Additional Material Presented at Meeting
Item 6.3_Commissioner Presentation
November 9, 2022 Harbor Commission Meeting

Mooring Field Open Water Initiative Improved Utilization Report

Newport Beach Harbor Commission Objective

For

Harbor Viability

Within

Functional Area 2.3

Evaluate the current mooring fields and provide a recommendation for new guidelines that better define rows and fairways to improve navigation, safety, and optimization of space within the mooring fields

Ira Beer
Harbor Commissioner
November 9, 2022

Historical Background
Relating to
Mooring Extensions & Improving Navigation

Harbor Commission Objective 2.3 as Approved by City Council

Purpose: To evaluate the current mooring fields and provide a recommendation for new guidelines resulting in:

- **Better Define Rows and Fairways To Improve Navigation and Safety**
- **Improved Optimization Of Space Within The Mooring Fields**
- **Additional City Moorings Within The Current Mooring Fields**

Historical Background

- Historically, the Newport Harbor Mooring Fields had been managed by the Orange County Sheriff's Department (OCSD).
- In 2017, the City of Newport Beach ended its contract with the OCSD Harbor Patrol for mooring administration and code enforcement, which is now managed by the Newport Harbor Resources Department.
- Prior OCSD practice was to approve mooring extensions on an ad-hoc basis without any official policy, guidelines or best practices. This practice has resulted in poor utilization of open water space reducing the navigable areas within the mooring fields.
- Since 2019, Harbor Commission policy has been to not approve mooring extension requests.
- As a result of prior practice, the current space within the mooring field footprints in many cases is not safely navigable nor suitable for public access and in many locations has turned into what closely resembles a crowded parking lot.

Solution for Improved Safety and Creating New Open Water Space

New Double Rows vs. Single Row Mooring Configuration

Intention:

- Greatly improved utilization of water space within the mooring fields
- Increase open water space throughout the harbor
- Create wider and well-defined fairways
- Increased spacing between moorings in the same row (appx minimum 50’ on center)
- More overall room to maneuver when tying to or departing from a mooring
- Safer navigation throughout the mooring fields for all mariners (motor, sail and human powered craft)
- Option to use a single buoy mooring system (like what is used in Catalina)
- Addition of long-term moorings to each mooring field.

Single Row Mooring Field

Approximately 200 Moorings covering 1.3 million sq/ft (30 ACRES)

Newport Harbor Mooring Fields J & H

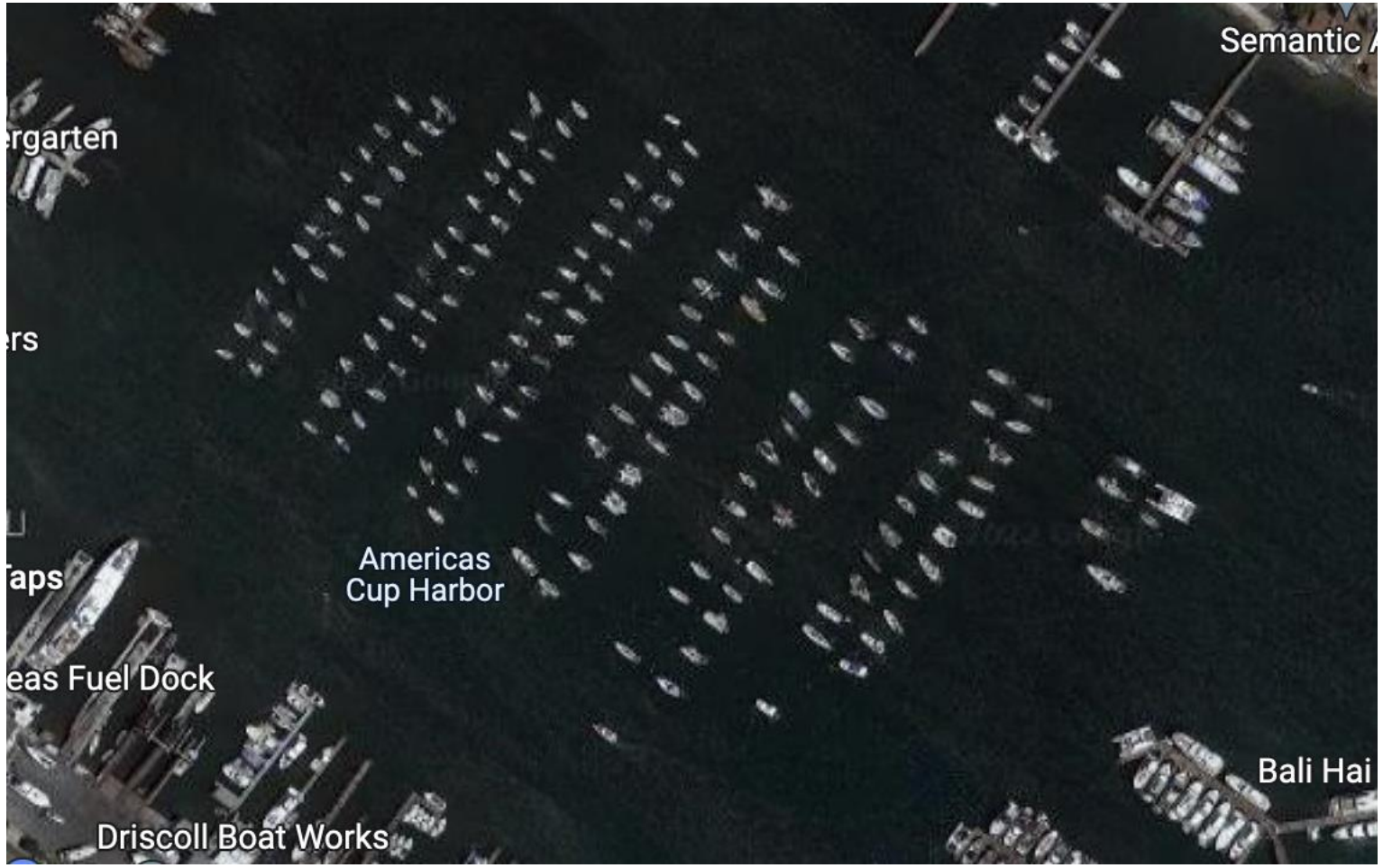
Without policies defining row and fairway sizes, a mooring field can become a safety concern to navigate and become very inefficient use of valuable waterways.

