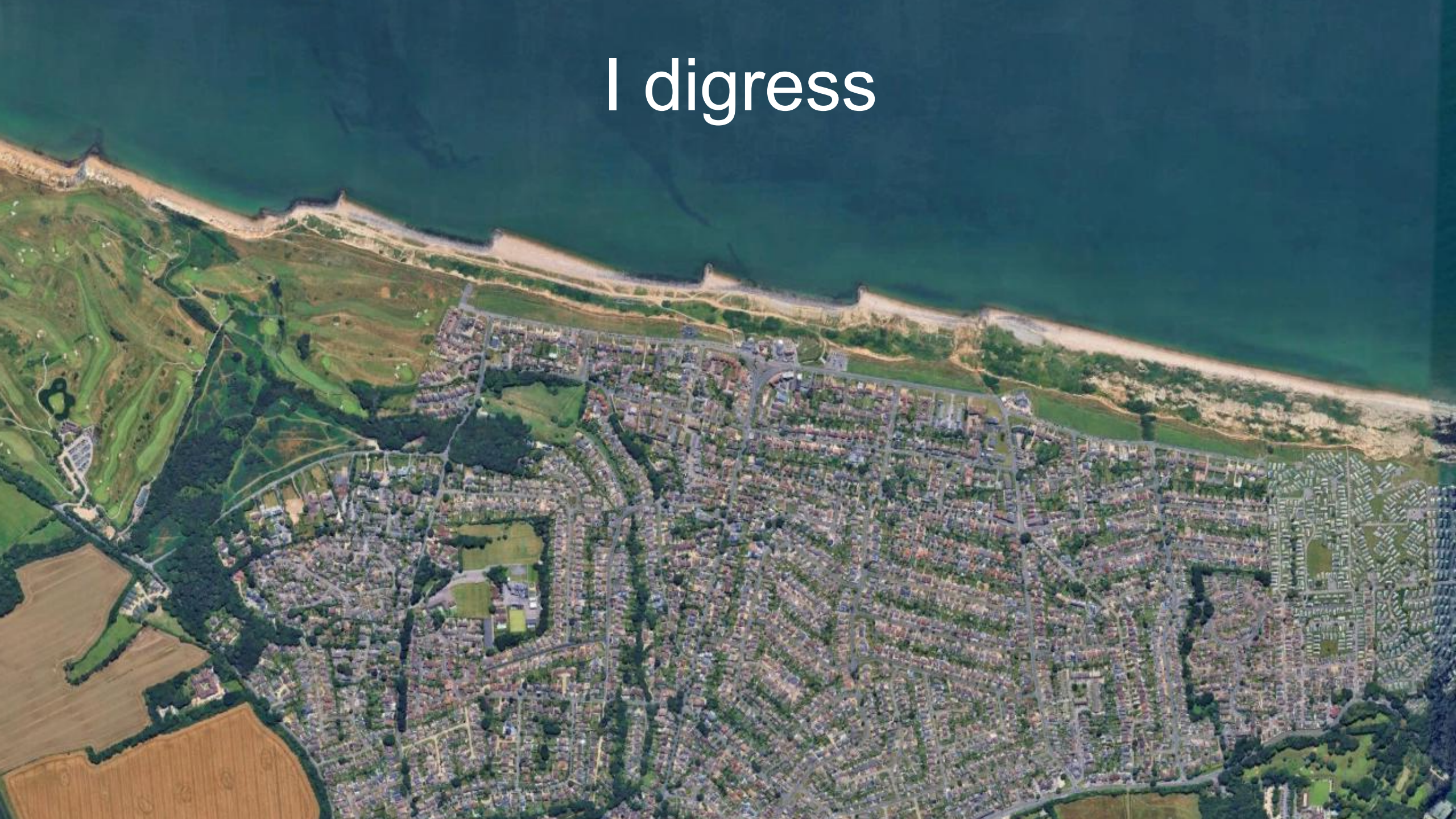
moffatt & nichol

Dorset Coast Forum 2026

Coastal Resilience – What can we learn from overseas?



