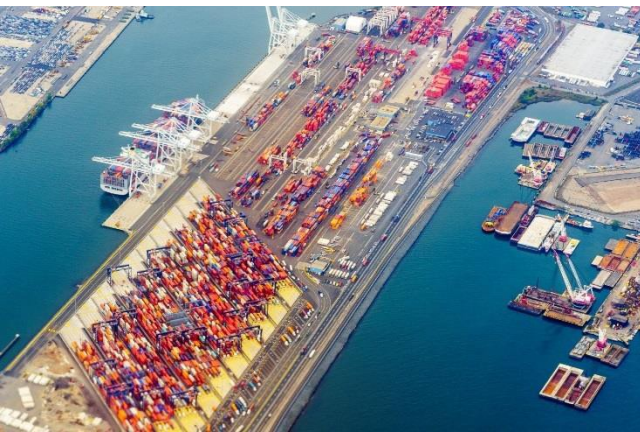


PORT MASTER PLAN 2050

A Road Map for the Next 30 Years



March–April 2019

Stakeholder Briefing

CONFIDENTIAL DRAFT

THE PORT AUTHORITY OF NY & NJ

Current State of the Port

Key Statistics: Port Department Facilities

Acres **3,000+**

Port Newark 846

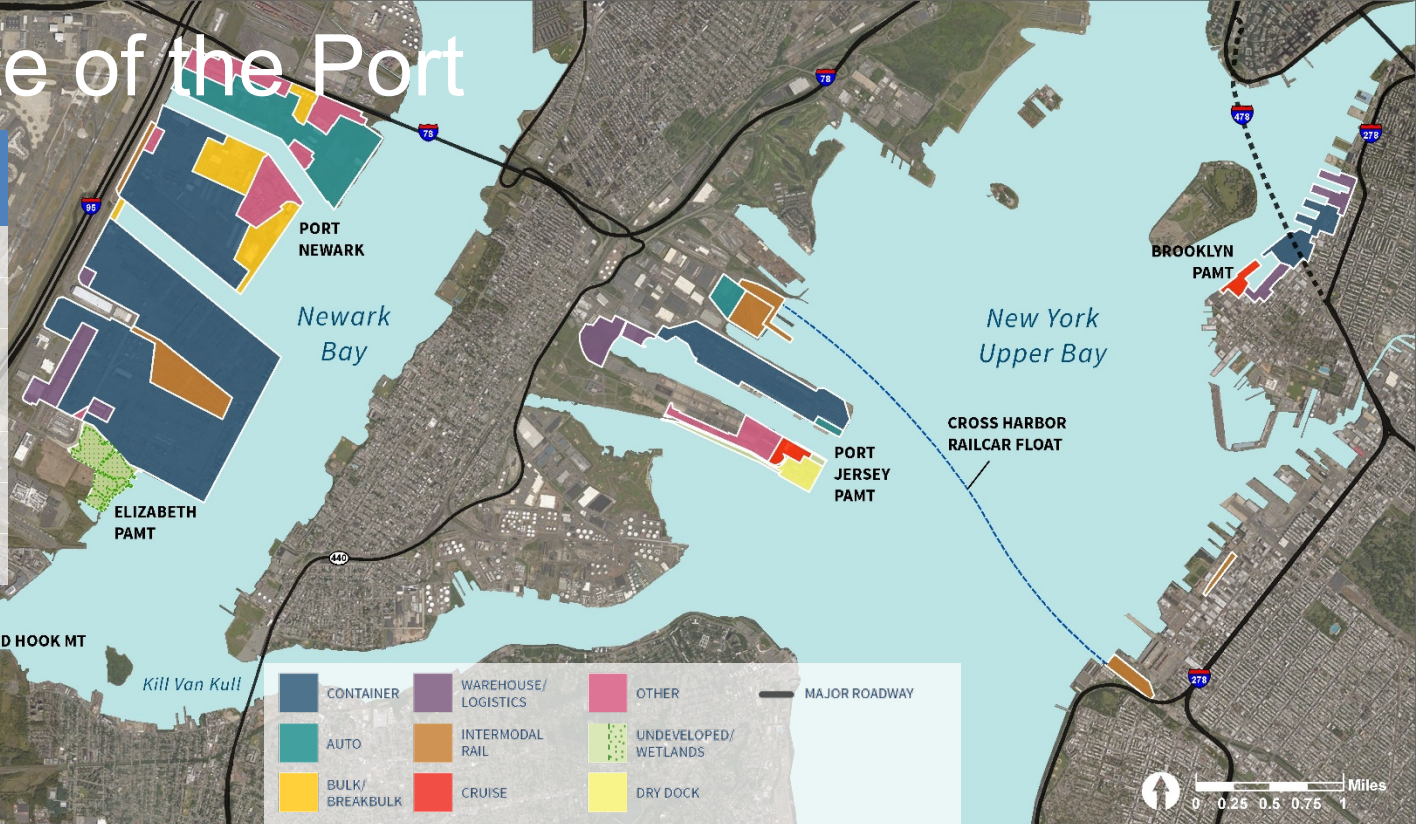
Elizabeth PAMT 1,124

Howland Hook MT 279

Port Jersey PAMT 419

Brooklyn PAMT 151

Tenants **~60**



Cargo Volumes (2018)

7.2 million
Containers (TEU)

645,760
By Rail (Lifts)

3.6 million
Dry Bulk (Tons)

573,035
Autos (Units)

856,271
Cruise (Passengers)

PONYNJ Benefits



LOCATION

- Located in the middle of the largest consumer markets in one of the most affluent parts of the world
- Greatest port reach on the East Coast. 45 million people within 4 hours' drive, 1/3 of the nation's GDP
- Access to 125 million people within a 36-hour drive



CONNECTIVITY AND SUPPORTING INDUSTRIES

- Direct access to major road and rail networks.
- Over 1 billion square feet of warehouses and distribution centers within 50 miles of port.
