BROWARD COUNTY
FLORIDA

Deepwater Port Component

Support Document

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LIST OF DEFINITIONS

Atlantic Intracoastal Waterway – Navigable waterway between Maine and Key West, the use of which is regulated by Section 4, Rivers and Harbors Act of August 8, 1917. The U.S. Department of the Army, Jacksonville District, Corps of Engineers, and the U.S. Coast Guard, Seventh District are responsible for the enforcement of federal regulations in the Intracoastal Waterway from Fernandina to Key West, Florida.

Break-bulk Cargo – Ocean cargo that is not containerized, but is shipped in bagged, baled, or palletized units within the ship's hold. Port Everglades' current break-bulk cargo includes primarily steel/coils/rebar which may also be referred to as neo-bulk.

Bulk Cargo – Cargo stowed loose in the hold of a ship and not enclosed in any container such as boxes, bales, bags, or casks. This may include free-flowing cargo such as oil, grain, coal, or ore that can be pumped, run through a chute, or handled by dumping. Port Everglades' bulk cargo includes liquid bulk commodities, such as petroleum, break-bulk commodities such as steel coils and rebar, and dry bulk commodities, such as cement and crushed rock.

Bunker – A compartment for storing fuel or potable water below the decks of a vessel.

Bunkering – Loading fuel or potable water into a ship's bunker for the ship's own use, as distinguished from loading it as cargo.

Coastal High-Hazard Area – The Coastal High-Hazard Area is defined as the Category 1 and 2 Hurricane Evacuation Zones, as shown on the "Flood Plains, Flood-Prone Areas and Coastal High-Hazard Areas" map in the Broward County Land Use Plan Map Series.

Container – A box for transporting cargo constructed to withstand transportation stresses, which allows for the intermodal movement among ships, railroads, and highway trucks.

Container (Gantry) Crane – A dockside crane, also called gantry crane, mounted on rails and designed to transfer containers to and from ships. Standard container cranes have a moveable boom that is stored in an up position when idle and is lowered into a horizontal position when in use. Low-profile container cranes usually have a horizontal boom that shuttles in and out over the ship, allowing for a structure of minimum height.

Containerized Cargo – Cargo that is carried in containers.

Container-on-flat-car (COFC) – A container mounted directly to a specially designed railroad flat car.

Daily Cruise – A cruise that embarks and disembarks from the same port within a twenty-four hour period. Port Everglades' daily cruises are associated with one-day and one-night trips, with destinations that include Freeport, Bahamas as well as cruises-to-nowhere. Daily cruise ships may include multiple embarkations within a single day.

Deepwater Port – Port listed in Sections 403.021(9) and 311.09(1), FS.

Development of Regional Impact – Any development that, because of its character, magnitude, or location, would have a substantial effect on the health, safety, or welfare of citizens of more than one county. Developments in Broward County, which exceed threshold standards in Chapter 380, FS must prepare an Application for Development Approval to be coordinated by the South Florida Regional Planning Council and adopted by the affected local government.

Florida Seaport Transportation and Economic Development (FSTED) Council – A funding program created by state statute to finance port facility projects that improve the movement and intermodal transportation of cargo and cruise passengers.

Foreign Trade Zone – A site in or near a U.S. Customs port-of-entry where all merchandise is considered to be in international commerce, outside U.S. Customs territory, and duties on merchandise can be deferred, reduced, or in some cases eliminated. Port Everglades is designated as Foreign-Trade Zone #25.

Hurricane Vulnerability Zone – The areas (hurricane evacuation areas and mobile home parks) delineated by the regional or local evacuation plan as requiring evacuation.

Homeport – A port that is utilized by a passenger or cargo vessel as its operational base.

In-Water Facility – In-water facilities serving waterborne commerce include ship berths, bulkheads, wharfs, piers, harbors, turning basins, and navigable channels.

Intermodal Container Transfer Facility (ICTF) – A rail yard that facilitates the transfer of cargo containers between ships, highway trucks, and railroad cars.

Lay-In – To berth in a harbor or port for the purpose of storage or repairs, but not to transfer cargo; also, the name of the berth.

Lift-on/Lift-off (Lo/Lo) – Containers and cargo lifted on and off ships by cranes.

Low-profile Container Crane – A container crane specially designed to meet specific height restrictions. Low-profile container cranes usually have a horizontal boom that shuttles in and out over the ship, allowing for a structure of minimum height.

Mobile Harbor Crane – A crane mounted on a rubber-tired chassis that can handle all types of cargo and move easily between locations to provide operational flexibility.

Multi-day Cruise – A cruise that embarks and disembarks from the same port for more than one day at sea and that may include several ports-of-call. Cruise lines that serve Port Everglades offer 3- or 4- night to 144-night cruises, including Caribbean, trans-Panama Canal, trans-Atlantic, trans-Pacific, and world cruises.

Panamax Ship – A ship with a maximum width (beam) of 106 feet, a length of 965 feet, and a depth of -39.5 feet which is designed to pass through the existing Panama Canal locks.

Port Jurisdictional Area (PJA) – The Port Everglades PJA is defined by Chapter 59-1157, Laws of Florida, as amended.

Port-of-call – A port at which a vessel stops as part of an itinerary.

Port Tariff – A document, such as that adopted by the Broward County Board of County Commissioners and filed with the Federal Maritime Commission, which describes port facilities, establishes rules and regulations governing the use of port facilities, and sets fees for dockage, wharfage, terminal storage, gantry cranes, container yards, and port services.

Post-Panamax Ship – A ship with a beam greater than 106 feet which is too wide to pass through the current Panama Canal locks.

Project Depth – The maintained depth of navigable waters, as determined by the U.S. Army Corps of Engineers.

Roll-on/Roll-off (Ro/Ro) – Containers and cargo, such as automobiles rolled or driven on and off a ship, typically under their own power.

Stevedore – A business which specializes in managing vessel loading and unloading (cargo) operations and/or passenger embarkation/disembarkation activity at a port.

Strategic Intermodal System (SIS) – Florida's high priority network of transportation facilities important to the state's economy and mobility as deemed by the Florida Department of Transportation (FDOT).

Super-Post Panamax – The generation of cargo ships designed to pass through the new Panama Canal locks to be completed in 2014. These ships, which can carry 12,000 TEUs, can have a beam of 160.7 feet, a length of 1,200 feet, and a depth of -49.8 feet; term can also refer to gantry cranes designed to work such ships.

Stick Crane – A mobile landside crane, normally mounted on a truck chassis, used to load and unload cargo ships.

Twenty-foot Equivalent Unit (TEU) – A twenty-foot long shipping container, a standard shipping container size, often used to measure port capacity and performance.

Throughput – The quantity of cargo and/or passengers that passes through a port; usually measured in tons (bulk cargo), gallons per day (liquid bulk cargoi), twenty-foot equivalent units (containers), car-equivalent units (automobiles) or revenue passengers (cruise).

Trailer-on-flat-car (TOFC) – A railroad flat car used to transport highway cargo trailers.

Wharf – A structure built on the shore of a harbor to berth ships; when extending along the shoreline, it is known as a marginal wharf; when extending into deep water, it is also known as a pier.

LIST OF ABBREVIATIONS

ACOE	U.S. Army Corps of Engineers
APM	Automated People Mover
BCAD	Broward County Aviation Department
CBP	U.S. Customs and Border Protection
COFC	Container-on-flat-car
EPGMD	Broward County Environmental Protection and Growth Management Division
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FEC	Florida East Coast Railway
FEMA	Federal Emergency Management Agency
FLL	Fort Lauderdale-Hollywood International Airport
FIND	Florida Inland Navigation District
FPL	Florida Power & Light Company
FIHS	Florida Intrastate Highway System
FS	Florida Statutes
FSTED	Florida Seaport Transportation and Economic Development Program
FTZ	Foreign-Trade Zone
GPD	Gallons per Day
ICTF	Intermodal Container Transfer Facility
LAPC	Local Area of Particular Concern
LF	Linear Feet

LO/LO	Lift-on/Lift-off
LOS	Level of Service
MGD	Million Gallons per Day
MPO	Metropolitan Planning Organization
NEPA	National Environmental Policy Act
NPDES	National Pollution Discharge Elimination System
ODMDS	Ocean Dredged Material Disposal Site
PED	Port Everglades Department
PEDD	Port Everglades Development District
PEECO	Port Everglades Environmental Corporation
PJA	Port Jurisdictional Area
POV	Privately Owned Vehicle
RO/RO	Roll-on/Roll-off
SIS	Strategic Intermodal System
TEU	Twenty-foot Equivalent Unit
TIP	Transportation Improvement Program
TRIP	Transportation Regional Incentive Program
TOFC	Trailer-on-Flat-Car
VPD	Vehicles per Day

INTRODUCTION

The Deepwater Port Support Document provides data and analysis used to develop Broward County's goals, objectives and policies (GOPs) specific to Port Everglades. As such, data, tables, and timelines contained in this support document have been updated in accordance with the Master/Vision Plan update adopted in June, 2020. The Deepwater Port Component is one of two sub-elements in the

Coastal Management Element, the other is the Natural Disaster Component. The component summarizes information in the Port Everglades Master/Vision Plan, adopted by the Broward County Board of County Commissioners on June 18, 2020, and provides the data and analysis relevant to the Port Everglades service area to fulfill the deepwater port requirements cited in Chapter 163.3178(2)(k), Florida Statutes (FS).

Part I of the Deepwater Port Component describes Port Everglades' Jurisdictional Area (PJA), defines the planning horizons in the Port's Master/Vision Plan, and provides a list of definitions and acronyms. Part II addresses the data requirements of Chapter 163.3178(2)(k)), FS, including inventories of land use, natural resources, areas subject to coastal flooding, historic resources and sites, estuarine pollution sources, beach and dune systems, and Port infrastructure. It also addresses natural disaster planning issues and deepwater port factors. Part III presents the Port's 5-and 10-year maintenance and expansion plans. It includes forecasts for the Port's key business lines -- containerized cargo, non-containerized cargo (dry bulk/break-bulk/autos), liquid bulk (petroleum), and cruise -- and the specific projects planned to provide the capacity needed to meet those forecasts. Part IV then analyzes the data presented in Part II in the context of the Port's planned development over the identified planning horizons. Part V concludes with Deepwater Port Component implementation.

A. General Description

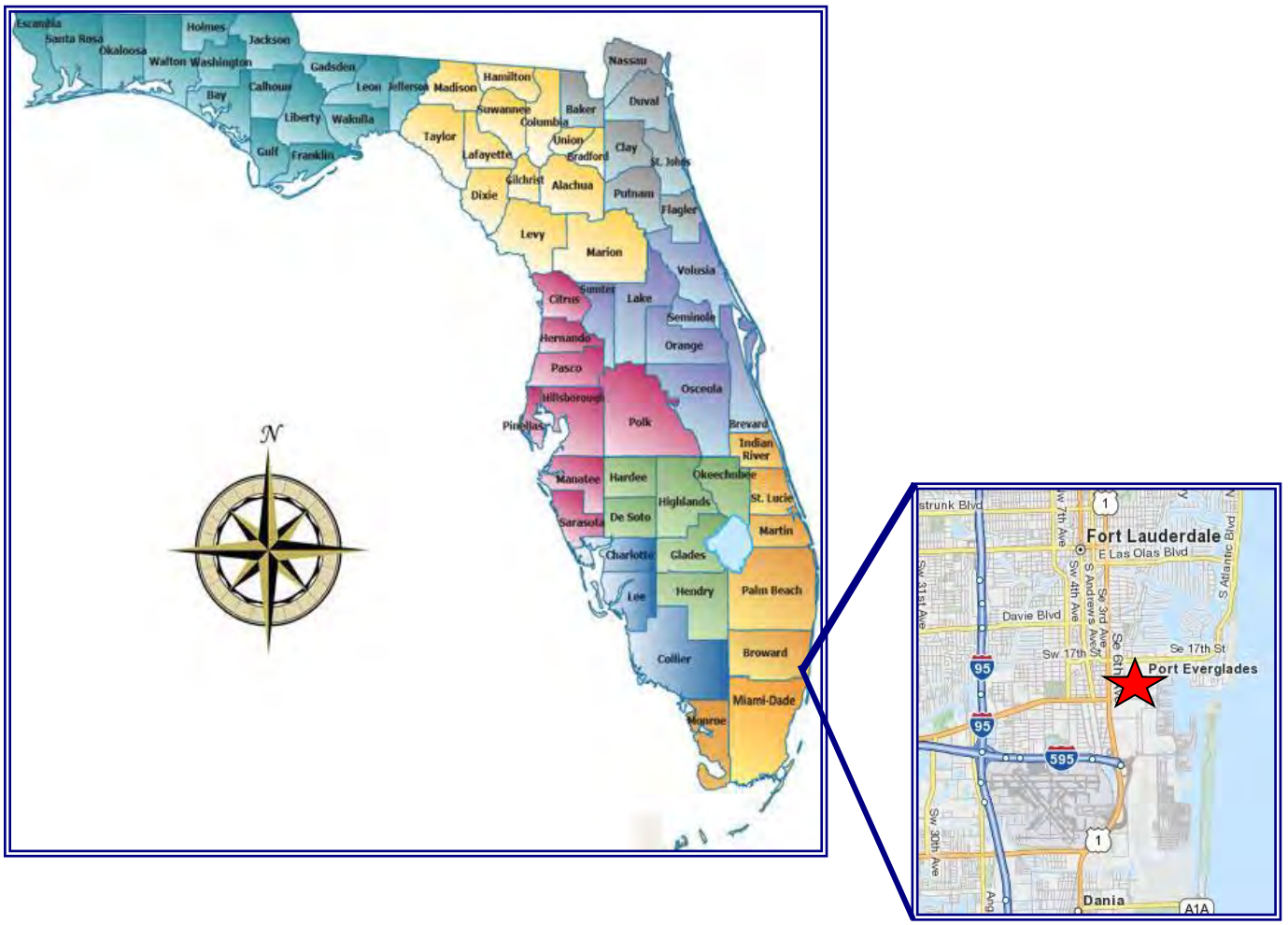
Port Everglades is located on Florida's east coast, 23 miles north of Miami and 312 miles south of Jacksonville. Figure P-1 shows the Port's South Florida location. Port Everglades is one of the deepest ports in Florida and has one of the shortest, straightest entrance channels among the U.S. Atlantic Coast seaports. The Port's outer channel project depth is 45 feet mean low water and the outer channel width is 500 feet. The inner channel and main turning basin project depths range from 31 to 42 feet mean low water. The inner channel is 450 feet wide from a point 1,000 feet within the jetty entrance. From this point, it flares to a width of 1,500 feet at the turning basin. Berth water depths vary up to 42 feet. The main turning basin, which measures 1,200 feet east-to-west and 2,450 feet north-to-south, is 9,000 feet from the ocean sea buoy. The proximity of the main turning basin to the ocean buoy enables ships to dock within a half hour from reaching the ocean buoy, less time than is required at any other Atlantic port. The main turning basin's north extension is 630 to 900 feet wide by 1,150 feet long. The south extension is 1,300 feet by 1,100 feet. The distance from the ocean entrance of the channel to the main turning basin is approximately 1.2 nautical miles.

B. Service Area

Port Everglades' PJA encompasses a total of 2,190 acres, which includes 1,742 acres of upland and 448 acres of submerged land. Upland acreage falls in the following municipalities:

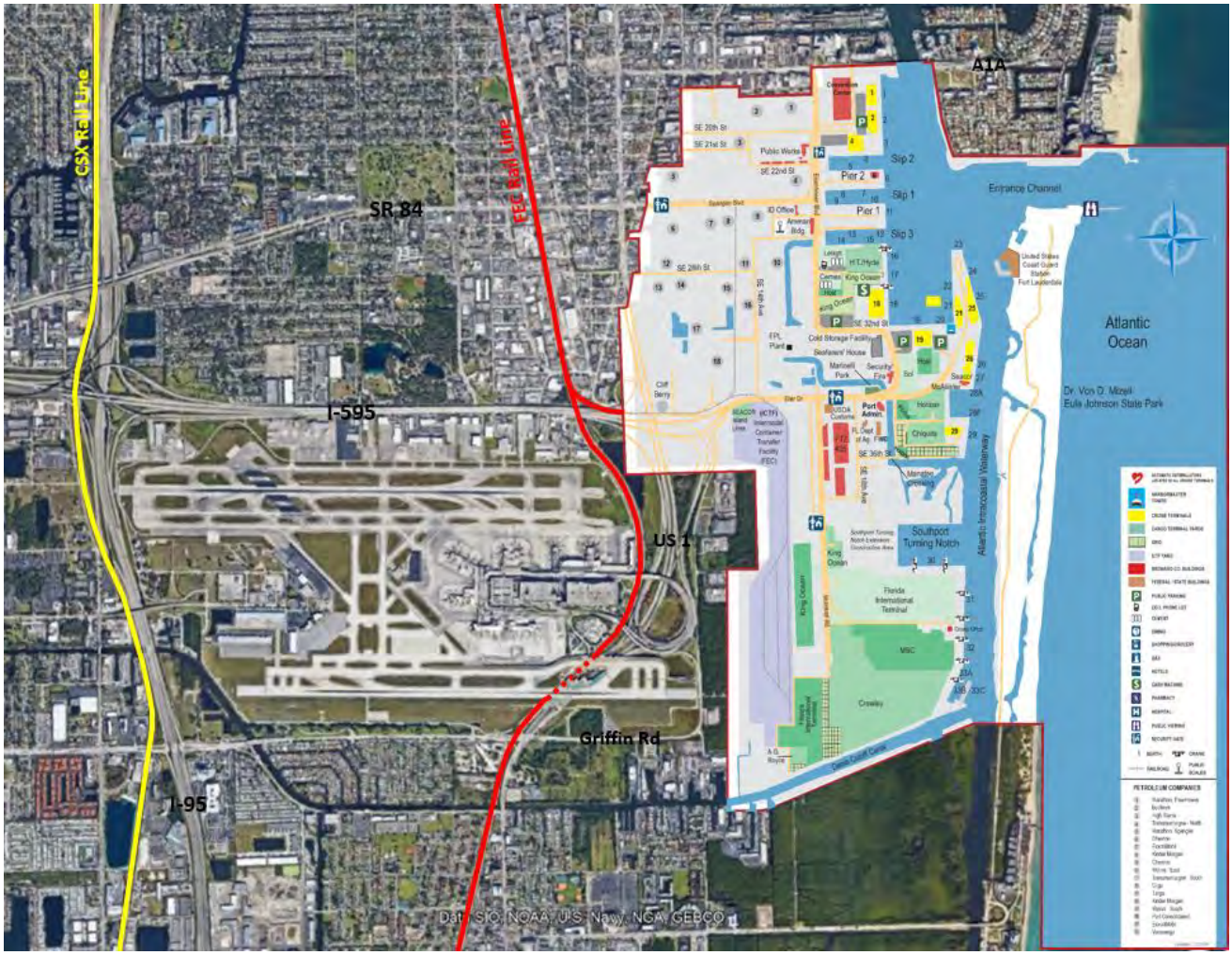
- 1,242 acres or 71.3 percent of the Port is located in the City of Hollywood.
- 232 acres or 13.3 percent of the Port is located in the City of Fort Lauderdale
- 234 acres or 13.4 percent of the Port is located in the City of Dania Beach.
- 34 acres or 2 percent of the Port is located in unincorporated Broward County.

Figure P-1: Port Everglades Location



Source: Deepwater Port Component Support Document (March 2019)

Figure P-2: Port Everglades Jurisdictional Area (PJA)



Source: Bermello, Ajamil & Partners, Inc. (2020)

C. Planning Horizons

The short-term (5-year) planning horizon of the Deepwater Port Component is 2023, while the longer-term (10-year) planning horizon is 2028. The Deepwater Port Component projections, capital improvements program, and adopted Goals, Objectives, and Policies (GOPs) reflect these two planning horizons, incorporating the recommendations of the Port Everglades Master/Vision Plan, which also looks at the 20-year planning horizon of 2038.

DATA REQUIREMENTS

The data requirements include inventories of existing land uses, natural resources, areas subject to coastal flooding, historic resources and sites, estuarine pollution sources, beach and dune systems, and infrastructure. This section also addresses natural disaster planning issues and deepwater port factors.

A. Inventories of Existing Land Use

This section includes inventories of existing land uses, shoreline uses, water-dependent and water-related uses, and areas in need of redevelopment.

1. General Description. Port Everglades contains three distinct areas, referred to as Northport, Midport, and Southport, which are illustrated on Figure P-3. The current uses in each of these areas are as follows:

    a. *Northport*. Located approximately between 17th Street and SE 26 Street, accommodates cruise ships and petroleum tankers as well as other liquid bulk, break-bulk, and dry bulk ships. The Broward County Convention Center, which is part of an approved Development of Regional Impact (DRI) that includes a proposed hotel complex and ancillary facilities, is located at Northport. In addition, Northport contains a newly constructed Port-owned parking garage.

    b. *Midport*. Located approximately between Spangler Boulevard and the Southport Turning Notch, is the Port's main cruise ship berthing area, but also accommodates liquid bulk (petroleum), dry bulk (cement), break-bulk and roll/on and roll/off (Ro/Ro) cargo facilities, specifically automobiles. Six multi-day cruise terminals are located in Midport, together with another Port-owned parking garage, the Port Administration building, Florida Power & Light (FPL), the Foreign-Trade Zone building, and Public Safety and other buildings.

    c. *Southport*. Located approximately between the Turning Notch and the Dania Cut-Off Canal to the east and from Eller Drive to the Dania Cut-Off canal to the west, is Port Everglades' primary container area, accommodating both lift/on and lift/off (Lo/Lo) and occasional Ro/Ro cargo operations. Southport is the area that has experienced most of the Port's containerized cargo growth and is the site of the Florida East Coast (FEC) Railway's near-dock intermodal container transfer facility (ICTF), which allows containerized cargo to move directly from ship to rail car for improved inland logistics.

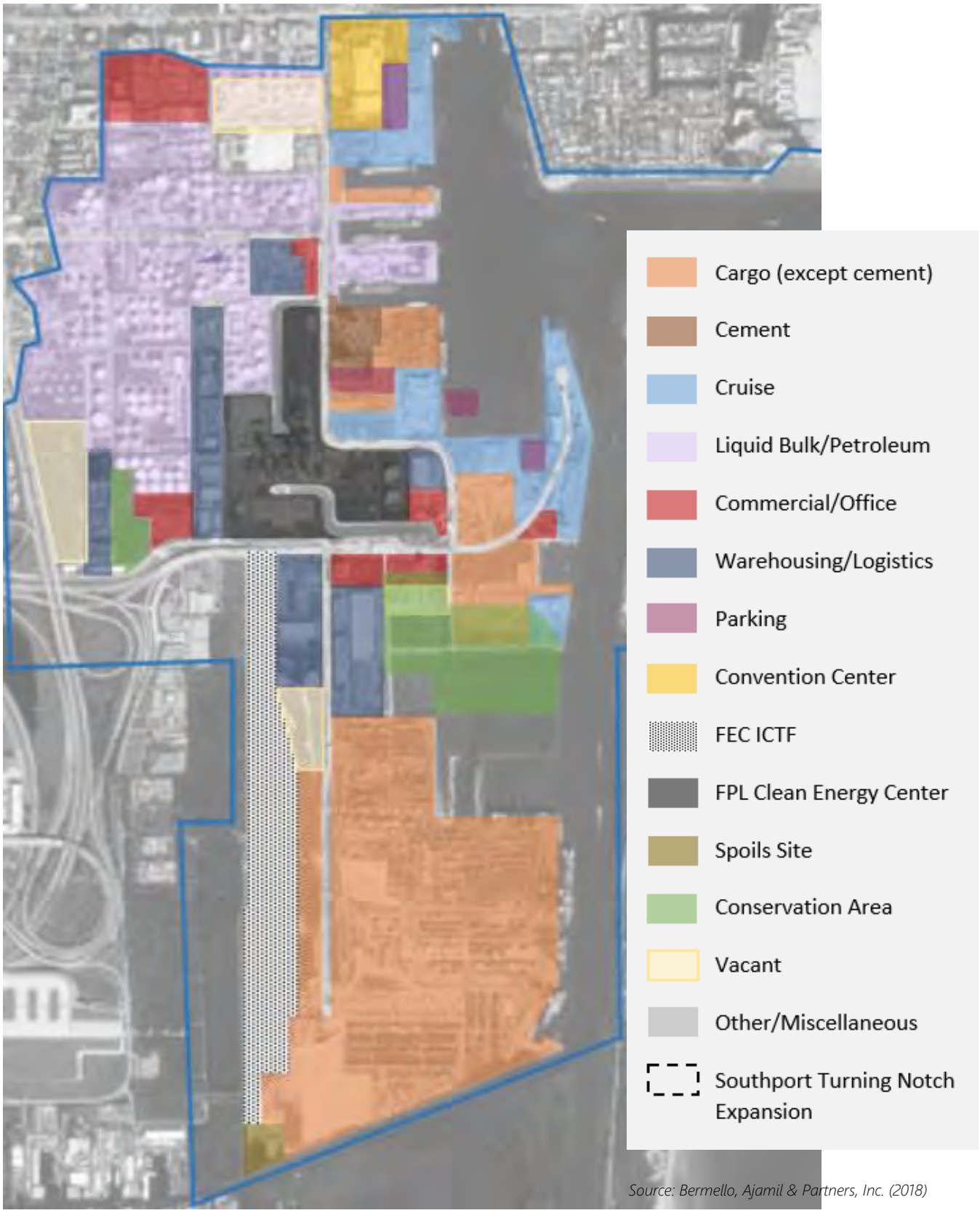
2. Inventory of existing land use coverage. Figure P-4 identifies the various Port-related uses in the PJA while Table P-1 provides an inventory of the existing land uses. The predominant existing land uses are preservation/recreation/water (641 acres or 29.3 percent), liquid bulk (petroleum) storage (339 acres or 15.5 percent), container areas (327 acres or 14.9 percent), and office/commercial (67 acres or 3.1 percent). Other significant uses in the PJA include FPL's Fort Lauderdale power plant, located on 44 acres in Midport and an easement on the western edge of Southport. Several DRIs, adopted pursuant to Chapter 380, FS, are located in the PJA, as illustrated on Figure P-5. These include the Port Everglades Petroleum Terminal DRI, and the Mobil Oil DRI. The Northport DRI relates to the construction of a proposed hotel and ancillary facilities adjacent to the Convention Center. Adjacent to the Port is the FLL DRI.