Double Row Mooring Configuration

America's Cup Harbor, San Diego

Approximately 180 Moorings covering 650,000 sq/ft (15 ACRES)

90% of the moorings in 50% of the space

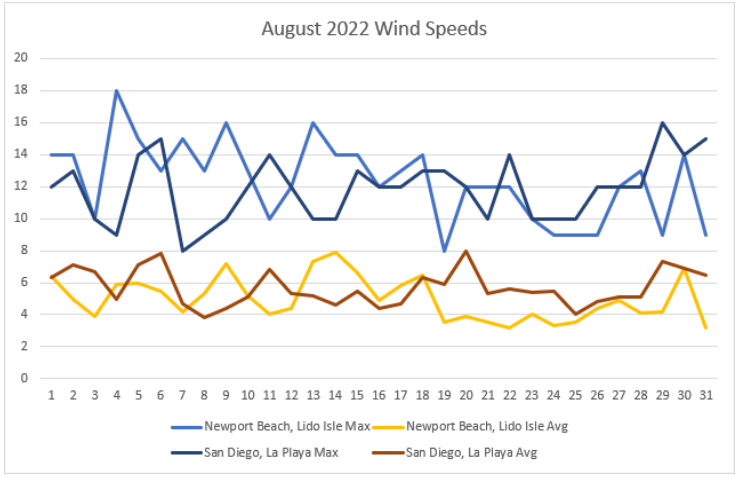


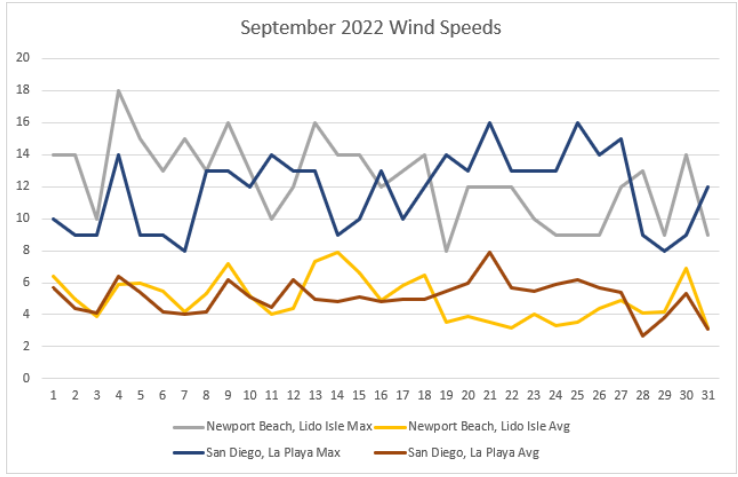
Boats in double rows provide more efficient use of space than single rows allowing
for wider fairways that improve safety, navigation and aesthetics.

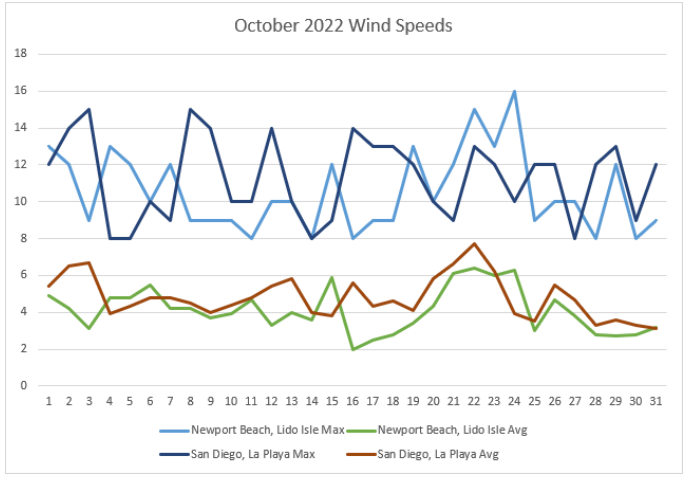
The America's Cup Harbor double row mooring field has provided a space efficient and safe harbor for mariners for the past 40 years. America's Cup Harbor experiences similar wind speeds as Newport Harbor and is subject to wakes from large vessels including naval ships from the main channel.

