CITY OF FORT LAUDERDALE

VIRTUAL MEETING
DO I HAVE TO RAISE MY SEAWALL?

An Overview of the City's Proposed Tidal Barrier Ordinance

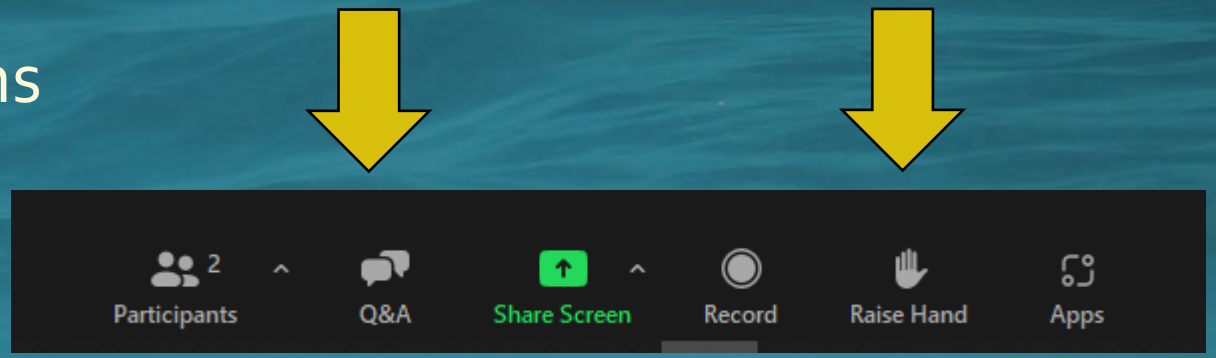
Wednesday, February 1, 2023
6:00 PM

A Community Conversation
with Nancy J. Gassman, Ph.D.
Asst. Public Works Director - Sustainability

Welcome to the Virtual Meeting

1) Meeting Purpose
    1) Provide information and answer questions about the proposed tidal barrier ordinance
2) Agenda
    1) 20 minute presentation
    2) 40 minutes for questions
3) Ways to Ask a Question
    a. Type it into Q & A
    b. Raise your hand in the zoom meeting
    c. Ask your question by phone (*9 to raise your hand)
4) Think of a Question after the Meeting Ends?
    1) Send an email to Sustainability@fortlauderdale.gov

Recording Available at YouTube.com/Cityoffortlauderdale



Questions Addressed in This Webinar

1) What is in the current seawall ordinance?
2) Why is the City considering changing the ordinance?
    a. Broward County mandate
    b. Planning for sea level rise
3) What are the major ordinance changes?
4) What has not changed about the ordinance?
5) Why is there a maximum and a minimum top elevation?
6) Do I have to raise my seawall?
7) Your questions

What is in the current seawall ordinance?

ULDR Section 47-19.3 - Boat slips, docks, boat davits, hoists and similar mooring structures

- Sets a **minimum seawall elevation** at **3.9 feet** NAVD88 **for new seawalls**;
- **Recommends** design of seawall for future height adjustment up to 5.0 feet NAVD88;
- Sets an allowable **maximum height** of the seawall and dock based on a property's base flood elevation;
- Requires seawall reconstruction to the minimum elevation if the **substantial repair threshold (50%)** is triggered;