I digress

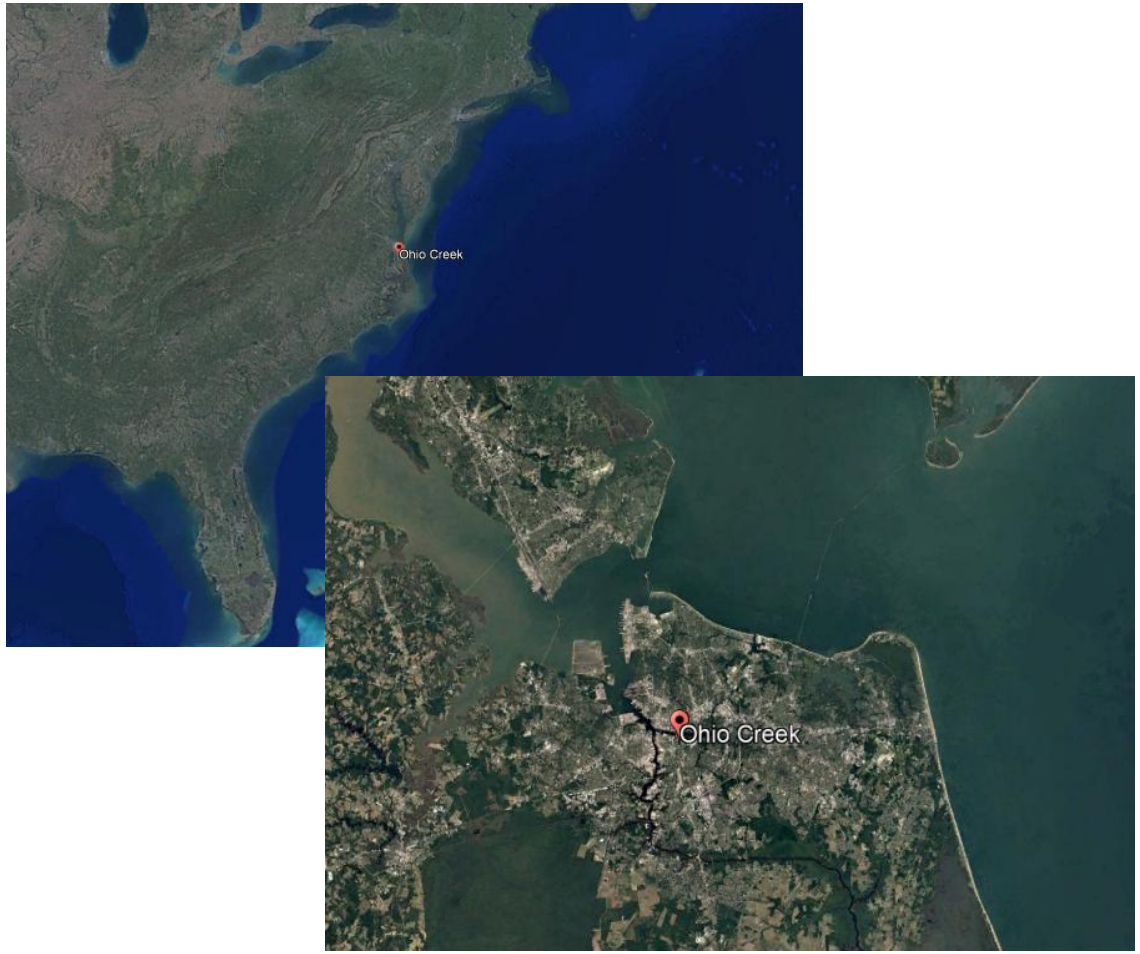


Lesson #1

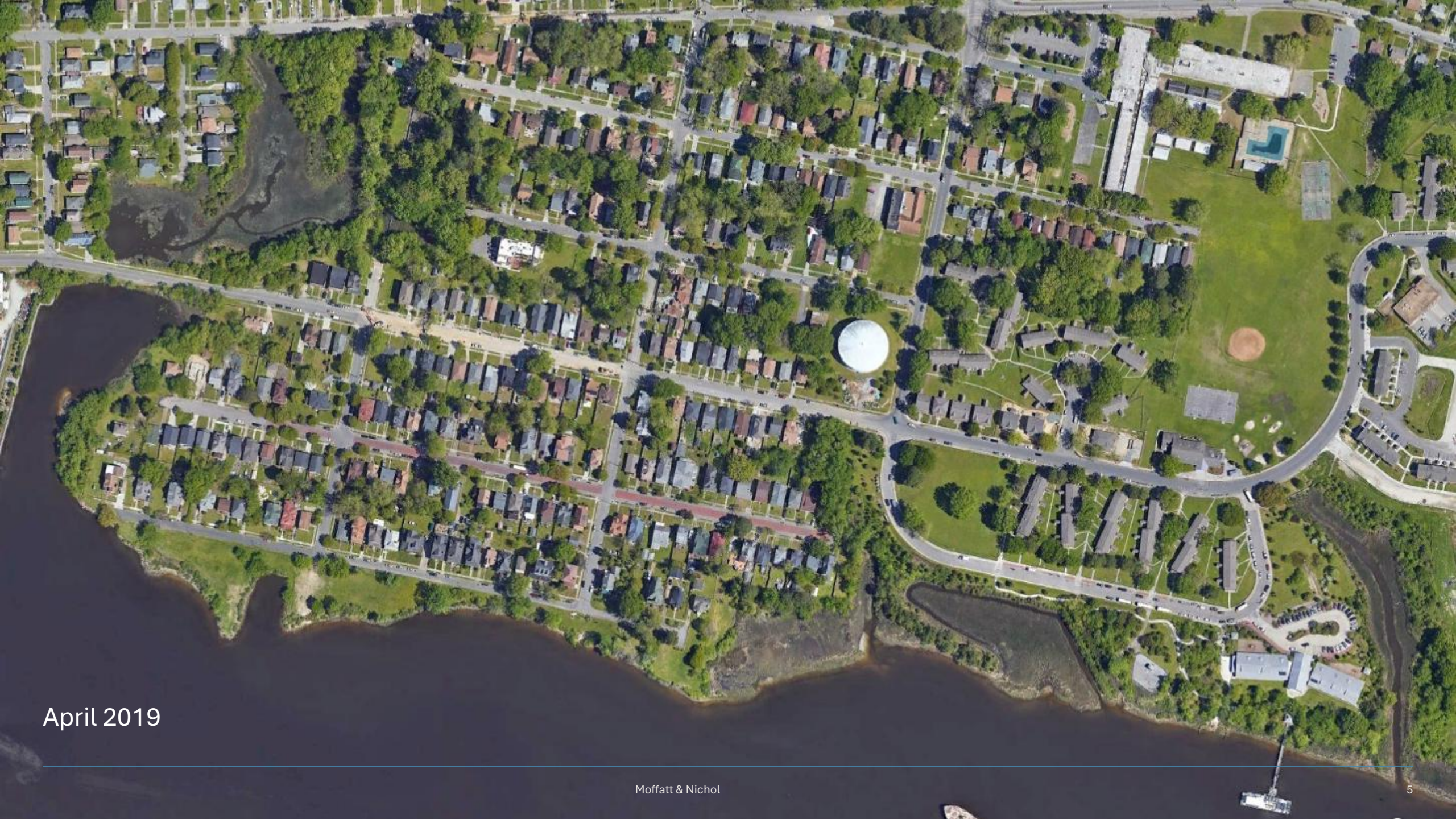
Engineers are not planners

Ohio Creek