Wind Speeds
Newport Harbor and San Diego Harbor

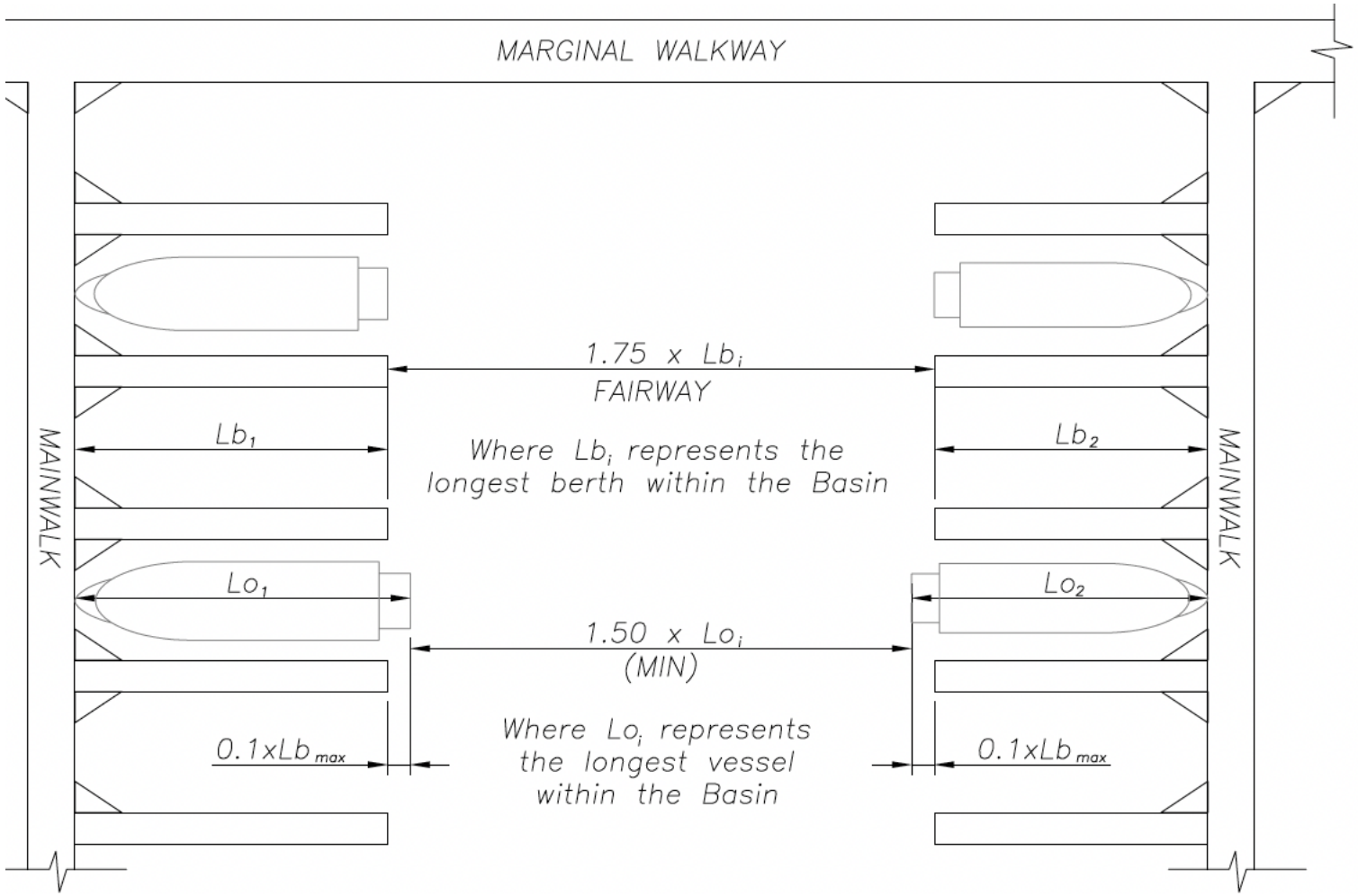
Both Newport and San Diego Harbors Experience Similar Wind Speeds







City of Newport Beach
Harbor Design Standards

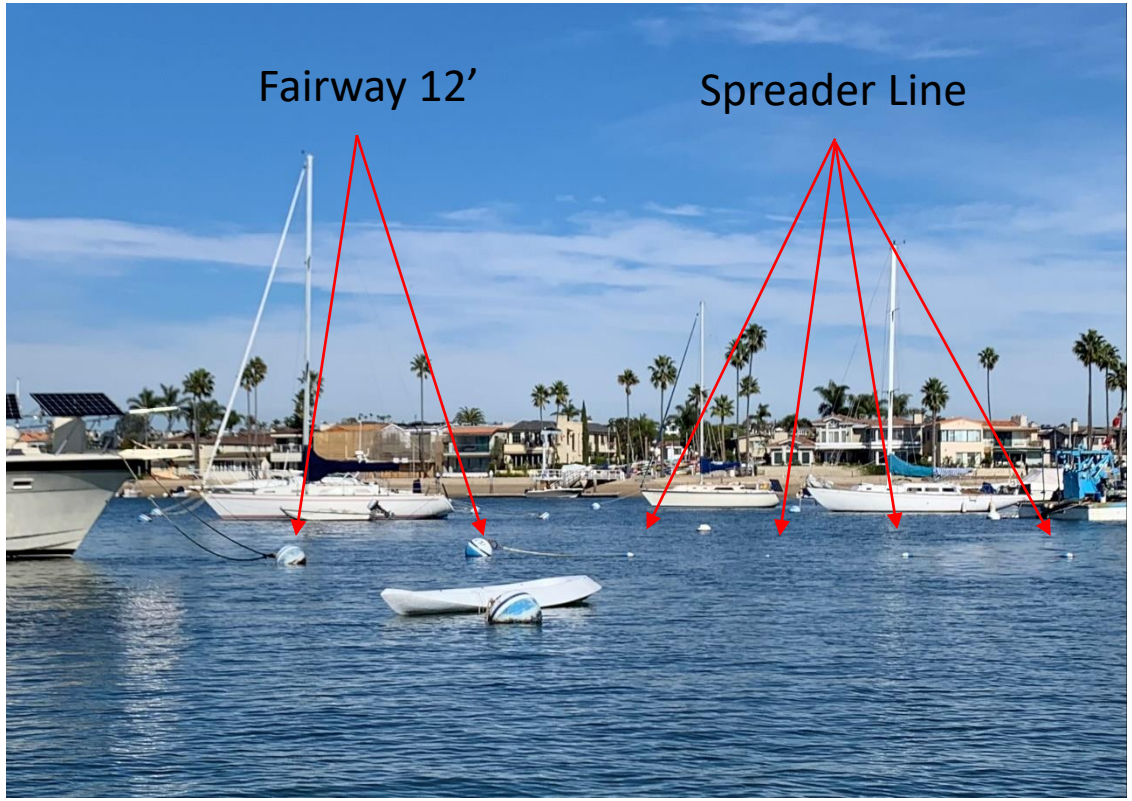


Harbor Design Standards adopted by the City of Newport Beach require the fairways (navigational area between slips) to be a minimum of 1.5 x the boat LOA (Length Overall)

Arguably, the fairways between rows In a mooring field should be held to the same guidelines as a marina slip is typically part of permanent structure. A mooring in open water allows for boat movement and drifting creating a less forgiving environment to safely navigate.

Current Spacing Is Below Harbor Design Standards

Dangerously narrow and cluttered fairway poses a safety hazard to all mariners.