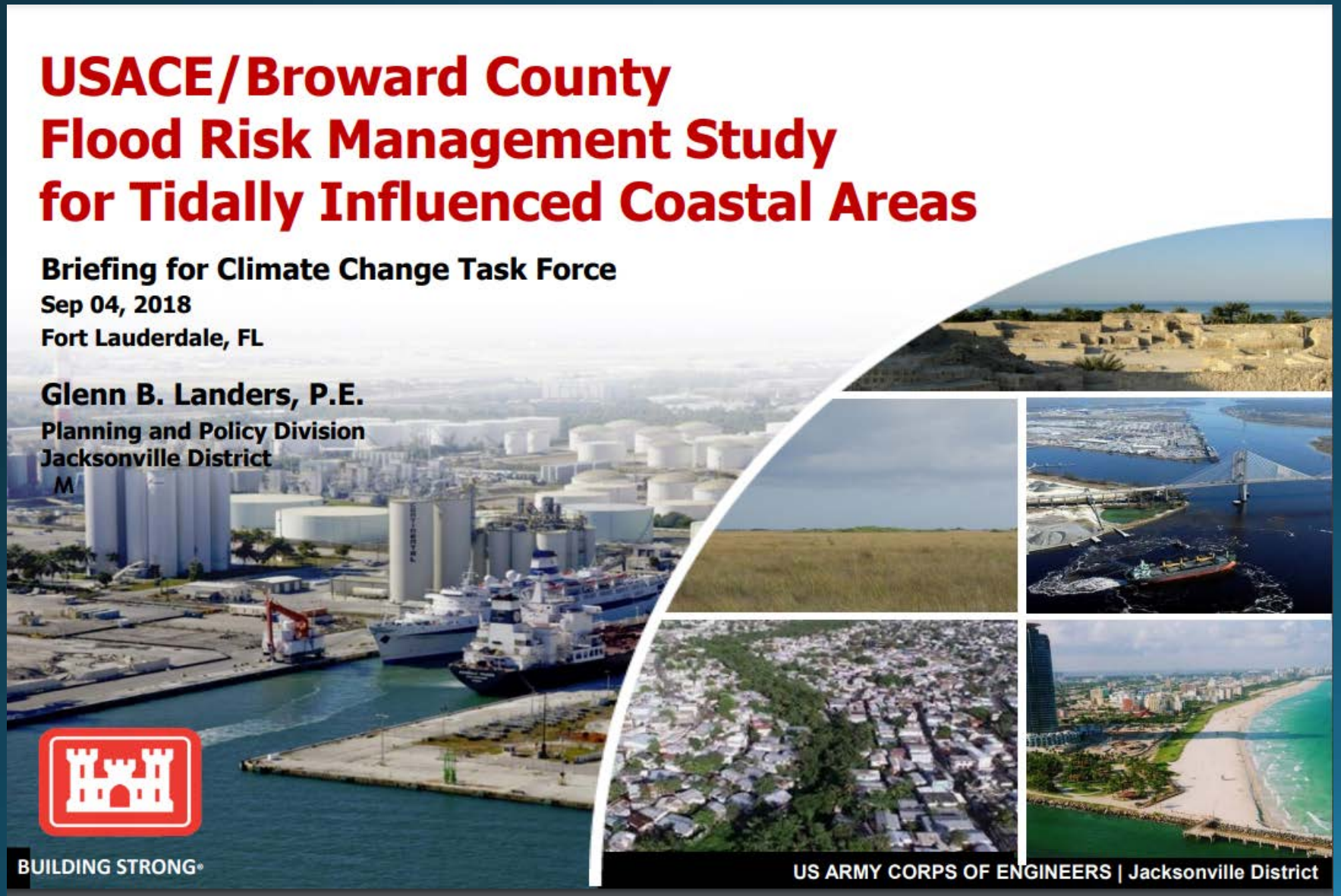
(cont)

What is in the current seawall ordinance? (cont)

ULDR Section 47-19.3 - Boat slips, docks, boat davits, hoists and similar mooring structures

- **Requires maintaining seawalls in good repair** and sets a timeline of 365 days for completion of repairs **if cited**;
- **Requires owners to prevent tidal waters entering their property from impacting others** and sets a timeline of 365 days for remedy **if cited**;
- Allows **fixed docks to extend 10 inches** above the adjacent seawall; and
- Addresses **floating docks.**

Why is the City considering changing the ordinance?



Broward County engaged the Army Corps of Engineers with the question:

What is the right height to build our seawalls to protect against sea level rise?

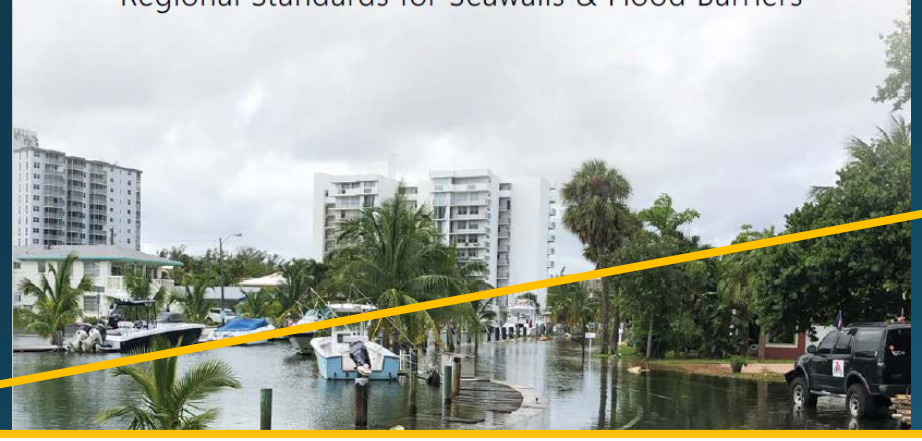
Why is the City considering changing the ordinance?

Broward County Regional Tidal Barrier Standard

BROWARD COUNTY FLORIDA

Build It High, Keep It Dry

Regional Standards for Seawalls & Flood Barriers



What is the new Regional Standard?

For all new tidal flood barriers and substantial improvements to shorelines and shoreline structures:
Minimum seawall and top-of-bank elevation = 5 feet by 2050

Sea level rise is increasing the frequency and severity of tidal flooding across Broward communities.