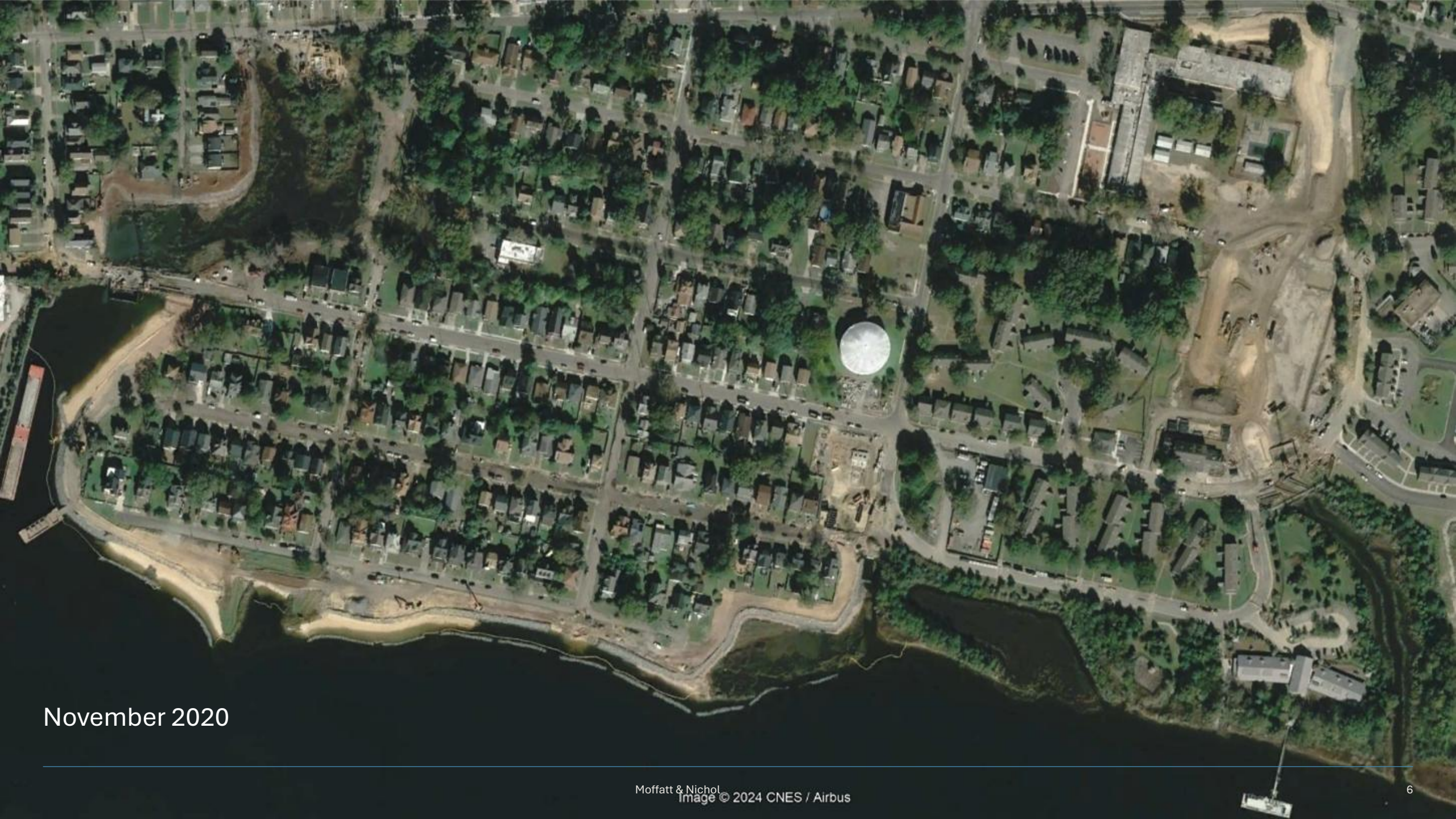
Norfolk, Virginia, USA



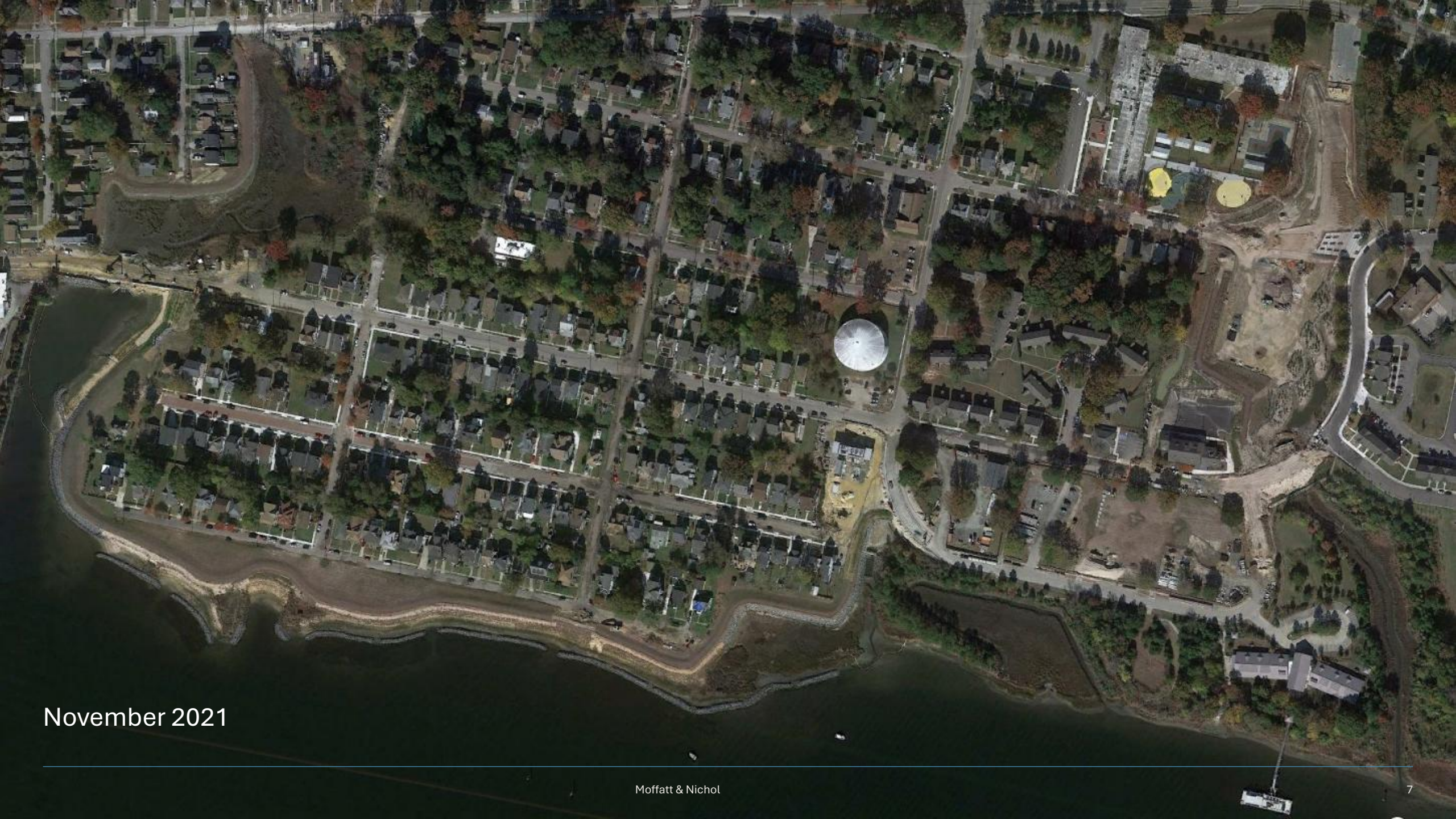




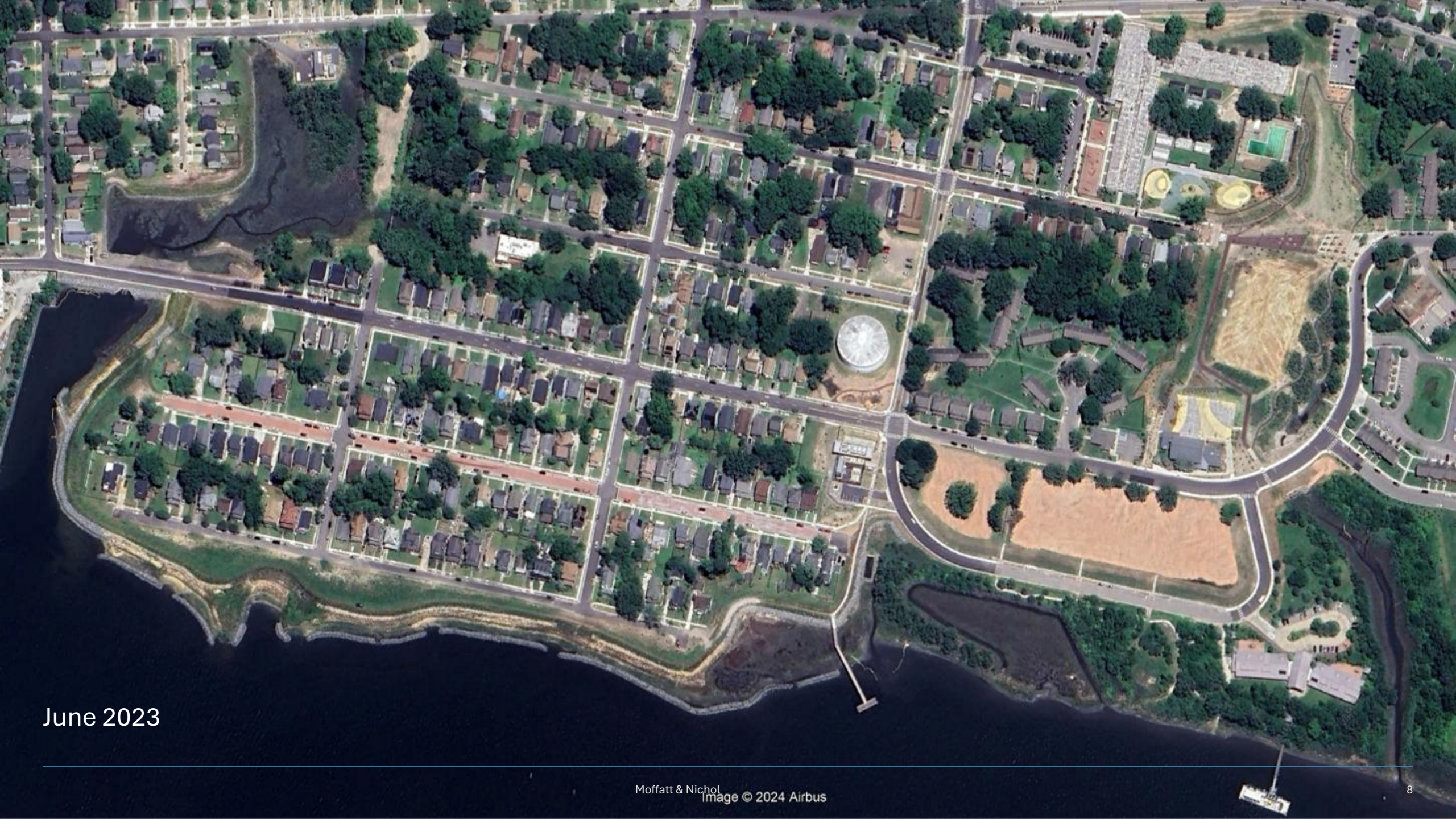