Source: Port Everglades

Figure P-3: Port Everglades Facilities

Source: Port Everlgades; Bermello, Ajamil & Partners, Inc. (2020)

Figure P-4: Existing Land Uses (PJA)



Source: Bermello, Ajamil & Partners, Inc. (2018)

Table P-1: Existing Land Uses – Port Jurisdictional Area (PJA)

Land Use	Acres	Percent
Cruise	88	4.0
Convention Center	31	1.4
Containers	327	14.9
Liquid Bulk/Petroleum	339	15.5
Dry Bulk/Cement	16	0.7
General Cargo Area (Break-bulk, Ro/Ro)	23	1.1
Commercial	67	3.1
Florida Power and Light	44	2.0
Office	41	1.9
Conservation Area*	66	3.0
Preservation/recreation/water*	640	29.2
Warehousing	60	2.7
Vacant Land	96	4.4
Transportation	243	11.1
Other	109	5.0
Total	**2,190**	**100.0**

Source: Port Everglades; Master/Vision Plan analyses (2018)
** Includes land use areas after completion of Southport Turning Notch Expansion.*

Figure P-6 shows grid and lease areas for Port-owned land as of 2020. The Port Everglades Department (PED) manages 519 acres available for leasing as well as 400,000 square feet of warehouse space and 100,000 square feet of office space. The eight Port-owned cruise terminals include approximately 1,072,000 square feet of passenger-processing and baggage-handling space.

Figure P-5: Developments of Regional Impact

Source: Bermello, Ajamil & Partners, Inc. (2020)

3. Inventory of shoreline uses. Shoreline uses in the PJA include the following:

    a. *Transportation uses.* The Port's primary existing 35 berths plus four new as yet undesignated berths within the expanded Southport Turning Notch used for cargo and cruise operations plus other smaller berths for lay-in and other uses.

    b. *Institutional uses.* The U.S. Naval Surface Weapons Center, the U.S. Coast Guard Guard Station, the Environmental Education Facility, and the Nova Southeastern University Oceanographic Center.

    c. *Recreational uses.* A portion of the Dr. Von D. Mizell-Eula Johnson State Park, 251 acres of barrier island between the Atlantic Ocean and the Intracoastal Waterway, from Port Everglades on the north to Dania Beach on the south.

    Figure P-7 shows the locations of the Port's primary 35 berths and new undesignated berths (shown as 30Xa, 30Xb, 30W, 30N. Table P-2 identifies the length, depth, and use of each berth. Other shoreline uses are shown previously in Figure P-3.

4. Inventory of water-dependent and water related uses. Water-dependent uses are activities that can be carried out only on, or adjacent to, water areas because the use requires access to the water body. The water-dependent uses in the PJA include the Port's cargo and cruise berths, the Florida Marine Patrol facility located adjacent to the FPL Discharge Canal, and the above-mentioned U.S. Coast Guard, U.S. Navy, and Nova Southeastern University facilities on the Dr. Von D. Mizell-Eula Johnson State Park. These uses are also identified on Figure P-3. Water-related uses are activities that are not directly dependent on access to a water body, but that provide goods and services directly associated with water-dependent or waterway uses. These include the Port's Foreign-Trade Zone, petroleum storage tanks, offices and warehouses, institutional facilities, and parking garages.

5. Areas in need of redevelopment. Table P-3 identifies all Port-owned buildings as of 2018 by building number, indicating the year built, address, port use, floor area in square feet, and existing use for each building. Many of the Port's buildings have been renovated since their original construction date. Figure P-3 includes the numbers of the main buildings referenced on Table P-3.)

Figure P-6: 2020 Land Uses- Port-Owned Property (Port Leases and Grid Map)

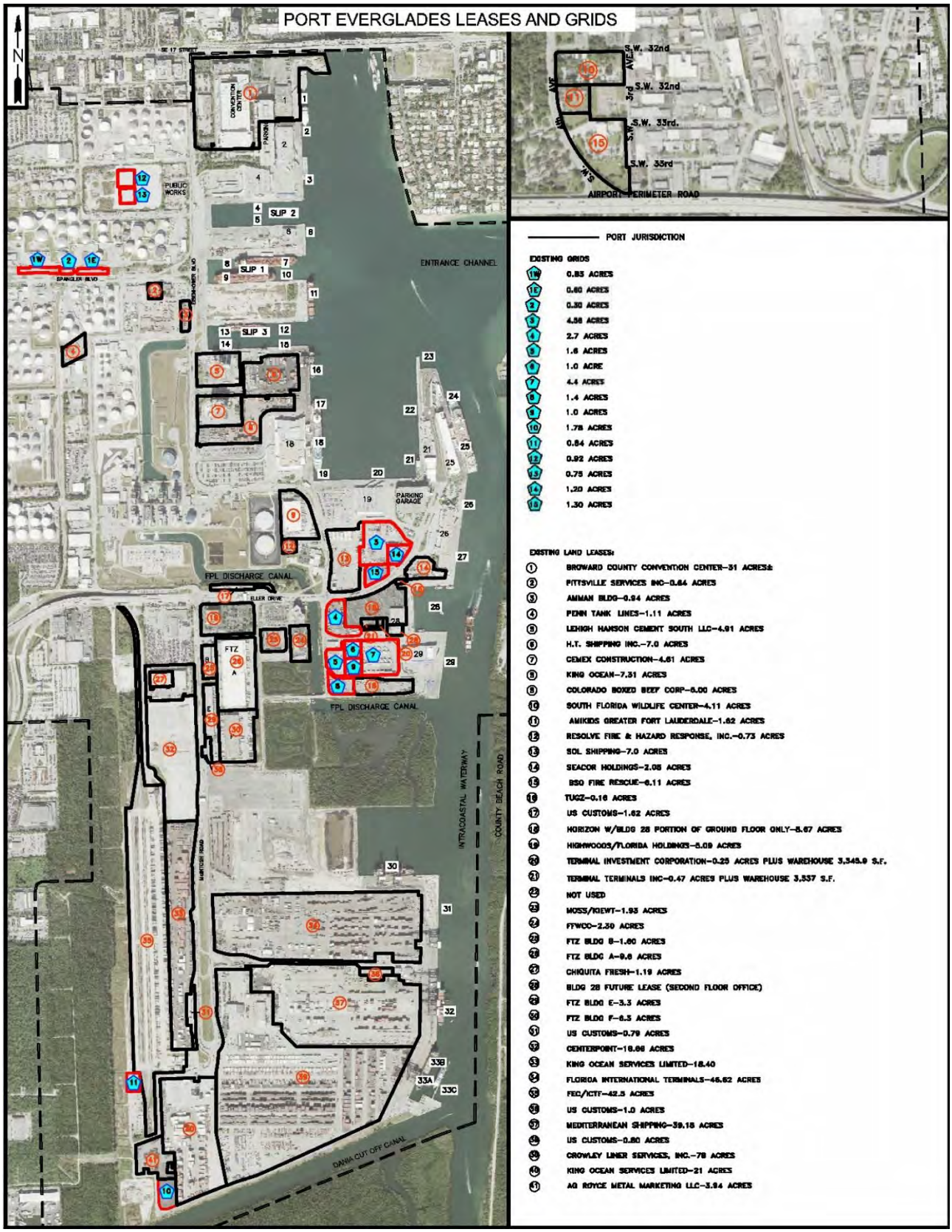
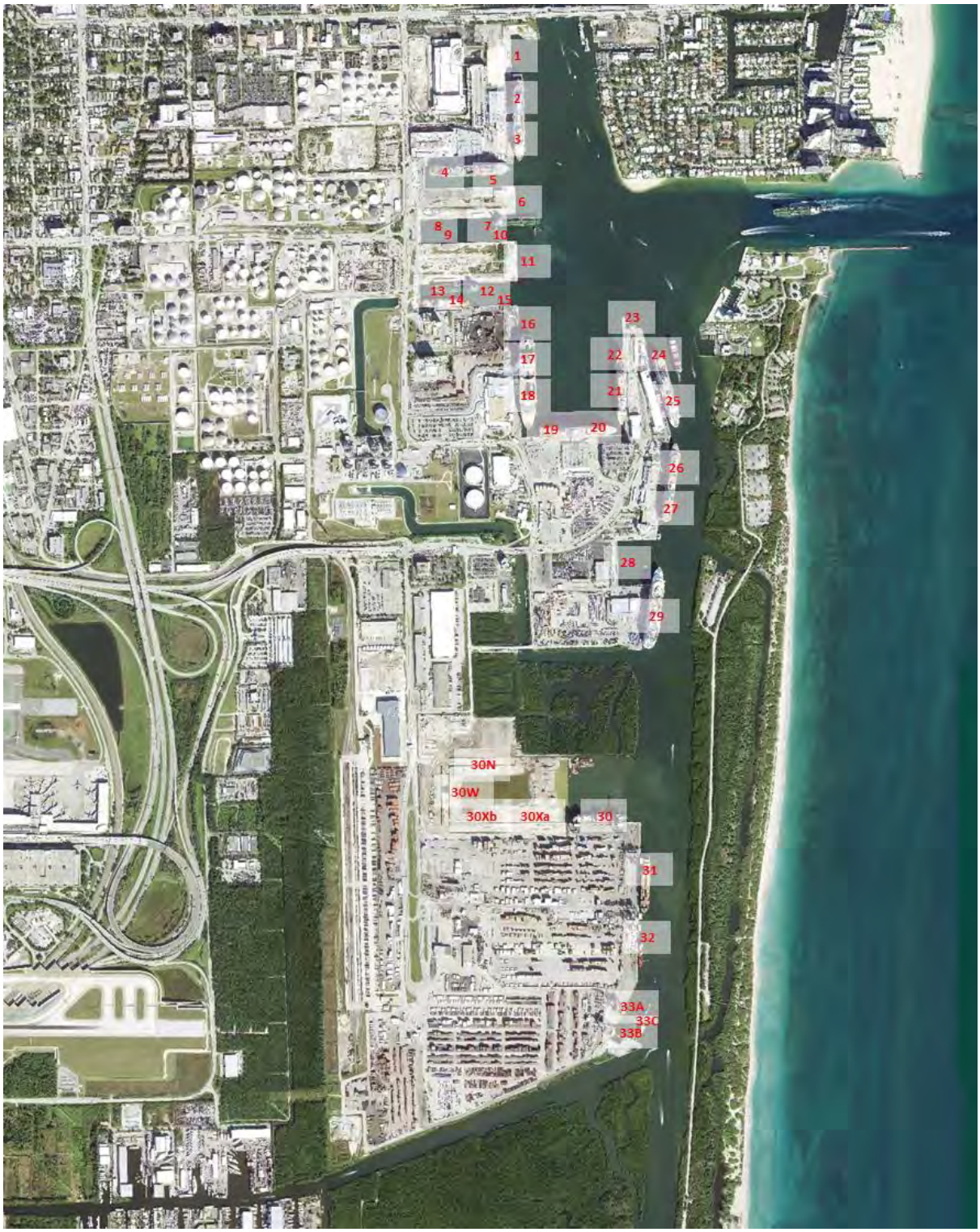


Figure P-7: Port Berth Locations



Source: Bermello, Ajamil & Partners, Inc. (2020)

Table P-2: Existing Berth Inventory

Berth Number	Length (In feet)	Depth (In feet, all tides)	Berth Usage
NORTHPORT			
1A	180	11	Lay-in
1B	220	17	Lay-in
1, 2, 3	1,601	29	Cruise/Occasional cargo/Navy
4	1,125	38	Cruise/Occasional cargo
4A, 4B	290	38	Ro/Ro
5	1,125	38	General cargo/Petroleum tanker
6	380	38	Lay-in
7, 8	1,200	37	Petroleum tanker
8A, 9A	300	37	Miscellaneous
9, 10	1200	37	Petroleum tanker
11	500	32	Barge
12A, 13A	300	36	Miscellaneous
12, 13	1,226	36	Petroleum tanker
MIDPORT			
14, 15	1,226	36	Cement/Other cargo
16, 17, 18	1,648	36	Cruise (Oasis -class)/Cargo (weekdays)
19, 20	1,300	35	Cruise/ Cargo/Navy
21, 22	1,475	36	Cruise/Cargo/Navy
23	240	36	Miscellaneous

24	684	38	Cruise
25	685	40	Cruise
26, 27	1,337	39	Cruise
28A	480	25	Tug
28B	275	25	Lay-in
28C	350	25	Lay-in
28D	350	25	Lay-in
28E	275	25	Lay-in
28F	400	20	Containerized cargo/Other cargo
29	800	40	Containerized cargo/Cruise/Ro/Ro
SOUTHPORT			
30	900	40	Containerized Cargo
31, 32	2,000	40	Containerized Cargo
33A	800	40	Containerized Cargo
33B	400	40	Containerized Cargo (Ro/Ro)
33C	400	40	Containerized Cargo (Ro/Ro)
Total	25,222		

Source: http//www.pepilots.com/navigation.html (2020)
Note: Berths 30Xa, 30Xb, 30W and 30N are under construction and not listed.

Table P-3: Existing Building Inventory

Location/Description	Address	City	Yr Blt	Sq Ft	Existing Use
Terminal 18 (Bldg 18)	1901 SE 32 Street	Hollywood	1964	259,370	Cruise terminal
Northport Parking Garage*	1901 Eisenhower Blvd	Ft Lauderdale	1994	146,700	Parking garage
Midport Garage & Ops (Bldg 20)	2020 Eller Drive	Hollywood	1994	715,897	Parking garage
Terminal 21 (Bldg 21)	2021 Eller Drive	Hollywood	1967	138,700	Cruise terminal
Terminal 29 (Bldg 29)	2200 SE 35 Street	Hollywood	1991	80,200	Cruise terminal/whse
Administration Building	1850 Eller Drive	Ft Lauderdale	1987	81,700	Office
Terminal 2 (Bldg 2)	1801 SE 18 Street	Ft Lauderdale	1957	85,504	Cruise terminal
Terminal 25 (Bldg 25)	2025 Eller Drive	Hollywood	1987	157,800	Cruise terminal
Terminal 26 (Bldg 26)	2026 Eller Drive	Hollywood	1987	115,581	Cruise terminal
Warehouse (Bldg 81)	3501 Mcintosh Rd	Hollywood	2001	81,858	Warehouses/offices
Foreign Trade Zone Warehouse (Bldg A)	3500 Block Mcintosh Rd	Hollywood	1977	204,659	Warehouses/offices
Warehouse/Terminal (Bldg 19)	2019 Eller Drive	Hollywood	1966	95,000	Cruise terminal/whse
Terminal 4 (Bldg 4)	1800 SE 20 Street	Ft Lauderdale	1987	140,000	Cruise terminal/whse
Maintenance Facility Bldg (Bldg ?)	2101 Eisenhower Blvd	Ft Lauderdale	1990	13,850	Maintenance/Office
Offices & Warehouses (Bldg 28)	2051 Se 35 Street	Hollywood	1966	37,049	Office
Public Safety Bldg & Fire Station	1901 Eller Drive	Hollywood	1988	21,558	Fire station/Public Safety
Seabulk Bldg-Office (Bldg 27)	2200 Eller Drive	Hollywood	1989	38,758	Office
Crane Transformer Vault& Maint Bldg (Bld	2050 SE 42 Street	Hollywood	1993	6,530	
Foreign Trade Zone Warehouse (Bldg F)	3500 Block Mcintosh Rd	Hollywood	1988	92,231	Warehouse
Crowley Cargo Trans Admin Bldg (100)	4300 Mcintosh Road	Hollywood	1990	31,000	Office
Security Operations Ctr	1901 Eller Drive	Hollywood	2003	5,424	BSO Offices
Howard Amman Office Bldg (Bldg 611)	2550 Eisenhower Blvd	Ft Lauderdale	1964	20,346	Office
Foreign Trade Zone Warehouse (Bldg E)	3500 Block Mcintosh Rd	Hollywood	1982	59,675	Warehouse
Crowley Cargo Maintenance (#110)	4300 SE 18 Avenue	Hollywood	1990	7,500	Maintenance facility
Foreign Trade Zone Warehouse (Bldg B)	3500 Block Mcintosh Rd	Hollywood	1977	23,830	Warehouse
APM Terminal Cargo Yard Buildings	4000 Mcintosh Rd	Hollywood	2005	0	Office
Offices (Bldg Otd)	2049 SE 35 Street	Hollywood	N/A	14,280	Office

Crowley Cargo Maritime Ops(#100)	4500 SE 20 Avenue	Hollywood	1990	35,610	Office
Plumbers Shop (Bldg 64)	1500 SE 24 Street	Hollywood	1960	9,559	Maintenance facility
Warehouse (Bldg 6)	1900 SE 23 Street	Ft Lauderdale	1960	15,970	Warehouse
Utility Building (Bldg 21a)	2021a Eller Drive	Hollywood	1967	1,600	
Crowley Cargo Produce Insp(#113)	4230 Mcintosh Rd	Hollywood	1990	2,200	Produce Inspection
Foreign Trade Zone Fire Pump Bldg (D)	3500 Block Mcintosh Rd	Hollywood	1977	0	
Southport Phase IV "FPL" Vault(Sp)		Hollywood	1967	0	
Linehandler Building	3510 SE 19 Avenue	Hollywood	1993	11,779	Office
Public Works Storage/Maint. (Bldg 68)	1601 SE 22 Street	Ft Lauderdale	1960	7,800	Maint./Storage whse
Crowley Cargo Guard House (#114)	4190 Mcintosh Rd	Hollywood	1990	0	Guard house
Public Works (Bldg 67)	1651 SE 22 Street	Hollywood	1979	6,451	Maint./Storage whse
Public Works (Bldg 69)	1501 SE 22 Street	Ft Lauderdale	1960	4,560	Maint./Storage whse
W/R (Bldg 612)	1451 SE 22 Street	Ft Lauderdale	1964	3,081	Maint./Storage whse
Building 65	1300 SE 26 Street	Hollywood	1960	3,637	Office/warehouse
Transformer Vault (Bldg 28a)	2028a Eller Drive	Hollywood	1977	9,072	FPL Transformer Vault
W/R Continental Cement (Bldg 613)	2800 Eisenhower Blvd	Ft Lauderdale	1985	0	
Public Works Welding Shed (Bldg 66)	2101 Eisenhower Blvd	Ft Lauderdale	1990	1,200	
Single wide trailer - GFC - SE 28th St.	Eller Drive	Ft Lauderdale	N/A	0	Office
Railroad Scale House (Bldg 66b)	1501 SE 24 Street	Ft Lauderdale	1962	0	
Transformer Vault (Bldgs 34, 48, 55)		Ft Lauderdale	1967	0	
Rest Rooms (Bldgs 11 and 12)		Ft Lauderdale	1999	0	
Building 46/47 (CVB)	1850 Eisenhower Blvd	Ft Lauderdale	1984	41,649	
U.S. Customs House	1580 SE 24th Street	Hollywood	1939	5,472	Office
Foreign Trade Zone (Bldg C)	3400 Mcintosh Rd	Hollywood	1987	1,200	Office
Florida International Terminals (Admin/Ops)	4100 McIntosh Rd	Hollywood	2019	5,500	Office

Source: Port Everglades Department 2020

** The Northport parking garage references the existing Northport parking garage. A new 1,818 space garage is under construction as of this update and will be added to the inventory upon completion.*

B. Inventories of Natural Resources

This section includes inventories of vegetative cover, wetlands, wildlife habitats, living marine resources, and other local natural resources.

1. Vegetative cover, wetlands, and wildlife habitats. Figure P-8 shows locations *within the PJA* of existing vegetative cover associated with mangrove forest concentrations. This cover includes a mature mangrove stand to the north of the Southport Turning Notch. This area is encumbered by an approximately 66-acre Conservation Easement issued to the Florida Department of Environmental Protection (FDEP). As discussed in Part III, the Port previously obtained FDEP approval to release 8.7 acres of the easement to allow the Southport Turning Notch expansion project to move forward. Release of this 8.7 acres was contingent upon the Port creating approximately 16.5 acres of new mangrove wetlands located to the southwest of the FPL Discharge Canal (see Figure P-8). Several other mangrove concentrations in the PJA are also shown on Figure P-8. In addition, port entrances, roadways, office buildings, passenger terminals, and parking facilities are landscaped with native and ornamental plant species.

    a. *Listed species*. Portions of the PJA serve as habitat for various listed species including:

        - West Indian manatee (*Trichechus manatus*).
        - Johnson's seagrass (*Halophila johnsonii*).
        - Three primary species of sea turtles—loggerhead (*Caretta caretta*), green (*Chelonia mydas*), and leatherback (*Dermochelys coriacea*).
        - Wood stork (*Mycteria americana*).
        - Small-toothed sawfish (*Pristis pectinata*).
        - Least tern (*Sterna antillarum*).
        - American crocodile (*Crocodylus acutus*)
        - Elkhorn coral (*Acropora palmata*).
        - Staghorn coral (*Acropora cervicornis*).

    A more complete inventory of listed species is presented in Table 1.10.2 of Element 1 of the Port Everglades Master/Vision Plan (2018 Update).

Figure P-8: Natural Resources within PJA

Source: Deepwater Port Component Support Document (March 2019); Bermello, Ajamil & Partners, Inc.

coriacea). It occasionally sees the hawksbill sea turtle (*Eretmochelys imbricata*) and Kemp's ridley sea turtle (*Lepidochelys kempii*), all of which are protected under the Federal Endangered Species Act (ESA). The loggerhead sea turtle is listed as threatened, while the green sea turtle and Kemp's ridley sea turtle are still endangered. Sea turtles rely on coastal beaches in Florida for nesting, typically between the months of May and October. The locations of these wildlife habitats in the PJA are shown in Figure P-8; however, not all of these areas have been designated as critical habitat for these species under federal or state regulations.

In 2014, critical habitats in offshore waters and on nesting beaches was established by the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS). Sea turtles occasionally enter the PJA, and as such, the Port is working with the Florida Fish and Wildlife Conservation Commission (FWC) and USFWS to minimize impacts to adjacent nesting beaches by embarking on a port-wide exterior lighting master plan to include installing shields on garage lights and use of high mast "turtle friendly" LED lighting. In addition, the Port is reviewing necropsy reports to determine the source of mortality, and is evaluating tree screening, false crawls, and hatchling disorientation.

Migratory shorebirds, such as least tern (*Sterna antillarum*), are seasonally present in Broward County. The least tern breeds along beaches up and down the eastern coast of the United States including those of Broward County. Other species of shorebird like the black skimmer (*Rynchops niger*) have also been reported to occasionally nest on rooftops. The State of Florida listed this species as threatened in 2011.

b. *Wildlife habitat*. In addition to listed species such as manatees and sea turtles, the waters and lands in and around Port Everglades provide habitat for a variety of other plant and animal wildlife. Numerous species of mammals, fish, and birds take refuge in the mangroves, canals, and trees that surround the Port. The waters to the south of the Port, including the waters bordering West Lake Park and the Dania Cut-Off Canal, are considered essential fish habitat under the Magnuson-Stevens Fishery Conservation and Management Act of 2002 (67 FR 2343).

2. Living marine resources. Portions of the PJA support live corals and seagrasses, in addition to providing shelter for fish, invertebrates, and other juvenile marine organisms. Marine game fish such as snook, tarpon, barracuda, and jacks also share

the coastal habitat; however, land-based fishing is not permitted on Port property in the PJA.

a. *Coral.* Port Everglades' outer entrance channel is comprised of a nearshore ridge complex and an inner, middle, and outer reef system that run parallel to shore. The nearshore hard-bottom (occurring in 0-12 feet of water) acts as habitat for algae, sponges, encrusting octocorals, and hard corals. The three further seaward reefs provide habitat for various hard-bottom communities and exhibit live growth, with turf algae being the most dominant, followed by macro-algae, sponges, octocorals, scleractinia, zonathids, and tunicates. This marine habitat is also regulated by federal, state, and county environmental protection agencies (see May, 2015 Final Environmental Impact Statement (EIS)). Two Acropora coral species, staghorn coral (A. cervicornis) and elkhorn coral (A. palmata) were listed in 2006 as threatened under the ESA, and critical habitat was designated in 2008, a part of which includes the outer edge of the Port Everglades entrance channel. Broward County has some of the largest densities of staghorn coral within the U.S., and some recent surveys by the National Coral Reef Institute (2013) have identified 28 new patches that may more than triple the amount of previously documented staghorn. In 2014, The National Oceanic and Atmospheric Administration (NOAA) listed five more Florida Atlantic Coast corals as threatened: Dendrogyra cylindrus, Mycetophyllia ferox, Orbicella annularis, Orbicella faveolata, and Orbicella franksi.

b. *Seagrass*. Seagrasses have been surveyed throughout the Port Everglades vicinity on numerous occasions. Three species of seagrass were observed in the marine environment surrounding Port Everglades during a 2009 survey, including Johnson's seagrass (*Halophila johnsonni*), paddle grass (*Halophila decipiens*), and shoal grass (*Halodule wrightii*). Johnson's seagrass is a threatened species that was listed under the ESA on September 14, 1998, and was designated critical habitat by the NMFS on April 5, 2000. Seagrasses are important benthic resources that provide a food source for threatened West Indian manatees and endangered green sea turtles, and provide shelter and nursery habitat for many other marine species. Seagrass prefers to grow in shallow-water lagoons in the intertidal zones of coastal habitats, and requires adequate sunlight to survive. Any event that reduces water clarity has the potential to reduce the amount of penetrable light reaching seagrasses, damaging beds or killing the plants. High channel flow, ship prop wash, or storm runoff may contribute particles that reduce water clarity. Also, dissolved nutrients contributed by canals, storm runoff, sewage, or industrial discharges may fuel

the growth of algae. High concentrations, or blooms, of phytoplankton (microscopic single-cell algae), particularly, can reduce the amount of light reaching seagrass beds. Phytoplankton blooms driven by nutrient pollution have been a significant factor in the reduction of seagrass beds in Florida coastal waters over the last 50 years. Seagrass beds can also sustain physical damage from boat propeller scarring and dredging.

Adverse impacts to seagrasses are regulated in the same manner as mangroves, and other coastal wetland plants, by Federal, State, and County environmental protection agencies.

