29, 2018**

Aerial Photo of Pillar Point Harbor and Surfer's Beach



Pilot Surfers Beach Restoration Project: Brief Project Background/Need for the project

- Construction of the East Breakwater at Pillar Point Harbor completed in 1961, resulted in increased erosion rates.
- In 2007, community members approached Harbor District requesting action be taken.
- In 2007 District formally requested that US Army Corps of Engineers (USACE) investigate erosion.



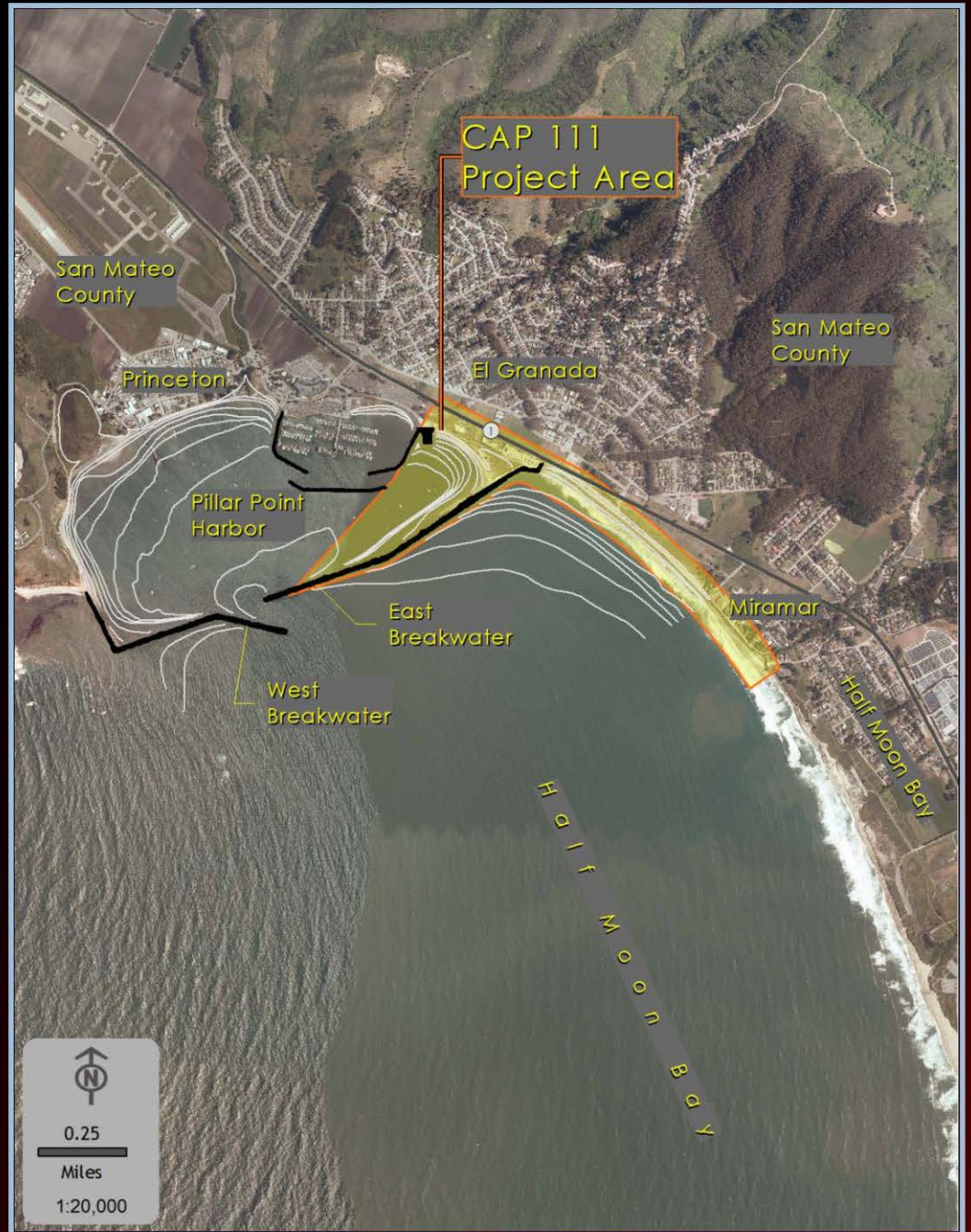
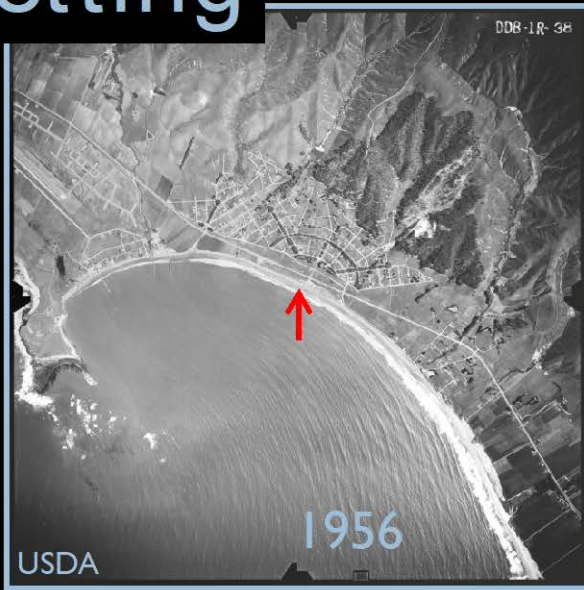
Project Background/Need for the project