April 2019



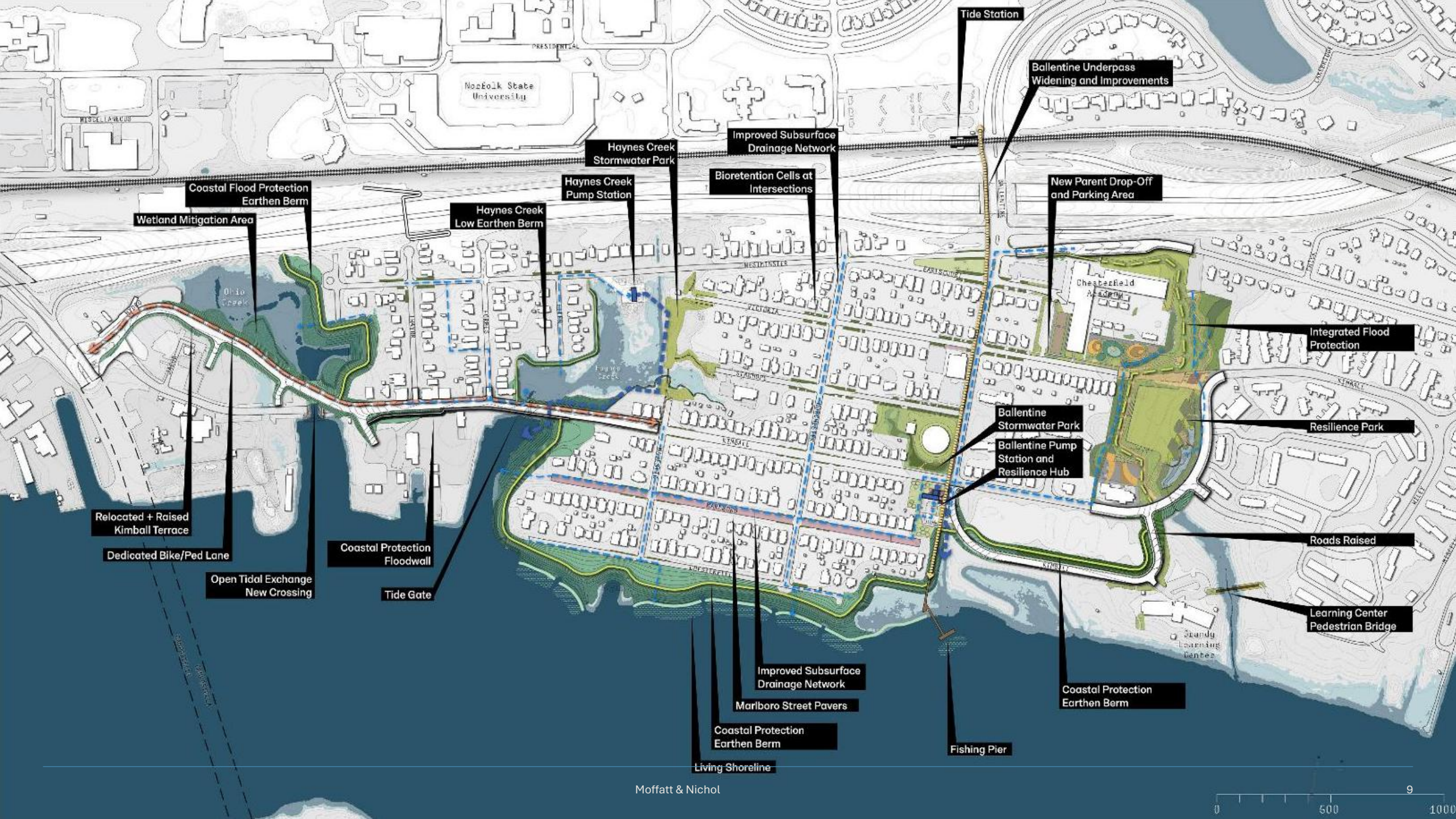
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November 2021