Recently, increased flooding has prompted both public and private investment in seawall improvements. Yet individual investments have not fully delivered expected flood protection benefits when adjacent and nearby seawalls continue to allow the trespass of water. Effective community flood protection requires a holistic approach.

Consistent seawall heights are necessary to protect the community from escalating impacts. Broward County has created regional guidance so that coastal flood barriers will continue to provide protection, even under future sea level rise conditions.

What is the new Regional Standard?

For all new tidal flood barriers and substantial improvements to shorelines and shoreline structures:
Minimum seawall and top-of-bank elevation = 5 feet by 2050

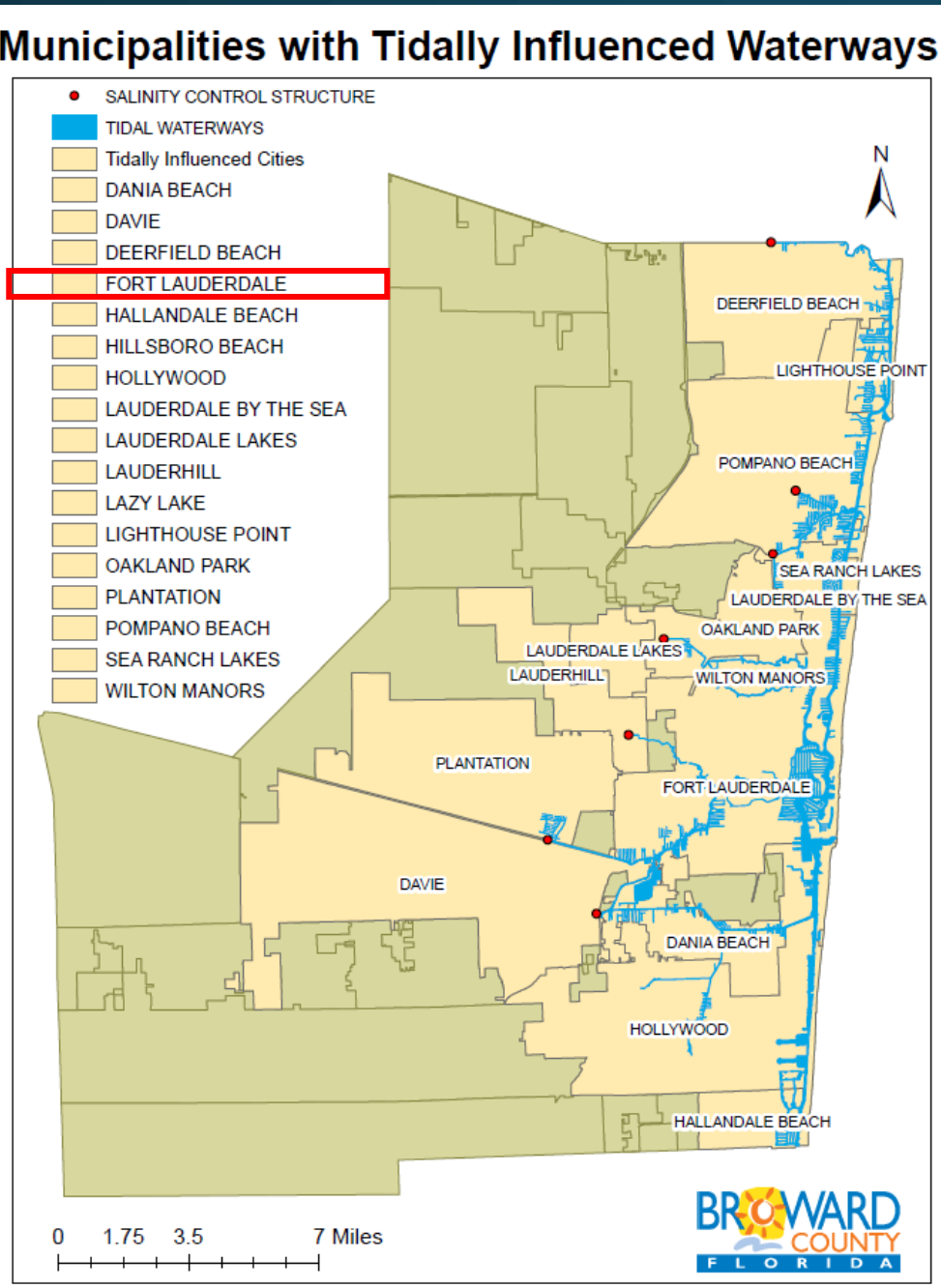
An allowance of 4 feet NAVD 88 until 2035 may be granted by the municipality if the project is designed and constructed to accommodate a minimum elevation of 5.0 feet NAVD 88 by January 1, 2050.