3. Other natural resources. Today, the dominant plant species along the Port's waterways include salt-tolerant plants such as red mangroves (Rhizophora mangle), white mangroves (Laguncularia racemosa), and black mangroves (Avicennia germinans). These wetland plants serve as important habitats for marine life, such as juvenile and adult manatees, fish, crustaceans, mollusks, bird species, and occasionally American crocodiles. The mangroves surrounding this area provide valuable natural habitat, and are a protected wetland resource in Broward County. The United States Army Corps of Engineers (ACOE), FDEP, South Florida Water Management District (SFWMD), and Broward County Environmental Protection & Growth Management Department (EPGMD

4.) regulate dredging and filling activities within the area. It is the purpose and intent of these agencies to ensure there will be no net loss in the function and value of existing wetland habitats. Therefore, any adverse impacts to existing mangroves are regulated by avoidance and minimization, followed by mitigation to offset unavoidable impacts. In 2016, Port Everglades received a "Notification of Trending Towards Success" from FDEP for successfully cultivating approximately 16.5 acres of nursery-grown mangrove and native plants on property that was originally dry land, but was intended for other uses. As part of ongoing wetland enhancement and restoration efforts at Port Everglades, the Port also created a 25 acre wetland, inclusive of 160,000 red mangroves, at Dr. Von D. Mizell-Eula Johnson State Park.

C. Areas Subject to Coastal Flooding

As part of the critical infrastructure of Broward County, the Port will implement the Broward County Climate Change Element recently adopted into the County's Comprehensive Plan. The goals and policies in this element provide specific direction to local government agencies, including the Port, on critical issues to address in the context of climate change, including action items that affect immediate planning at the Port. To evaluate the eventual effects of global

climate change on the Port's shoreline, EPGMD and local municipalities are working on several initiatives that will be considered in the evaluation of future developments at Port Everglades.

The Southeast Florida Regional Climate Change Compact, a collaborative between Broward, Palm Beach, Miami-Dade and Monroe Counties, updated the unified regional projection in 2019. The unified sea level rise projection is to be used for planning purposes to aid in understanding of potential vulnerabilities and to provide a basis for developing risk-informed adaptation strategies for the region. In the near term, sea level rise is projected to be 10 to 17 inches by 2040 (above the 2000 mean sea level).

D. Inventory of Historic Resources

The term "historic resources" refers to all areas, districts or sites containing properties listed on the Florida Master Site File, the National Register of Historic Places, or designated by a local government as historically, architecturally, or archaeologically significant. The former U.S. Customs House, located at the southwest corner of Spangler Drive and Eisenhower Boulevard, is listed in the Florida State Master Site File (Site BD00210).

E. Estuarine Pollution Sources

Potential sources of pollution in the PJA include stormwater outfalls maintained by the PED, petroleum piers that may leak historical petroleum contamination into the harbor if breached, the petroleum storage tank areas and connecting pipelines, and the Florida Marine Patrol boat storage and repair facility. No marine vessel is totally leak-free. Residual pollution may occasionally be traced to ships that illegally discharge bilge water or spill petroleum products into the Port's berth and harbor area. Several other land uses in or adjacent to the PJA, such as the U.S. Naval Surface Weapons Center, the Nova Southeastern University Oceanographic Center, the USCG Station, and the residential area along the north side of the Port's Entrance Channel may contribute to the existing sources of pollution.

Most of the projects included in Port's Master/Vision Plan consist of expanded or reconfigured cargo yards, renovated cruise terminals, new parking structures, development of currently undeveloped land and new roadways, all of which involve increasing impervious areas within the Port. These projects will impact surface water and will require new or revised surface water management permits. Under Multisector Generis Permit (MSGP) a NPDES permit is required to address stormwater management under permit FLR05B255 charge to implement SWPPP with pollution prevention measures, treatment or removal techniques, monitoring, BMPs and other practices to control water quality by periodically monitoring TN, TP, chlorophyll-H, and copper.

In addition to activities occurring on the Port, water from areas to the north, west, and south pass through the harbor. As such, these waters may contain stormwater generated from associated roadways, parking lots, marinas, and residential areas located outside of the PJA. These sources of discharges have not been identified with regard to any impact on the water quality in the PJA.

F. Natural Disaster Planning Issues

This section addresses hurricane evacuation planning and post-disaster redevelopment planning as they pertain to the PJA. The Natural Disaster Component of the Coastal Management Element provides general natural disaster planning information.

1. Hurricane evacuation planning. This subsection addresses the areas in the PJA requiring evacuation during a Category 3-5 storm event, the number of persons requiring evacuation, the transportation routes and constraints on evacuation routes, and the time needed to evacuate during a 100-year storm event or a Category 3 or higher storm event.

    a. *Hurricane vulnerability zone*. The Hurricane Vulnerability Zone comprises the areas the regional or local hurricane evacuation plan delineates as requiring evacuation. It includes areas requiring evacuation in the event of a 100-year storm or a Category 3-5 storm event. The entire PJA is located in the Hurricane Vulnerability Zone.

    b. *Number of persons requiring evacuation, hurricane shelter and shelter spaces available*. There are no residential areas in the PJA. Thus, there are no persons requiring an evacuation shelter. Port personnel, such as employees of the Seaport Engineering & Facilities Maintenance Division (SEFM), Public Safety, Administration, and other divisions of the PED, must evacuate following the securing of the premises in accordance with the Port Everglades Hurricane Procedure & General Disaster Plan & Continuity of Operations Manual, revised April 20, 2011. Essential Port personnel are required to remain on standby at their homes during a storm event, while Public Safety personnel coordinate operations at the Broward County Emergency Operations Center in accordance with the Broward County Emergency Operations Plan and the above-referenced Port Everglades Hurricane Procedure & General Disaster Plan & Continuity of Operations Manual.

    c. *Evacuation routes, transportation, and hazard constraints*. Evacuation routes are those routes designated by county civil defense authorities or the regional evacuation plan for the movement of persons to safety in the event of a

hurricane. Eller Drive, which directly connects the Port with the Florida Intrastate Highway System (FIHS), serves as the primary evacuation route in the PJA. The eastern terminus of I-595 begins at Eller Drive, providing direct access to I-95, I-75, and Florida's Turnpike. The secondary evacuation route is Spangler Drive/SR 84, which connects with U.S. 1 and I-95.

The primary transportation constraint on evacuation routes is the volume-to-capacity ratio on the internal and external roadway system; the widening of Eller Drive has helped reduce this constraint on the internal system. The primary hazard constraints on the primary and secondary evacuation routes are the rate and height of flooding caused by the storm tides associated with hurricane storm events.

d. *Evacuation times*. Port personnel are to be evacuated prior to the attainment of flood stage. It is estimated that the securing of Port facilities will be completed at least 12 hours prior to projected landfall. In addition, the Harbormaster will strongly advise and recommend that all vessels in port leave well in advance of the approaching hurricane; however, the decision to remain in port or ride out the hurricane at sea rests with a vessel's master. Vessels remaining in port must comply with the USCG's requirements, as listed in their Hurricane and Natural Disaster Plan. Requests for berths approximately 24 hours prior to the hurricane's anticipated arrival are handled on a case-by-case basis.

2. Post-disaster redevelopment. Port Everglades provides essential transportation and cargo storage/distribution services to the South Florida region and serves as a primary facility for the collection, storage, and distribution of materials necessary for regional post-disaster redevelopment following a major storm event. It is expected that any damaged port facilities will be rapidly reconstructed to conditions that existed prior to the hurricane.

   a. *Existing and proposed uses in coastal high-hazard areas*. The Coastal High-Hazard Area refers to the evacuation zone for a Category 1/2 hurricane. According to the "Flood Plains, Flood-Prone Areas and Coastal High-Hazard Area" Map in the Broward County Plan Use Plan Map Series, all existing and proposed uses in the PJA would be affected by a Category 1 or 2 storm event, requiring implementation of the Port Everglades Hurricane Procedure & General Disaster Plan & Continuity of Operations Manual upon the issuance of a hurricane watch by the National Hurricane Center and the Broward County Emergency Management Division.

b. *Structures with a history of repeated damage.* No structures in the PJA with a history of repeated damage have been identified.

c. *Inventory of infrastructure in Coastal High-Hazard Area.* All Port uses and infrastructure shown on Figure P-3 are located in the Coastal High Hazard Area.

G. Inventory of Beach and Dune Systems

Beach and dune systems provide habitat for various terrestrial vegetation and animal species. The beach and dune systems within the Port Everglades jurisdictional area are limited to Dr. Von D. Mizell-Eula Johnson State Park, which is situated on the peninsula that separates Port Everglades from the Atlantic Ocean. It consists of maritime hammock, coastal strand, and beach dune systems, the latter of which is used as an active nesting area for sea turtles. The Dr. Von D. Mizell-Eula Johnson State Park includes an approximately 150-foot-wide beachfront with no well-formed dune structures. This broad, flat beach is popular for swimming and sunning. When driving on the beach was banned, sand dunes, anchored by sea oats and other rare beach plants, did, however, begin to reform. FDEP, together with the Environmental Protection and Community Resilience Division of the Broward County EPGMD, are directly responsible for the maintenance of the beach areas in the PJA.

1. Past trends in erosion and accretion. Sand material has historically been accreting on the north side of the Port Everglades Entrance Channel jetties, with erosion occurring on the south side of the jetties. Sand also accumulates along the south side of the north jetty and a western section of the Entrance Channel.

2. Shore protection structures. Shore protection structures in the PJA include the concrete and steel bulkheads that form the ship berths and marginal wharfs, the riprap shoreline that protects the mangrove forest bordering the Southport Turning Notch, and the rock jetties that protect the Port Everglades Entrance Channel.

3. Effects of shore protection structures. The jetties lining the Port's Entrance Channel are composed of large boulders that help maintain channel project depth. Due to the prevailing southerly littoral current, sand material is deposited on the north side of the jetties, with scouring occurring on the south side of the jetties. The riprap that lines the Southport Turning Notch prevents erosion in the adjacent mangrove forest by breaking the wave action from tides, winds, and passing ships; prevents flotsam and jetsam from collecting in the mangrove area; and provides additional habitat for aquatic species.

4. Identification of existing and potential beach nourishment areas. The beach area in the Dr. Von D. Mizell-Eula Johnson State Park, located south of the Entrance Channel jetties, experiences historic erosion due to the location of the jetties and the effect of the

southerly littoral current. This area continues to be a location for potential beach renourishment. For example, in recent years, a rock spur was built from the Port's south jetty and two rock T-head groins were built just south of the jetty to accommodate beach fill. These structures serve to stabilize the beach at that very dynamic location without adverse down drift impacts. About 50,000 cubic yards of sand were removed from a shoal that was beginning to obstruct the navigation channel, and the material was placed on the beach at the park. Port Everglades, which once owned the northern portion of the Dr. Von D. Mizell-Eula Johnson State Park, donated this land to the State of Florida; therefore, the PED does not maintain the beach areas in the PJA. The Environmental Protection and Community Resilience Division of the EPGMD provides for beach nourishment together with the FDEP and the ACOE. Historic dredging information indicates that maintenance dredging material from the Port Everglades Harbor and channels is not suitable for beach renourishment.

H. Inventory of Public Access Facilities

Since the events of September 11, 2001, public access to Port Everglades is restricted, based on state and federal statutes.

1. Public access points. The beaches in the PJA, which are located in the Dr. Von D. Mizell-Eula Johnson State Park, are accessible by the public. These beaches have guarded swimming areas, public rest rooms and showers, picnic facilities, public dockage and boat ramps, and an Environmental Education Center, built by the Port to promote environmental awareness. As the Port is no longer an unrestricted open port, those wishing to access the Port must enter by one of four security checkpoints -- located on Eller Drive, Spangler Boulevard, Eisenhower Boulevard and McIntosh Road -- and show required identification. The locations of these checkpoints are shown in Figure P-9.

2. Private property open to public. In addition to the four Port-operated security checkpoints, shown in Figure P-9, individual security gates at private or leased terminals in Midport and Southport control access to these properties on the Port. The Convention Center is located outside the restricted zone, meaning the public can access this facility without showing identification. The PED does provide opportunities for controlled public access to the Port, subject to advance registration, during Fleet Week, when Navy ships are berthed at the Port, and for other special events.

3. Parking facilities. The PED maintains several parking facilities. The 2,000-space Midport parking garage, which serves the passenger terminals at Midport. A new 1,818 space parking garage is currently under construction in Northport on the site of a former surface parking lot. Once completed in 2020, this new garage will serve as the principal

parking area for cruise passengers using Terminals 2 and 4. A large section of the existing Northport garage will be demolished to free up space for the planned Convention Center expansion and new hotel. The remainder of the Northport parking garage will become the responsibility of the Broward County Convention Center. Surface parking is also provided at Port-owned buildings for use by Port staff, tenants, and visitors to the Port for business purposes; these buildings include the Port Administration Building, the Public Safety Building, the Port Maintenance Division facility, the Amman Building, the Seabulk Building, the Foreign-Trade Zone, and various passenger terminals, such as Cruise Terminal 18, which has approximately 1,000 spaces. Parking is also provided for the longshoremen/stevedores serving the cruise and cargo vessels.

4. Coastal roads and facilities providing scenic overlooks. Several Port roadways, including Eller Drive, Eisenhower Boulevard, SE 19th Avenue, and SE 32 Street, provide scenic views of the working harbor, but these are no longer available for unrestricted public access. Marinelli Gardens, located on the north side of Eller Drive, just west of the FPL Discharge Canal, includes parking and picnic tables along the canal. North Ocean Drive, located in the Dr. Von D. Mizell-Eula Johnson State Park, provides access to the oceanfront beaches, with overlooks of the Port, the Intracoastal Waterway, and Whiskey Creek. A paved, lighted jetty at the north end of the park provides excellent fishing and an opportunity to view ships arriving at and departing from the Port. On the eastern shore of the Intracoastal Waterway, four marina-type facilities are operated by governmental and educational agencies. A boat-launching ramp/dock is maintained in Dr. Von D. Mizell-Eula Johnson State Park for transient park visitors. In addition, the U.S. Coast Guard, the U.S. Navy, and Nova Southeastern University operate facilities for the exclusive use of their vessels. The only boat ramp in the PJA is located in the Dr. Von D. Mizell-Eula Johnson State Park. This ramp is part of the park's public dock facility. The only public dock in the PJA is also located in the Dr. Von D. Mizell-Eula Johnson State Park.

5. Marinas, boat ramps, and public docks. The Broward Sheriff's Office maintains a floating dock in the FPL Discharge Canal for moving their harbor patrol boats and the Florida Marine Patrol operates a dry storage and repair facility adjacent to the canal. The Port also permits the temporary lay-in of large privately-owned yachts at several berths.

6. Fishing areas and piers. Port Everglades is designated as a manatee sanctuary by state statute. As such, fishing in the PJA is prohibited except in the Dr. Von D. Mizell-Eula Johnson State Park and along the south jetty of the Port's Entrance Channel. There are

no fishing piers in the PJA; the nearest fishing pier is located in the City of Dania Beach, adjacent to the southern portion of the park, which is outside of the PJA.

7. Open space. The only beachfront open space in the PJA is located in the Dr. Von D. Mizell-Eula Johnson State Park, which is managed by the FDEP.

I. Inventory of Infrastructure

1. Roadways. Figure P-9 identifies the roadways in the PJA and their connections to the regional highway network. The Port is located at the eastern terminus of I-595, which connects with I-95, Florida's Turnpike, and I-75 -- all components of the state's Strategic Intermodal System (SIS) -- as well as with other major arterials such as U.S. 1, U.S. 441 (SR 7), and SR 84. U.S. 1 also connects the Port with Fort Lauderdale-Hollywood Internaitonal Airport (FLL), just a few minutes away. From the regional highway network, Port Everglades has three points of access:

    a. *Eller Drive, which connects with I-595.* This southernmost east-west access to the Port is the road most traveled by trucks headed to and from the Southport container facility and by buses and passenger vehicles headed to and from the Port's Midport cruise terminals.

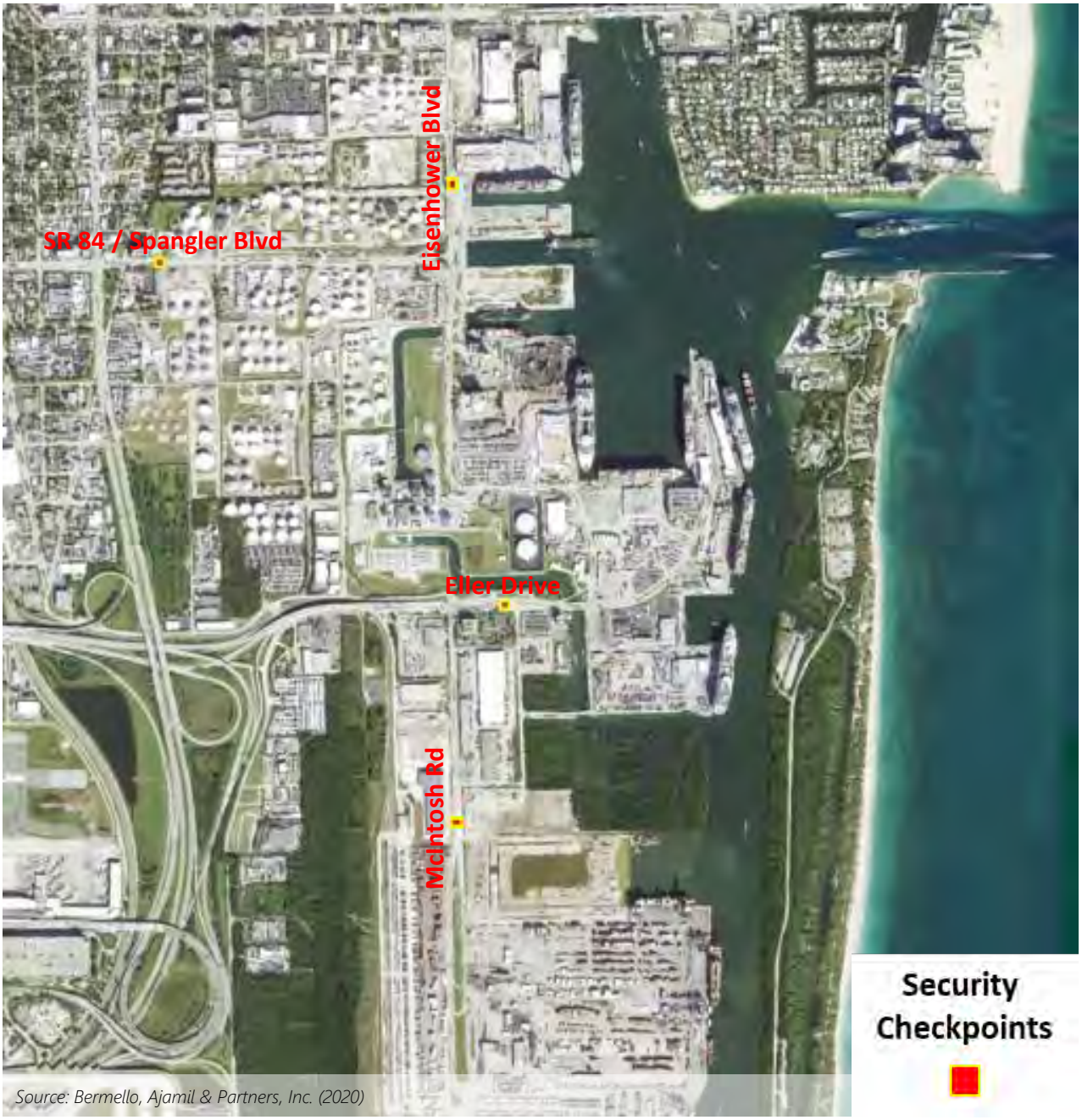
    b. *Spangler Boulevard, which is a continuation of SR 84, and enters the Port from the west, just to the north of the Midport area.*

    c. *Eisenhower Boulevard, which runs north-south, provides access to the Port from its northernmost edge, SE 17th Street/SR A1A.* As the main entrance to Northport, this road serves the Convention Center, the Northport parking garage, and two of the Port's cruise terminals. In addition to Eller Drive, Eisenhower Boulevard, and Spangler Boulevard, internal roads serving various terminals and other Port facilities include SE 14th Avenue, SE 19th Avenue, McIntosh Road, SE 20th Street, SE 28th Street, SE 18th Avenue, SE 22 Street, SE 25th Street, SE 26th Street, SE 30th Street, SE 32nd Street, SE 35th Street, and SE 36th Street. Ocean Drive, located in Dr. Von D. Mizell-Eula Johnson State Park provides access to beaches, shoreline parking, and marine facilities operated by the USCG, the U.S. Navy, and Nova Southeastern University.

2. Bridges or causeways. The 17th Street Causeway Bridge, which borders the PJA on the north, is a drawbridge spanning the Intracoastal Waterway. The original 1950s bridge, which had a 25-foot clearance, has been rebuilt. The new bridge opened in April 2002. This new structure includes wider traffic lanes, bicycle lanes, and a 55-foot vertical clearance to reduce the frequency of opening the span for passing boats. In the PJA,

a PED-maintained fixed bridge along Eller Drive spans the FPL Discharge Canal in Midport. A second bridge has been built over the FPL Discharge Canal to connect the dockside of the Midport area with the backlands west of the canal in Southport; this bridge eliminates the need for container traffic traveling between the two locations to leave and then reenter through the security area. A fixed bridge maintained by the state is located in Dr. Von D. Mizell-Eula Johnson State Park along Ocean Drive, the main park roadway that spans Whiskey Creek.

Figure P-9: Existing Roadways, Ingress and Egress Points



Source: Bermello, Ajamil & Partners, Inc. (2020)

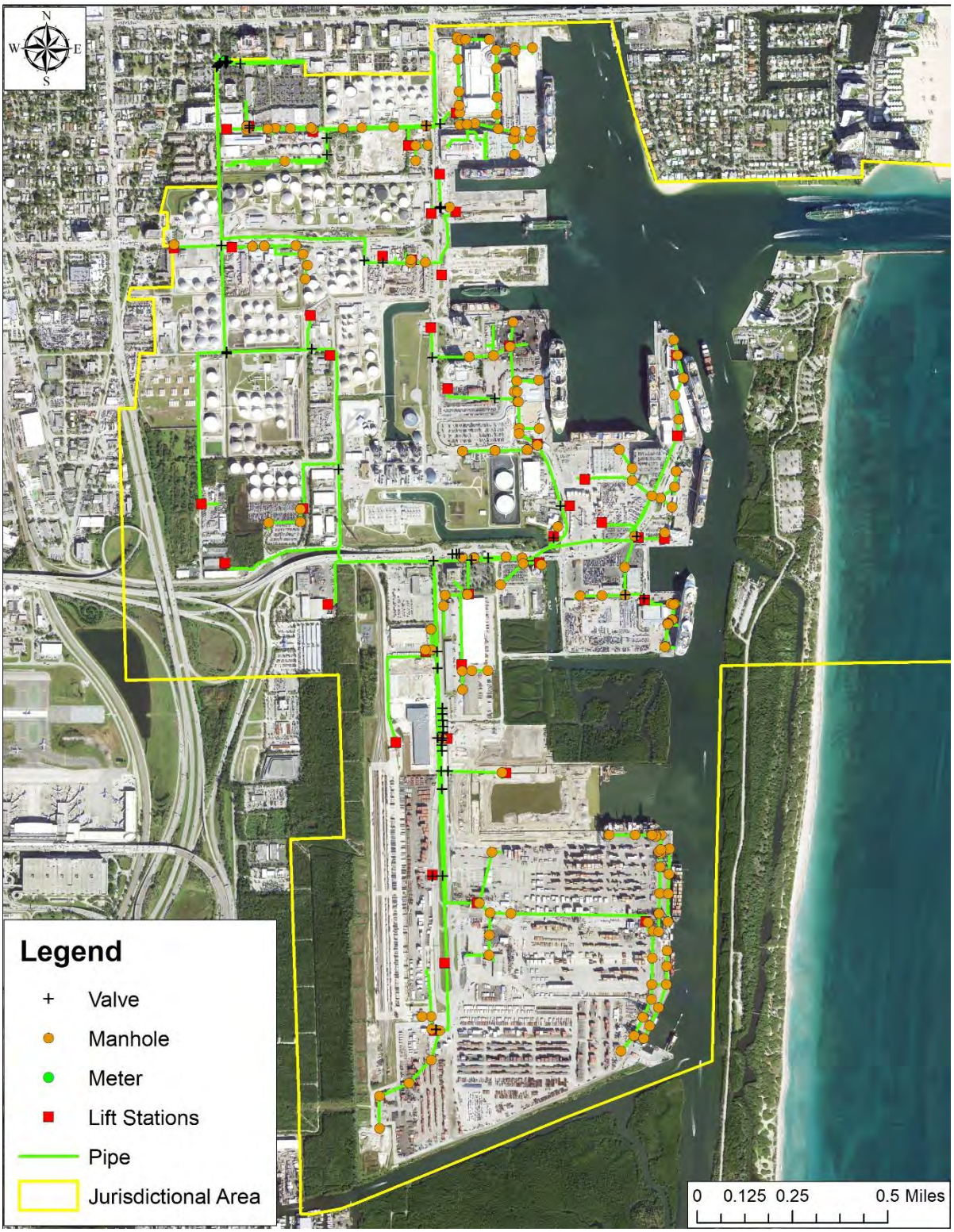
3. Sanitary sewer facilities. The PED owns and operates the sanitary sewer transmission lines and lift stations in the PJA; these are maintained by SEFM , with the exception of the property located in the Dr. Von D. Mizell-Eula Johnson State Park, which is served by an on-site treatment facility. The locations of these sanitary sewer facilities are illustrated in Figure P-10. In accordance with an adopted Large User Agreement between the PED and the City of Fort Lauderdale, the City treats the sewage at the G.T. Lohmeyer Plant, which has an operating capacity of 55.7 million gallons per day (mgd) maximum 3-month average daily flow. Approximately 20 percent of the PJA is currently not served by wastewater collection or advanced treatment systems. These areas are primarily located in the petroleum tank farms, the I-595 right-of-way, and open space and recreation uses. The non-serviced areas rely on temporary facilities or small septic tank systems.

4. Potable water facilities. The PED owns and operates the potable water transmission lines in the PJA. These lines are maintained by the SEFM, with the exception of the property located in the Dr. Von D. Mizell-Eula Johnson State Park. The locations of these lines are illustrated on Figure P-11. In accordance with an adopted Large User Agreement between the Port and the City of Fort Lauderdale, the City supplies potable water to the Port. Water is delivered from either the Peele-Dixie or the Fiveash Water Treatment Plant and enters the Port's distribution system through five master meters. The meters and maximum delivery capacity are located at S.E. 17th Street (19,000 gallons per day (gpd)), S.E. 20th Street (271,000 gpd), S.E. 24th Street (103,000 gpd), S.E. 28th Street (207,000 gpd), and Eller Drive (835,000 gpd).