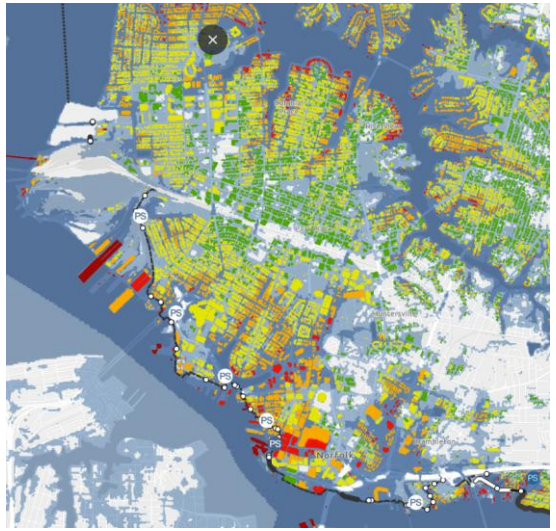


June 2023


Tide Station
Ballentine Underpass Widening and Improvements
Improved Subsurface Drainage Network
Haynes Creek Stormwater Park
Haynes Creek Pump Station
Bioretention Cells at Intersections
New Parent Drop-Off and Parking Area
Coastal Flood Protection Earthen Berm
Wetland Mitigation Area
Haynes Creek Low Earthen Berm
Integrated Flood Protection
Ballentine Stormwater Park
Resilience Park
Ballentine Pump Station and Resilience Hub
Relocated + Raised Kimball Terrace
Dedicated Bike/Ped Lane
Open Tidal Exchange New Crossing
Coastal Protection Floodwall
Tide Gate
Roads Raised
Learning Center Pedestrian Bridge
Improved Subsurface Drainage Network
Marlboro Street Pavers
Coastal Protection Earthen Berm
Coastal Protection Earthen Berm
Fishing Pier
Living Shoreline
Norfolk State University
Chesterfield Academy
Stanly Learning Center
0
500
1000