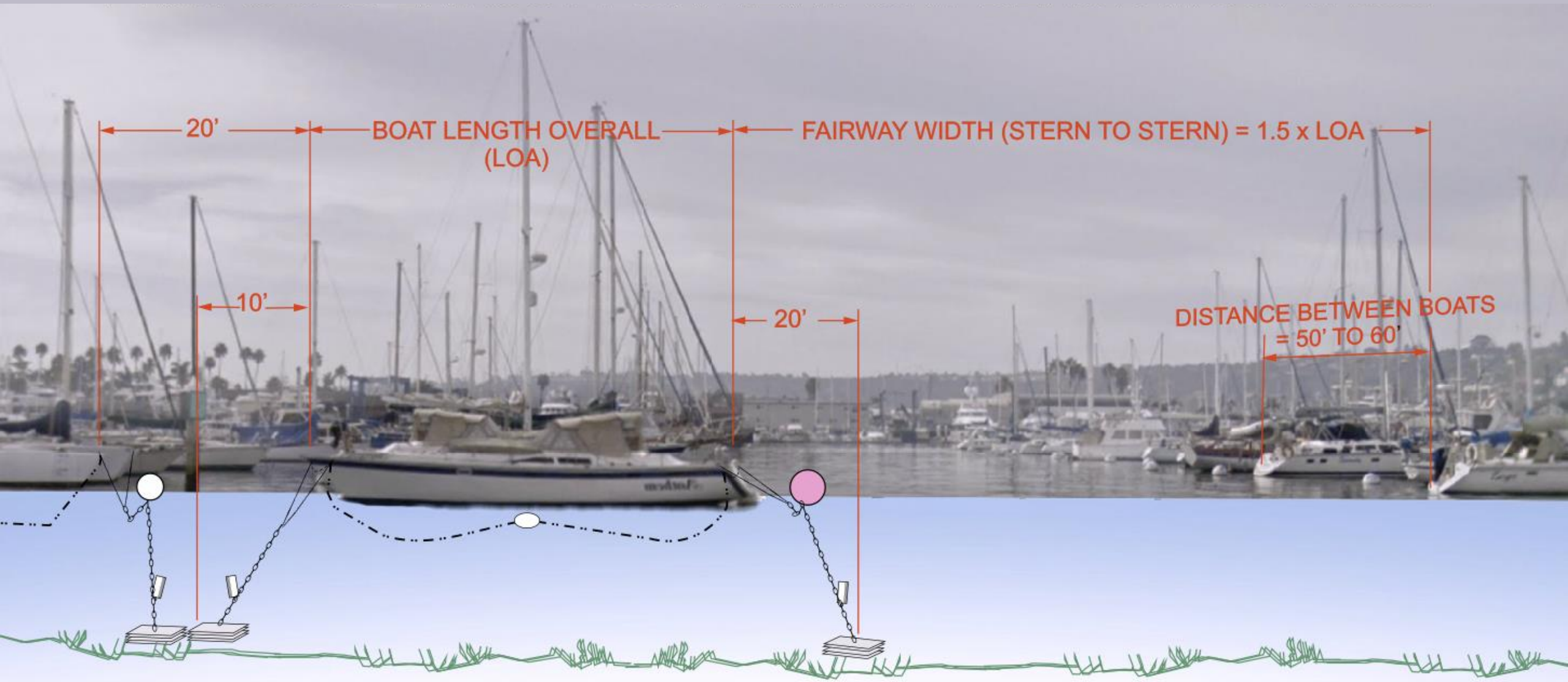
Closer view of fairway shows approximately 12 feet space to navigate through. Spreader line is longer than the mooring creating a safety hazard.

Current Spacing Is Below Harbor Design Standards

Narrow fairways under 20’ in places

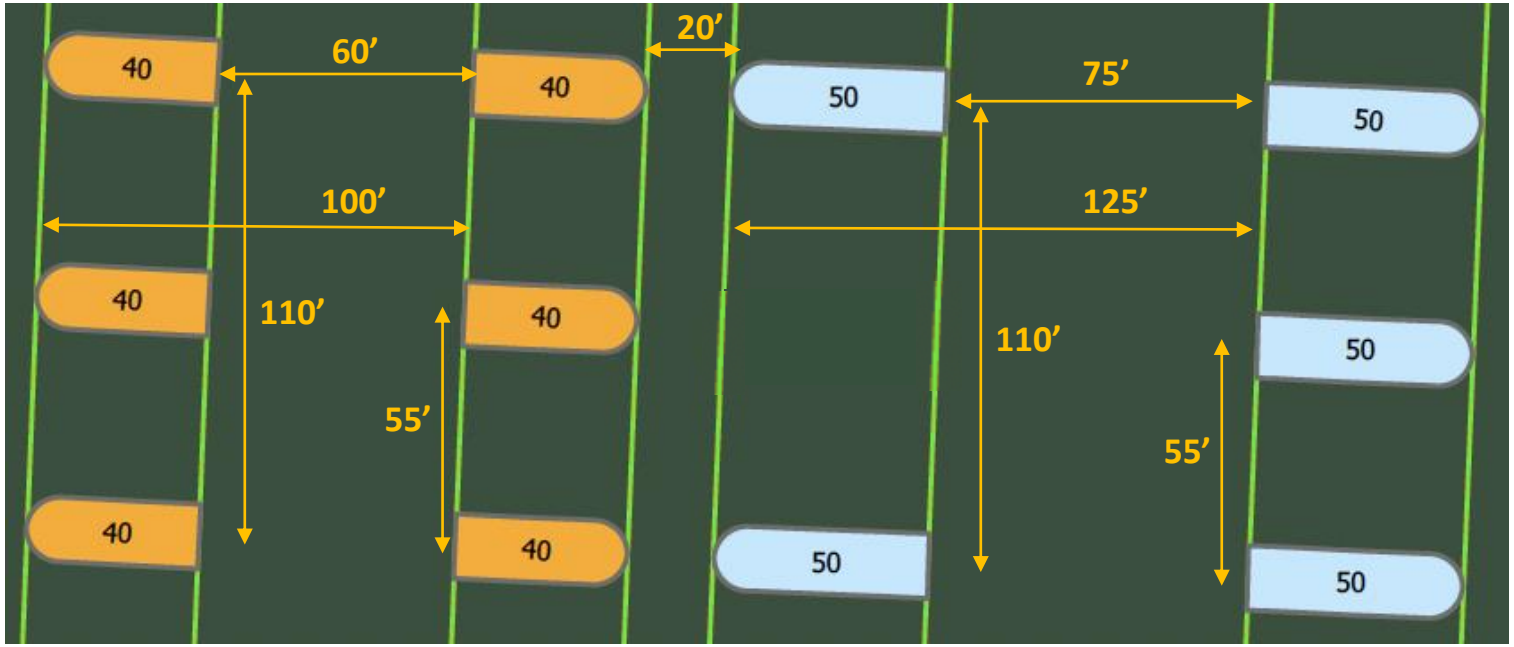
Often less than 20’ distance between boats in the same row