This rule is not applicable to oceanfront beaches or shorelines seaward of the Coastal Construction Control Line. The rule deems tidal flooding a public nuisance and will be implemented via County land use plan and code of ordinances. Local governments are required to adopt a local ordinance implementing the regional standard by February 13, 2022.

The regional standard was informed by technical work undertaken with support from the U.S. Army Corps of Engineers (USACE) as part of the joint Broward County/USACE Flood Risk Management Study for Tidally Influenced Costal Areas authorized under the Planning Assistance for States Program.

For complete details on the regional standard and associated policies, please go to Broward Land Use Plan Policy 2.21.7 at bit.ly/2T6pUng and Broward County Code of Ordinances Sec. 39-404 bit.ly/37K9hmF.

Elevation is measured using North American Vertical Datum of 1988 (NAVD 88). Land elevations along tidal waterways vary from 6 to 8 feet NAVD 88 in northern parts of the County to 1 to 4 feet NAVD 88 in southern parts of County with property specific variability throughout the County. The elevation of individual areas can be found using the Sea Level Scenario Sketch Planning Tool https://sls.geoplan.ufl.edu/beta/viewer/. Users do not need to make a "Show Scenario" selection. In the left navigation pane, under "Layers", uncheck "Current Flood Risk" and check "Florida Base Layers". Click the + sign to expand this field. Select "FL DEM feet". Next find the magnify glass symbol in the top navigation and type in a property address. Click on the blue location pointer and note the number of feet listed in the data table. To determine the visible height of the tidal flood barrier necessary, the land elevation should be subtracted from 5 feet NAVD 88. For example, if the land elevation is 4 feet NAVD, the visible barrier will be 1 foot above the ground surface (5 feet NAVD 88 – 4 feet NAVD = 1 foot). If the shoreline land elevation is 5 feet NAVD 88 or higher, an additional tidal flood barrier would not be required per the resiliency policy.



Why is the City considering changing the ordinance?

Policy 2.21.7 of the Broward Comprehensive Plan (adopted Jan 7, 2020, item 32) requires that **tidally-influenced municipalities adopt regionally consistent top elevations for seawalls, banks, and berms**…consistent with Broward County Chapter 39, Article XXV by March 31, 2022.

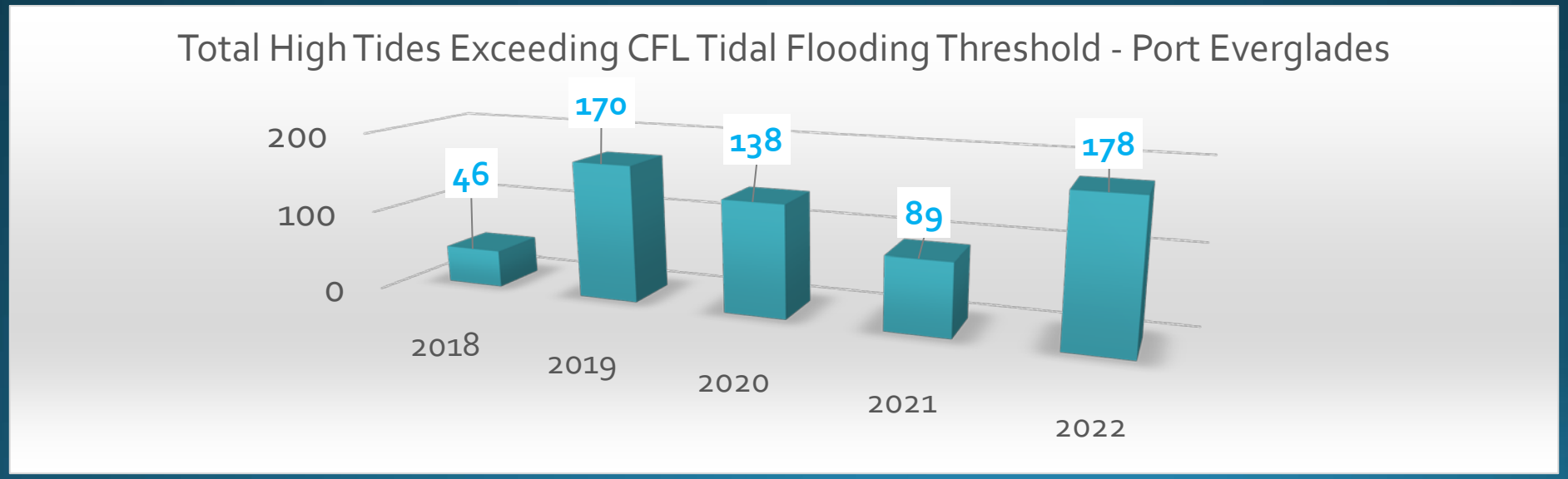
- **Broward code based on FTL seawall ordinance**
- **Major change is minimum top elevation of five (5) feet NAVD88.**

Why is the City considering changing the ordinance?

