

Orange County  
Sanitation District  
70th Anniversary

# New Ocean Monitoring Vessel

Presented by:  
Samuel Choi, Environmental Protection Manager

Operations Committee  
July 10, 2024

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## Agenda

- Ocean Monitoring Program
- M/V *Nerissa*
- Replacement Vessel
- Retiring M/V *Nerissa*
- Requested Action
- Questions

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Environmental Monitoring



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**EPA** United States  
Environmental Protection  
Agency

**Code of  
Federal  
Regulations**

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**CALIFORNIA  
WATER BOARDS**  
State Water Resources Control Board

STATE WATER RESOURCES CONTROL BOARD  
REGIONAL WATER QUALITY CONTROL BOARDS

**California Ocean Plan  
Santa Ana RWQCB Basin Plan**

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**NPDES Permit**  
**OC San Ocean Monitoring and Reporting Program**

Core Compliance Monitoring  
Regional Monitoring  
Strategic Process Studies




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Ocean Monitoring Program



**OC San must demonstrate:**

- Safe to swim → Water quality monitoring

- Healthy ecosystem → Sediment and animal community monitoring

- Safe to eat fish → Fish health and tissue bioaccumulation monitoring


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## Ocean Monitoring Program



- 185 square miles
- 167 sampling stations
- 103 – 110 sea days per year
- Travel nearly 3,000 miles per year

### Ocean Team



### M/V Nerissa



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## Ocean Monitoring Program

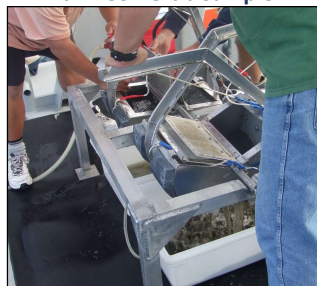


CTD Rosette



Water quality

Van Veen Grab Sampler



Sediment quality

Mooring



Oxygen and pH

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# Ocean Monitoring Program



## TRBM/ADCP



Profiling ocean current

## Trawls



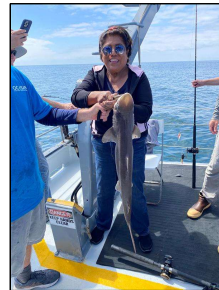
Benthic community

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# Ocean Monitoring Program



## Rig Fishing



Fish health



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## Motor Vessel (M/V) Nerissa



- ✘ Will not meet CA Air Resources Board (CARB) regulations in 2026
- ✘ Overhaul will compromise hull integrity and is not cost-effective
- ✘ Unable to support expanding regulatory requirements

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## Replacement Vessel



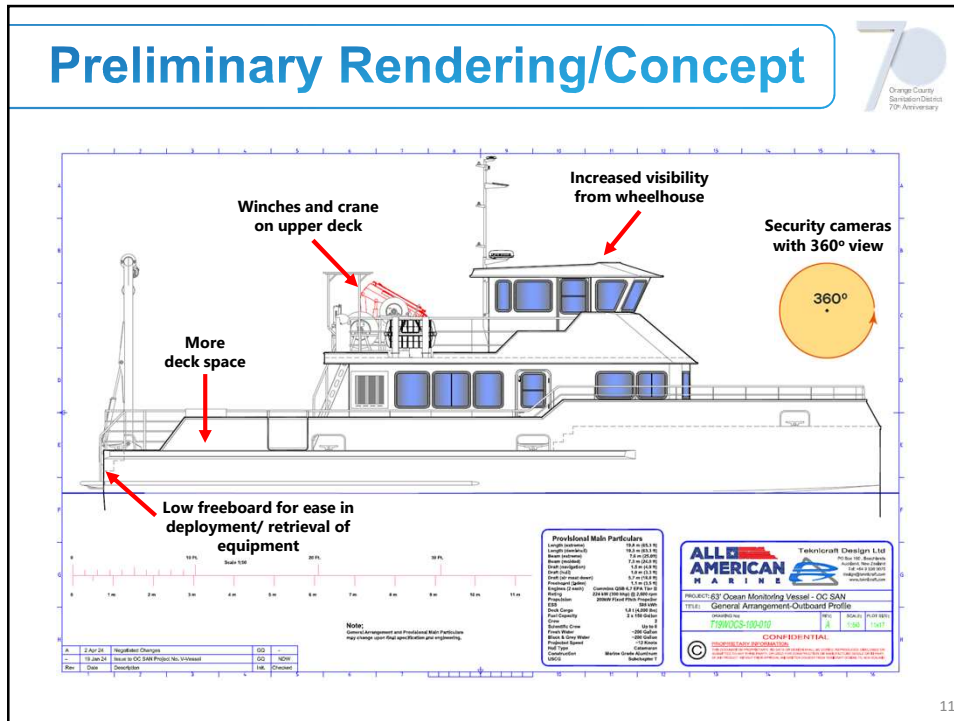
Similar Vessel: University of Hawaii Research Vessel