- More first port of call services than any other East Coast port



INVESTMENT

- Significant private and public sector investment to support future growth



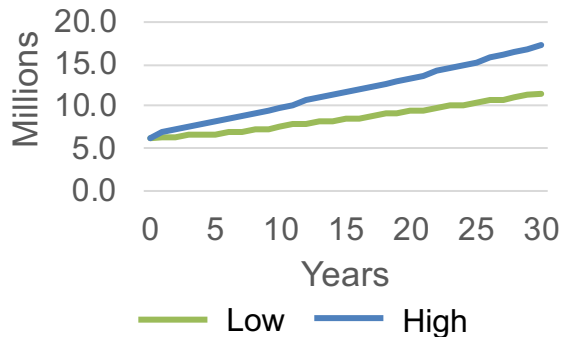
Containers

Trends and Emerging Issues

- Container volumes are projected to double or triple by 2050
- Ocean carrier consolidation and alliances
- Vessel size increasing rapidly
- Use of real-time decision making and other technologies



Market Forecast (TEU)



Estimated Leasehold Acreage

	Present	2050
Acres	1,649	1,779 – 1,815



Design Vessel

Capacity	18,000 TEU
Class	ULCV
Length (LOA)	399 m (1,310 ft)
Beam (max)	54 m (177 ft)
Draft	16 m (52 ft)
Air Draft (est.)	59 m (194 ft)

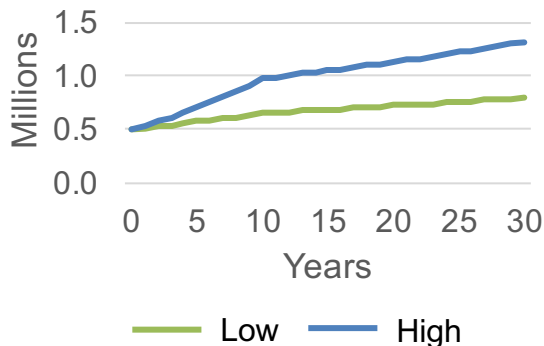
Autos

Trends and Emerging Issues

- Auto volumes remain strong
- Mobility as an on-demand service
- Autonomous vehicles
- Electric and hybrid vehicles



Market Forecast (CEU)



Estimated Leasehold Acreage

	Present	2050
Acres	291	390



Design Vessel

Capacity	9,000–10,000 CEU
Class	PCTC
Length (LOA)	265 m (869 ft)
Beam (max)	42 m (138 ft)
Draft	13 m (43 ft)
Air Draft (est.)	52 m (171 ft)

