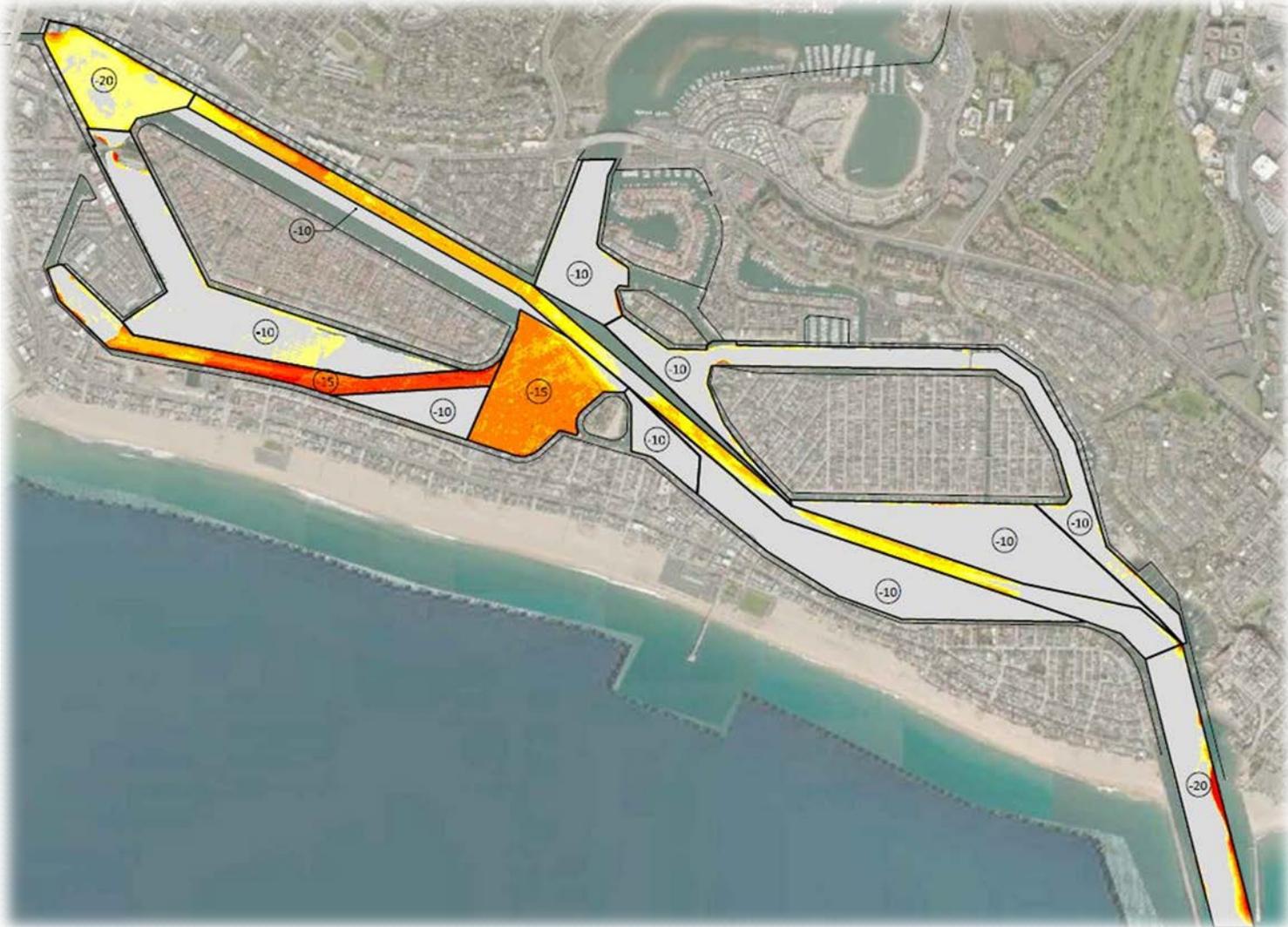


# Harbor Design Depths and Dredging Needs



Comparison of Existing Bathymetry and Authorized Depth	
Elevation Range (ft)	Color
At or Below Dredge Depth	Grey
0.0 to 1.0	Light Yellow
1.0 to 2.0	Yellow
2.0 to 3.0	Orange
3.0 to 4.0	Dark Orange
4.0 to 5.0	Red-Orange
5.0 and Greater	Red

2016 Bathymetry vs. Federal Authorized Depth

# Basic Dredging Methods



Crane with Clam Shell  
and Dump Scow

# Basic Dredging Methods

Suction Dredge with  
Direct Beach Disposal  
Santa Cruz



Suction Dredge with Dump Scow - Upper Bay





# Some Thoughts On A Game Plan

- Actively Pursue a Federal Dredging Project in Lower Harbor to remove approximately 650,000 cy Legacy Material
  - Necessary Sediment Testing is Underway
  - Staff/Council/Harbor Commission Engaging Elected Representatives, Army Corps, and Regulatory Agencies
  - Requesting \$400,000 in 2019 Army Corps Budget for Design
- Work with County to set aside funds to Dredge County Tidelands
  - North and South of PCH
  - Possibly Join the Larger Project



# Some Thoughts On A Game Plan

## Addressing Annual Maintenance Dredging *(slips, beaches, shoals, etc.)*

- ? Explore Modifying RGP (Nearshore Dredging) to allow Small Quantities of Material Disposal into Channels prior to Large Project
  - \*(provided this is agreeable with Corps & Regulatory Agencies)*
  - *Permitted for Small Cost Recovery Fee*
  - *Larger Dredging Project later Removes Material at Lower Bulk Rate*
  - *Reduces Disposal Cost to Residents = More Attractive to Dredge*
  
- ? Consider Contracting, or Purchase/Operating Small Suction Dredge System for on-going maintenance of Public & maybe Private Areas