Compliance with City's Comprehensive Plan

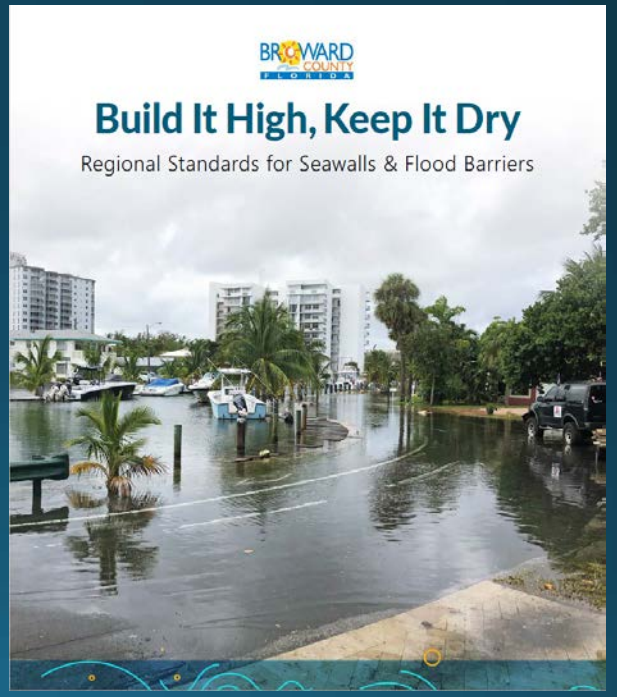
- POLICY Climate Change 2.2.3a: To ensure coordination, consistency and maximum effectiveness of coastal improvements necessary to mitigate high tide flooding associated with realized and additional sea level rise through the year 2070, **the City will adopt and update as necessary regionally consistent top elevations standards for seawalls,** banks and berms, and other appurtenant coastal infrastructure (e.g., boat ramps) consistent with the findings and recommendations of the United States Army Corps of Engineers/Broward County Flood Risk Management Study for Tidally Influenced Coastal Areas. **These standards shall be consistent with Chapter 39, Article XXV – Resiliency Standards for Flood Protection - of the Broward County Code of Ordinances.**

Why is the City considering changing the ordinance?



Why is the City considering changing the ordinance? SUMMARY

1. Achieve compliance with objectives and policies in the City's adopted Comprehensive Plan
2. Achieve compliance with Policy 2.21.7 of the Broward County Comprehensive Plan
3. Adjust the 2016 seawall ordinance to reflect sea level rise projections the Commission adopted in 2020
4. Support reduction of tidal flooding
5. Contribute to improving community resilience



What are the major ordinance changes?

ULDR Section 47-19.3 – Boat slips, docks, boat davits, hoists and similar mooring structures

ULDR Section 47.19.13 - Resiliency Standards for Tidal Flood Protection

ULDR Section 47.39.A.1.b General Provisions

City of Fort Lauderdale Code of Ordinances Section 8-91 - Mooring Structures

- Establishes terms, phrases, words for definition and interpretation purposes of this section;
- Extends the elevation requirement from only seawalls to all tidal flood barriers;
- Requires a minimum elevation of five (5) feet National American Vertical Datum (NAVD88) for new or substantially repaired tidal barriers;
- Allows for structures permitted before Jan 1, 2035 to be built at four (4) feet NAVD88 but they must be designed to be elevated to five (5) feet NAVD88 by Jan 1, 2050;
- (continued)…

What are the major ordinance changes?

- Establishes a maximum elevation for tidal barriers related to the base flood elevation (BFE) of the property or 6 feet which ever is lower;
- Requires tidal structures built where no previous seawall existed to provide habitat enhancement at the waterward face of the bulkhead or seawall;
- Encourages incorporation of living shoreline features;
- Provides for the City Engineer's ability to issue a waiver from the top elevation requirement for waterfront properties containing a principal structure with a habitable finished floor elevation of less than 4.0 feet NAVD88; and