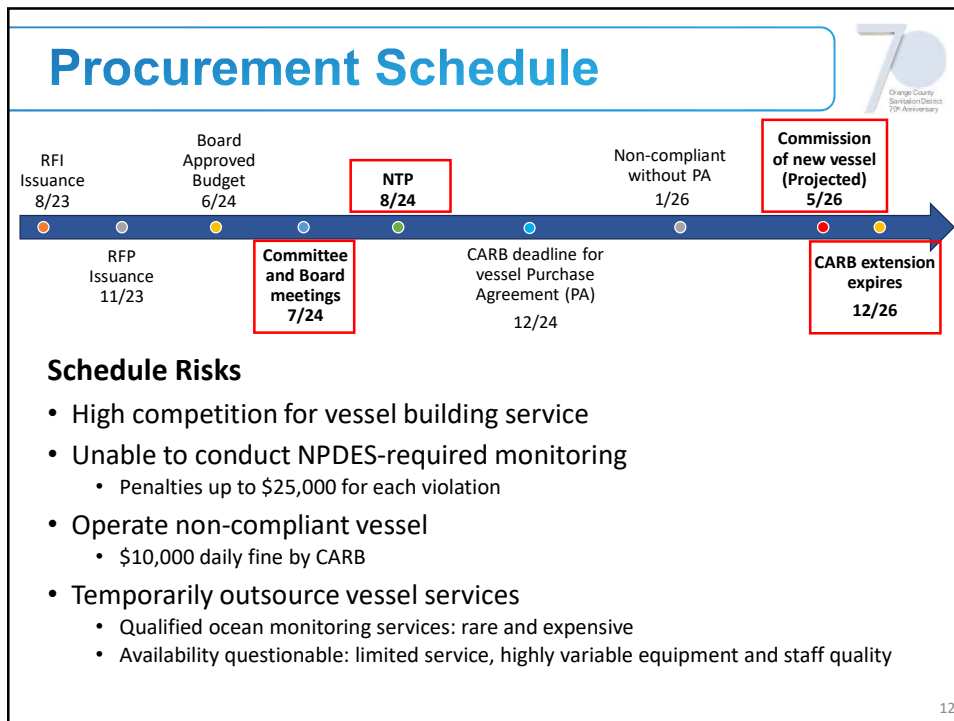
- ✔ CARB-compliant
- ✔ 65 feet long
- ✔ 25 feet wide
- ✔ Aluminum
- ✔ Catamaran design
- ✔ Plug-in hybrid system
- ✔ 30 years of estimated useful life

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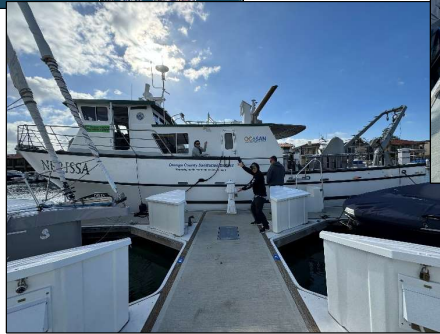


