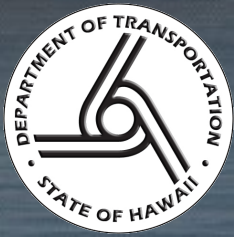


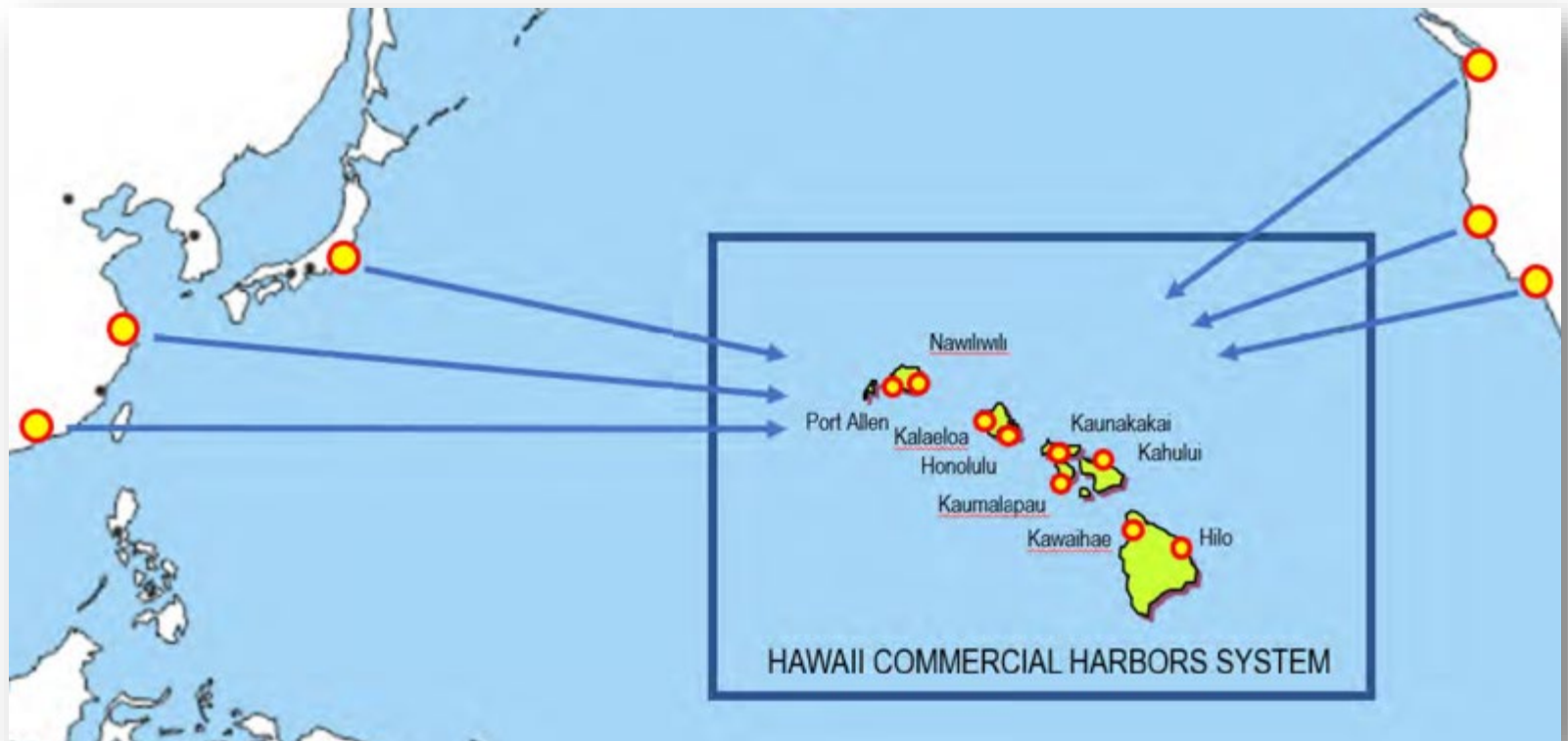
Proposed Lock & Dam System to Protect Honolulu Harbor from Sea Level Rise

**Storms, Flooding & Sea Level
Defense Conference
November 3, 2021**



COMMERCIAL HARBORS SYSTEM

- The commercial harbor system is Hawaii's lifeline to the outside world.
- Hawaii imports about 80% of all goods consumed its residents consume. Over 98% are brought in through the commercial harbors system.
- 10 commercial ports.
- Self-funded enterprise supported by tariffs and leases.