5. Man-made drainage facilities. Port Everglades owns and maintains the man-made drainage facilities in the PJA. This system is maintained in accordance with a National Pollution Discharge Elimination System (NPDES) permit in cooperation with the FDEP as delegated by the U.S. Environmental Protection Agency (EPA). There are two types of drainage systems in the PJA: one is piped and the other uses surface water discharge through ditches and swales. Drainage facilities in the PJA are identified in Figure P-12.

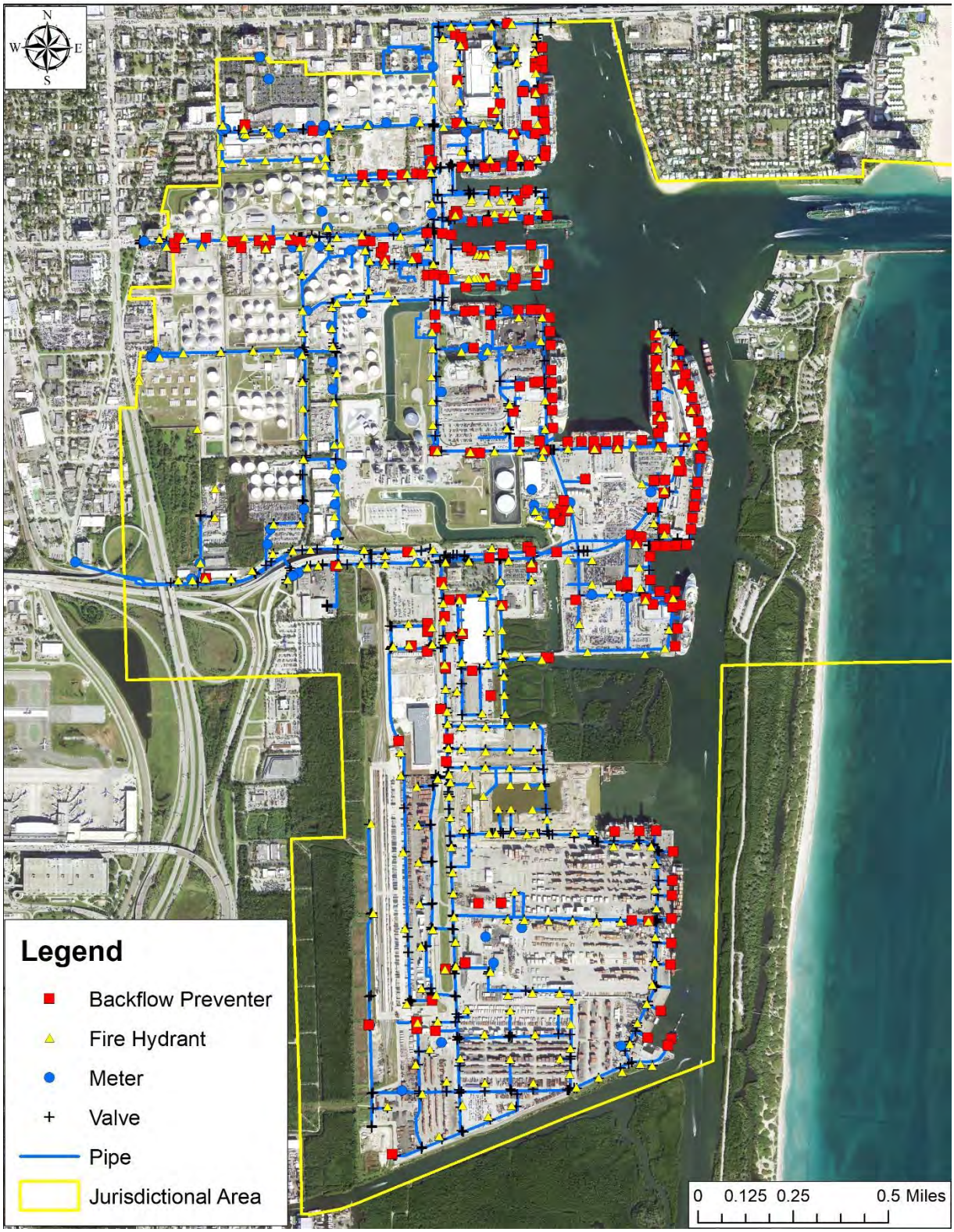
6. Solid waste facilities. The Port Everglades Public Works section hauls away a major portion of the solid waste generated by the Port. More than a dozen firms are authorized to haul waste for private owners and operators in the PJA. The solid waste collected in dumpsters is transferred to the Southwest Regional Landfill or the South County Resource Recovery Facility. The wastes generated by the foreign-flag ships that call at the Port are disposed of by several privately contracted haulers. The respective cruise lines contract with several franchised companies for the pick-up and disposal of the waste from their ships, which is hauled away to various locations out of the county.

Figure P-10: Sanitary Sewer Facilities



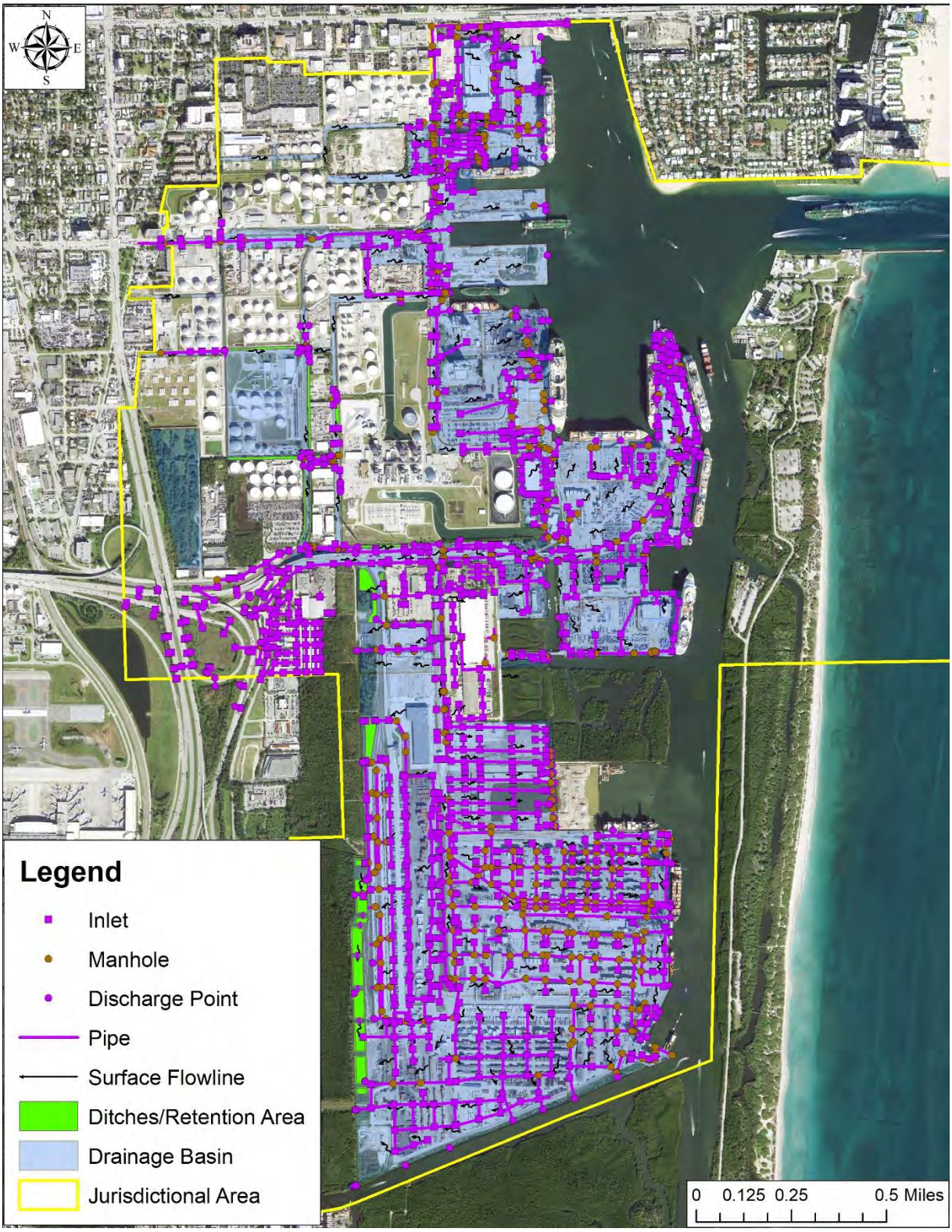
Source: SEFM Division (2020)

Figure P-11: Potable Water Facilities



Source: SEFM Division (2020)

Figure P-12: Drainage Facilities (Stormwater)



Source: SEFM Division (2020)

7. Railroad facilities. Port Everglades is served by an internal railroad network that is owned by the PED and maintained by the Florida East Coast (FEC) Railway, per an existing agreement. As Figure P-13 shows, the main rail line accesses the Port along Eller Drive then turns north to the west of SE 14th Avenue. The main rail line also branches to the south and passes underneath the I-595 overpass to access the on-port, near-dock ICTF, which was constructed in 2014. The ICTF, which increases the efficiency of inland cargo logistics for both imports and exports and substantially reduces Port-related truck traffic, is also shown in Figure P-13, The FEC maintains a separate off-port rail cargo yard west of Andrews Avenue and south of SR 84, outside the PJA. This off-port yard has trailer-on-flat-car (TOFC) and container-on-flat-car (COFC) capability, but the vast majority of containers and trailers originating at or destined for Port Everglades are handled at the on-Port ICTF.

J. Inventory of Deepwater Port Factors

1. Economic base. Port Everglades plays a vital role in the South Florida region and as of 2019 generated an estimated $32 billion in total business activity each year. This activity supports more than 219,000 jobs statewide and contributes $1.13 billion annually in state and local taxes. Table P-4 illustrates the Port's waterborne commerce activity between 2010 and 2019. Data for 2019 are unaudited. The Port is the third busiest cruise homeport in the world, with approximately 3.9 million revenue passengers handled in FY2019 (October-September). The Port ranks 12th among mainland U.S. container ports, moving 1.05 million TEUs (twenty-foot equivalent container units) in FY2019. The Port also supplies a 12-county region with gasoline, fuel oil, and aviation fuel. Other commodities handled by the Port include new and used automobiles, cement, steel coils and rebar, aggregates, and gypsum. Trucks, trailers, tractors, buses, and yachts and other boats are also shipped through the Port.

2. Landside transportation needed to support Port Everglades. Figure P-2, shown previously, identifies the major transportation corridors that serve Port Everglades. Figure P-9, also shown previously, shows the Port's four ingress and egress points for motorized traffic. These points include Eller Drive at I-595, Spangler Boulevard/SR 84 at U.S. 1, and Eisenhower Boulevard at SE 17th Street/SR A1A, which directly connect the Port to the FIHS and SIS. The eastern terminus of I-595 within the PJA provides ingress and egress at Eller Drive. I-595 intersects with I-95, Florida's Turnpike, and I-75 to the west of the PJA. Spangler Boulevard, which becomes SR 84 at U.S. 1, intersecting with I-95 to the west of the PJA, provides a secondary access to the FIHS/SIS.

3. In-water facilities. The in-water facilities at Port Everglades, including the Port's three slips and thirty-five primary berths, several of which have Ro/Ro ramps, are shown in Figure P-7 (see Part II.A.3). The Port has more than 25,000 lineal feet of bulkhead.

4. Maintenance of in-water facilities. The PED is responsible for maintaining project depths within 100 feet of the bulkheads, within all slips, within the last 1,000 feet of the Intracoastal Waterway between the "knuckle" or curve at Midport to the Dania Cut-Off Canal, and within the southern extension of the main turning basin. The ACOE is responsible for maintaining the project depths in the remainder of the PJA. The Port conducts depth soundings to monitor any depth changes, which may be caused by siltation or propeller backwash. Port Everglades Harbor has not experienced a need for frequent maintenance dredging activities; however, the Port does require periodic depth maintenance in Slips 1, 2, and 3.

Source: Cruise Industry News (https://www.cruiseindustrynews.com/cruise-news/20143-port-everglades-excels-in-advanced-terminals.html)

Figure P-13: Rail Facilities Serving Port Everglades

Source: Bermello, Ajamil & Partners, Inc. (2020)

Table P-4: Waterborne Commerce Report

Port Everglades Waterborne Commerce Chart for the Ten Fiscal Years 2019 through 2010 (Unaudited)

FISCAL YEAR	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Operating Revenue [1]	$ 170,744,938	$ 167,996,115	$ 161,733,028	$ 162,596,496	$ 153,450,795	$ 153,193,953	$ 146,824,451	$ 142,931,312	$ 139,177,090	$ 124,653,452
Expenses	$ 105,753,126	$ 103,969,738	$ 88,572,056	$ 83,269,230	$ 79,844,421	$ 79,416,801	$ 74,937,974	$ 72,146,510	$ 73,405,360	$ 73,950,966
Gross Margin	$ 64,991,812	$ 64,026,377	$ 73,160,972	$ 79,327,266	$ 73,606,374	$ 73,777,152	$ 71,886,477	$ 70,784,802	$ 65,771,730	$ 50,702,486
TOTAL WATERBORNE OPERATING REVENUE	**$ 142,020,889**	**$ 140,916,169**	**$ 134,172,097**	**$ 135,185,504**	**$ 127,584,116**	**$ 128,432,403**	**$ 125,866,644**	**$ 122,018,332**	**$ 118,021,876**	**$ 103,312,041**
Cruise Revenue	$ 59,411,960	$ 59,596,111	$ 55,874,688	$ 55,322,611	$ 52,314,661	$ 59,422,144	$ 62,152,647	$ 60,159,964	$ 56,754,102	$ 45,724,190
Containerized Cargo Revenue	$ 34,525,134	$ 35,182,449	$ 34,155,505	$ 36,703,322	$ 34,846,800	$ 33,019,453	$ 31,670,506	$ 31,321,019	$ 31,669,031	$ 29,473,963
Petroleum Revenue	$ 37,401,760	$ 36,079,665	$ 34,733,092	$ 34,868,376	$ 32,749,162	$ 29,363,512	$ 27,530,193	$ 25,656,369	$ 25,771,885	$ 25,486,535
Bulk Revenue	$ 4,977,258	$ 3,617,433	$ 2,950,864	$ 3,418,513	$ 2,827,139	$ 2,814,888	$ 1,701,037	$ 2,003,023	$ 1,378,516	$ 925,567
Break Bulk Revenue	$ 4,001,558	$ 4,672,385	$ 5,144,529	$ 3,804,004	$ 3,671,874	$ 2,766,579	$ 2,130,060	$ 1,552,505	$ 1,283,503	$ 872,967
Lay-In Revenue [2]	$ 1,703,219	$ 1,768,126	$ 1,313,419	$ 1,068,678	$ 1,174,480	$ 1,045,827	$ 569,175	$ 1,078,394	$ 806,288	$ 467,858
Navy Revenue [2]	$ -	$ -	$ -	$ -	$ -	$ -	$ 113,026	$ 247,058	$ 358,551	$ 360,961
TOTAL SHIP CALLS	**4,016**	**4,214**	**4,029**	**3,959**	**3,768**	**3,970**	**3,850**	**4,000**	**4,183**	**4,079**
Cruise Ships	902	858	846	876	889	877	772	838	969	1,015
Container Ships	2,058	2,120	1,987	1,887	1,680	1,860	1,872	1,867	1,861	1,830
Cargo Ships	270	270	243	222	218	191	188	194	180	113
Petroleum Tankers/Barges	526	572	594	593	581	564	591	618	630	661
Navy/USCG [2]	-	-	-	-	-	-	14	16	26	29
Other (Bunkers/Tugs/Lay-In) [2]	260	394	359	381	400	478	413	467	517	431
TOTAL CRUISE PASSENGERS	**3,892,215**	**3,870,342**	**3,863,662**	**3,826,415**	**3,773,386**	**4,001,354**	**3,600,636**	**3,757,320**	**3,952,843**	**3,674,226**
Single Day	119,153	128,934	125,410	145,866	151,157	121,321	90,909	68,298	288,740	360,018
Multi-Day	3,773,062	3,741,408	3,738,252	3,680,549	3,622,229	3,880,033	3,509,727	3,689,022	3,664,103	3,314,208
TOTAL CONTAINERIZED CARGO (tons) [3,4]	**6,797,694**	**7,365,755**	**7,226,433**	**6,692,690**	**6,693,446**	**6,529,771**	**6,045,588**	**5,944,513**	**5,787,961**	**5,216,831**
TEUs Loaded	766,664	830,082	792,995	739,326	749,876	735,572	663,410	655,046	621,632	552,781
TEUs Total	1,053,078	1,108,465	1,076,912	1,037,226	1,060,507	1,013,344	927,572	923,600	880,999	793,227
TOTAL PETROLEUM (tons) [3,6]	**16,937,058**	**16,704,803**	**16,492,838**	**16,223,101**	**15,743,265**	**15,176,585**	**15,330,225**	**14,830,384**	**15,325,199**	**15,483,856**
Barrels	119,845,866	118,124,294	116,750,337	114,750,795	111,308,509	107,204,234	108,377,053	104,819,812	108,262,845	109,380,437
TOTAL BULK (tons) [3]	**1,544,332**	**1,337,159**	**1,220,147**	**1,428,763**	**1,234,305**	**1,300,532**	**884,908**	**973,191**	**531,572**	**511,467**
Bulk Cement	882,916	655,164	665,307	715,752	702,600	633,530	534,469	613,051	375,050	264,211
Dry Bulk	661,416	681,994	546,325	699,712	517,137	651,566	337,239	346,976	141,189	234,068
Liquid Bulk (Non-petroleum)	-	-	8,515	13,299	14,568	15,436	13,200	13,164	15,333	13,188
TOTAL BREAK BULK (tons) [3, 4, 5]	**295,692**	**327,139**	**362,353**	**336,777**	**330,647**	**266,420**	**191,752**	**120,812**	**94,921**	**69,960**
Steel/Coils/Rebar	151,450	177,384	262,464	246,875	236,722	190,173	116,448	53,055	27,180	15,192
Other Break Bulk	144,242	149,755	99,889	89,902	93,925	76,247	75,304	67,757	67,741	54,768
TOTAL VEHICLES & YACHTS (tons) [3,4,5]	**95,049**	**140,806**	**107,841**	**95,856**	**108,826**	**106,505**	**134,506**	**166,237**	**180,986**	**181,169**
Trucks/Trailers	19,182	18,405	19,490	19,932	26,131	28,662	30,416	28,222	28,112	34,105
Tractors	3,162	5,503	7,717	15,648	27,232	33,019	50,247	76,163	83,337	79,210
Yachts/Boats	62,950	69,774	63,276	52,972	49,514	40,200	43,744	55,198	60,812	54,396
Autos	9,755	46,966	17,198	7,238	5,872	4,180	5,310	4,307	7,253	12,972
Buses	-	158	160	66	77	444	4,789	2,347	1,472	485
TOTAL PURE CAR CARRIER (units)	**50,883**	**28,975**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
TOTAL WATERBORNE COMMERCE (tons) [3]	**25,574,776**	**25,734,855**	**25,301,771**	**24,681,331**	**24,001,663**	**23,273,318**	**22,452,473**	**22,116,275**	**22,087,515**	**21,640,144**

[1] FY 2013 through 2019 Operating Revenue is adjusted to exclude Property Damage Recoveries, considered Non-Operating Revenue.
[2] FY 2014 through 2019 Navy revenue and vessel calls are included in Lay-in Revenue and Other vessel calls respectively.
[3] Tonnage is measured in 2,000-pound short tons.
[4] Vehicles & Yachts tonnage is presented in detail in its own section for informational purposes, but this tonnage is accounted for in other areas above.
[5] Break Bulk tons FY 2018 include 25,237 Pure Car Carrier units, or 37,908 tons of vehicles & yachts and 3,738 Pure Car Carrier units or 6,866 tons of other break bulk cargo.
[6] Petroleum does not include truck and rail volumes. FY 2019 Total Petroleum volume including Truck & Rail is 17,769,607 tons; 125,874,463 barrels.

5. Management of dredged material. Limited upland areas are available to the Port for the disposal of dredged materials. With the exhaustion of possible alternative locations to place fill on land, other than a 6-acre site in the southwest corner of the Port, the EPA and ACOE have suggested ocean dredged material disposal sites (ODMDS). See Figure P-14.

   The existing ODMDS was designated to accommodate dredged material from periodic maintenance events in the Port. However, preliminary results of the modeling conducted in 2009 by the ACOE regarding the capacity of the existing ODMDS indicated that it is insufficient in size to contain the potential volume of dredge material (not to exceed 6.63 million cubic yards) resulting from the planned Port Everglades deepening and widening project. ACOE and EPA worked cooperatively on the development of an Environmental Assessment (EA), supporting the ODMDS expansion. Figure P-14 shows the location of the two proposed alternatives, the existing ODMDS, and the entrance to Port Everglades, approximately 3.25 nautical miles offshore of Fort Lauderdale. Additional needs for expansion include disposal area for other federal projects, the Port Everglades Sand Bypass project, and O&M material from dredging events. In 2014, EPA conducted a post-disposal monitoring survey. Based on the data collected in this survey, EPA plans to modify the Site Management and Monitoring Plan to change the release zone for ocean disposal of dredge material within the disposal site, moved approximately 50 meters to the north to ensure that most of the dredge material is contained within the southern boundary of the disposal site. This survey also showed that no chemical concentrations exceeded EPA's marine water quality criteria, and that the benthic community within and around the site is healthy, despite elevated chemical concentrations in the sediment and the presence of a layer of dredge material.

6. Selection criteria for upland dredge disposal sites. The selection of upland dredge disposal sites in the PJA is to be restricted to Port-owned property. Minimal social, cultural, or other ancillary non-Port-related activities are expected to be impacted by the location and development of an upland dredge disposal site, since Port-owned property is considered industrial in nature and is located within the influence of saltwater groundwater. Upland dredge disposal is, however, expected to be minimal.

7. Hazardous material handling and cleanup. Procedures for the handling and disposal of regulated or hazardous materials found on Port property are included in the Port Tariff. The Port generates small amounts of regulated waste from operations such as container crane maintenance, vehicle maintenance, painting, and other minor activities. The Port provides for the disposal of these materials through a contract with a licensed disposal company to handle these substances.

8. Handling and cleanup of petroleum products. Port Everglades serves as the primary port-of-entry for petroleum products in South Florida. These petroleum products are off-loaded from vessels to privately owned oil tank storage facilities through at-dock manifolds and underground pipelines. Petroleum transfers are carried out by the Port's private sector users in accordance with applicable state and federal regulations. An established notification protocol involving federal and state agencies as well as the Port in the event of a spill.

   Over the years, petroleum product has accidentally been discharged from petroleum facilities, including underground pipelines and storage tanks, forming plumes of free-phase and dissolved petroleum product in the ground and ground water. To facilitate environmental investigation, assessment, and remediation of historical petroleum contamination on Port lands, several of the petroleum terminal operators with facilities located in the PJA have formed a non-profit corporation called the Port Everglades Environmental Corporation (PEECO).

   Additionally, as noted in the Water Quality section under permit FLR05B255, Port Everglades is charged with implementing a comprehensive Stormwater Management Program (SMP) that includes the implementation of a Stormwater Pollution Prevention Plan (SWPPP), with pollution prevention measures, discharge containment, and treatment or removal techniques for petroleum remediation from fuel farms.

Source: RDG Planning & Design (https://rdgusa.com/projects/welcome-to-port-everglades)

Figure P-14: ACOE Ocean Dredge Material Disposal Site – November 2012

Source: U.S. Army Corps of Engineers; depths in meters (2012)

K. Maintenance and Expansion Program

The Port Everglades Master/Vision Plan identifies projects in Northport, Midport, and Southport to meet the anticipated demand in its core business lines: cruise, containerized cargo, liquid bulk (petroleum), dry bulk (crushed rock/aggregates), break-bulk, and automobiles (Ro/Ro). This section presents forecasts for each of these business lines over the 5- and 10-year planning horizons, followed by a summary of the projects proposed to meet the forecasted demand. This information provides the context for the subsequent analysis of Port conditions and impacts in Part IV.

1. Economic Assumptions. The economic assumptions used to identify projected needs at the Port over the 5-, 10-, and 20-year planning horizons were prepared by specialized industry professionals who were part of the consulting team tasked with updating the Port's Master/Vision Plan.

2. Foreseeable Changes in Shipping Technologies.

    a. *Changes in shipping technologies.*

        - Cruise shipping. Due to the unprecedented impact of COVID-19 (the SARS-CoV-2 virus declared a global pandemic by the World Health Organization in early 2020) on the global cruise industry, cruise trends must be bifurcated into long-term trends – those that predate COVID-19 and are expected to resume once the disruption caused by COVID-19 abates – and near-term trends – trends that are a direct result of COVID-19 and will define the industry throughout its multi-year recovery period. Since near-term conditions remain unstable and since the Port Everglades Master/Vision Plan was completed prior to COVID-19, only long-term trends are included here.

          As of the first quarter of 2020 there were 120 new cruise vessels scheduled for delivery between 2020 and 2027. The average passenger capacity of these vessels is 2,113; however, 30 of these newbuilds have a capacity over 4,000 passengers and 21 of them exceed 5,000 passengers. The majority of these ultra-large vessels are being built by cruise lines that currently call Port Everglades, namely Carnival Cruise Line, Princess Cruises and Royal Caribbean International (RCI). This trend toward larger average cruise vessels, particularly in Port Everglades' core service region – the Caribbean – is the predominant trend impacting the Port's long-term cruise business and operations. The attractiveness of Port Everglades as a cruise homeport is confirmed by feedback from cruise

line stakeholders and an assessment of the Port's overall cruise tourism infrastructure (both soft and hard).