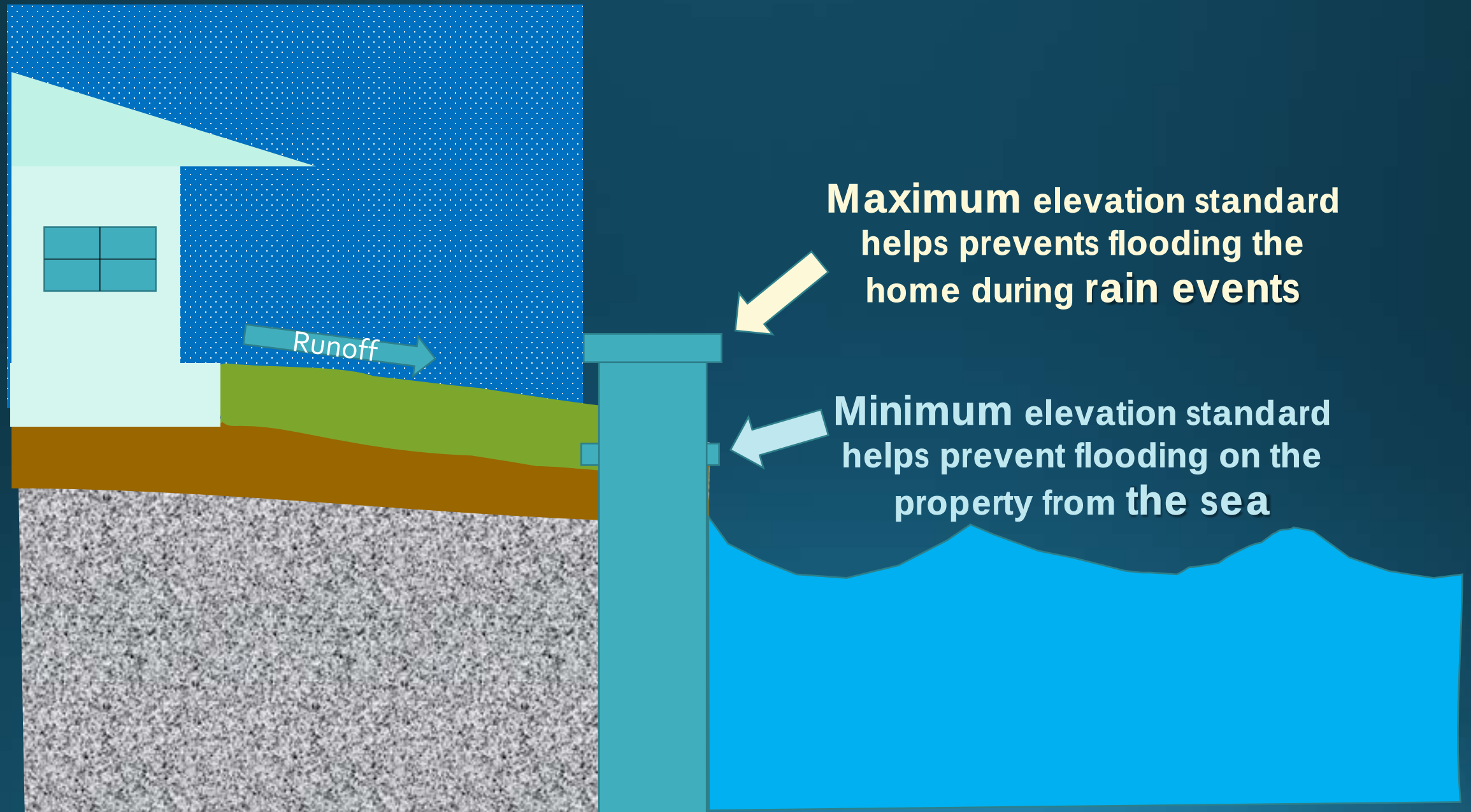
(continued)…

What are the major ordinance changes?

- Required disclosure in contracts for sale of real estate after ~~December 31, 2022~~ upon adoption of this ordinance.

  "THIS REAL ESTATE IS LOCATED IN A TIDALLY INFLUENCED AREA. THE OWNER MAY BE REQUIRED BY COUNTY OR MUNICIPAL ORDINANCE TO MEET MINIMUM TIDAL FLOOD BARRIER ELEVATION STANDARDS DURING CONSTRUCTION OR SUBSTANTIAL REPAIR OR SUBSTANTIAL REHABILITATION OF SEAWALLS, BANKS, BERMS, AND SIMILAR INFRASTRUCTURE OR WHEN REQUIRED TO ABATE NUISANCE FLOODING."

Why is there a maximum and a minimum top elevation?



Do I HAVE to raise my seawall?

ONLY IF….