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## End Tie for Replacement Vessel



Balboa Marina



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## Retiring M/V Nerissa

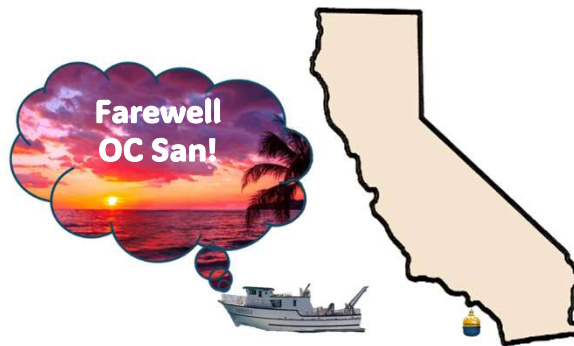


### CARB Restrictions:

*“Cannot sell, purchase, offer for sale, lease, rent, import, or otherwise acquire a new or in-use diesel engine intended to operate in California.”*

### Options

- Donate
- Auction
- Surrendered Vessel Program
- Salvage for parts



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## Recommendation

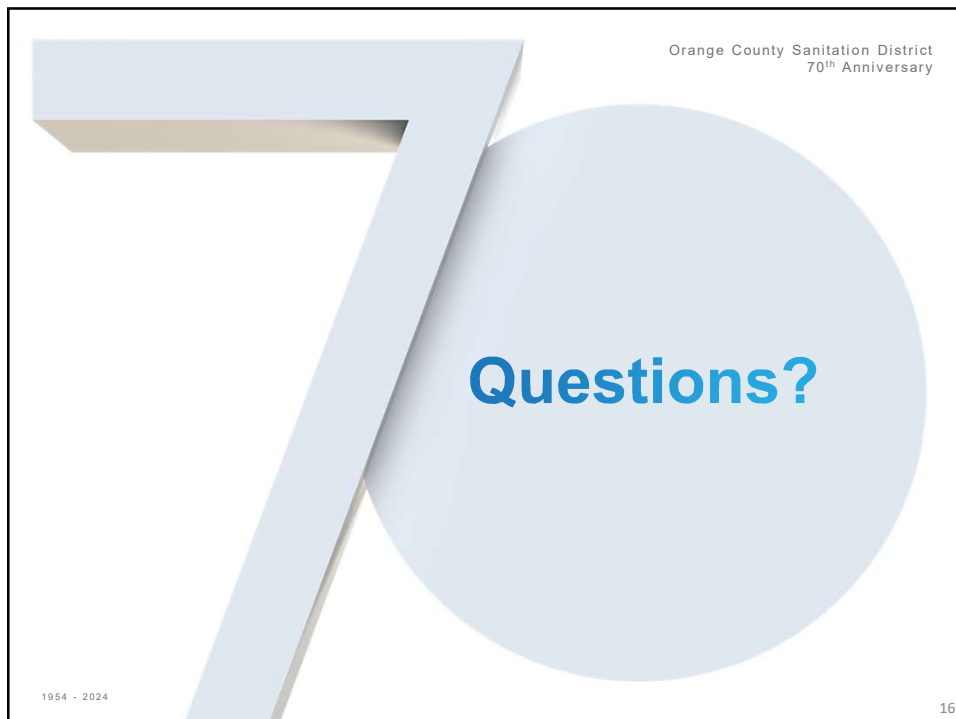


Recommend to the Board of Directors to:

1. Approve an Agreement to Design and Build an Ocean Monitoring Vessel to All American Marine, Inc. (AAM) for the purchase of a 65-foot (overall length) aluminum catamaran design ocean monitoring vessel with a plug-in hybrid propulsion system for a total amount not to exceed \$9,206,149; and
2. Approve a contingency of \$920,615 (10%).

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