PROPOSED LAYOUT FOR NEWPORT HARBOR MOORINGS



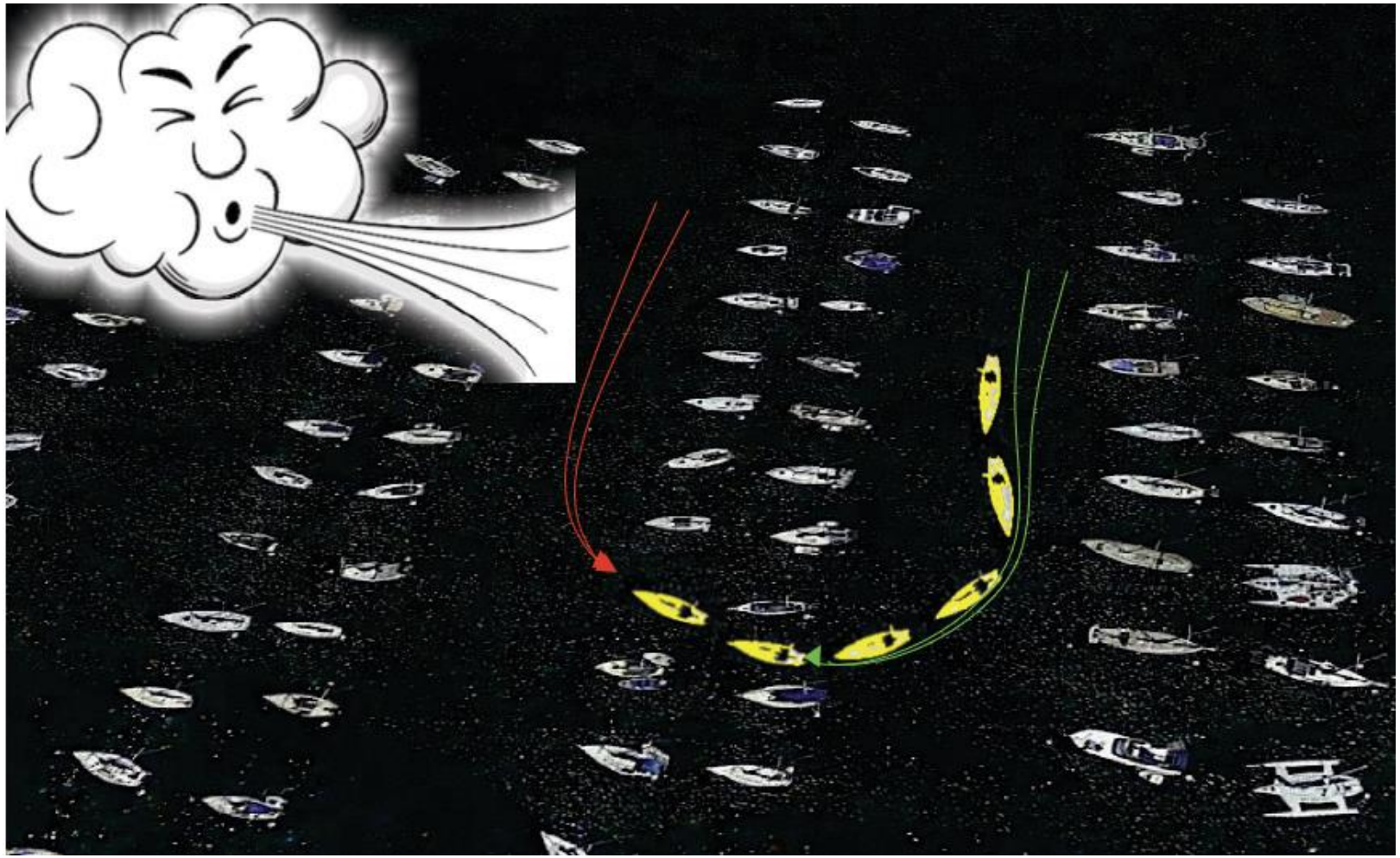
Safety and Improved Navigation With Double Row – Two Point Moorings

New Double Row Mooring Design – C Field



- When approaching a 50’ mooring, a boater will have a 75’ wide fairway (1.5 x its LOA) and open space of approximately 100’ x 125’ to grab the mooring line and secure the vessel.
- A boater can safely move left or right a distance up to 50’ when abandoning an attempt to retrieve the mooring line. A boat tied to a mooring should not be able to encounter adjacent boats in the same row.
- Even with all this extra room, boaters must know how to properly operate their vessel and are responsible to match their ability with present conditions in an open an active mooring field.

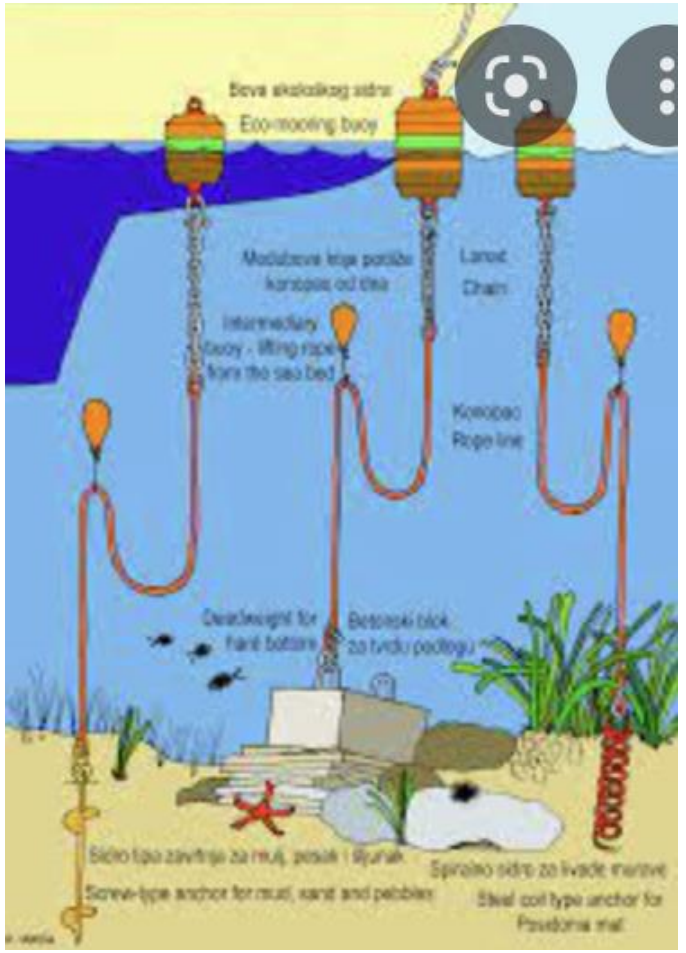
Flexibility and Space For Mooring in Varying Conditions