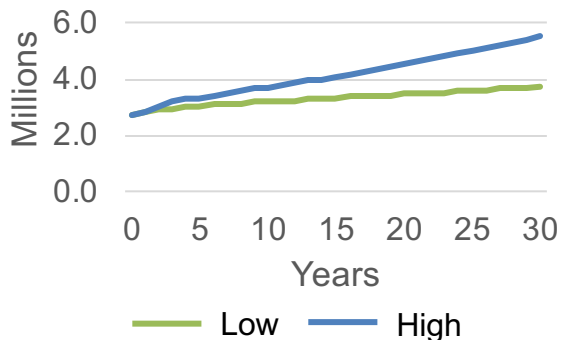
Bulk

Trends and Emerging Issues

- Bulk volumes remain strong
- Offshore wind and other renewable energy sources
- LNG bunkering
- Additive manufacturing (i.e. 3D printing)
- Beneficial use of recycled commodities



Market Forecast (Tons)



Estimated Leasehold Acreage

	Present	2050
Acres	160	179 – 281



Design Vessel

Capacity	80,000 DWT
Class	Panamax
Length (LOA)	290 m (950 ft)
Beam (max)	32.3 m (106 ft)
Draft	14.6 m (47.9 ft)
Air Draft (est.)	40 m (132 ft)

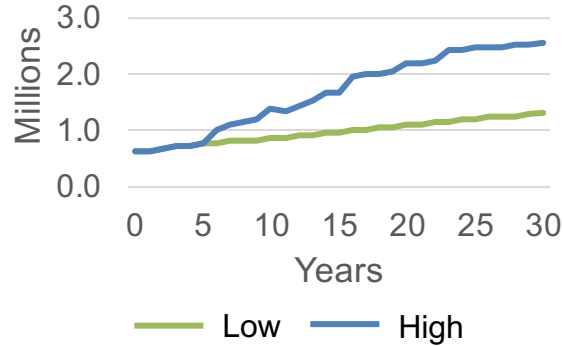
Cruise

Trends and Emerging Issues

- Consistent growth in passenger volumes
- Increasing vessel size
- NY/NJ as port of call



Market Forecast (Pax)



Estimated Leasehold Acreage

	Present	2050
Acres	No change	



Design Vessel

Capacity	5,400 pax
Class	Oasis Class
Length (LOA)	362 m (1,188 ft)
Beam (max)	65.5 m (215 ft)
Draft	9.1 m (30 ft)
Air Draft (est.)	57 m (187 ft)

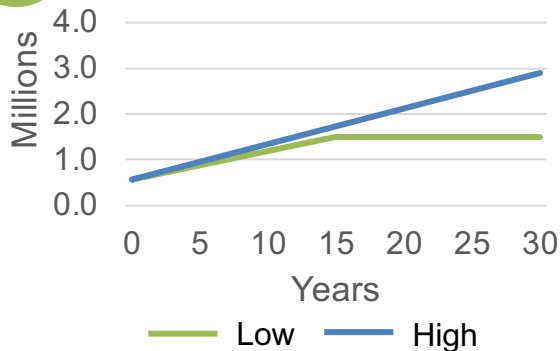
Intermodal Rail

Trends and Emerging Issues

- Potential demand for inland port facilities
- Need for additional off-terminal facilities (including storage tracks)
- Discretionary market opportunity

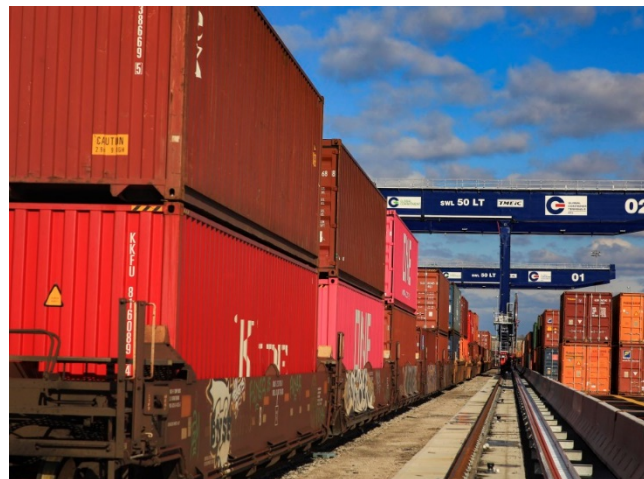


Market Forecast (Lifts)



Estimated Leasehold Acreage

	Present	2050
Acres	(included in container leaseholds)	



Design Vessel

Capacity

Class

Length (LOA)

Beam (max)

Draft

Air Draft (est.)