The assessment of the Port's future passenger and vessel throughput, berth demand, and utilization for future cruise operations resulted in the following key conclusions:

i. The Port's cruise terminals must be designed to allow for flexibility in terms of cruise line operations, passenger loads and other variables while emphasizing efficiency and guest/user convenience.

ii. Increasingly, new cruise terminals should be highly functional facilities that are designed to allow performance targets to be achieved through a coordinated level of operations by limiting passenger queueing times and minimizing the overall amount of time required to complete the key embarkation and disembarkation processes.

iii. Efficiency of operations and passenger throughput rates become even more important as average vessel sizes increase and as average and peak passenger volumes at the Port continue to grow.

iv. Landside infrastructure, especially ground transportation areas, will need to be as efficient as terminals themselves to ensure smooth overall operations; technology and design will be the main drivers of efficiency.

v. The Port should continue to manage existing berths and work with cruise line partners to increase weekday use, taking the burden off weekend infrastructure requirements.

vi. Much of the Port's growth opportunities will depend on addressing both the quantity and quality of cruise infrastructure requirements for future vessels entering the Caribbean region.

vii. Alternative, secondary uses (i.e. events) of cruise terminals is a common way for many ports to generate incremental revenue to offset the high costs of cruise infrastructure development.

- Cargo shipping. Port Everglades, as part of the South Florida "Gateway to the Americas," conducts significant trade with the countries in Latin America and the Caribbean. In recent years, approximately 90 percent of the Port's container activity was dedicated to this trade with nearly 40

percent of all loaded TEUs being imported from or exported to countries in Central America, including Honduras, Guatemala and Costa Rica. The Port has for many years been among the leading ports for perishables, primarily tropical fruit, in the United States – a trend which continues.

While Latina America and the Caribbean are by far the Port's largest trade regions, the trade lane experiencing the strongest percentage growth during the past decade was Northern Europe followed by the Mediterranean. Asian trade declined significantly between 2010 and 2019. Such trade has been historically dominated by the West Coast ports but events and investments in the past decade, including the expansion of the Panama Canal, have resulted in increased diversification to all-water services of containerized cargo via various U.S. East Coast ports. The vast majority of Asian cargo consumed in Central and South Florida moves either intermodally (i.e. by rail) via the West Coast ports or by truck from the Southeast ports of Savannah and Charleston. This cargo continues to represent an all-water direct service market for the Port to target, though attracting such discretionary cargo is a difficult proposition given the strength of existing supply chains and the deployment of vessels in these trade lanes that are too large for Port Everglades to accommodate both in terms of draft and crane restrictions. To target this market, the Port has pursued and continues to pursue major infrastructure enhancements -- water depth, berths, cranes, storage capacity, and transportation systems -- needed to accommodate ships carrying up to 14,000 TEUs.

East Coast competitors of Florida's seaports have been penetrating the Central and South Florida markets, primarily due to the growth of all-water services. Once the Port's new "big ship" capabilities come online Port Everglades will be in a position to capture incremental cargo as well as organic growth in trade driven by regional population growth.

Latin American and Caribbean Export Market. The South Florida ports -- Everglades, Miami, and Palm Beach -- have historically dominated the Latin American and Caribbean export markets. This domination has been facilitated by the concentration of Latin American- and Caribbean-related businesses located in South Florida, including export distribution and consolidation centers, and a strong local truck market. Free trade agreements with Chile and DR-CAFTA (the Dominican Republic, Belize,

El Salvador, Honduras, Nicaragua, Guatemala, and Costa Rica) strengthen and sustain the Latin American and Caribbean economies that rely on this U.S. export market.

Port Everglades' favorable geographic location makes it an ideal port-of-call for cargo shipping lines serving Latin America and the Caribbean Basin. The Port also serves as a transshipment point for the transfer of containerized cargo between Latin America/Caribbean Basin ports and those in Europe.

Apart from containerized cargo, prior to COVID-19, the Port experienced substantial growth in new automobile imports and exports, with Mexico serving as the principal source market for imports and the U.S. Southeast serving as the principal source market for exports. Once COVID-19 recovery stabilizes it is expected that this will continue to be a growth area for Port Everglades.

The Port Everglades Master/Vision Plan addresses these and other opportunities. Proposed projects in the 5- and 10-year planning periods to develop the Port's container-handling capacity include the expansion of the Southport Turning Notch (already under construction), the addition of six new super post-Panamax ship-to-shore (STS) cranes – three of which are scheduled to be put into service by the first quarter of 2021 – and major improvements to the Southport transportation network, including a new I-595 flyover, realignment of McIntosh Road and the addition of a secondary access point at Griffin Road. to facilitate truck traffic in and out of the container yards.

b. *Changes in port operations*. The federal and state security mandates following the events of 9/11 required the Port to implement significant new measures to protect Port facilities, tenants, users, and the local community from potential threats. The Port has also implemented several "green" initiatives in response to growing concern about global climate change.

FLL Height Restrictions. Port Everglades is uniquely located only about 1.5 miles from FLL. Both the Broward County Aviation Department (BCAD) and the PED have developed master plans that recommend expansions of their respective facilities and operations to meet the projected needs for the airport and seaport services that are vital to the regional economy. Flight arrival and departure patterns from FLL, including the north runway and the new 9,000-foot south

runway which terminates just west of NE 7th Avenue, present constraints on Port cargo activity due to air draft restrictions imposed by the Federal Aviation Administration (FAA). Specifically, the air draft constraints restrict the height of structures, STS cranes and vessels located under the flight paths. In developing the Port Everglades Master/Vision Plan, the PED coordinated extensively with BCAD as to the optimum locations for berthing super Post-Panamax ships expected to call at the Port once the Southport Turning Notch Expansion and harbor deepening and widening projects are completed.

Airport-Seaport Connectivity. A second area of collaboration between the PED and BCAD involves the close link between the seaport and the airport regarding the transport of cruise passengers. Nearly sixty percent of the Port's multi-day cruise passengers arrive via FLL. The majority of these passengers arrive and depart on Saturdays and Sundays, creating the potential for significant congestion, especially as the Port serves more megaships with over 5,000 passengers each, many of whom are from abroad. Passengers currently transfer from the airport to the seaport terminals by buses under contract with the individual cruise lines. Concurrently with the preparation of the 2009 Master/Vision Plan update, the PED and BCAD, in conjunction with the Florida Department of Transportation (FDOT), jointly conducted a Project Development & Environment Study for the Broward County Intermodal Center and Automated People Mover (APM) system, followed by an Environmental Assessment. Since that time both the Port and BCAD have completed additional master plan updates that include the APM and a new County-wide tax funding mechanism was approved by voters in 2019.

While details associated with the final path and ultimate design of the APM remain to be determined, the Port's Master/Vision Plan fully integrates the APM and will coordinate and phase development of individual projects in order to take maximum advantage of this alternative means of transportation.

c. *Estimates of future types and volumes of commodities to be handled.* The Port's markets for containerized cargo, non-containerized cargo (dry bulk/break-bulk/autos), and liquid bulk (petroleum) are fully discussed in Element 2 of the Port Everglades Master/Vision Plan. Specific forecasts for the planning milestones, as prepared by the specialized industry professionals who were part of the consulting team, are summarized below.

    - Containerized cargo. Based on historical containerized cargo volume and interviews with Port Everglades tenants, Martin Associates identified

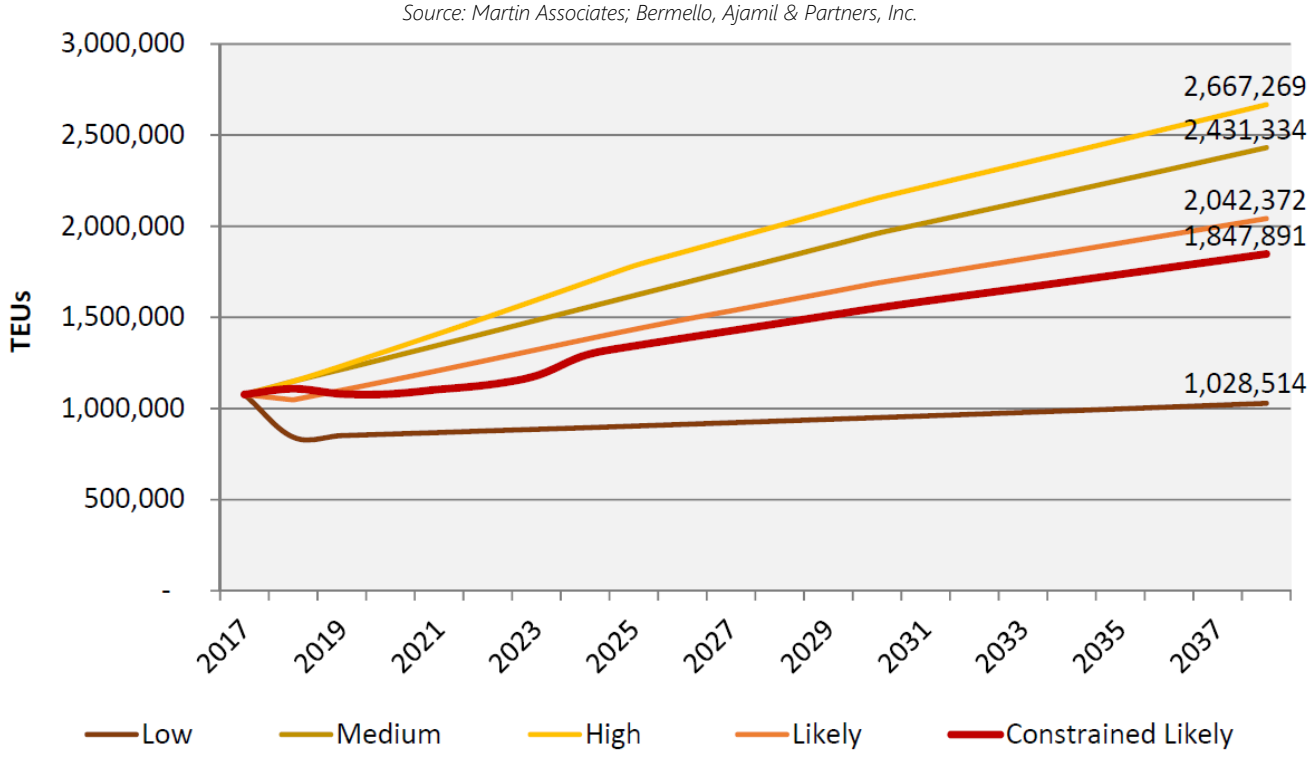
unconstrained Low, Medium, High and Likely growth scenarios for the Port over the 20-year planning period. A fifth Constrained Likely scenario was subsequently developed by Port management to account for operational disruptions expected to result from near-term infrastructure improvements in Southport.

The Low container forecast scenario assumes the near-term loss of a 14-day Central America/South America service and a weekly transatlantic service resulting in a loss of 234,000 total TEUs. Volumes would grow organically from that point over the remaining 20-year planning period but would not reach pre-2018 levels again. This represents a worst-case scenario for the Port. The Medium scenario, or baseline projection, calls for 3.6 percent average annual growth between 2018 and 2038, which compares to a 4.1 percent overall annual growth rate between 2009 and 2017. This scenario assumes that Port Everglades will grow organically in step with regional population growth but will not capture any additional market share or lose any existing ocean carrier services. The High scenario assumes that Port Everglades will gain discretionary market share over a five-year period, adding about 19,000 TEUs per year, until it reaches a 25 percent penetration rate. It is additionally assumed that this incremental volume will grow at the same annual rate as baseline container TEU import throughput at Port Everglades. After the five-year incremental addition of potential market, the total TEUs at Port Everglades will grow at the same average annual rate developed for the Medium scenario. Martin Associates' unconstrained Likely scenario reflects an average between the unconstrained Low, Medium and High scenarios. The Constrained Likely scenario mirrors the unconstrained Likely scenario after 2025 but is lower initially due to impacts associated with ongoing Southport construction.

All five forecasts are shown in Figure P- 15.

Figure P-15: Container Forecast Range

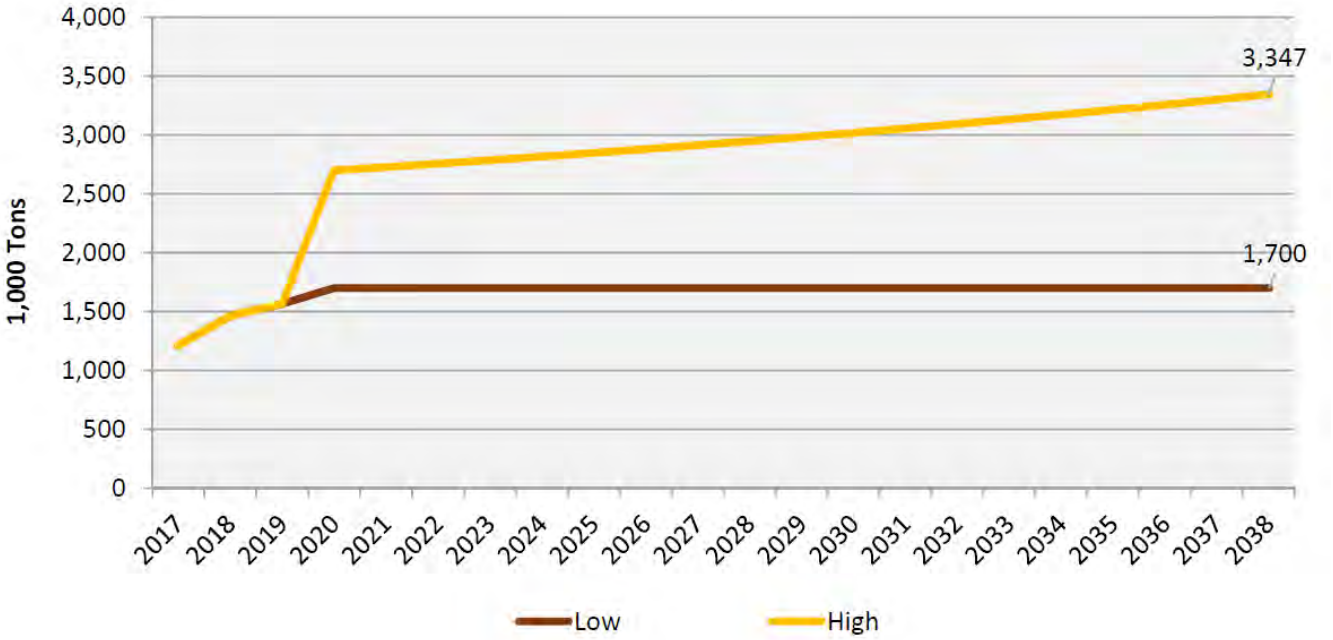
Source: Martin Associates; Bermello, Ajamil & Partners, Inc.



- Non-containerized cargo (dry bulk/break-bulk/autos/miscellaneous). Dry bulk cargo handled at Port Everglades consists of cement and miscellaneous dry bulk, including ash, bauxite, slag and coal. Cement has declined significantly over time – from a high of 2.5 million tons in 2006, to between 600,000 and 1 million tons per year in more recent years. Since 2014, non-cement dry bulk cargos have ranged between 500,000 and 700,000 tons annually. Interviews with the bulk operators at Port Everglades suggest that this volume will likely be sustained over the next several years, due to potential construction activity. In addition, there exists the potential for increased imported limestone to augment the current limestone production sourced from the Lake Belt Region. The Master/Vision Plan does not include a facility for handling this opportunity, however, so it is unlikely to materialize at Port Everglades. Figure P-16a shows Martin Associates' Low and High forecast scenarios for dry bulk. The Low scenario assumes a peak in 2020 followed by flat growth through the remaining years of the planning period. The High scenario adds limestone aggregate import volume to the Low scenario.

Figure P-16a: Dry Bulk Forecast Range

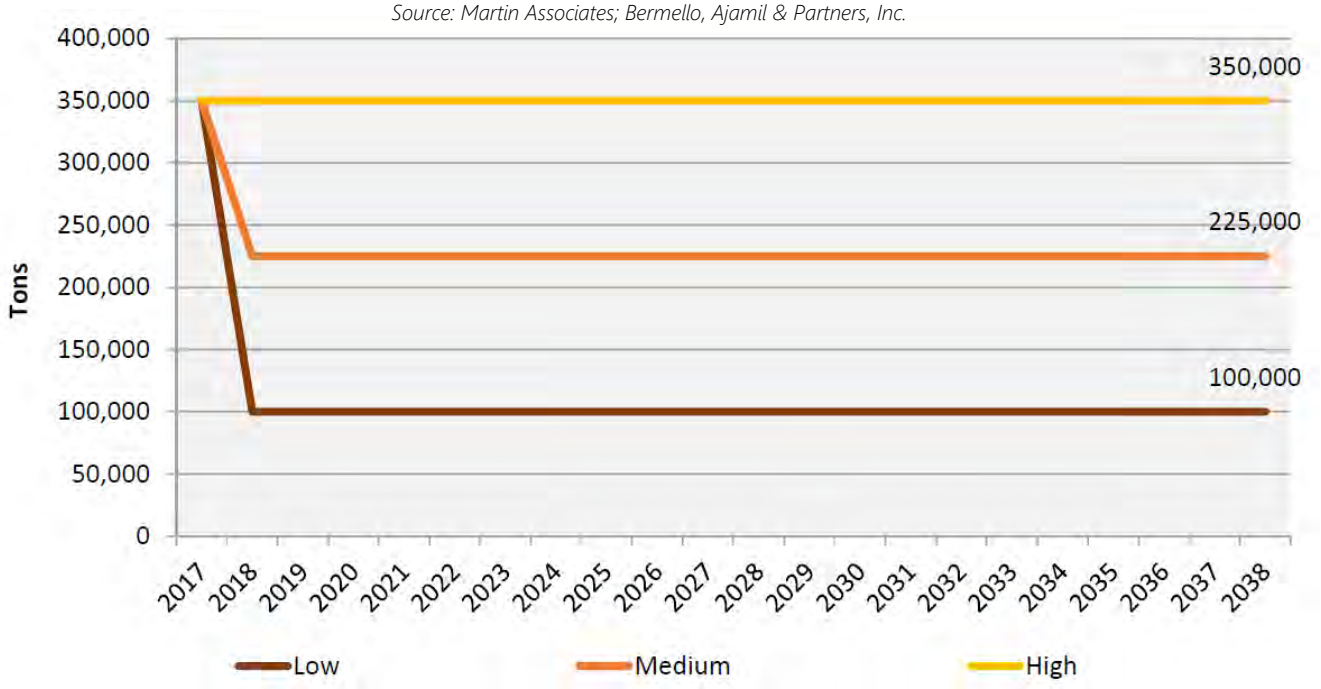
Source: Martin Associates; Bermello, Ajamil & Partners, Inc.



Port Everglades' break-bulk cargo consists mainly of steel products plus some other miscellaneous cargos. This market has been highly inconsistent during the past decade but volume has remained at about 250,000 tons per year since 2015. Driven by steel imports, which are tied to construction and industrial activity, this line of business correlates closely to the general economic cycle, and fluctuates dramatically, depending on development activity within the South Florida region. Three scenarios for break-bulk cargo were used for projection purposes, with all three being unconstrained. The High projection assumes that current steel import volumes are maintained throughout the forecast period, with other break-bulk tonnage remaining at 100,000 tons annually. The Medium scenario assumes that 50 percent of recent steel volume continues to be handled at the Port in the long term. Under the Low scenario, no steel is handled at Port Everglades in the future, but 100,000 tons of other break-bulk products continue to be handled. See Figure P-16b.

Figure P-16b: Break-bulk Forecast Range

Source: Martin Associates; Bermello, Ajamil & Partners, Inc.

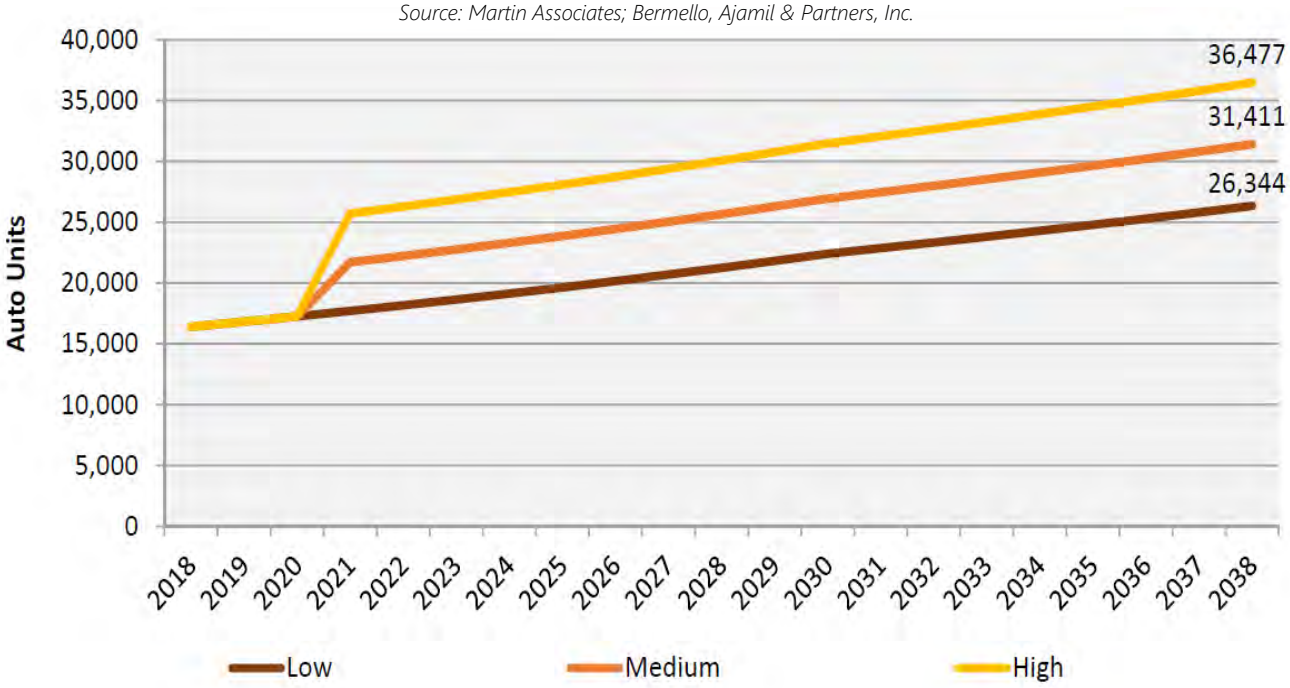


The ability to attract U.S. manufactured export vehicles destined for markets with which Port Everglades has strong trade ties by rail from production facilities in Alabama represents a real and growing market opportunity for Port Everglades. In order to forecast future automobile imports at Port Everglades, the South Florida population growth rate was applied by Martin Associates to the car equivalent import units (CEUs) handled in 2018 at the Port. Based on interviews with the current automobile terminal operator, an additional 8,000 annual import CEUs were added in 2021 for the High scenario. The Low Scenario does not include this incremental volume. Imports are projected to grow consistent with population throughout the remaining forecast period.

For exports, the GDP projections of the Caribbean and countries along South America's East Coast were applied to 2018 volume at Port Everglades. Exports across all countries are projected to grow at 2.5 percent annually. Figure P-16c shows the Low, Medium and High scenarios for this line of business in CEUs. The Medium Scenario is the average of the Low and High scenarios.

Figure P-16c: New Automobile Forecast Range

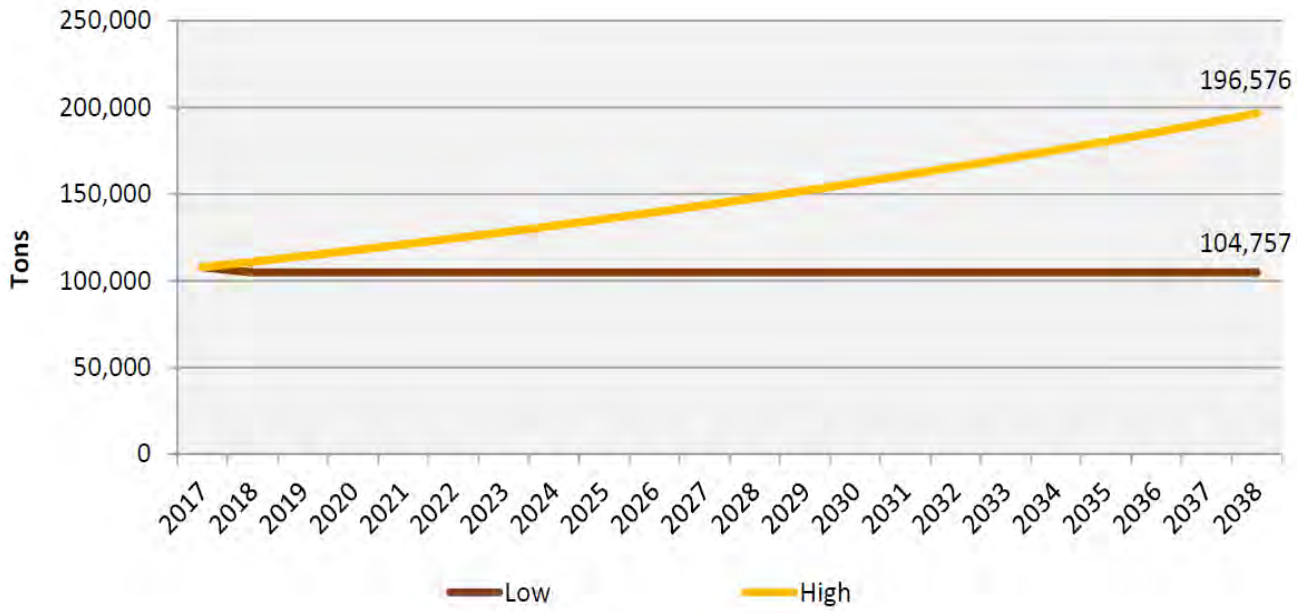
Source: Martin Associates; Bermello, Ajamil & Partners, Inc.



In addition to miscellaneous break-bulk cargos that move to the Caribbean and Central and South America, Port Everglades' north-south services also carry exports of used Ro/Ro cargo, such as tractors, buses, and a variety of yachts for repositioning. Volumes of these cargos have declined significantly, since peaking at nearly 250,000 tons in 2008. Two scenarios were developed to project future used Ro/Ro cargo and yacht volumes. For the Low scenario, average tonnage levels since 2013 have been assumed to remain constant for the entire 20-year forecast period (FY2019-FY2038). The High scenario assumes that the highest level of Ro/Ro tonnage and yachts handled between 2009 and 2017 will be reached again within approximately 30 years, resulting in 20-year volume of just under 200,000 tons. See Figure P-16d.