- The USACE analysis determined that the bluffs along Surfers Beach eroded at an average rate of 1.64 feet per year between 1993 and 2012.
- The study also found that there is a significant accumulation of sand within Pillar Point Harbor.





Setting



2013



US Army Corps of Engineers
San Francisco District

Project Background/Need for the project

- USACE has since determined that there is not a federal interest in pursuing a beach nourishment project.
- In lieu of federal funding, the Board of Harbor Commissioners voted, in late 2015, for the District to pursue a “Pilot Surfer’s Beach Replenishment Project”.



Project Funding

- In February 2016, the District submitted a grant application to Division of Boating and Waterways for \$800,000 to fund the Project implementation (construction and monitoring).
- In April 2016, the District submitted a funding request to *California Ocean Protection Council* (OPC) for a \$75,000 Prop 84 grant to help pay for the Project Planning Phase.



Project Description

- The proposed project involves one-time placement of approximately 75,000 cubic yards of sand.
- It is a “Pilot” project meant to study benefits and impacts.
- Extensive biological and physical monitoring will be included.
- Planning is now underway.



Project Planning Process

- Planning Phase includes the following components:
 - Stakeholder collaboration and public outreach process
 - Project design and engineering
 - Environmental review
 - Permitting and agency consultation
 - Biological and physical monitoring design/planning
- Planning Phase officially began in July 2017 and will continue until project implementation, which is expected Spring 2019.



Surfers Beach Pilot Sand Replenishment Project

Stakeholder Collaboration & Public Outreach

Accomplishments to Date on Project Planning:

- ✓ Extensive outreach about the project, including over 10 presentations about the project to a diverse set of audiences.
- ✓ Formed a Technical Advisory Group (TAG) to provide input on the Project design and engineering decisions.
- ✓ Held meetings with local municipalities and agencies to discuss the project.
- ✓ Identified potential partners and stakeholders/created stakeholder outreach lists.
- ✓ Established a project webpage: smharbor.specialdistrict.org/surfer-s-beach-project

Surfers Beach Pilot Sand Replenishment Project

Project Design and Engineering

Accomplishments to Date on Project Planning:

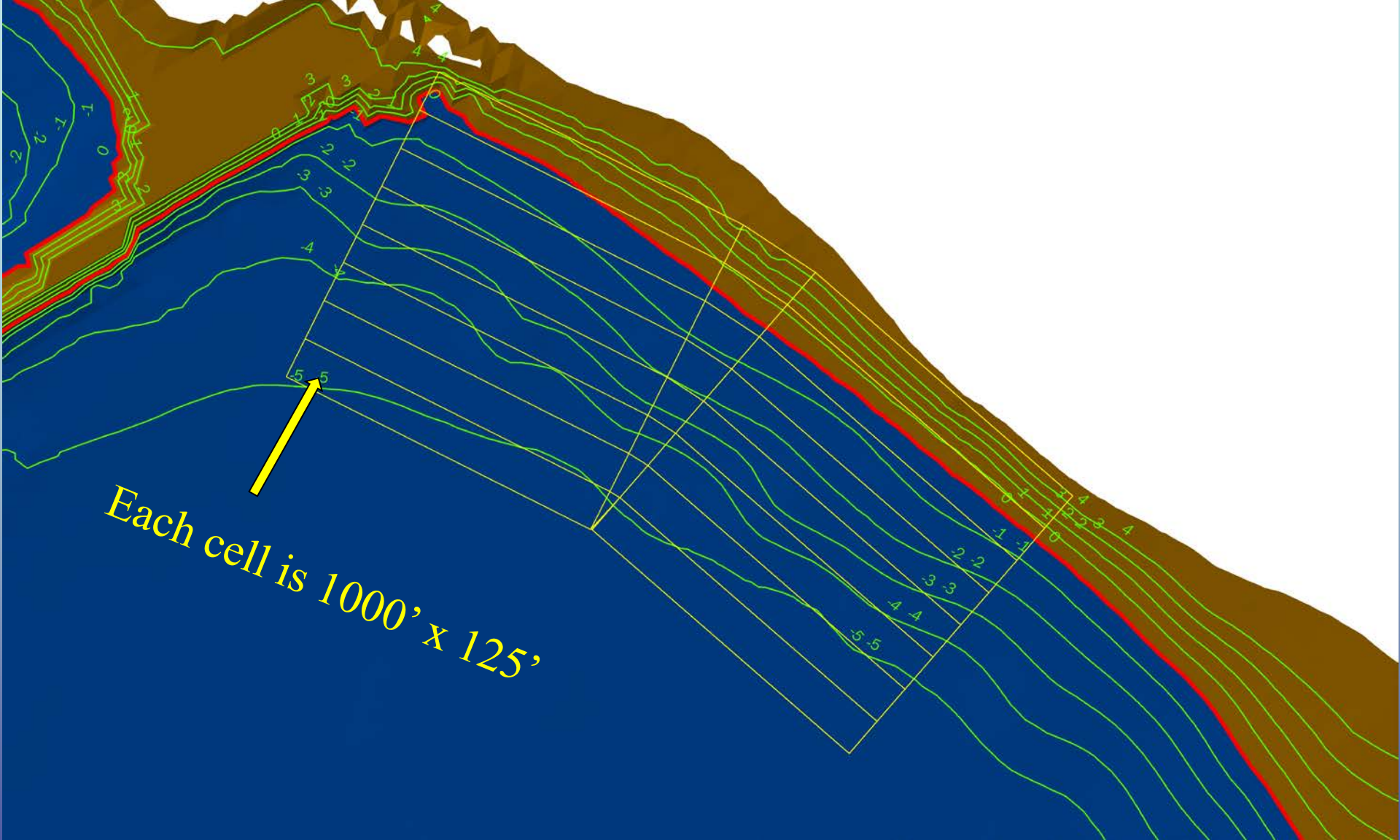
- ✓ Received initial input from permitting agencies and local municipalities on project design considerations.
- ✓ Identified a list of potential design options for further evaluation.
- ✓ Developed Request For Proposals for all necessary engineering services.
- ✓ Initiated collaboration with USACE to begin computer modelling of project design scenarios.