When tailwinds or other conditions affect the approach to a mooring, the improved open water space between moorings (50’to 60’ on-center), should be ample room for approaching the mooring from the downwind or opposing fairway.

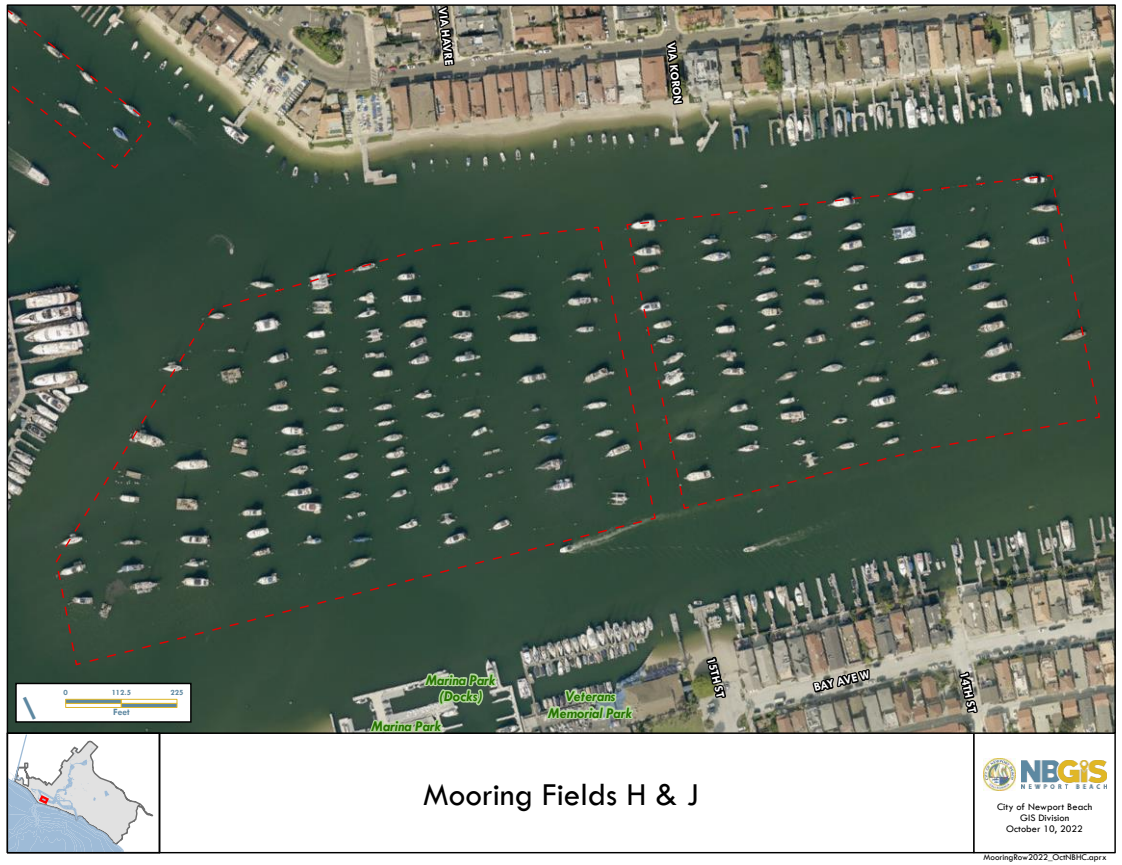
New Environmental Design Uses Conservation Moorings

Mooring scarring destroys eel grass and disrupts the marine ecosystem. The California Coastal commission has imposed strict guidelines for eel grass monitoring and mitigation.