HONOLULU HARBOR

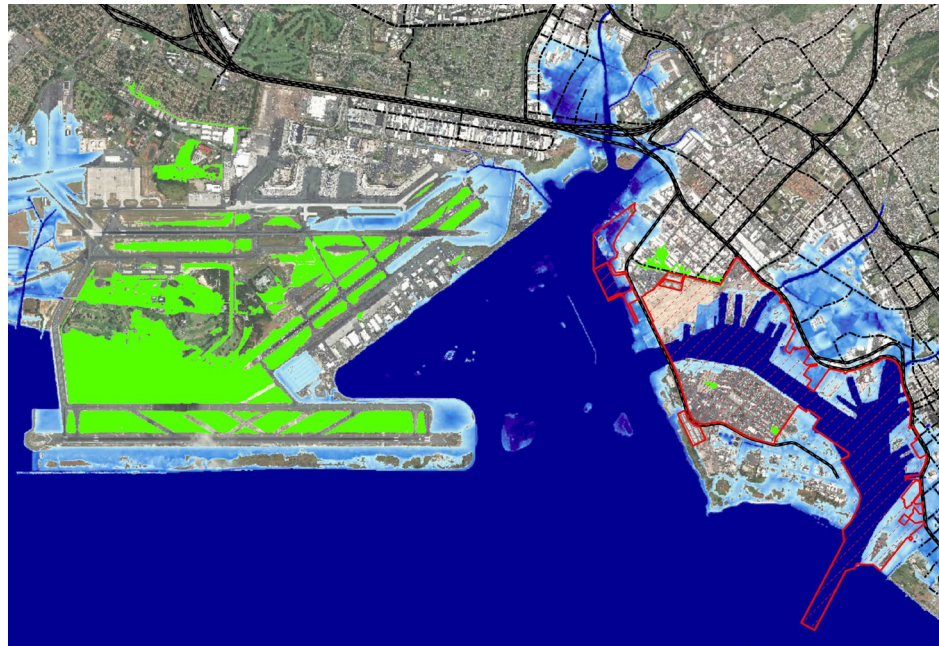
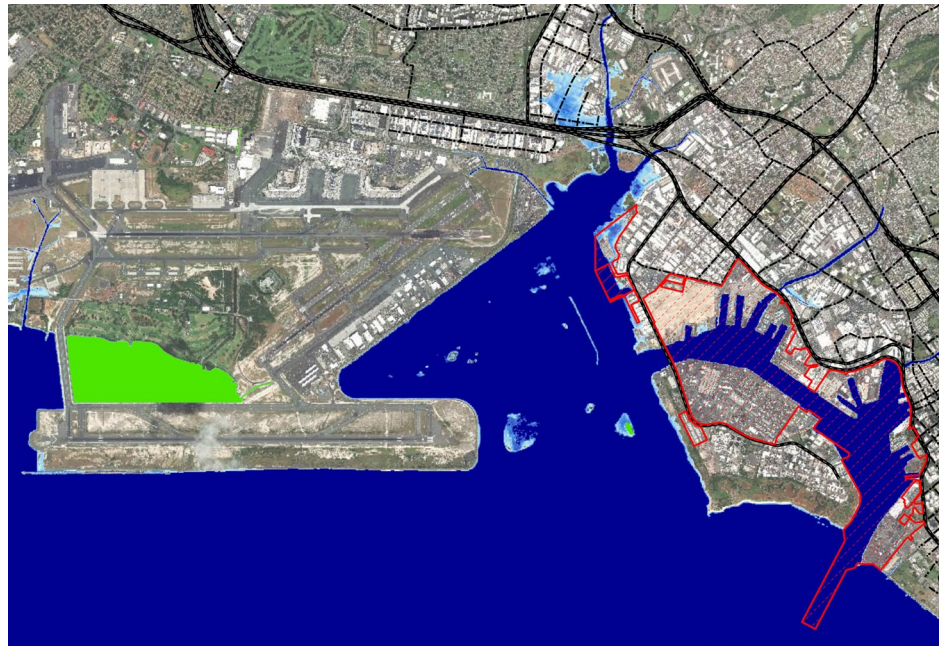