Figure P-16d: Miscellaneous Cargo Forecast Range

Source: Martin Associates; Bermello, Ajamil & Partners, Inc.



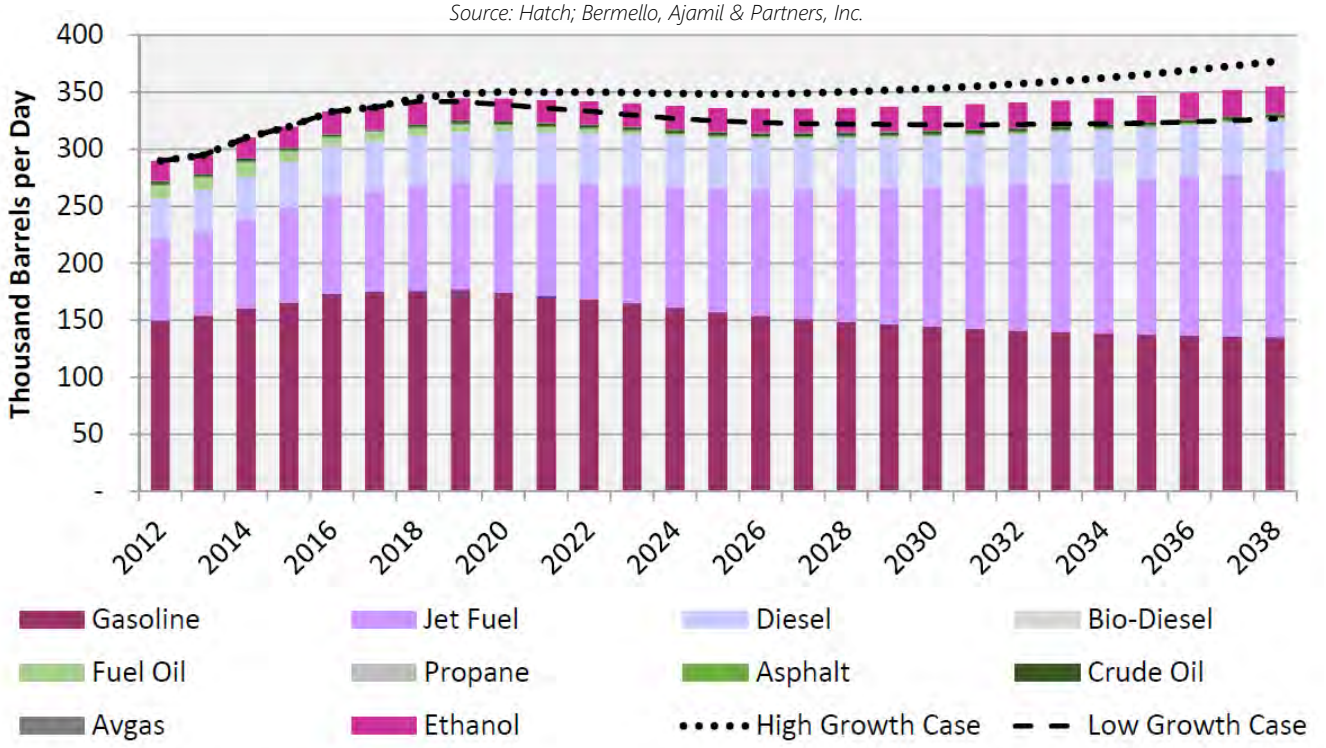
- Liquid bulk cargo. Liquid bulk cargo at the port can be divided into two broad categories – petroleum and non-petroleum – with petroleum comprising the vast majority of annual throughput.

  Total petroleum throughput volumes are expected to grow from over 322,000 barrels per day (BPD) in 2017 to nearly 355,000 BPD by 2038. Gasoline will continue to be the leading product; however, due to more rapid growth in diesel and jet demand, the percentage of throughput attributed to gasoline will decrease during the forecast period from 52 percent of the total in 2018 to 38 percent by 2038. Jet fuel throughput will see strong growth over the planning period, with the percentage of throughput increasing from 27 percent in 2018 to 41 percent in 2038. See Figure P-17a.

  Non-petroleum liquid bulk cargo at Port Everglades, which consists mainly of tallow, has been stable during the past several years, ranging between 12,000 and 15,000 tons annually. In FY2017, the tonnage dropped drastically to 8,500 tons, the lowest annual volume during the past 11 years. For planning and future forecasting purposes, it has been assumed that non-petroleum liquid-bulk volumes will be constant, continuing to average a level that is consistent with the 11-year annual average between FY2006 and FY2017.

Figure P-17: Liquid Bulk Forecast

Source: Hatch; Bermello, Ajamil & Partners, Inc.



d. *Estimates of future cruise passengers to be handled.* Unconstrained Low, Medium and High forecasts for multi-day and daily cruise passengers, as developed by Bermello, Ajamil & Partners, Inc., are illustrated in Figures P-18a and P-18b. As with containerized cargo, Port management developed an additional Constrained Likely scenario for its multi-day cruise business to reflect expected impacts associated with construction and other operational disruptions created as a result of the Port's capital improvement program. Following this Constrained Likely forecast as shown ion Figure P-18a, the number of multi-day cruise revenue passengers embarking and disembarking at the Port is expected to increase steadily from a total of 3.7 million in FY2018 to 6.5 million by the end of the 20-year planning period (2038). As previously noted, this forecast was completed prior to COVID-19, meaning the near-term forecast will be markedly different. However, it is believed that, after a 4-5 year recovery period, the Port's cruise revenue passenger volumes will return to pre-COVID-19 levels. Daily cruise passenger volumes are expected to grow at an annual rate between 1 percent and 5 percent, assuming one or more facility(ies) is identified to support this line of business after 2022. See Figure P-18b.

Figure P-18a: Multi-Day Cruise Revenue Passenger Forecast Range

Source: Bermello, Ajamil & Partners, Inc.

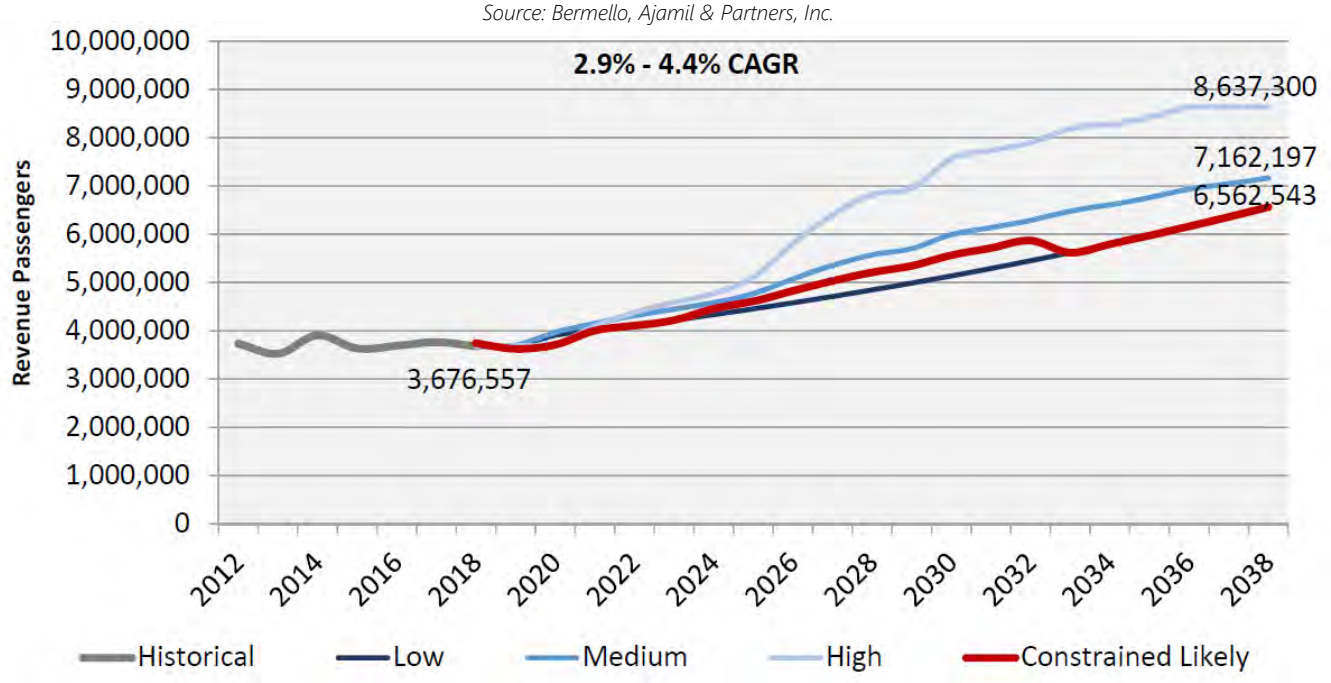
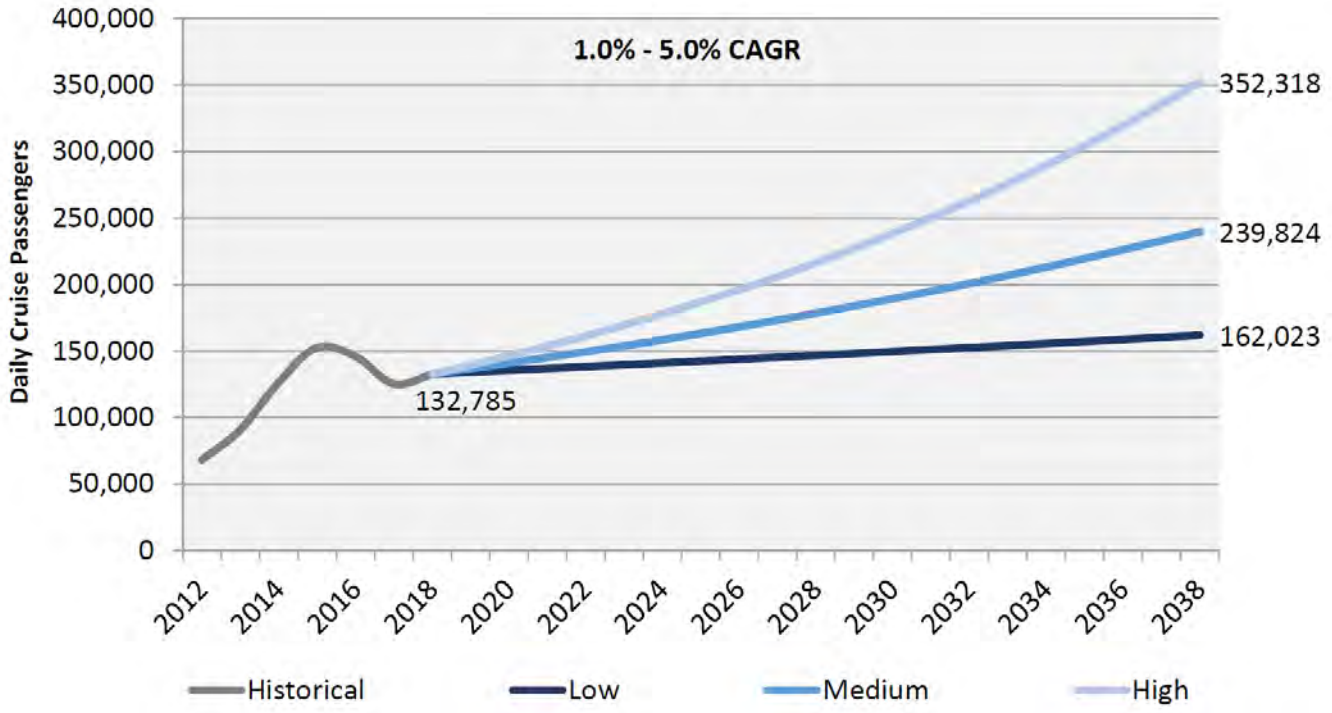


Figure P-18b: Daily Cruise Revenue Passenger Forecast Range

Source: Bermello, Ajamil & Partners, Inc.



e. *Summary of market forecasts for the 5-, 10-, and 20-year planning horizons.* Table P-5 summarizes the market forecasts for each of the Port's business lines at the Plan milestones: 2023, 2028 and 2038.

Table P-5: Summary of Market Forecasts by Business Line at Plan Milestones

Business Line	5-Year Plan	10-Year Plan	20-Year Plan
Containerized Cargo – Constrained Likely (TEUs)	1,180,000	1,467,883	1,847,891
Non-Containerized Cargo (Tons)	1,904,757	1,904,757	1,904,757
Dry Bulk – Low	1,700,000	1,700,000	1,700,000
Break-bulk – Low	100,000	100,000	100,000
Miscellaneous – Low	104,757	104,757	104,757
Automobiles – High (CEUs)	26,870	30,070	36,477
Liquid Bulk Cargo (BPD)	340,000	336,000	355,000
Cruise (Revenue Passengers)	4,356,080	5,355,562	6,724,566
Multi-Day – Constrained Likely	4,216,522	5,208,885	6,562,543
Daily – Low	139,558	146,677	162,023

Source: Bermello, Ajamil & Partners, Inc. (2020)

f. *Required improvements to in-water and on-land facilities.* The needed expansions to in-water and on-land facilities are identified in the 5-Year Master Plan and 10- and 20-year Vision Plans. These expansions are described in detail in Element 3 of the Port Everglades Master/Vision Plan. The 5-year and 10-year plans are summarized in the next section. The 20-year Vision Plan is not included in the Deepwater Port Component Support Document.

g. *Infrastructure required to meet anticipated needs.* The infrastructure required to meet the landside access needs of projected cargo and passenger demands include: the future development of an APM to ease the transfer of passengers between FLL, Port Everglades and the Convention Center; the addition of an open (unsecured) Port Access Road connecting U.S. 1 to SE 17th Street via a route

within the PJA that runs parallel to Spangler Boulevard and Eisenhower Boulevard; the addition of a flyover to connect I595 to McIntosh Road to relieve traffic at the intersection with Eller Drive; the addition of a secondary access point in Southport at the terminus of Griffin Road; the reconfiguration of McIntosh Road in Southport to free up additional contiguous container area; and improvements to NE 7th Avenue to provide an alternate route that mitigates congestion by distributing truck traffic across a significantly greater physical area.

L. Deepwater Port Master/Vision Plan

1. Future port expansion for the initial five-year period.

a. *In-water facilities*. The Port Everglades Master/Vision Plan identifies several in-water projects in Northport, Midport, and Southport to improve capacity, accommodate the projected demand for passengers and cargo in 2023 and 2028, respectively, and address other critical infrastructure needs.

i. Northport in-water facility projects in the 5-year Master Plan include the following:

- Slip 1/Phase 1 (new and reconfigured bulkheads at Berths 9 and 10). The principal liquid bulk project included in the 5-year Master Plan is the excavation of terra firma behind Berths 9 and 10 by approximately 150 feet to the south in order to widen Slip 1 so that it can better accommodate a wider range of future liquid bulk vessels, including larger international as well as coastwise tankers and barges. This projects will require complete replacement of the bulkheads at berths 9 and 10. As part of this project new liquid bulk transfer capabilities are being added to Berths 14-15 in Midport so that liquid bulk operations can shift to those berths during Slip 1 expansion, thereby ensuring continuity of the Port's critical petroleum operations, which account for 100% of South Florida's jet fuel and gasoline supply.

- Repair and replacement of bulkheads at berths 1A, 1B, 2 and 3 as well as the north wall of the Port's entrance channel.

- ACOE design of replacement bulkheads at berths 7, 8 and 8A as part of the Port Everglades deepening and widening project.

ii. Midport in-water facility projects in the 5-year Master Plan include the following:

- Repair and replacement of bulkheads at berths 16-18.
- Repair and replacement of bulkheads at berths 21 and 22.

iii. Southport in-water facility projects in the 5-year Master Plan include the following:

- Southport Turning Notch Expansion. Construction of this project was initiated in 2018 and is expected to continue until 2023. This project will create up to five new cargo berths in Southport and is the largest single construction project in the Port's history. This project is divided into two contract phases. Contract 1, which is currently in progress, covers the waterside expansion work, including excavation, dredging, and bulkhead construction; Contract 2 will cover the related landside work and will begin near the end of the 5-year planning period. A total of 16.5 acres of new mangrove wetlands were previously created and transferred to the State of Florida on an uplands site adjacent to the Turning Notch in exchange for State release of 8.7 acres of the previous Conservation Easement at the west end of the existing Notch.
- ACOE design of replacement bulkhead at berth 32 as part of the Port Everglades deepening and widening project.
- US Coast Guard station relocation as part of the initial phase of the ACOE deepening and widening project. Other in-water work associated with the Port Everglades deepening and widening project – up to and including the majority of dredging work – is expected to occur during the 5-year Master Plan period but it is not currently possible to determine exactly how much of this work will occur before 2023 versus after 2023 given the current project status.

b. Landside facilities.

i. Northport landside projects in the 5-year Master Plan include the following:

- Port Access Road. At Port Everglades, where once the public could pass through the Port to reach local destinations, post-9/11 security mandates eliminated this access. The phased Port Access Road is a concept that has been designed to allow the public to travel between the intersection

at Eisenhower Boulevard and SE 17th Street to U.S. 1 without passing through a Port security gate. Phase 1 of this project shifted the Port's security checkpoint to the south by approximately 1,500 feet. In addition to offering swift, direct access to the Convention Center, Phase 1 construction enabled the Port to retain a security checkpoint on Eisenhower Boulevard, thus continuing to allow cruise passengers and others wishing to enter the Port access from SE 17th Street. Phase 2 comprises the U.S. 1 to SE 17th Street connector road and is in design.

- T2/T4 parking garage. This project, which began construction in 2019, will replace spaces lost as a result of the partial demolition of the existing Convention Center parking structure and will serve both Terminal 2 and Terminal 4 via a modern, indoor climate-controlled people mover/moving sidewalk system. A total of approximately 1,818 new spaces will be available in this structure upon completion in 2020. This new garage will also incorporate critical GTA elements at ground level to support both of the Port's Northport cruise facilities.

- Consolidated maintenance facility. This project calls for developing a new consolidated maintenance campus on approximately 11 acres in Northport, much of which is currently vacant, but some of which is already occupied by various facilities used by the Port's public works staff. This project will consolidate Port maintenance facilities and operations as a means to increase efficiency, reduce waste/lost time and lower operating costs and will also vacate some two dozen smaller satellite facilities in various locations across the Northport, Midport and Southport areas of the Port to create opportunities to consolidate land in those areas in pursuit of higher and better uses that directly support the Port's core revenue-producing lines of business (i.e. cruise and cargo).

ii. Midport landside projects in the 5-year Master Plan include the following:

- Improvements to Cruise Terminals 21. Redevelopment of Terminal 21 in Midport is critical to the Port's near-term and long-term future competitiveness. While it does not increase the Port's berth capacity, it does improve an existing asset that is generally inadequate in size and configuration to meet the needs of current and future generations of cruise vessels. In order to minimize design costs and maximize operational efficiencies, it is envisioned that the proposed redevelopment of Terminal 21 will involve a complete or near-complete tear down and

rebuild. Cruise Terminal 18 Parking Garage. This new facility will add 1,600 structured parking spaces above a passenger intermodal zone to serve the Port's Midport cruise passengers and provide 400 spaces for employee parking.

- Former Dynegy property development. This project comprises development of the former Dynegy property into a new, state-of-the-art rail-served logistics center. It is expected that this new 19-acre parcel will be developed by a private third party with little or no capital contribution from the Port.

- Ro/Ro yard relocation/expansion (Phase 1). The sole non-containerized cargo project included in the 5-year Master Plan is a proposed relocation and expansion of the existing ro-ro facility in Midport from nine acres to 15 acres by 2023.

iii. Southport landside projects in the 5-year Master Plan include the following:

- New STS cranes. A total of six super post-Panamax (SPP) ship-to-shore (STS) cranes are proposed in the 5-year Master Plan as part of the Southport Turning Notch expansion project. Berth capacity specific to containerized cargo depends in part on both crane density (i.e. the number of cranes assigned per vessel call) and crane productivity. Berths with STS cranes available will generally be able to move containers across the berth more rapidly than vessels using ship's gears or truck-mounted cranes. Because of this, given the limited total length of berth available for container operations at Port Everglades, and considering the rapid cascading of larger vessels from major east-west trade lanes into north-south trade lanes it is crucial for Port Everglades to have an appropriate number of STS cranes that are also of sufficient size – including height, reach and lift capacity – to efficiently work a wide range of container vessels. The addition of six SPP STS cranes will help to level the playing field for Port Everglades in terms of containerized cargo infrastructure and, when combined with the new berths created by the Southport Turning Notch expansion project, will enhance the Port's capacity and operational efficiency and so too result in higher future revenues and greater local and regional economic impacts.

- Port Everglades International Logistics Center (ILC) and Phase 9A container yard. The approximately 16-acre PEV ILC, which is funded primarily by private entities, is under construction. This project replaces

the existing Foreign Trade Zone No. 25 (FTZ 25) site at the Port with a new, state-of-the art logistics center that has the capability to absorb all existing FTZ activity while also offering modern warehouse space and associated amenities. Development of the ILC on a formerly undeveloped parcel of land to the west of McIntosh Road also frees up approximately 26 acres of land to the east of McIntosh Road that is adjacent to existing Southport container yard. Once vacant, these 26 acres will be converted to much needed contiguous container yard.

- Auto terminal west. This 100 percent privately-funded third party project is included in the 5-year Master Plan since it is likely to be developed within the same timeframe. Essentially, this is envisioned to be a satellite yard for the ICTF that handles primarily domestic automobile cargo that moves into South Florida from other U.S. states via the FEC railway.

- I-595 Flyover. This critical transportation project would separate Southport traffic, which consists primarily of trucks moving containers into and out of the Port's container terminals and/or the ICTF, from traffic that continues straight into the Midport area via Eller Drive using a multi-lane bi-directional grade separation that links McIntosh Road directly to I-595. A 2019 traffic study concluded that, when combined with additional future Southport transportation improvement projects (i.e. Griffin Road Extension/NE 7th Avenue Improvements, McIntosh Road Realignment, removal of Southport security checkpoints) the I-595 flyover greatly improves truck-related congestion at the intersection of Eller Drive and McIntosh Road while also eliminating most of the eastbound truck queueing that currently occurs at this intersection during peak weekday periods.

Table P-6 shows the capital improvement projects proposed in the 5-year Master Plan by type, location and target start/completion date. Table P-7 summarizes the capital investment required to implement all 22 projects included in the 5-year Master Plan. Figures P-19a and P-19b illustrate the Port's 5-year Master Plan projects and 2023 land use following implementation of the 5-year Master Plan, respectively.

Table P-6: 5-year Master Plan Projects

Location	0-5 Year Projects	Start Year	Completion Year
Northport	T2 / T4 Parking Garage	2018	2020
	Maintenance Facility Consolidation	2019	2023
	Port Access Road	2019	2023
	Slip 1 / Phase 1 (Berths 9 / 10 Bulkheads)	2019	2025
Midport	T21 Redevelopment	2020	2023
	Ro-Ro Yard Relocation / Expansion	2020	2023
Southport	3 SPP STS Cranes	2017	2020
	PEV ILC	2019	2020
	Phase 9A	2018	2022
	STNE	2015	2023
	SP Crane Rail	2015	2023
	3 SPP STS Cranes	2021	2023
Portwide/Other	USACE Deepening & Widening (USCG Relocation)	2019	2026
	Former Dynegy Logistics Development	2020	2023
	Auto Terminal West	2020	2023
	USACE Deepening & Widening	2019	2025
	I-595 Flyover	2021	2025
Bulkheads Replacements/ Improvements	Berths 21 & 22 Bulkheads	2019	2022
	Berths 7, 8, 8A & 32 Bulkheads (USACE Design)	2019	2023
	Entrance Channel North Wall	2020	2024
	Berths 9 & 10 Bulkheads (Slip 1 / Phase 1)	2019	2025
	Berths 1A, 1B, 2, & 3 Bulkheads	2021	2025
	Berths 16-18 Bulkheads	2022	2026

Source: Bermello, Ajamil & Partners, Inc. (2018)

Table P-7: 5-year Master Plan Investment (millions)

Business Line	Port Investment	Private/Third Party Investment	Total Investment
Containerized Cargo	$508	$200	**$708**
Non-Containerized Cargo (including Ro/Ro)	$10	-	**$10**
Liquid Bulk	$92	$49	**$141**
Parking	$112	-	**$112**
Cruise	$127	$50	**$197**
Real Estate	-	-	-
Portwide/Other	$104	$453	**$557**
TOTAL	**$953**	**$771**	**$1,724**

Source: Bermello, Ajamil & Partners, Inc.