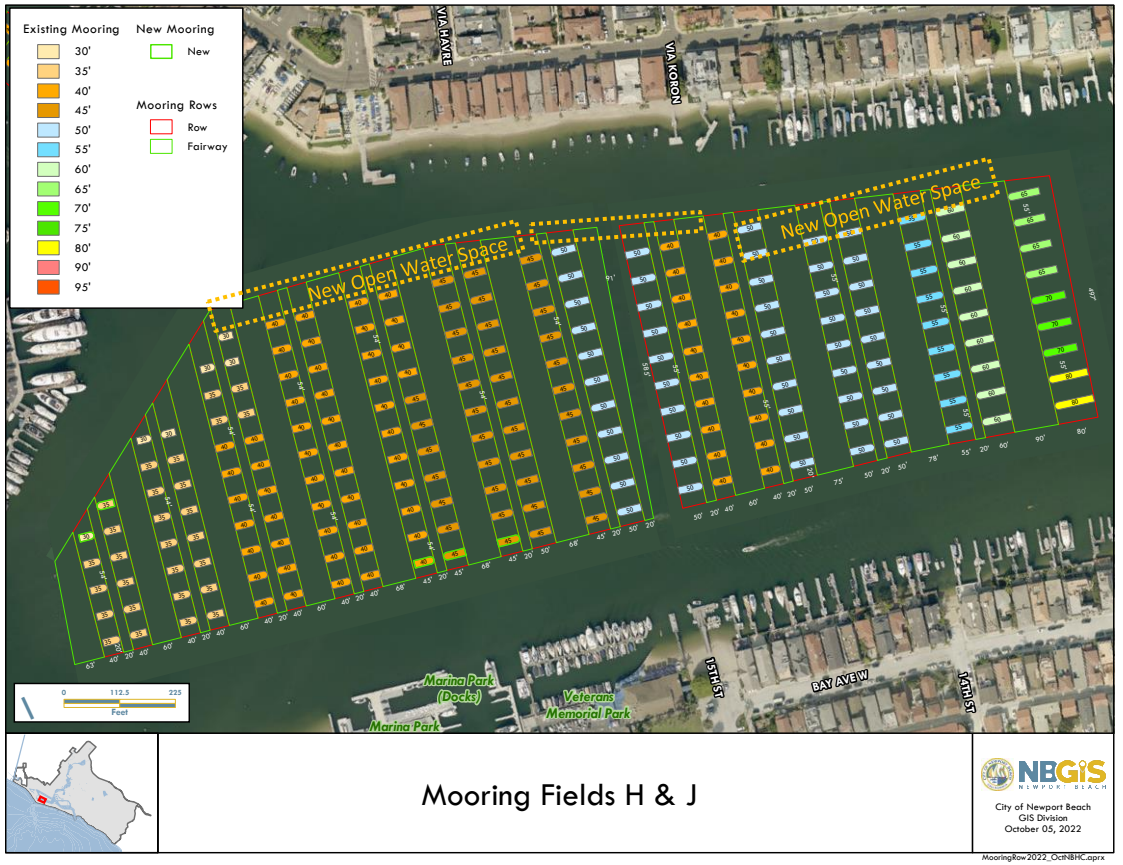


Floats as shown in the diagram will keep the chain mostly off the sea floor allowing for eel grass to flourish and help restore marine life in the harbor.

Single Row Mooring Configuration
J & H Fields

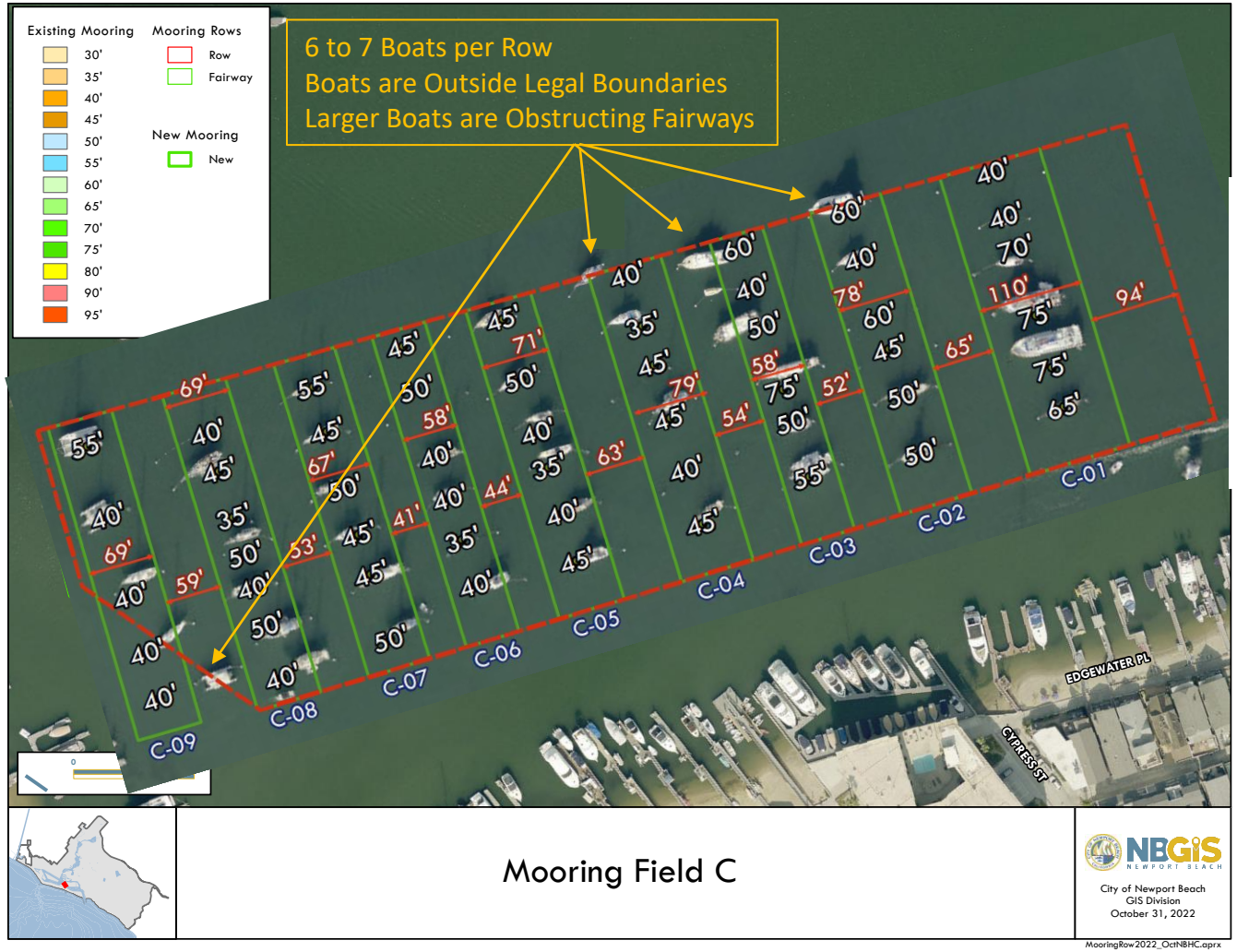


This is a poor utilization of space. Up to 15 boats in a row. Every row provides less than adequate spacing and is not compliant with Harbor Design Standards.