HONOLULU HARBOR

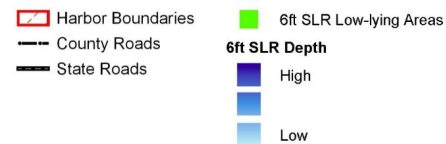
DANIEL K. INOUE INTNL AIRPORT

3ft. SLR (irrespective of time)

6ft. SLR (irrespective of time)



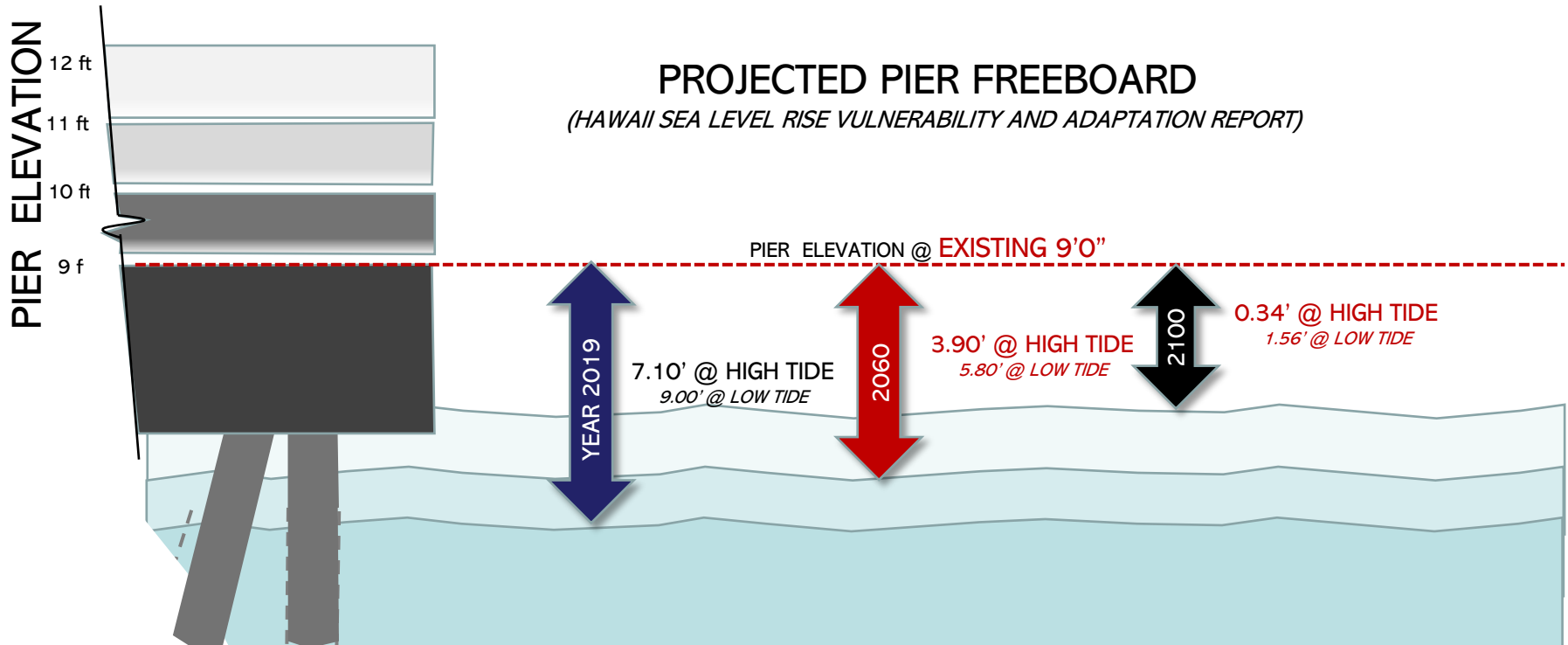
“...predicts up to **3.2 feet** of global sea level rise by year 2100 (IPCC 2014), recent observations and projections suggest that this magnitude of sea level rise could occur **as early as year 2060**...” (Hawai'i Sea Level Rise Vulnerability and Adaptation Report – 2017).