Surfers Beach Pilot Sand Replenishment Project

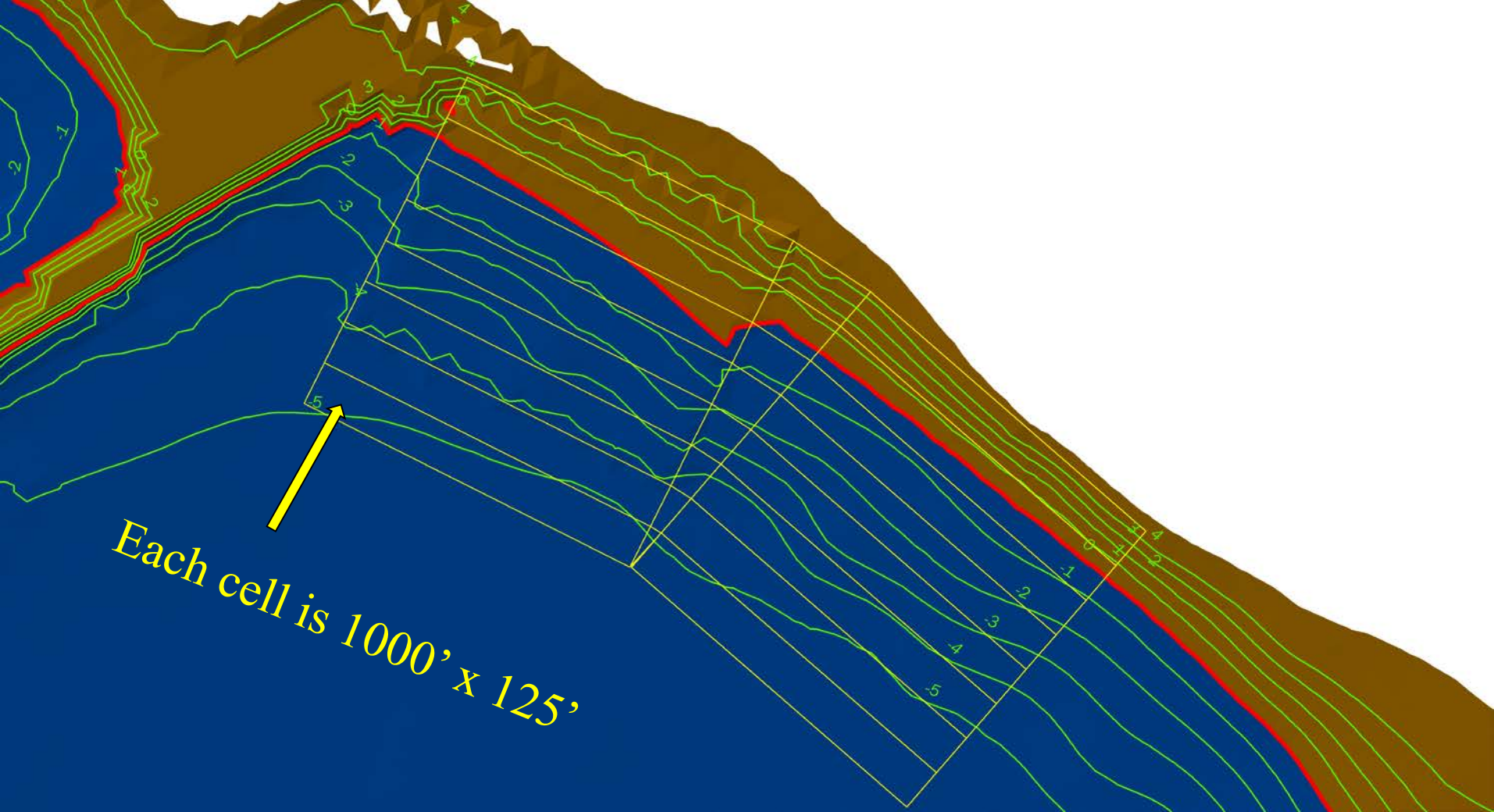
Collaboration with USACE on initial beach nourishment scenario development and modeling

Five beach nourishment project ‘scenarios’ (75,000 cy each) are being modelled currently:

1. Slurry placement within Surfers Beach cells
2. Slurry placement within Vallejo Beach cells
3. Slurry placement spread along Surfers and Vallejo beaches
4. Shaped berm placement within Surfers Beach cells (cells 1-2)
5. Shaped berm of 75,000 CY at Vallejo Beach