Figure P-19a: 5-year Master Plan Projects

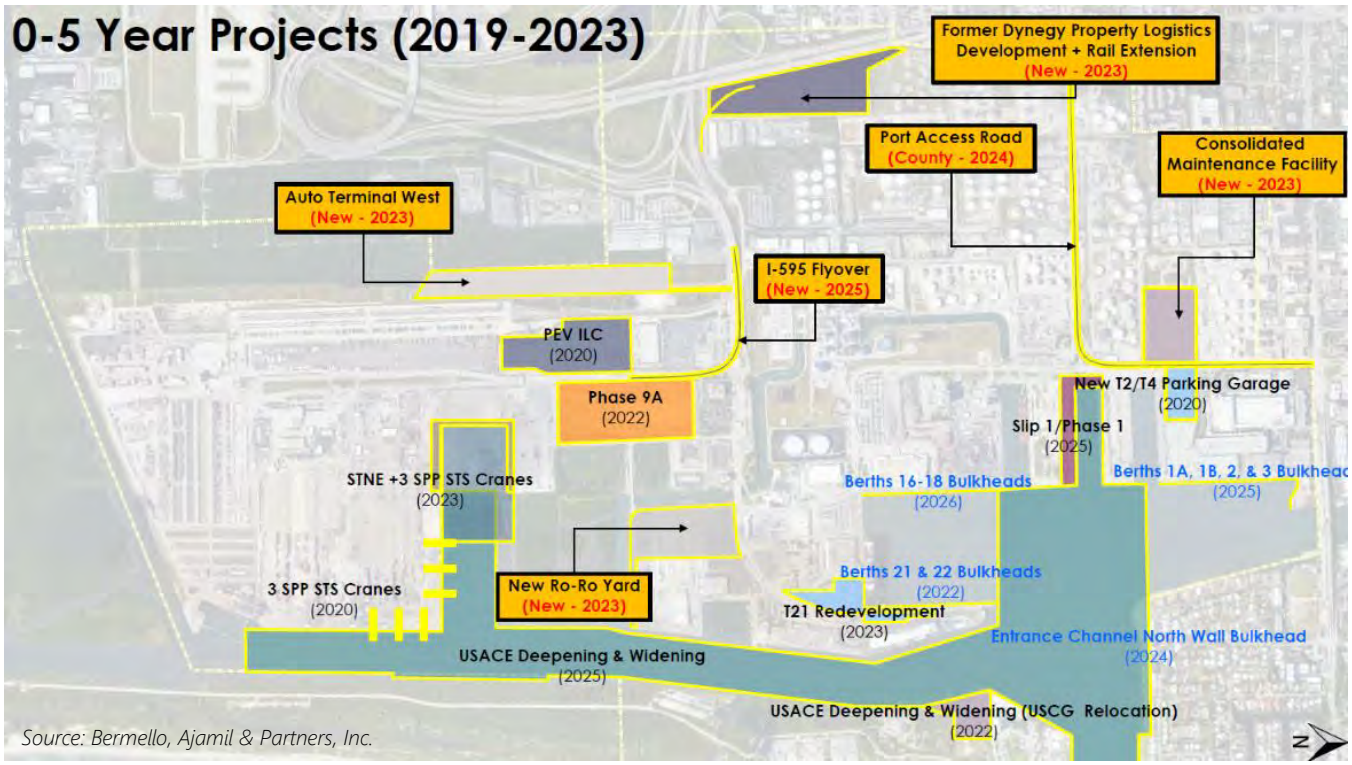
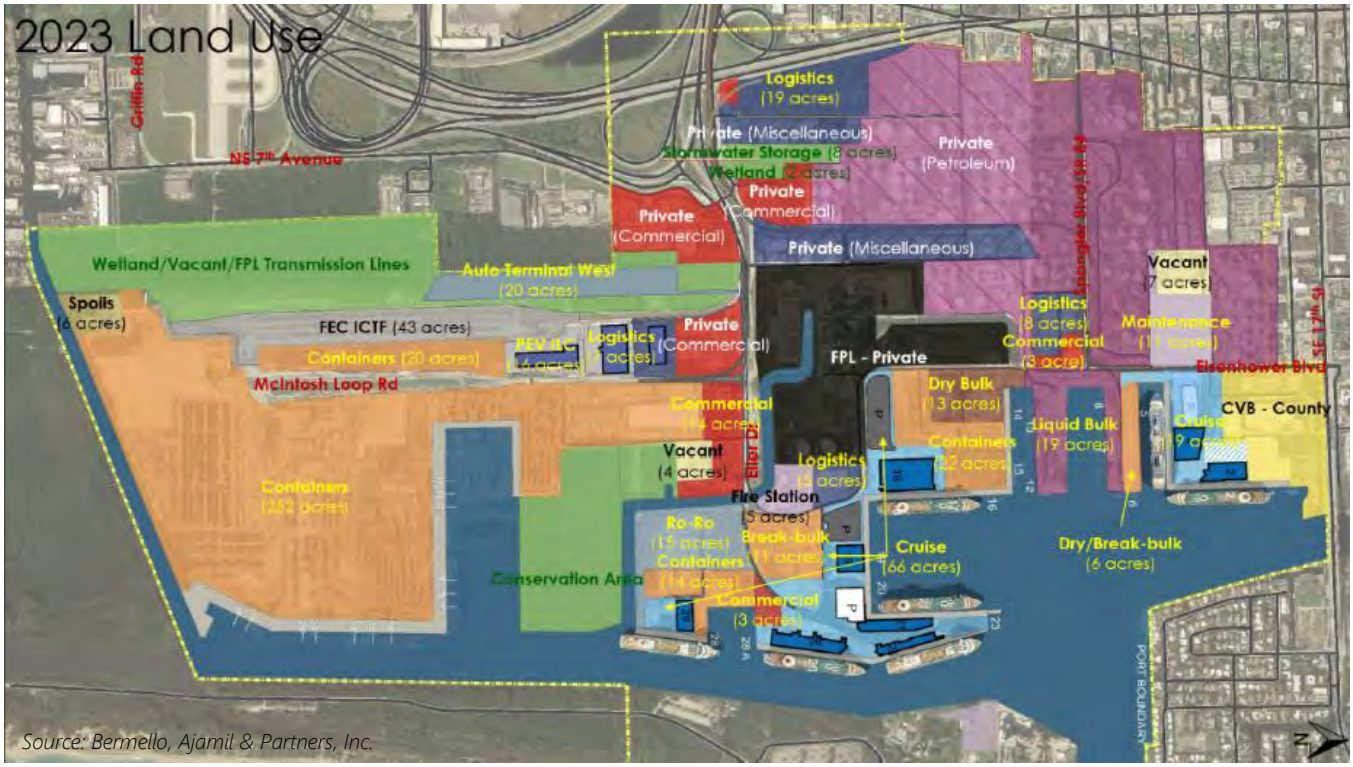


Figure P-19b: 2023 Land Use (post-implementation)



2. Future port expansion for the ten-year period.

a. *In-water facilities*. The in-water facility projects proposed for implementation in the 10-year planning period are summarized below by Port area.

i. Northport in-water facility projects in the 10-year Vision Plan include the following:

- Slip 1/Phase 2 (repair/replacement of bulkheads at berths 7, 8 and 8A). This project will conclude the Slip 2 expansion effort begun as part of the 5-year Master Plan.
- Repair and replacement of bulkheads at berths 4-6.
- Additional ACOE work associated with the Port Everglades deepening and widening project.

ii. Midport in-water facility projects in the 10-year Vision Plan include the following:

- Tracor Basin fill. This project, which has carried over from the 2014 Plan, benefits the Port's cruise operations and is closely linked to the redevelopment of Terminal 29. The filling of Tracor Basin, which creates approximately four acres of new land in addition to adding about 575 linear feet of new, contiguous berth and apron, increases both the efficiency and the flexibility of berth 29 for cruise operations but also for Ro/Ro vessels, since berth 29 will continue to be a shared, multi-purpose berth. The extension of the apron allows for more efficient cruise vessel provisioning and baggage handling and also maximizes the potential service range of the passenger boarding bridges (PBBs) that will service Terminal 29 in the future. The additional acreage will also permit a more functional GTA between Terminal 29 and Terminal 26.
- Repair and replacement of bulkhead at berth 29.

iii. Southport in-water facility projects in the 10-year Vision Plan include the following:

- Repair and replacement of bulkhead at berth 32 (ACOE).
- Other in-water work associated with the Port Everglades deepening and widening project – up to and including the majority of dredging work – could occur during the 10-year Vision Plan period but it is not currently

possible to determine exactly how much of this work will occur before 2023 versus after 2023 given the current project status.

b. *Landside facilities.*

i. Northport landslide projects in the 10-year Vision Plan include the following:

- New break-bulk yard. This project will develop approximately seven acres of new break-bulk yard adjacent to the Port's new consolidated maintenance facility as proposed in the 5-year Master Plan. When complete, this new yard is expected to be the Port's principal break-bulk yard.

ii. Midport landslide projects in the 10-year Vision Plan include the following:

- Cruise terminals 29 and 26 redevelopment. This project will redevelop two existing terminals into a completely new cruise node that includes a new parking structure on the land created by filling in the Tracor Basin. It will substantially improve operational efficiency, passenger throughput capacity (by virtue of berths, terminals and upland areas that can accommodate the largest class of vessels calling Port Everglades now and into the future) and guest experience, making it vital to the Port's future competitiveness.

- Ro/Ro yard relocation/expansion (Phase 2). This project will expand the Port's newly created Midport Ro/Ro area by two acres to accommodate projected growth in new automobile import and export activity. There is sufficient area surrounding the proposed footprint that additional

- APM. Broward County, in its 2020 Vision Plan, outlined a framework for future development at FLL, Port Everglades and the Convention Center, including elements that would promote regional transportation/transit improvements. One of the key elements of this County vision is the APM. The southern terminus of this dedicated transport system will be the Intermodal Center (IMC) currently proposed within the BCAD long-range master plan. The APM will improve the level of service to airline passengers moving between FLL terminals but also to fly-in/fly-out cruise passengers looking to access one of the Port's eight (or future nine) cruise terminals as well as convention goers. This project will also relieve traffic congestion on the airport and within Port Everglades itself by virtue of removing taxis, buses, shuttles and other rideshare vehicles that

routinely transport cruise passengers and convention goers between FLL, the Port and the Convention Center. The total system length is expected to be approximately five miles in each direction (i.e. 10 miles roundtrip) and it is currently envisioned that this entire length will consist of mainline guideway (i.e. an elevated tram system) and between 8 to 10 total stops/stations (including intra-airport stops).

iii. Southport landside projects in the 10-year Vision Plan include the following:

- Phase 9C-1 container yard. This project calls for expansion of the Southport container yard area by approximately four acres.

- Griffin Road extension/NE 7th Avenue Improvements. By far the most significant and potentially impactful cargo projects proposed in the 10-year Vision Plan are the Griffin Road extension and NE 7th Avenue improvements. These two projects are very closely linked and are proposed to be developed as part of a single, phased design and construction program. Currently, the sole point of access to the Port's main Southport container handling area is via the existing McIntosh Loop Road. This one-way in, one-way out situation means that 100 percent of truck traffic must access all of Southport's container terminals via a single entry point by transiting a single intersection (i.e. McIntosh Road at Eller Drive). The proposed Griffin Road extension proposes to open a secondary access point for Southport via an extension of Griffin Road. This extension will connect the southern end of McIntosh Road with the existing Griffin Road, thereby redistributing an estimated 25 percent of future truck traffic away from the I-595 terminus. It is unclear at this stage of planning how far west trucks will be allowed to travel upon leaving Southport or whether or not trucks traveling inbound to Southport will be able to access the new Griffin Road extension via U.S. Highway 1 and/or I-95. Because of this, an expansion of NE 7th Avenue is also proposed in conjunction with the Griffin Road extension project so that truck traffic can also access the southern access point for Southport via this alternative route while still having the option to connect to I-595 in both directions. When combined with the I-595 Flyover project proposed in the 5-year Master Plan and the elimination of the existing Southport security checkpoint, modeling shows that even with a doubling of future truck trips, traffic within the Southport area will flow more smoothly than it does today during peak periods once these

improvements are made.

- McIntosh Road realignment. The other major cargo-related transportation project proposed in the 10-year Vision Plan is the realignment of McIntosh Road. This project proposes to replace the existing one-way on-port McIntosh Loop Road with a bi-directional multi-lane truck route that connects the proposed I-595 Flyover to the proposed Griffin Road extension via the new southern access point. In addition, this project calls for shifting the existing location of McIntosh Road to the farthest possible western alignment in order to allow all available land to the east of the new road to be used for container yard and/or container terminal gate complexes. This westward realignment creates additional contiguous container yard for all Southport terminal operators, consistent with the goals of the Master/Vision Plan.

Table P-8 shows the capital improvement projects proposed in the 10-year Vision Plan by type, location and target start/completion date. Table P-9 summarizes the capital investment required to implement all 15 projects included in the 10-year Master Plan. Figures P-20a and P-20b illustrate the Port's 10-year Vision Plan projects and 2028 land use following implementation of the 10-year Vision Plan, respectively.

Source: Port Everglades

Table P-8: 10-year Vision Plan Projects

Location	5-10 Year Projects	Start Year	Completion Year
Northport	Break-bulk Yard	2024	2026
	Slip 1 / Phase 2 (Berths 7, 8, 8A & 32 Bulkheads)	2025	2027
Midport	Tracor Basin Fill	2024	2026
	Ro-Ro Yard Expansion	2024	2027
	T29 Redevelopment	2024	2027
	T26 Redevelopment	2026	2030
	T29 / T26 Parking Structure	2026	2030
Southport	Phase 9C-1	2024	2025
	Griffin Road Extension / NE 7th Avenue Improvements	2024	2026
	McIntosh Road Realignment	2024	2027
	Container Terminal Reconfiguration	2024	2028
Portwide/Other	APM/Rail Extension (TBD)	2024	2028
Bulkheads Replacements/ Improvements	Berth 29 Bulkheads	2024	2026
	Berths 14 & 15 Bulkheads (Design Only)	2023	2027
	Berths 7, 8, 8A & 32 Bulkheads (Slip 1 / Phase 2)	2025	2027
	Berths 4-6 Bulkheads	2025	2029

Source: Bermello, Ajamil & Partners, Inc. (2018)

Table P-9: 10-year Vision Plan Investment (millions)

Business Line	Port Investment	Private/Third Party Investment	Total Investment
Containerized Cargo	$81	-	$81
Non-Containerized Cargo (including Ro/Ro)	$7	$4	$11
Liquid Bulk	$37	$4	$41
Parking	$41	-	$41
Cruise	$232	$144	$366
Real Estate	-	-	-
Portwide/Other	$0	$TBD	$TBD
TOTAL	$398	$142	$540

Source: Bermello, Ajamil & Partners, Inc.

Figure P-20a: 10-Year Vision Plan Projects

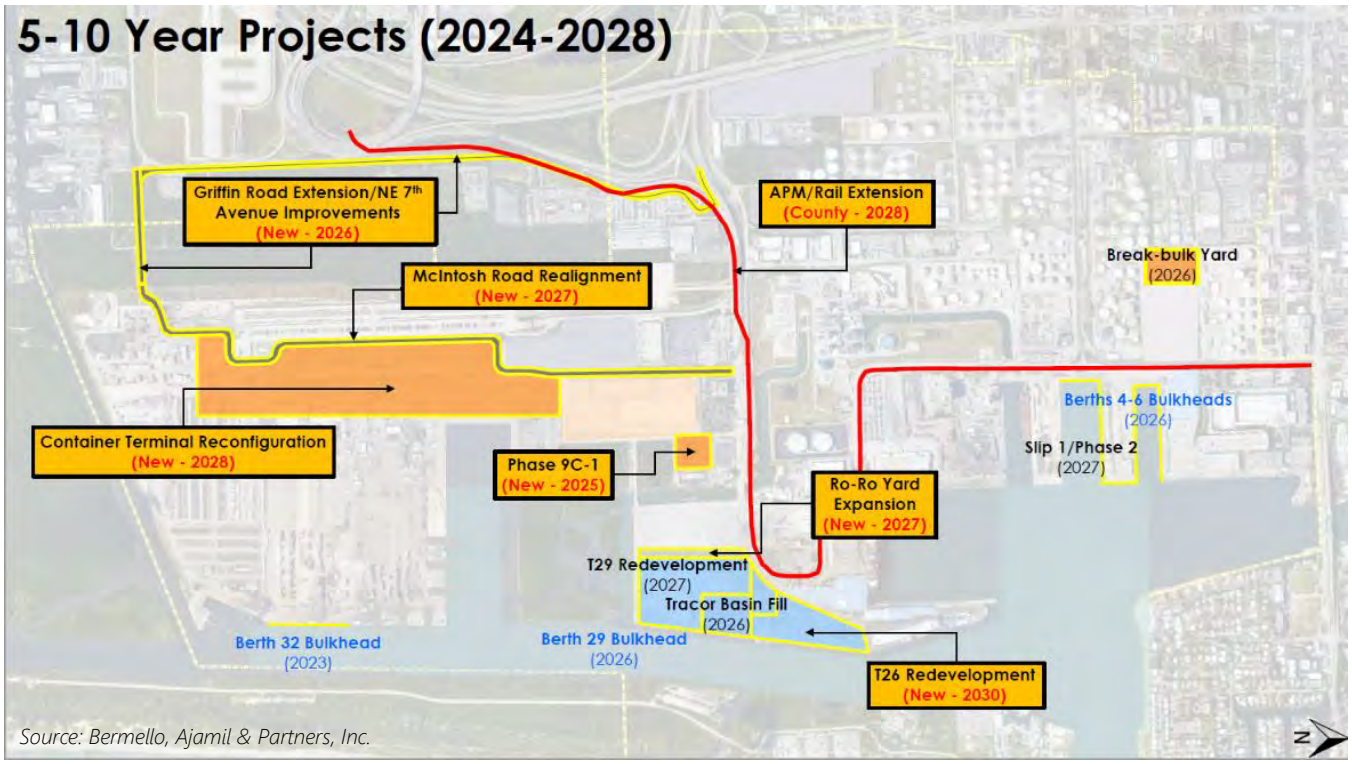
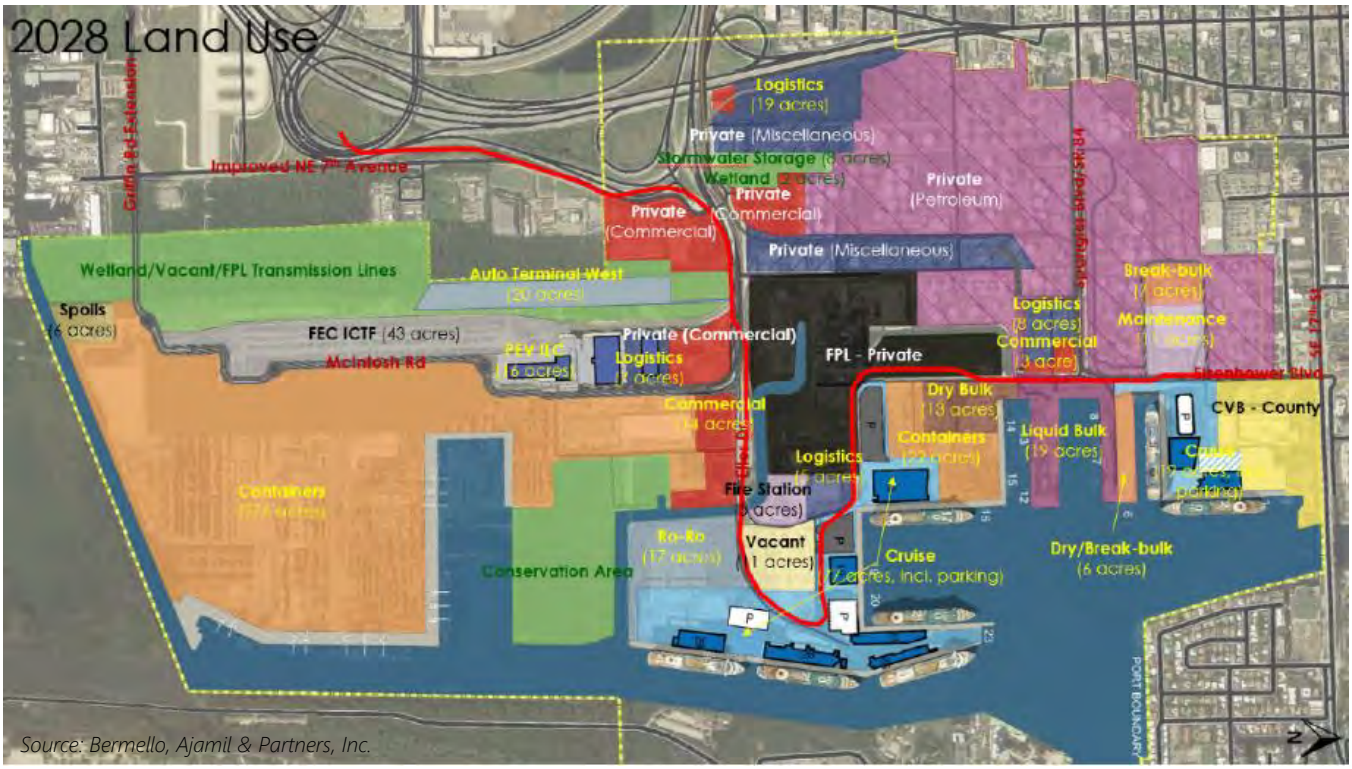


Figure P-20b: 2028 Land Use (post-implementation)



3. In-water facility maintenance for at least a ten-year period.

   On January 5, 1996, the ACOE issued Permit 1989002282 (IP-EJ) REISSUANCE, which allows the Port to conduct maintenance dredging of berths and slips. This permit, valid until 2016, was subsequently modified to include the upland disposal site in the southwest corner of Southport. The state FDEP permit is being reauthorized to use the same disposal site; the Broward Environmental Protection Division has already modified their permit to include this disposal location. The status of these two permits as of the drafting of this document was "pending" with renewals of both expected to be issued by the end of July, 2020. It is expected that both permits will be extended for multi-year periods.

ANALYSIS REQUIREMENTS

A. Existing Land Use Analysis

1. Conflicts among shoreline uses. There are no identified conflicts among shoreline uses in the PJA, the result of the following actions covering the entire PJA: the adoption of the Port Everglades Transportation Area land use designation by the Broward County Land Use Plan; the adoption of a unified zoning district; the designation of the Port Everglades Development District (PEDD) by the municipalities of Fort Lauderdale, Hollywood, and Dania Beach; and the adoption of an Interlocal Agreement, dated May 6, 1994, between Broward County and the three municipalities, which specifies jurisdictional responsibilities in the PJA.

2. Need for water-dependent and water-related uses. On June 18, 2020 the Broward County Board of County Commissioners (BCC) adopted the Port Everglades Master/Vision Plan. This document, referred to hereafter as the 2018 Update, replaces the previous 2014 Port Everglades Master/Vision Plan. The 2018 Update is the principal source of this Deepwater Port Component Support Document and will be incorporated in its entirety into the Deepwater Port Component of the Broward County Comprehensive Plan. The Port Everglades Master/Vision Plan recommends that several water-dependent and water-related capital improvements be made in the PJA to meet projected demand through the 5-, 10- and 20-year planning horizons. Only the 5-year Master Plan and 10-year Vision Plan components are discussed in detail in this document.

B. Natural Resources Analysis

1. Vegetative cover, wetlands, and wildlife habitats. The ACOE, FDEP, South Florida Water Management District and the EPGMD regulate any dredging and filling activity within mangrove habitats. It is the purpose and intent of these agencies to ensure no net loss in the function and value of existing wetland habitats. Therefore, any adverse impacts to existing mangroves are regulated by avoidance as the first priority, minimization as the second priority, and mitigation as the third priority. The future land use designation of the Port Everglades Transportation Area will have minimal direct impact on vegetative cover in the PJA. However, various transportation projects may impact ditches, most of which contain mangroves. These projects will have limited direct impacts and will need to be mitigated at the West Lake Park site.

    a. *Listed Species*. The Port is committed to addressing the protection of wildlife within its property and along the waterways. This commitment includes implementation of federal, state, county, and local species protection plans, adherence to special construction techniques and/or guidelines that address wildlife concerns, and participation in scientific programs associated with resource protection.

    The Florida Manatee Sanctuary Act of 1978 established the entire state of Florida as a "refuge and sanctuary for manatees" and allowed for the enforcement of boat-speed regulations in manatee-designated protection zones. As previously acknowledged, the West Indian manatee is protected federally by both the Marine Mammal Protection Act of 1972 and the ESA of 1973. Port Everglades is one of about two dozen manatee wintering sites designated as manatee protection zones. Many steps are routinely taken to protect the West Indian manatee during dredging projects and from routine boating traffic in the canals. The Port's dredge protection plan includes these guidelines to ensure manatee protection:

    - Contractors are informed of manatee permit stipulations and life history traits prior to construction.
    - A safety zone in which all work ceases upon sighting of a manatee is established approximately 300 yards from a drill or blast rig.
    - Manatee observers and side-scan sonar are utilized to monitor the presence of manatees within safety zones.
    - Manatee warning signs are placed on all waterborne equipment.

- All water traffic proceeds at slow speed.
- Appropriate agencies are contacted in the event of injury or death to manatee individuals.

To further protection measures, the port has installed 4-foot standoff manatee fenders to 26,000 linear feet of bulkhead, as required by the Broward County MPP, to reduce the chance of a manatee becoming trapped between large vessels and the bulkhead. As part of Port Everglades' continued initiatives to protect manatees, the Port conducts year-round recording of manatee sightings on observation logs. The Port has also installed manatee-grating devices on outfall pipes; prohibited recreational access to the FPL Discharge Canal; and supports manatee research. In addition, the approximately 16.5-acre mangrove easement created in association with the Southport Turning Notch expansion project provides a buffer between upland Port activities and the area most frequented by manatees.

Dredging and in-water construction associated with projects in the Master/Vision Plan, specifically the development, repair and replacement of berths and bulkheads, has the potential to directly impact manatees. Manatees may also be indirectly impacted through removal or degradation of seagrass. All new construction will adhere to the USFWS's Standard Manatee Construction Conditions for In-Water Work and will be designed with manatee protection measures per the Broward County Manatee Protection Plan. Additionally, the Port is conducting an 'in-house' manatee study using Florida Fish and Wildlife Conservation Commission (FWC) and Broward County Environmental Protection and Growth Management Department aerial data to analyze the historic account of manatees utilizing the port and FPL cooling plant. Finally, the continued enforcement of no fishing and no wake boat speeds will help protect the seasonal manatee population in the PJA.

The PED also continues to protect the endangered sea turtle species that utilize the nearby waters and beaches of Dr. Von D. Mizell-Eula Johnson State Park. The beaches and dunes along the eastern margin of the Port have long been recognized as sea turtle nesting grounds. Coastal lighting in developed areas has been shown to impact the activities of nesting turtles, prompting changes to and reduction of the Port's lighting systems.

To curb interaction with crawling and nesting turtles along the beach adjacent to the Port, changes have been made to diminish the intensity of lights in the

Midport area visible from the park to the east. Dockside lighting at Berths 24 through 27 and 29, both pole- and building-mounted, have been adjusted downward to safely light the dock areas while limiting scatter. Circuits have been reconfigured with controls added to the building automation system for the roof-level parking deck at Terminal 29, the Midport parking garage, and the decorative lighting on the Harbormaster Tower. Lighting in these facilities as well as in the planned new garage is scheduled to remain fully turned off when not in use for the duration of turtle nesting season.

In addition, as with fish and mobile marine species, dredging and in-water works have the potential for direct impacts to sea turtles through entrainment or collision, and indirect impacts through noise disturbance or removal of seagrass foraging habitat. NMFS's Sea Turtle and Smalltooth Sawfish Construction Conditions will therefore be implemented during all in-water construction activities.