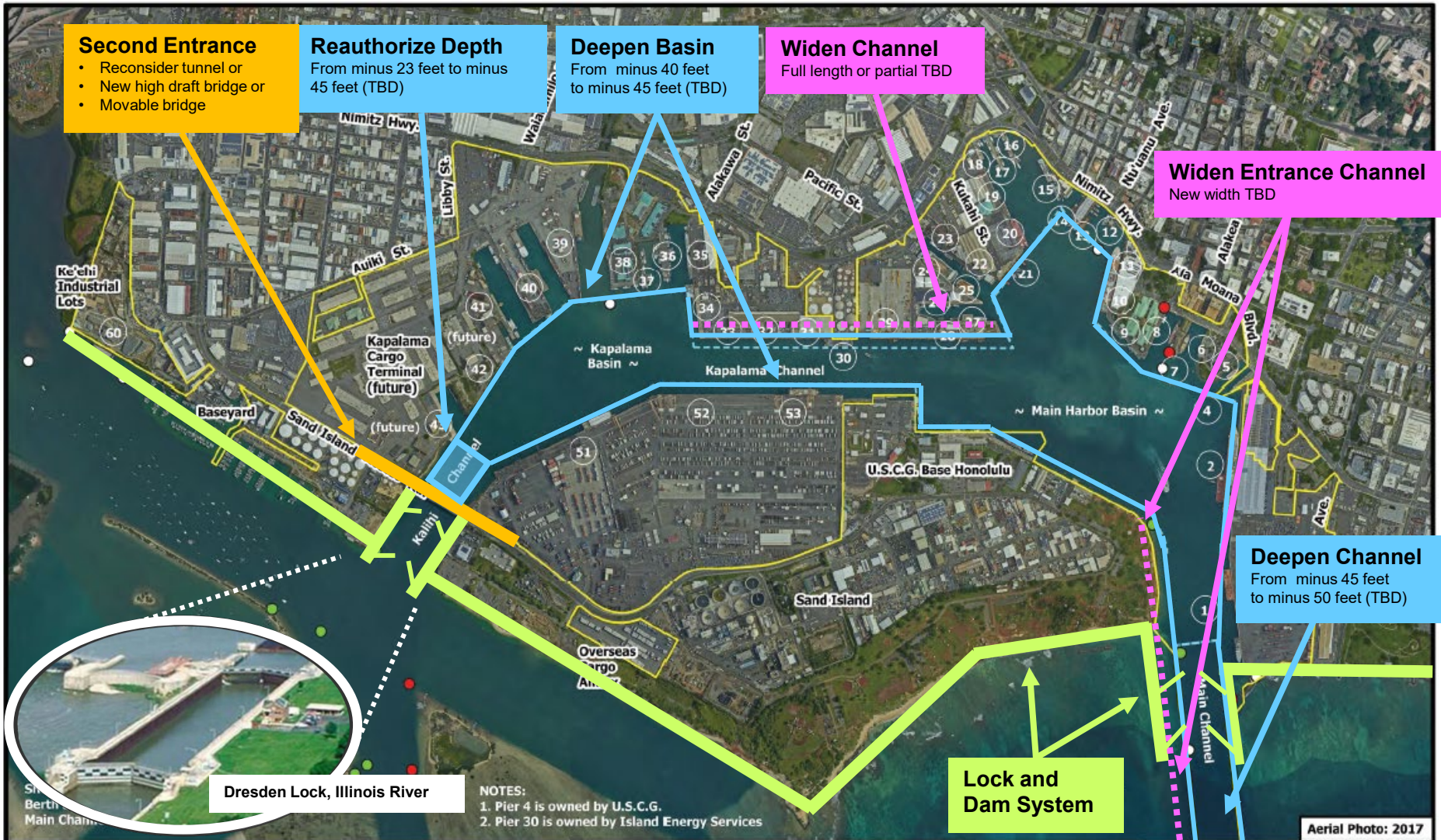
Sea Level Rise: Potential Impacts to Hawaii's Commercial Harbors (State of Hawaii Department of Transportation - Harbors Division, April 2021)

SEA LEVEL CHANGE – INCREMENTAL ADAPTATION

FREEBOARD
3.2 Feet Rise by YEAR 2060



HONOLULU HARBOR MODIFICATIONS



Second Entrance

- Reconsider tunnel or
- New high draft bridge or
- Movable bridge

Reauthorize Depth
From minus 23 feet to minus 45 feet (TBD)

Deepen Basin
From minus 40 feet to minus 45 feet (TBD)

Widen Channel
Full length or partial TBD

Widen Entrance Channel
New width TBD

Deepen Channel
From minus 45 feet to minus 50 feet (TBD)

Lock and Dam System



Dresden Lock, Illinois River

NOTES:
1. Pier 4 is owned by U.S.C.G.
2. Pier 30 is owned by Island Energy Services

ALOHA



Mahalo!