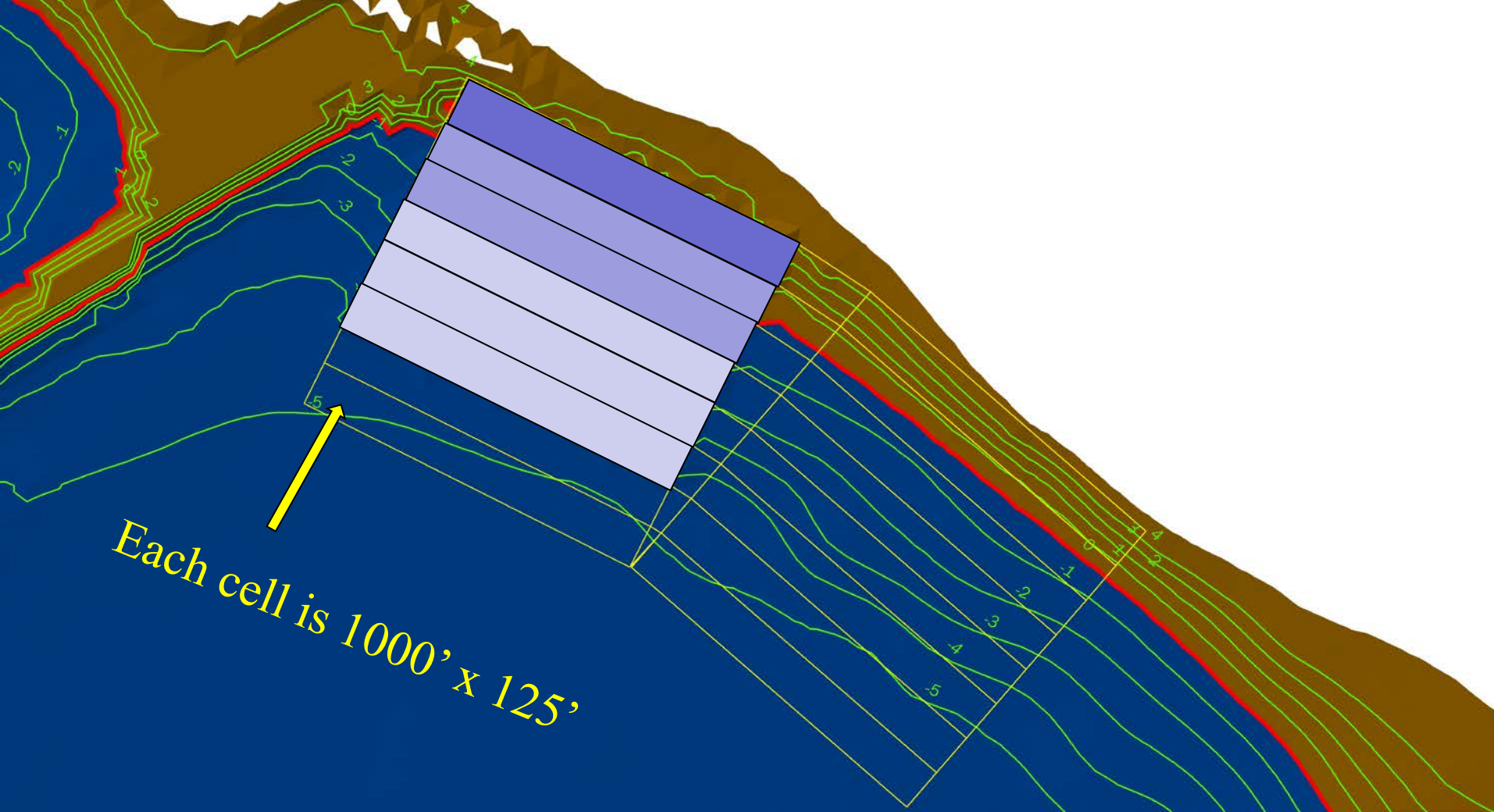


Modeling of Baseline Conditions (using most recent bathymetry data)



Scenario 1:

- 4' of sand in Cell 1
- 3' of sand in Cells 2 and 3
- 2' of sand in Cells 4, 5, and 6



Scenario 1:

- 4' of sand in Cell 1
- 3' of sand in Cells 2 and 3
- 2' of sand in Cells 4, 5, and 6

Example of Beach Nourishment Bolsa Chica Dredging Project 2018



Surfers Beach Pilot Sand Replenishment Project **Environmental Review**

Accomplishments to Date on Project Planning:

- ✓ Received initial input from all applicable permitting agencies and jurisdictions.
- ✓ Identified all necessary studies, surveys, and reports and CEQA/NEPA requirements.
- ✓ Compiled and reviewed existing literature and studies related to the project and vicinity.
- ✓ Developed Request For Proposals for sediment sampling and analysis.