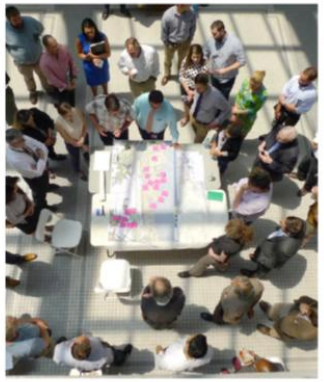
Ohio Creek

Norfolk, Virginia, USA













WAGGONNER & BALL
A MOFFATT & NICHOL STUDIO



Lesson #2

Value the foreshore

Broad Beach Restoration
Malibu, CA



Pre-Project Conditions
January 24, 2012 photo

Cardiff Living Shoreline, Encinitas, CA

moffatt & nichol



Thin Layer Placement & Harbor Dredging
Seal Beach & Huntington Beach, CA

moffatt & nichol



Lesson #3

Don’t be afraid to step forwards

Lightning Point Living Shoreline

Bayou la Batre, Alabama, USA




Feb 1997
Image U.S. Geological Survey


Feb 2007
Image © 2024 Maxar Technologies


Sept 2011
Image USDA/FPAC/GEO




Dec 2016


Image © 2024 Maxar Technologies


Nov 2019

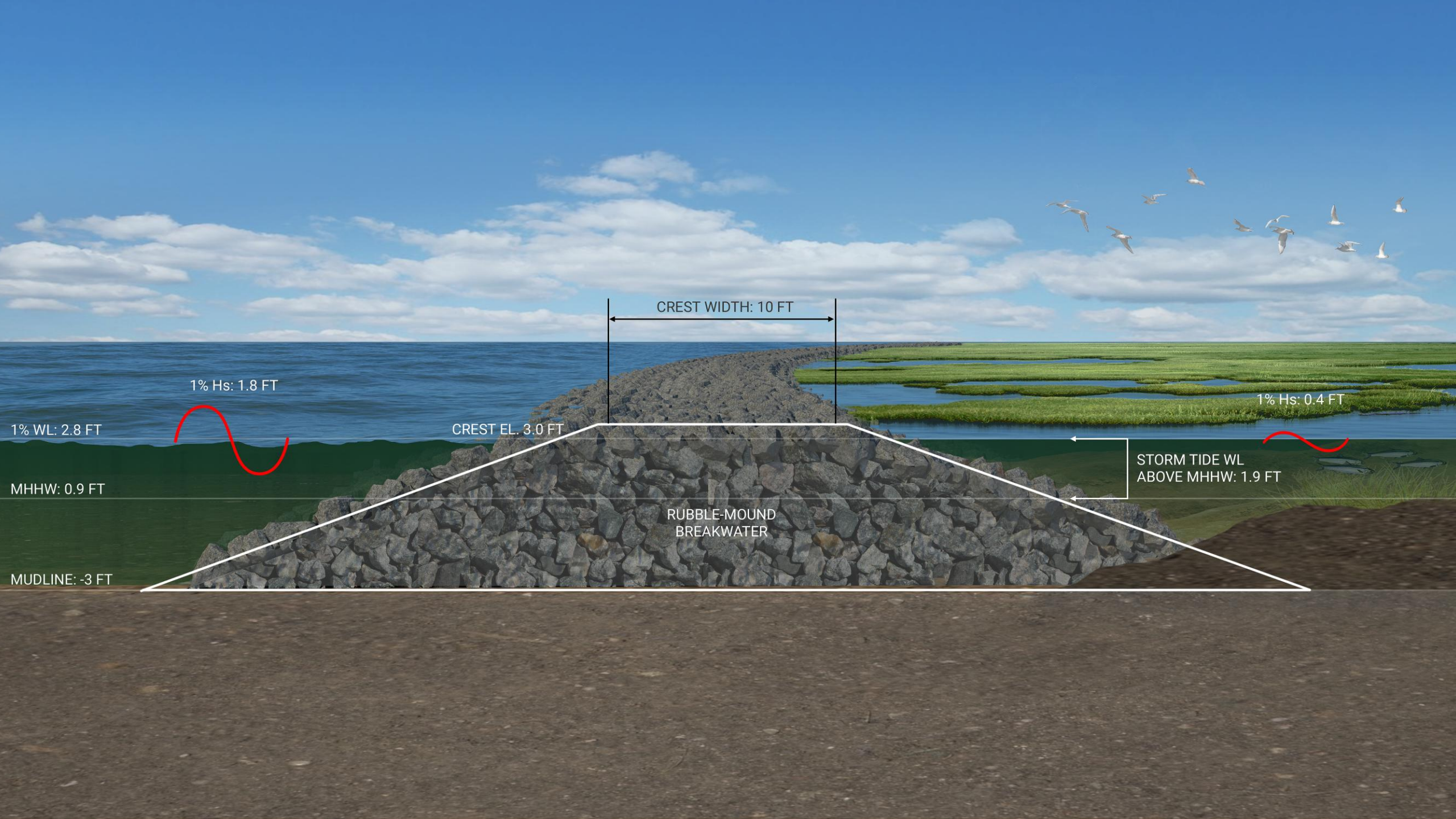

Image © 2024 Maxar Technologies


Image © 2024 Maxar Technologies





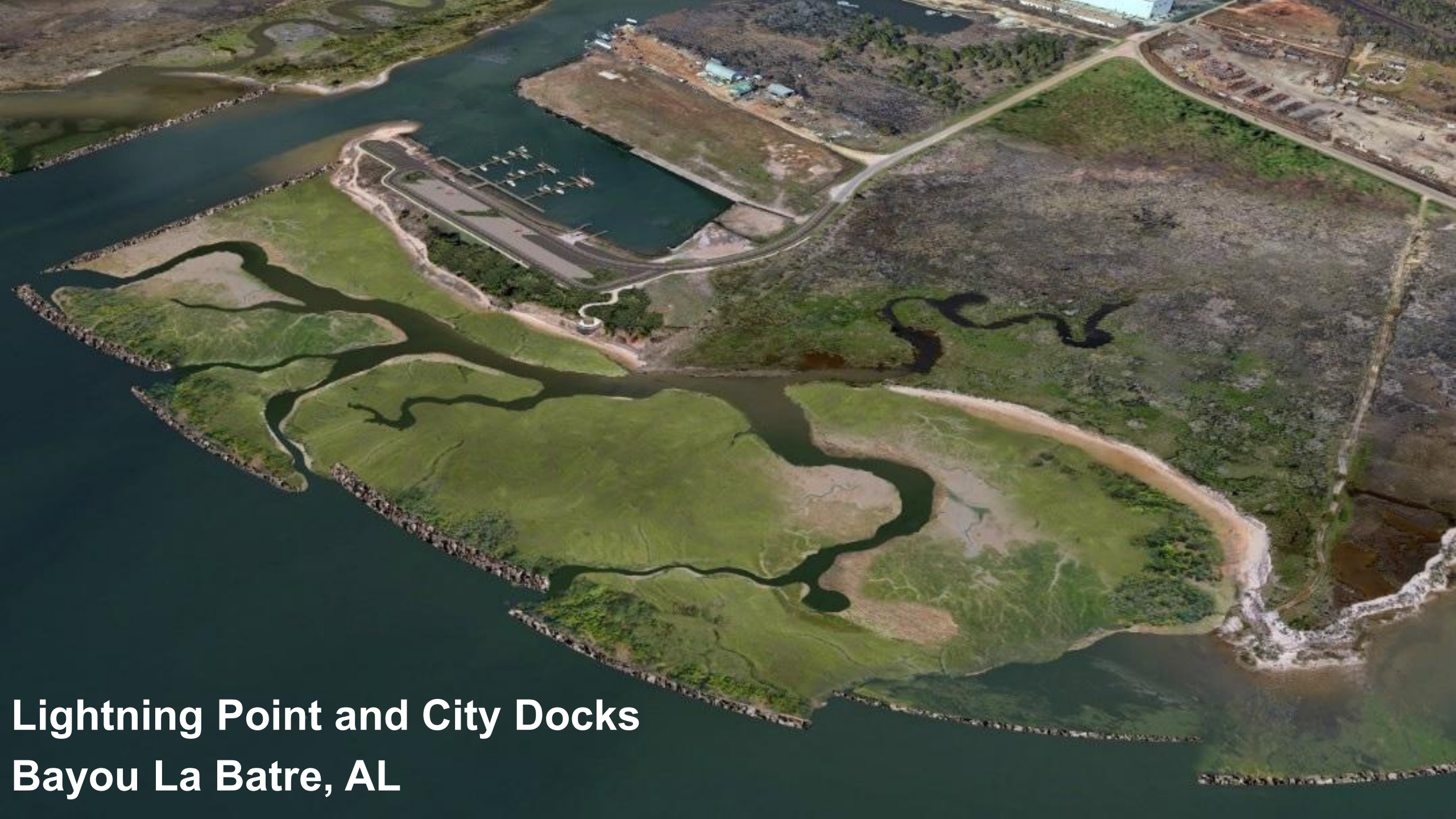

Nov 2023
Image © 2024 Airbus


CREST WIDTH: 10 FT
1% Hs: 1.8 FT
1% WL: 2.8 FT
CREST EL. 3.0 FT
1% Hs: 0.4 FT
STORM TIDE WL
ABOVE MHHW: 1.9 FT
MHHW: 0.9 FT
RUBBLE-MOUND
BREAKWATER
MUDLINE: -3 FT