1) The owner is installing a **new** seawall/tidal barrier

OR

2) The owner comes in for a seawall repair permit and the **substantial repair threshold (50%)** is triggered

OR

3) if cited;

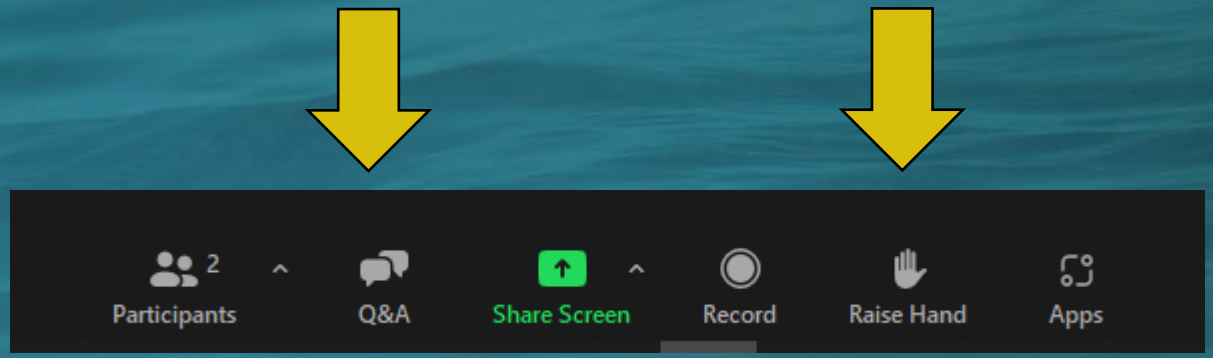
- **The owner is cited for having a seawall/ tidal barrier in disrepair**;
- **The owner is cited for allowing tidal waters entering their property to impact others or the public right of way**.

Do I HAVE to raise my seawall…

- If I currently have a seawall on my property?
  - Only if it meets one of the three criteria
- If I buy a new house with a seawall?
  - Only if it meets one of the three criteria
- If my seawall is low?
  - Only if it meets one of the three criteria
- By a specific date?
  - Only if it meets one of the three criteria

Time for Your Questions

1) Ways to Ask a Question
    a. Type it into the Q & A
    b. Raise your hand in the zoom meeting
    c. By Phone only
        a. *9 to raise your hand
        b. *6 to unmute



2) Think of a question after the meeting ends?
    a. Send an email to Sustainability@fortlauderdale.gov

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Next Steps

This item is scheduled to go before the City Commission for final approval in March.

John C. Herbst
Commissioner - District 1

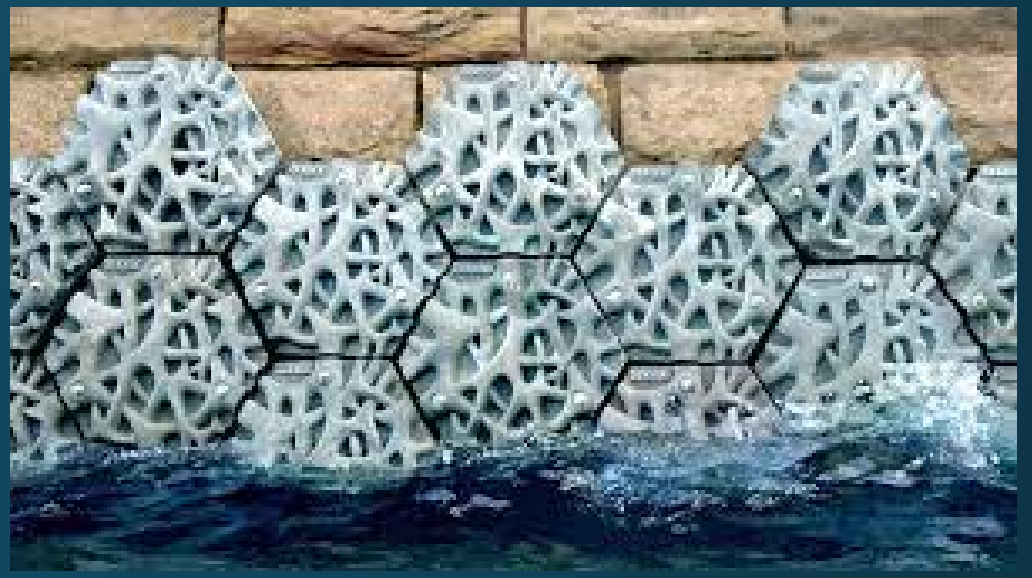
Dean J. Trantalis
Mayor

Steven Glassman
Commissioner - District 2

Pamela Beasley-Pittman
Commissioner - District 3

Warren Sturman
Vice Mayor/Commissioner - District 4

What is habitat enhancement or living seawalls?



$125-$200 per ln ft installed

How is the substantial repair threshold (50%) defined?

(a) LENGTH

(a) Any modification of a shoreline structure along more than fifty percent (50%) of the length of the property's shoreline;

OR

(b) VALUE

(b) Any modification or alteration that exceeds fifty percent (50%) of the fair market replacement cost of the existing shoreline structure.

(c) The term “shoreline structure” excludes docks, finger piers, piles and ancillary concrete footers but includes concrete docks that are poured monolithically with the seawall cap.

What is the cost of seawall replacement or repair?

Range of charges for installing a seawall.