Not Applicable

Other Emerging Trends and Issues

Trucking and Logistics

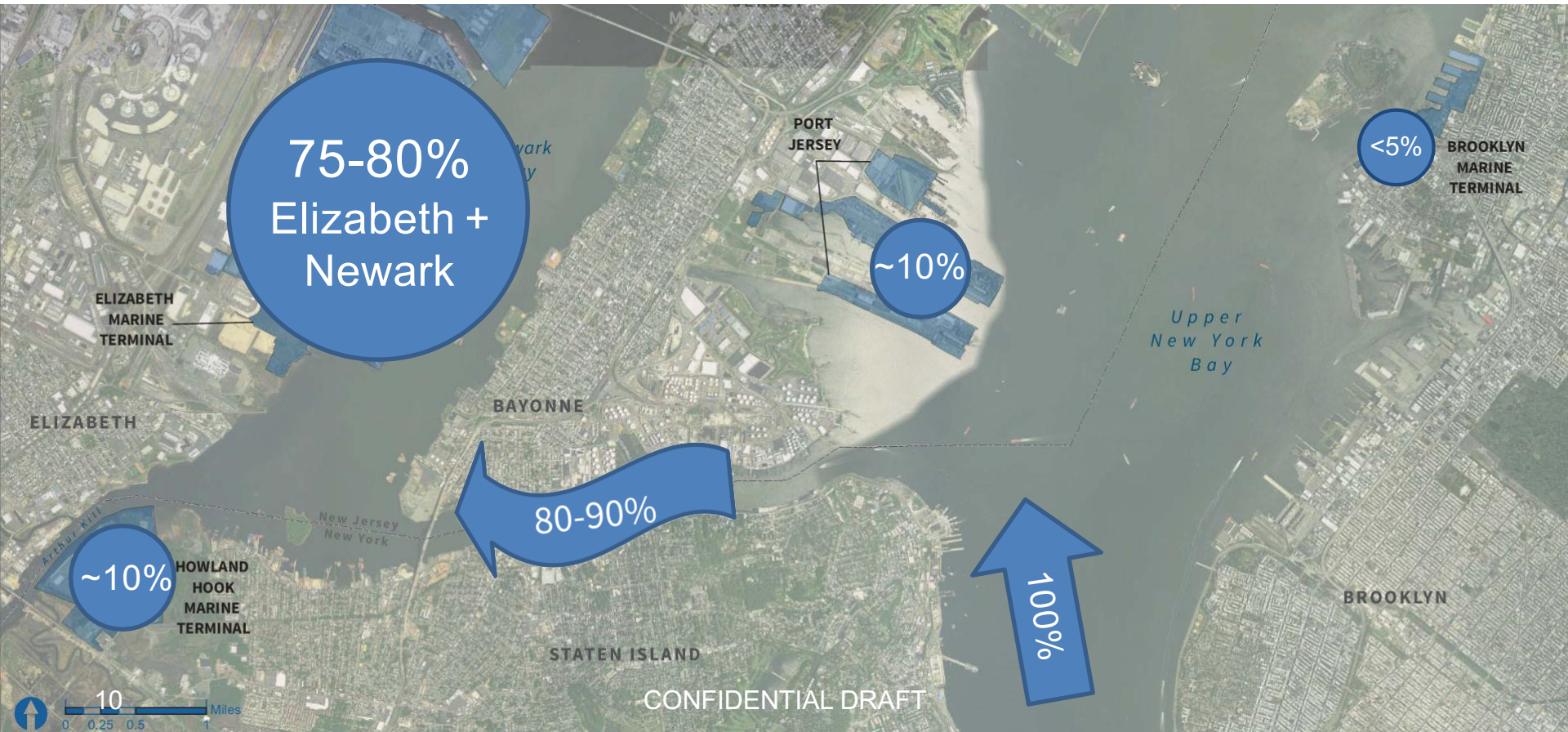
- Truck data capture
- Shared chassis pools and empty container depots
- Autonomous trucking and platooning
- Driver supply
- Intelligent transportation systems (ITS)
- Digitization of information streams



Infrastructure and Terminals

- Kill Van Kull channel becomes a greater constraint without mitigation
- Modal split has opportunity to increase, including rail and marine highway (barge)
- Tenants want to invest in capacity to support growth

Current Container Capacity of Port



Current Container Capacity vs. Forecast Demand