Lightning Point and City Docks
Bayou La Batre, AL



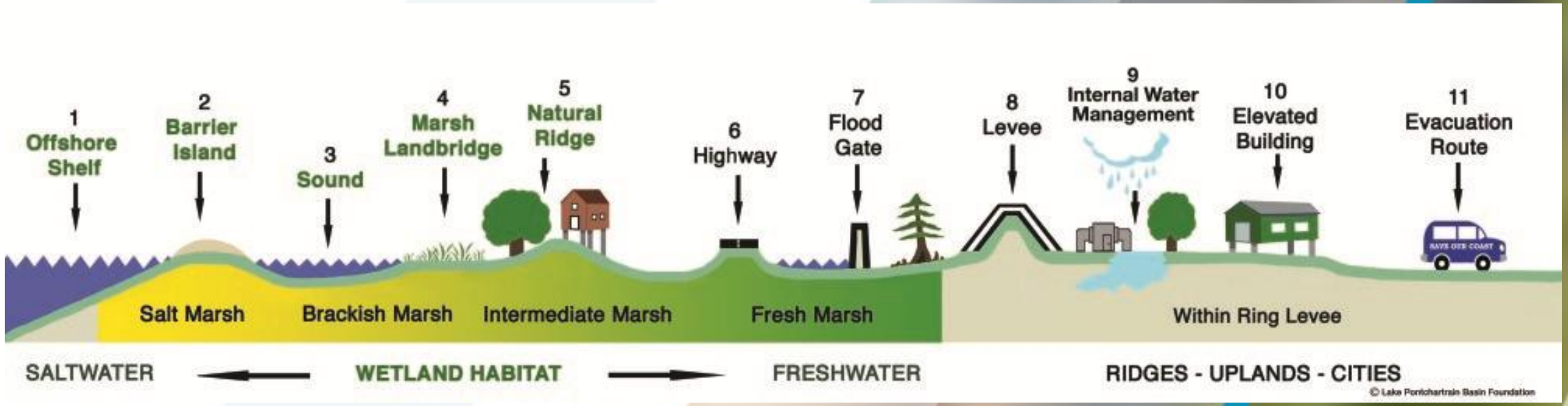
moffatt & nichol



Lightning Point and City Docks
Bayou La Batre, AL

Project Benefits

- Innovative protection within the Multiple Lines of Defense Strategy



Pontchartrain Conservancy

Carrot Island Living Shoreline, Beaufort, NC
Rachel Carson Reserve



moffatt & nichol

Dauphin Island Causeway Beneficial Use
Mobile County, AL

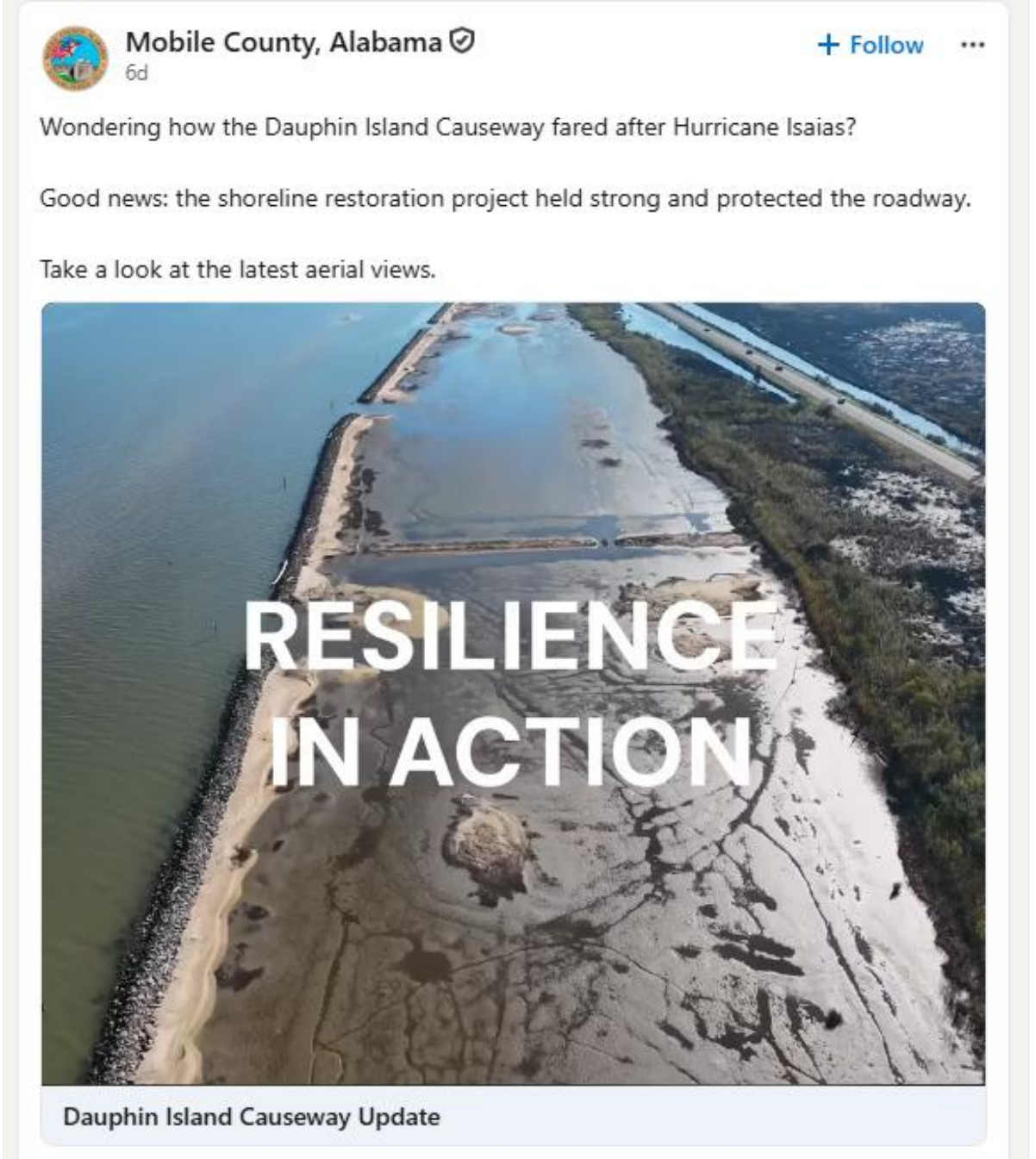


Hurricane Isaias, October 9, 2026

Hurricane Isaias made landfall near Destin, Florida, on October 9, 2026, as a Category 2 storm, bringing impacts to the Mobile, Alabama region primarily on the western/back side of the system.