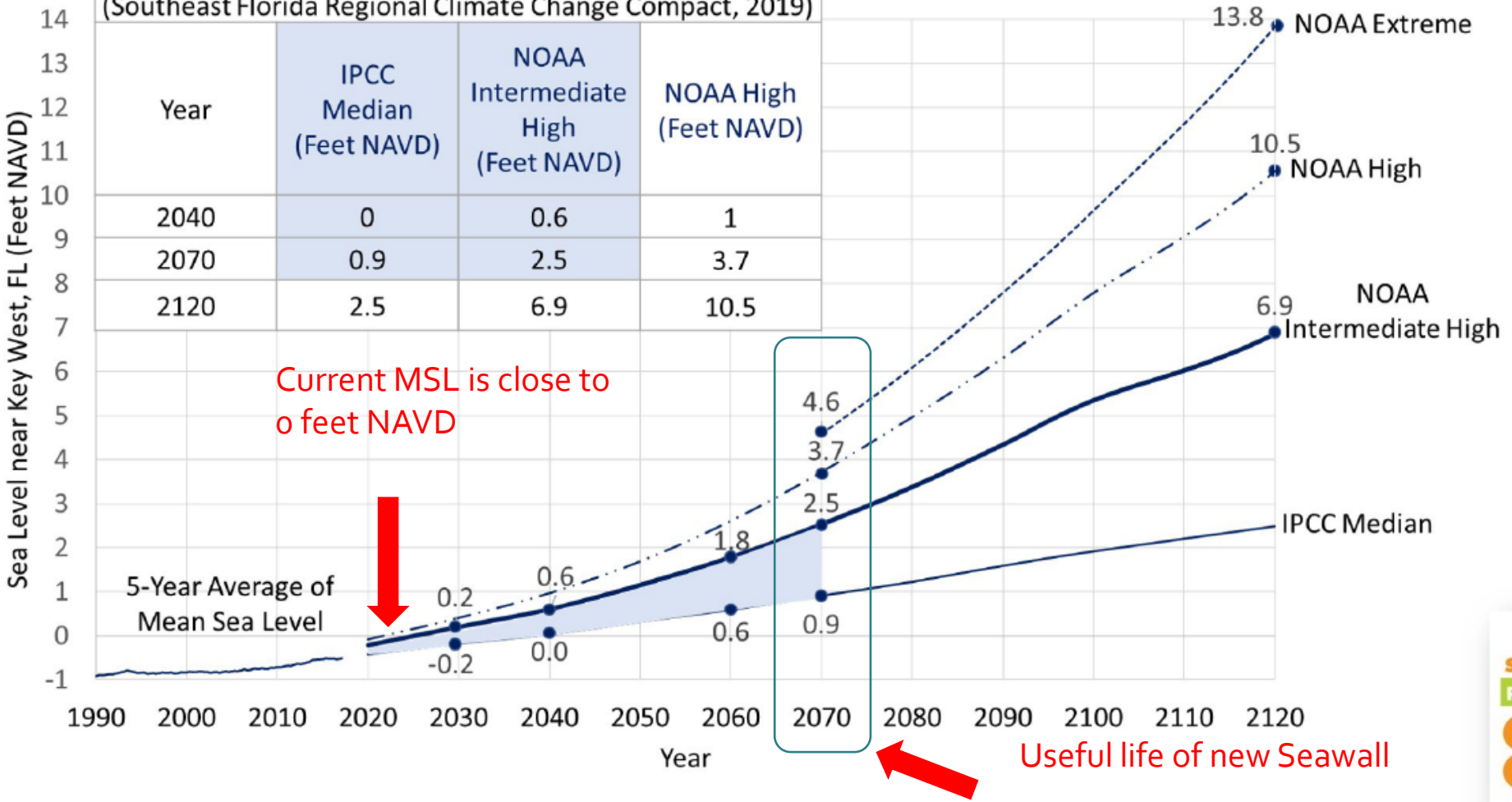
- New seawall
  - $650-$2,000 ln ft depending on the depth of the waterway and the location of the seawall.
- Repair of broken/spalled concrete areas costs
  - ~ $60 per cubic foot of epoxy mortar.
- To add a 12” cap
  - ~ $75 - $125 per linear foot.
- Engineering and permitting services
  - $2,000-$5,000 per job.

2019 Regional Sea Level Rise Projection (NAVD 88)

FIGURE 2: Unified Sea Level Rise Referenced to NAVD

Unified Sea Level Rise Projection
(Southeast Florida Regional Climate Change Compact, 2019)

Year	IPCC Median (Feet NAVD)	NOAA Intermediate High (Feet NAVD)	NOAA High (Feet NAVD)
2040	0	0.6	1
2070	0.9	2.5	3.7
2120	2.5	6.9	10.5



SOUTHEAST FLORIDA REGIONAL COMPACT CLIMATE CHANGE