Sand Sampling and Analysis Concept



Surfers Beach Pilot Sand Replenishment Project

Permitting and Agency consultation

Accomplishments to Date on Project Planning:

- ✓ Held individual meetings with each agency and jurisdiction to discuss permitting requirements.
- ✓ Coordinated a *Permitting Workshop and Site Visit*, attended by 14 agency and municipality officials.
- ✓ Identified all permitting requirements and developed a project *Permitting Matrix*.
- ✓ Collaborated extensively with with NOAA/GFNMS staff to discuss project design options and permitting requirements.

Defining Mean High Water Line



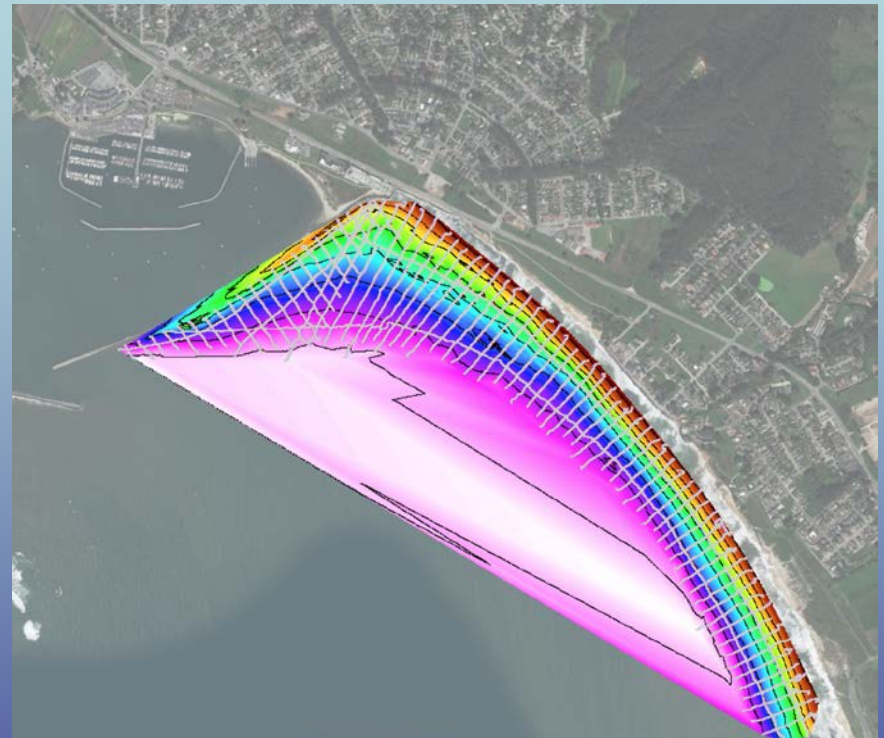
Surfers Beach Pilot Sand Replenishment Project **Biological and Physical Monitoring Program**

Accomplishments to Date on Project Planning:

- ✓ Initiated development of a *Biological and Physical Monitoring Program* for the project.
- ✓ Held meetings with USACE and U.S. Geological Survey (USGS) to develop monitoring program specifics.
- ✓ Hosted a workshop with permitting agencies to discuss monitoring program requirements.
- ✓ Developed a list of *Monitoring Questions* in collaboration with agency staff.
- ✓ USGS Conducted a July 2018 initial “pre-baseline” bathymetric/topographic survey. Data currently being processed.

USGS Pre-Baseline Survey

- In July 2018, USGS completed a comprehensive bathymetric survey for the project, along Surfers Beach and inside Pillar Point Harbor.
- Data processing is now being completed and the survey info will be used in the USACE modeling scenarios.



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