Wind Speeds for Mobile / Alabama Coast

- **Mobile Area Gusts:** Mobile experienced tropical-storm-force or gusty winds reaching up to **45 mph** as it sat on the western side of the circulation.
- **Nearby Regional Gusts:**
  - Orange Beach, AL: **72 mph**
  - Perdido Bay, AL: **75 mph**
  - Pensacola, FL (nearby): **102–116 mph** peak gusts
  - Milton / Whiting Field, FL: **114–105 mph**



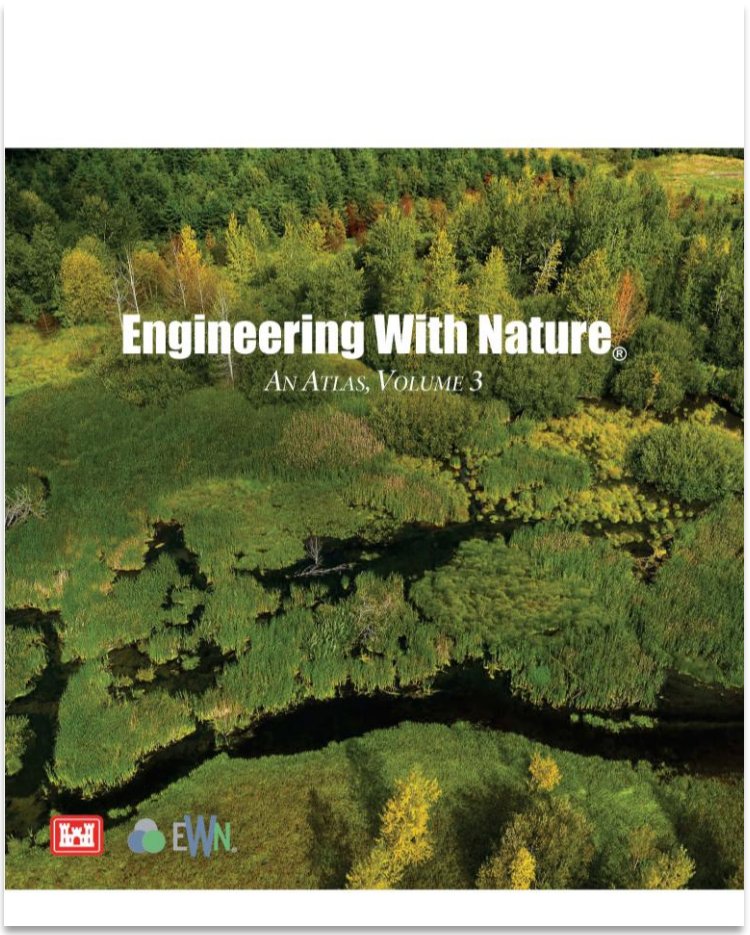

Graveline Bay
Dauphin Island, AL
moffatt & nichol

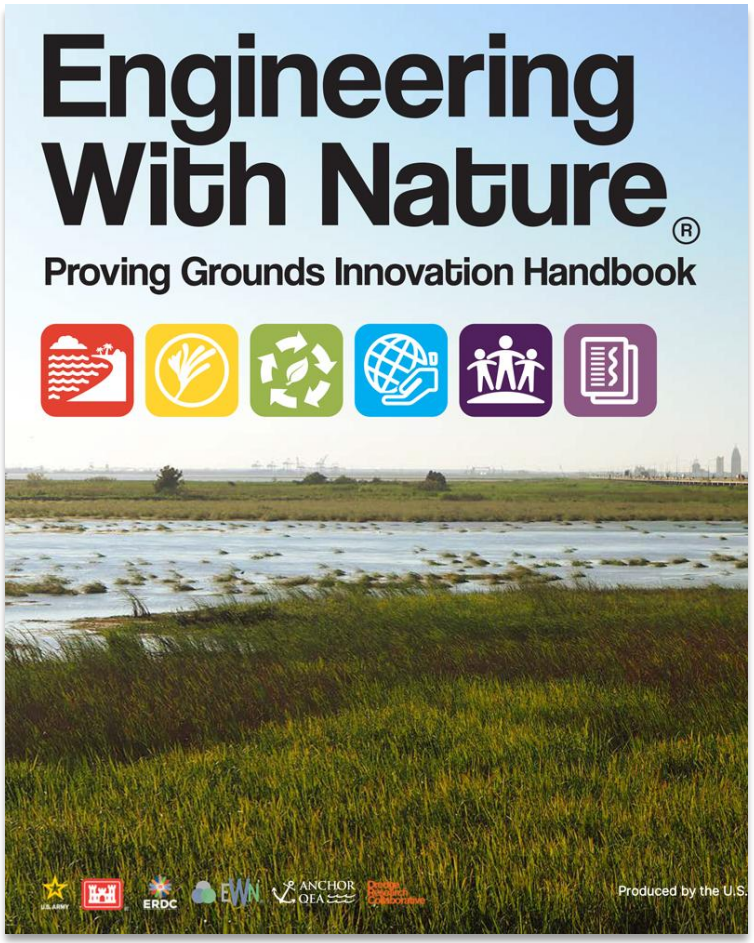
Graveline Bay Marsh Creation Project
Dauphin Island, AL

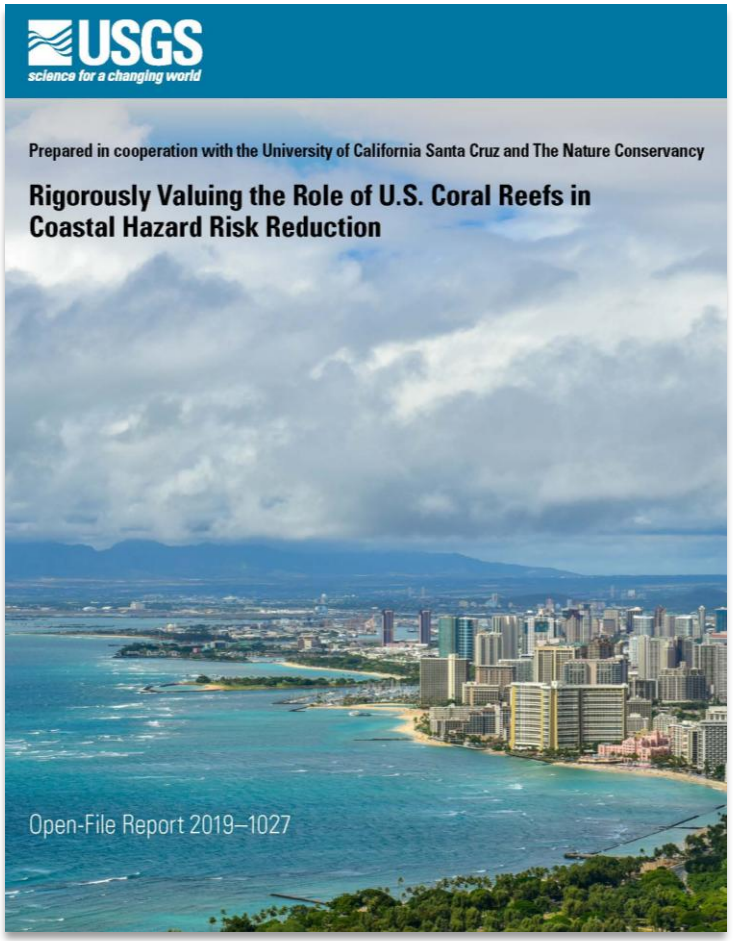












Cumulative Defence Strategies Work



Thank you

Hamish Hall BEng CEng FICE
07880 178297