New configuration provides improved navigation and utilization of space. Only 11 boats per row vs 15. Every row is in substantial compliance with Harbor Design Standards

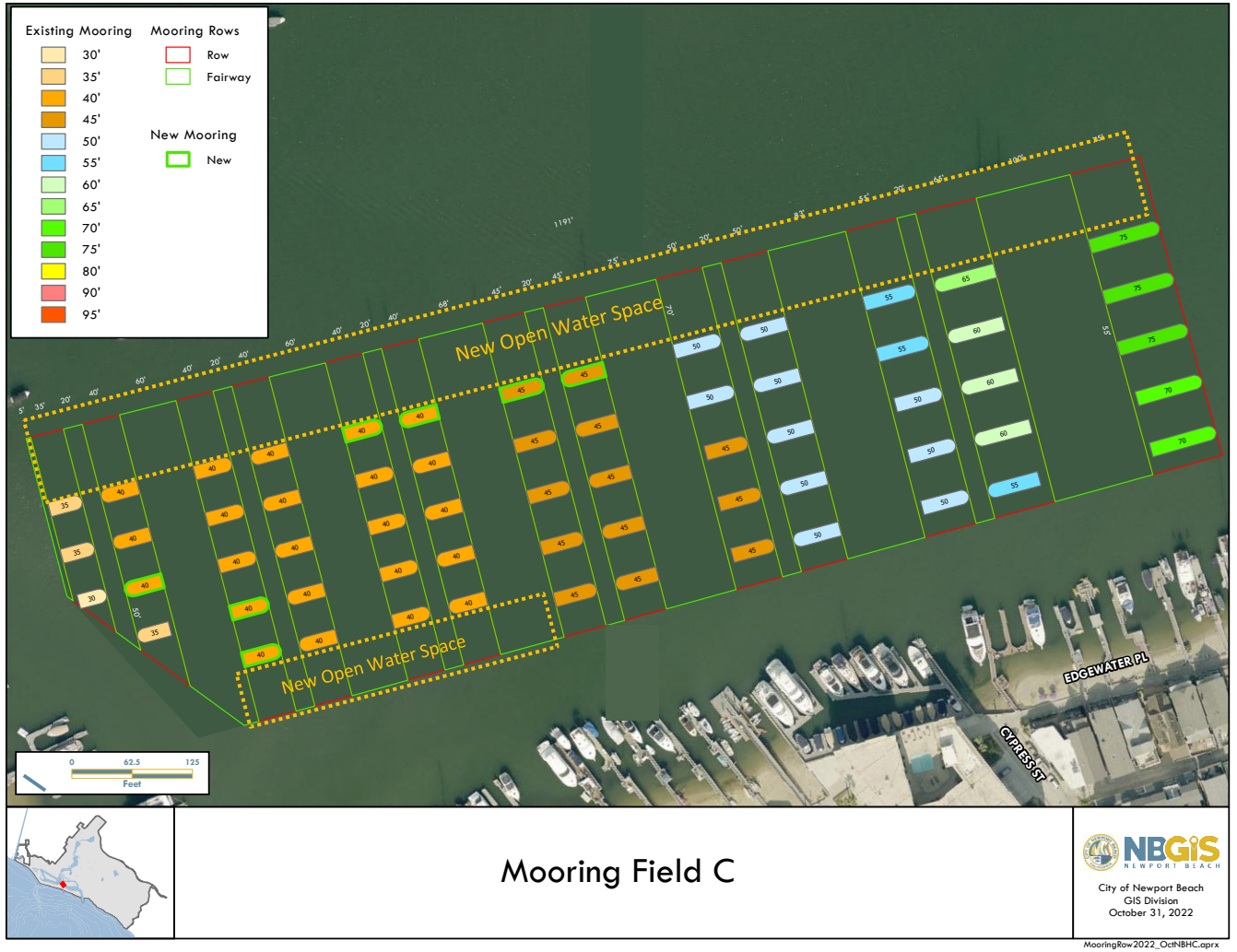
New Double Row Mooring Configuration
C Field Pilot Test - Before



Existing Conditions

- All rows provide less than adequate spacing that is not compliant with Harbor Design Standards. Fairways are only 41’ to 65’ wide with up to 75’ boats protruding into fairways.
- Many vessels are moored outside the designated mooring field boundaries.
- Poor utilization of valuable water space along the main channel of Newport Harbor

New Double Row Mooring Configuration
C Field Pilot Test - After



- New Configuration Provides Improved Utilization of Space
- Every Row is in Substantial Compliance with Harbor Design Standards. All boats are spaced 50’ - 55’ on center and fairways range from 60’ to 100’.
- Rows Reduced in Size from 6 to 7 Boats Down to 5 Boats
- 7 New Moorings Are Added
- 2 Acres of New Open Water Created Along The Main Channel (appx 1200’ x 70’
- Greater Distance Between the Mooring Field and Residential Properties
- Complete one-double row then test and confirm engineering design before continuing with the balance of the field.

Title 17 Changes to Sections 17.25.020 and 17.60.040

Summary

- Accommodation for all prior mooring extension requests up to five feet that were received before November 1, 2022
- Creating an opportunity for future extensions through a mooring exchange program where practicable
- Creating an option to allow for double mooring rows with optional shared anchor systems
- Allow mooring permittees to use a proper length floating spreader line attaching bow to stern mooring buoys and requiring the spreader line be connected to both mooring buoys when the boat is off mooring
- Future new mooring permits issued will be non-transferrable
- Policy related to transferability for existing mooring permittees remains unchanged
- General clarifications to existing policy

Newport Harbor
Mooring Field Reconfiguration

Summary

- Adding open water space for use by all mariners over public tidelands.
- No upfront cost to existing mooring permittees.
- Accommodation for all 5’ mooring extension requests received before November 1, 2022.
- Greater average distance in rows between boats for safer mooring.
- All relocations will be in the same mooring field with consideration for like-for-like positioning, where practicable.
- Substantially wider fairways for improved public access and safer navigation through the mooring fields for both human-powered and motor-powered craft.
- Improved aesthetics for shoreline properties of residents, commercial establishments, visitors and all harbor users.
- Additional moorings that will (i) be more affordable and require no initial investment to use, and (ii) generate additional revenue for the Tidelands Fund and Harbor Operations.
- Return of capital investment as a result of new mooring revenue to the City.

Question & **Answer**

Session
for
Harbor Commissioners

Presented by

Ira Beer
Harbor Commissioner

Public Comments

Open Forum