The American crocodile (*Crocodylus acutus*) is federally listed as endangered. Its numbers have risen from around 200 in the 1970's to over 2,000 today. Crocodiles have been observed in and around Port Everglades, including the banks of the Dania Cut-off Canal and the mangrove shorelines of West Lake Park and Dr. Von D. Mizell-Eula Johnson State Park. These animals are considered shy, more so than their alligator cousins, and noise and disturbance from dredging activities and in-water construction activities will likely cause the species to avoid these areas, making direct impacts unlikely. Indirect impacts from disturbance may temporarily cause increased stress levels and disruption of normal behaviors. Given the nature of the construction activities, long-term and permanent adverse effects to the American crocodile are not anticipated as a result of projects included in the Master/Vision Plan.

The Smalltooth Sawfish (*Pristis pectinata*) is listed under the ESA as an endangered species. This species is not common within the PJA. However, they have been reported in the vicinity and may travel and forage the marine bottoms of Port channels, berths and turning basins, and mangrove shorelines--especially in their juvenile life stage when they prefer shallow (0-3 ft.), nearshore, euryhaline waters. Construction noise and activities may temporarily disrupt smalltooth sawfish behavior if they are present within the Port Everglades waterways during construction activities. Dredging and vessel activity also have the potential for collision or entrainment. In the unlikely event a sawfish is present in the project area, sawfish should not be injured or killed by dredging

or construction activities because the dredges advance relatively slowly and are noisy, giving mobile sawfish the opportunity to get out of the way. Additionally, NMFS's Sea Turtle and Smalltooth Sawfish Construction Conditions will be implemented during construction.

b. *Wildlife Habitat*. Impacts to waters and lands in and around Port Everglades, which provide habitat to various wildlife species, are strictly controlled by federal, state, county, and local regulations. The waters to the south of the Port, including the waters bordering West Lake Park and the Dania Cut-Off Canal, are considered essential fish habitat under the Magnuson-Stevens Fishery Conservation and Management Act of 2002 (67 FR 2343). These essential fish habitats supply the necessary waters and substrate to fish for spawning, breeding, feeding, and growth to maturity.

   Widening the navigation channels with environmentally friendly bulkheads, that is, bulkheads that do not penetrate the water surface, wherever possible, will allow tidal flows to be maintained at the shoreline and critical habitat areas. The Port will also continue to participate in the Broward County Reef Tire Removal Program, a joint venture between county, state, and federal entities which will remove from nearby coastal waters approximately 700,000 tires originally intended to form artificial reef habitat.

2. Living marine resources. The existing riprap placed along the eastern shore of the Intracoastal Waterway and the Southport Turning Notch provides structures that attract marine life and will continue to be monitored and maintained by the Port.

   a. *Coral*. Existing coral habitat in the Port area is regulated by federal, state, and county environmental protection agencies. The Port Everglades deepening and widening project will remove existing hardbottom habitat within the channel during excavation activities. As mentioned in Element 1 of the Master/Vision Plan, previous surveys have shown there is an estimated 14.6 acres of hard-bottom and coral reef habitat that will be lost due to the proposed outer channel. To mitigate for the unavoidable loss within the dredge template, off-shore boulder-based artificial reef, at a location to be determined, will be constructed. Bulkhead replacement and improvements will also have a direct effect on the coral colonies growing on the subject bulkheads. 9,713 individual coral colonies that have been documented growing within the Southpoint turning notch. Corals within the Southport Turning Notch, and other structures that will be impacted by Port projects, that are good candidates for relocation have been or will be transplanted to artificial substrate as a preventative loss

initiative. Locations may include riprap at Dr. Von D. Mizell-Eula Johnson State Park, riprap at Broward County Westlake Park, or artificial substrate within the Port. For those coral colonies that are not deemed as good candidates for relocation, compensatory mitigation through artificial substrate placement is proposed. Additional mitigation measures for unavoidable coral loss include outplanting coral colonies from local coral nurseries to artificial substrates and degraded nearshore hardbottom communities. All coral relocation activities require environmental agency and approval.

Source: Port Everglades

b. *Seagrass*. As mitigation for the approximately 4.2 acres of seagrass expected to be lost at Port Everglades as a result of the Port's deepening and widening project – including – the Port is working to construct and implement a restorative habitat within West Lake Park in Hollywood. Dredging for the Port Everglades deepening and widening project will directly remove areas of documented seagrass – including about 3.6 acres with some amount of the ESA threatened Johnson's seagrass. Reconstruction and expansion of berths and bulkheads may also directly impact any seagrass occurring adjacent to the toe of the seawall or within the expansion footprint. Additionally, increased turbidity from construction may temporarily reduce adequate light penetration to underlying seagrasses or cause sedimentation from settlement of suspended sediments onto seagrass. Impacts to seagrasses will be mitigated at the West Lake Park site. Mitigation credits will be allocated from the West Lake Park comprehensive restoration project to offset impacts associated with the deepening and widening of Port channels. In addition to the direct impacts, any secondary impacts resulting from proposed deepening and widening activities would also be subject to regulation. Regulation may include, but not be limited to, turbidity containment efforts and monitoring during those activities.

3. Other natural resources. The future land use designation of the Port Everglades Transportation Area will not have direct impact on LAPCs in the PJA. An environmental impact statement for any proposed development that may affect or include land designated a LAPC will continue to be required by the Broward County Land Development Code prior to the issuance of any development orders.

C. Analysis of Areas Subject to Coastal Flooding

The entire operating area of the PJA is designated either Flood Zone AE, X, or VE by the FEMA Flood Insurance Rate Maps. Therefore, all future development and redevelopment in the PJA will be subject to the conditions and code requirements for the PJA in the FEMA Flood Insurance Program.

1. Sea level rise and coastal flooding. Changes in sea level have the potential to massively reconfigure geomorphology, change tidal variation, alter salinity patterns, and impact ecological processes in South Florida's coastal habitats, including wetlands, mangrove forests, and seagrass beds.

   The Southeast Florida Regional Climate Change Compact, a collaborative between Broward, Palm Beach, Miami-Dade and Monroe Counties, updated the unified regional projection in 2019. The unified sea level rise projection is to be used for planning

purposes to aid in understanding of potential vulnerabilities and to provide a basis for developing risk informed adaptation strategies for the region. In the short term, sea level rise is projected to be 10 to 17 inches by 2040 (above the 2000 mean sea level).

To anticipate the eventual effects of global climate change on the Port's shoreline, EPGMD mapped the incremental effects of sea level increases adjacent to the Port, identifying areas at risk for sea level rise in one-foot increments; up to three feet. Most of the areas affected by the rise are low-lying with existing vegetation, including mangroves, in the environmentally protected areas. Also affected by sea level rise are the shallow seagrass beds present in various locations in the vicinity of the Port. The Broward 100-Year Flood Elevation Map requires the finished floor elevations of buildings to be higher than the flood elevations predicted for a 100-year return interval storm based on community hydrologic modeling under future conditions. It will be important to consider future flood projections when retrofitting, amending land use or designing new infrastructure to higher elevations. However, as indicated by the sea level rise projections completed by Hazen and Sawyer for the City of Hollywood, most of the projects for new developments, cargo areas, terminal expansion, etc. are above year 2100 inundation levels.

2. Sea level rise and mangroves. Mangrove communities are highly productive systems, providing valuable habitat for fisheries, shorebirds, marine mammals, snakes, and crocodiles. Many of the world's marine species, including important coastal fisheries, rely on coastal wetlands for at least part of their life cycle. The complex root systems of mangroves serve as refuge for large numbers of species, as well as providing stabilization for sediments, thereby reducing coastal erosion and improving water clarity. Coastal mangrove tracts can provide protection from storm surges to adjacent land and human populations, and prevent damage to freshwater ecosystems and agricultural areas from saltwater intrusion.

   As sea levels rise, the seaward and landward margins of the mangrove community migrate inland to maintain their preferred environmental conditions, including period, frequency, and depth of inundation; and salinity. Depending on the ability of mangrove species to colonize new habitat at a rate that keeps pace with the rate of relative sea level rise, the slope of adjacent land, and the presence of obstacles to landward migration such as seawalls and other shoreline protection structures, some sites will revert to a narrow mangrove fringe or lose the mangrove community altogether (Gilman et al., 2006).

   Sea level rise has a direct impact on the frequency and duration of inundations and drying periods of coastal mangrove wetlands, which support a community of small

marsh fishes critical as a food source to wading birds such as wood storks, egrets, and roseate spoonbills. Regular periods of water level recession serve to concentrate the fish assemblages in densities adequate to support wading bird nesting. Landward salinity intrusion is another impact of higher sea levels in coastal wetlands. It is a major factor limiting distribution and abundance of various fish species, submerged aquatic vegetation, and estuarine alligator and crocodile populations.

Based on EPGMD's analysis, a one-foot rise in sea level will impact the vast majority of mangrove communities in the Port area. Development of the land surrounding the mangrove pockets in Port Everglades prevents the natural landward migration of the mangrove communities with rising sea levels. The current projected time frame for a one-foot sea level rise exceeds that of the Port's five-year Master Plan and 10-year Vision Plan but may coincide with the latter years of the 20-year Vision Plan.

A Seawall and Flood Barrier Standard, adopted into the Broward County Land Use Plan and proposed for code amendment, sets a minimum top elevation requirement of four feet North American Vertical Datum (NAVD) by 2035 and five feet NAVD by 2050 for all tidally-influenced waterfront property owners. This standard was informed by a study undertaken in collaboration with the ACOE and will reduce both the neighborhood flooding occurring now and increased flooding projected in the future because of high tides and rising sea levels.

3. Sea level rise and seagrasses. A major impact on seagrasses of changes resulting from sea level rise will be the redistribution of existing habitats. Distribution changes will result from the effects of salinity change on seed germination, propagule formation, photosynthesis, growth, and biomass (Short and Neckles, 1999).

   Changes in water depth also impact the flow patterns and deposition of sediments in and around seagrass beds. Alteration of the sediment composition is expected to cause shifts in community structure. Some species have been shown to persist in nutrient-rich sediments high in organic content, whereas others occur in patches characterized by more sandy sediments. An increase in the deposition of sandy beach and offshore sediments in seagrass beds can be expected to promote a shift in species composition. Increased water depth will impact the amount of light reaching existing seagrass beds, thereby affecting productivity, and could result in community decline.

4. Sea level rise and underground stormwater systems. Other areas that could be affected by the rise in sea level are the underground stormwater management systems consisting of exfiltration piping and trenches that are used to filter surface water runoff. These systems need to be above the water table to filter pollutants from the stormwater

runoff. Underground exfiltration systems are typically used in paved parking areas and container storage yards to maximize the paved area for use by Port operations. The Future Conditions Groundwater Table Map approved by the County Commission in 2017 requires drainage infrastructure for major development and redevelopment projects to be designed for year 2070 conditions, when sea level rise will have reduced the amount of rainfall that can be stored in the topsoil. The future groundwater table elevation across the Port varies from 1.5 to 2.5 feet North American Vertical Datum (NAVD).

The ACOE Flood Risk Management Study for Tidally Influence Areas was inclusive of Port Everglades and included surge and wave simulations for future storms and economic modeling. To encourage waterfront property owners to pursue more naturally resilient adaptation options, a living shoreline toolkit was developed containing four template designs for deep and shallow water and narrow and wide canals with guidance to simplify the permitting process and cost estimates to encourage pursuit of habitat and water quality enhancing adaptations. To support municipal implementation of the tidal flood barrier policy, County staff have coordinated with FDOT to utilize high resolution LIDAR elevation data to extract seawall and shoreline elevations and identify areas in need of priority adaptation. This pilot project demonstrated how pre-planned co-utilization of data can yield cross-jurisdictional cost-savings and expediency in project planning.

D. Analysis of Historic Resources

Only one building in the PJA has been identified as containing historic resources. The former U.S. Customs House, once federally owned, but transferred to the Broward County in 2004, is listed in the Florida Master File (Site BD00210). Florida's Historical Resources Division determined the property to be eligible for designation on the National Register of Historic Places, but no action has been taken to pursue this eligibility. Any future discovery and preservation of historic or archeological resources in the PJA will be subject to applicable local, state, and federal regulations.

E. Estuarine Pollution Analysis

1. Assessment of general conditions. Port Everglades does not function in the classical definition of an estuary. This man-made port facility receives waters from the south via the Intracoastal Waterway, from the west via the Dania Cut-Off Canal, and from the north by way of the New River system. All land in the Port is bulkheaded except for the FPL cooling water intake and discharge canal and a 66-acre mangrove area in Southport, which is protected by riprap. The Port has conducted sediment analysis, chemical analysis of the water column, and macroinvertebrate investigations associated

with dredging projects or for scientific study. Data indicate that, for all parameters studied, the health of the Port's environment is within the standards set by local, state, and federal agencies; however, the Port has no control on the quality of the water that enters the Port through the referenced water systems.

2. Assessment of development and redevelopment. Reductions in traffic congestion associated with the I-595 flyover project proposed in the 5-year Master Plan are expected to minimize increases in air emissions throughout the Port and the region. Additional on-Port transportation enhancement projects in the 10-year Vision Plan, including the construction of the proposed APM, will further help to minimize Port-related air emissions by reducing truck congestion and providing fly-in cruise passengers with an attractive alternative means to access the Port directly from the airport without having to use an over-the-road vehicle. The expansion of Slip 1, which will be carried out in two separate phases across both the 5-year Master Plan and 10-year Vision Plan will also remove a portion of the petroleum contamination currently contained in the bulkheads at that location. Any remaining product will be contained within new bulkheads with greater lifespan and durability.

3. Assessment of the impact of facilities proposed in the Transportation and Infrastructure Elements of the Broward County Comprehensive Plan upon water quality, circulation patters, and accumulation of contaminants in sediments. It is anticipated that the facilities proposed in the Master/Vision Plan will have no significant impact on the water quality, circulation patterns, and accumulation of contaminants in sediments located in the PJA.

4. Actions needed to remedy existing pollution problems. The non-profit PEECO, representing the majority of petroleum terminal operators in the PJA, has identified areas of concern that exhibit free-floating petroleum product landward of the Port's bulkheads. In cooperation with the Port, PEECO has worked with the FDEP and has prepared a Contamination Assessment Report, conducted a comprehensive Environmental Risk Assessment, and conducted initial remediation activities in the Port-owned common areas containing underground petroleum pipelines. Subsequent activities involving PEECO, the Port, and FDEP have centered around ongoing free-phase petroleum hydrocarbon removal from the ground on the petroleum piers using state funds from the Inland Protection Trust Fund.

5. Regulatory programs used to maintain or improve estuarine quality. The PED will continue to pursue the maintenance of estuarine quality through the implementation of the Port's NPDES permit, which requires the water quality management of stormwater runoff in the PJA and will continue to install pollution-retardant structures

in all new drainage facilities in accordance with best available construction technology practices.

Section 27 of the Broward County Code specifies pollution regulations which are enforced by the EPGMD. These regulations enforce the provisions of the Federal Clean Air and Clean Water Acts in Broward County, which include the PJA. All requests for construction and maintenance dredging will follow federal, state, and county dredge and fill permitting procedures, which require the application of turbidity controls during dredge and fill activities along the waterfront.

The Port's Oil Spill Contingency Plan is fully coordinated with the USCG, the South Florida Regional Planning Council, the Florida Marine Patrol, the Broward County Emergency Management Division, the Broward County Sheriff's Office, and the Port Everglades Public Safety Division. This coordination is managed by the Port Everglades Cleanup Committee, which maintains oil spill response equipment on a full-time basis. The Port's Public Safety Division also maintains its own equipment and serves as the first line of defense in the event of an oil spill.

F. Analysis of Natural Disaster Planning Issues

1. Analysis of hurricane evacuation planning.

a. *Hurricane vulnerability zone.* All of the PJA is located in Broward County's Hurricane Vulnerability Zone. Deepwater ports, by definition, are constructed in coastal areas. In South Florida, all coastal areas are subject to periodic hurricane impacts. Hurricane preparedness, hurricane mitigation, and post-disaster redevelopment will continue to be significant considerations when developing operation plans and capital improvements programs in the PJA.

b. *Number of persons requiring evacuation*. Residential uses are not permitted in the PJA; therefore, it is anticipated that no residents will require evacuation from the PJA due to an anticipated hurricane storm event. Ships in port will be encouraged by the Harbormaster to evacuate the Port well before the arrival of the storm. The crews are expected to accompany their ships that leave port. The evacuation of Port Everglades' employees and tenants will occur in accordance with the Port Everglades Hurricane Procedure & General Disaster Plan & Continuity of Operations Manual.

c. *Number of persons requiring public hurricane shelter.* Residential uses are not permitted in the PJA; therefore, it is anticipated that no residents will require public hurricane shelters due to an anticipated hurricane storm event. Ships in

port will be encouraged by the Harbormaster to evacuate the Port well before the arrival of the storm. The crews are expected to accompany their ships that leave port. The evacuation of Port Everglades' employees and tenants to their homes will occur in accordance with the Port Everglades Hurricane Procedure & General Disaster Plan & Continuity of Operations Manual.

d. *Number of shelter spaces available*. Port Everglades is located entirely in the Hurricane Vulnerability Zone; consequently, there are no existing or proposed shelter spaces in the PJA.

e. *Evacuation routes*. It is anticipated that Eller Drive and Spangler Boulevard will continue to serve as the primary hurricane evacuation routes in the PJA. These two roadways provide direct access to the FIHS/SIS, which will be relied on to transfer personnel, commercial vehicles, and equipment away from the Hurricane Vulnerability Zone. The widening of Eller Drive to a 4-lane roadway has improved the PED's ability to evacuate the PJA in a timely manner.

f. *Transportation and hazard constraints on evacuation routes*. The primary constraint on the PJA evacuation routes is the susceptibility to flooding. Heavy rainfall, high tides, and storm surge associated with a hurricane could impact the availability of Eller Drive and Spangler Boulevard for use as evacuation routes. It is, therefore, imperative that the PED and Port tenants secure their premises and evacuate their employees well before the inundation of the Port's evacuation routes by heavy rains and storm surge from an impending hurricane.

g. *Evacuation times*. The Port Everglades Hurricane Procedure & General Disaster Plan & Continuity of Operations Manual anticipates that all Port administration and Port tenant personnel would be evacuated at least 12 hours before the anticipated landfall of a hurricane. This would allow sufficient time to evacuate the Port before the evacuation routes become impassible from flooding and storm surge.

2. Estimate of the projected impact on hurricane evacuation planning.

a. *Anticipated population density*. Residential uses are not permitted in the Port Everglades Transportation Area future land use category of the Broward County Land Use Plan; therefore, no population density is anticipated in the PJA.

b. *Special needs of the elderly, handicapped, and hospitalized*. Residential uses are not permitted in the Port Everglades Transportation Area land use category of

the Broward County Land Use Plan; therefore, no special needs of the elderly, handicapped, and hospitalized are anticipated in the PJA.

c. *Other special needs of the existing and anticipated populations*. Residential uses are not permitted in the Port Everglades Transportation Area land use category of the Broward County Land Use Plan; therefore, no special needs of the existing and future populations are anticipated in the PJA.

3. Measures that could be adopted to maintain or reduce hurricane evacuation. The PED is carrying out the following measures:

   a. *Maintenance of Eller Drive* as the primary evacuation route, together with close coordination between the PED and the Broward County Emergency Management Division, to insure the maintenance or reduction of hurricane evacuation times in the PJA.

   b. *Annual reviews and updates of the Port Everglades Hurricane Procedure & General Disaster Plan & Continuity of Operations Manual*, together with the participation by Port Everglades staff in Broward County's annual hurricane simulation exercises, to further the maintenance of effective hurricane preparedness in the PJA.

   c. A policy encouraging the early dismissal of non-essential Port personnel as a means of reducing hurricane evacuation times.

4. Post-Disaster redevelopment analysis.

   a. *Existing and proposed land use in high-hazard areas*. All existing and proposed land uses in the PJA are located in the Coastal High-Hazard Area. Therefore, following a major storm event, it is anticipated that most of the Port infrastructure would require redevelopment. Port Everglades is vital to the maintenance of South Florida's economy, necessitating the reconstruction of all damaged structures and infrastructures in the PJA to pre-storm conditions.

   b. *Structures with a history of repeated damage*. There are no structures in the PJA with a history of repeated damage from coastal flooding or hurricanes; therefore, no action regarding this concern is required.

   c. *Coastal or shore protection structures*. Coastal or shore protection structures in the PJA include the jetties along the Port Everglades Entrance Channel, riprap along the shoreline of the Southport Turning Notch, and the vertical bulkheads that protect the berths in the PJA from prop wash. All of these structures would

be affected by storm surge and high velocity waves during a hurricane storm event. Port Everglades is vital to the maintenance of South Florida's economy, necessitating the reconstruction of all damaged coastal or shore protection structures in the PJA to pre-storm conditions. The ACOE is responsible for maintaining the entrance channel jetties, while the PED is responsible for maintaining the riprap and bulkheads in the PJA.

d. *Infrastructure in high-hazard areas*. All infrastructure in the PJA is located in the Coastal High-Hazard Area. Following a major storm event, any of the Port's above-ground infrastructure that is damaged would require redevelopment. Port Everglades is vital to the maintenance of South Florida's economy, necessitating the reconstruction of all damaged structures and infrastructure in the PJA to pre-storm conditions.

e. *Beach and dune conditions*. The PJA's beaches and dunes are located entirely in the Dr. Von D. Mizell-Eula Johnson State Park. The park includes an approximately 150-foot wide beach with small secondary dune structures. This beach area would be subject to storm surge and high velocity waves during a hurricane storm event, which could drastically alter the location and amount of sand along the beach. The low beach elevation and insignificant dune structures could result in a breach of the ocean into the Intracoastal Waterway during the storm's high tide. The FDEP is responsible for the maintenance of state-owned parks and beaches and should coordinate with the Environmental Protection and Community Resilience Division of the EPGMD in developing a contingency plan for beach renourishment following a storm event.

5. Analysis of measure to reduce exposure to hazards.

a. *Relocation*. There are no residential uses requiring relocation in the PJA. The port and water-dependent non-residential uses in the PJA, by their nature, cannot be relocated. Such uses as ship berths, passenger and cargo terminals, petroleum storage tanks, cement storage silos, bulk and container cargo yards, warehouses, and administrative offices must remain in the PJA to insure the Port's and the South Florida region's continued economic viability. It is expected that any hurricane-related damage to these uses would be expediently repaired to their pre-storm conditions to reduce any resultant long-term economic loss.

b. *Structural modification*. No modifications to existing structures are recommended. All structures in the PJA have been built in accordance with

existing building codes and will be rebuilt to pre-storm conditions in accordance with current building codes.

c. *Public acquisition*. No public acquisition of privately owned property in the PJA is recommended for the purpose of reducing the impact of natural hazards to the general public.

6. Coastal high-hazard area.

a. *Analysis of the potential for relocating threatened infrastructures*. All infrastructure in the PJA is located in the Coastal High-Hazard Area. It is anticipated that much of the Port's infrastructure would require redevelopment following a major storm event. Port Everglades is vital to the maintenance of South Florida's economy, necessitating the reconstruction of all damaged structures and infrastructure in the PJA to pre-storm conditions. It can be concluded that, to preserve and protect the regional economy, there is no potential for relocating threatened infrastructure located in the PJA.

G. Beach and Dune Analysis

1. Past trends in erosion and accretion. Sand material has historically been accreting on the north side of the Port Everglades Entrance Channel jetties with erosion occurring on the south side of the jetties. Consequently, approximately 7,000 cubic yards per year of sand material are deposited in the vicinity of the Port Entrance Channel. To date, this has not restricted or impaired navigational operations. In addition, winter storms tend to erode the beaches to the south, requiring periodic renourishment.

2. Effects of shore protection structures. The Port Everglades Entrance Channel is lined by rock jetties composed of large boulders that aid in maintaining channel project depth. Due to the prevailing southerly littoral current, sand material is deposited on the north side of the jetties with scouring occurring on the south side of the jetties.

3. Measures which could protect or restore beaches. The proposed Sand Bypass Project exemplifies a long-term strategy for regional resilience in Southeast Florida, with substantial physical, economic, and environmental benefits to the Broward County Federal Shore Protection Project and Port Everglades Federal Navigation Channel. The Sand Bypass Project will aid in serving as a supplemental sand source for the Broward County Segment III Shore Protection Project, which will provide for an economical, local source of sand in a county where local sources necessary for continued beach restoration and maintenance are nearly depleted. Implementation of the proposed Sand Bypass Project will result in the following benefits:

- Increase the resilience of critical natural resources and existing infrastructure;
- Reduce the impacts of Port Everglades to the shorelines south of the inlet;
- Provide a sustainable beach compatible sand source for the highly erosional shorelines south of the inlet -- Segment III of the Broward County Federal Shore Protection Project;
- Fortify and sustain storm protection for critical infrastructure and valuable property including the US Coast Guard Station, port facilities and over $345 million in property;
- Reduce shoaling in the Federal navigation channel;
- Preserve habitat and nesting areas for three endangered and four threatened species in one of the most highly developed urban areas in the state;
- Maintain opportunity for public outdoor recreation at Dr. Von D. Mizell-Eula Johnson State Park, serving over half a million residents and visitors annually;
- Provide the most environmentally-sensitive approach to beach management in an area of rich coastal and nearshore reef resources

Status: Staff has finalized the mitigation plan for the Port Everglades Sand Bypass project and received the final federal permit. Procurement is anticipated to begin in October. Public outreach will begin by February 2021. Construction is anticipated to begin in June 2021. The ACOE will award the contract for the south jetty rehabilitation in late August.

H. Capacity and Need for Public Access Facilities

1. Analysis of the capacity and need for public access facilities.

a. *Public access points to beach or shoreline through public lands*. The beaches and shoreline in the PJA are located in the state-owned and maintained Dr. Von D. Mizell-Eula Johnson State Park. Public access to beaches and the ocean front is presently adequate. No deficiencies are identified which would require improvements to increase public access to beaches and the shoreline in the PJA.

The security measures imposed by state and federal mandates have restricted public access to the Port itself. In addition, U.S. CBP regulations require that the Port control public access to the dockside areas. Even had these measures not been imposed, unlimited public access to the working harbor area of the Port

poses a danger to public safety and must be controlled. Port operations involve the use of specialized off-road equipment, which may cause delays in normal traffic flow in the PJA. In addition, dock-side operations include the use of heavy equipment, such as gantry cranes, mobile stick cranes, hustler tractors, and port packer front-end loaders which facilitate the loading, unloading, storage, and movement of cargo and containers.

b. *Private property open to the general public*. The only private property within the secure zone of the PJA which was once open to the general public – the former restaurant called "Burt and Jacks" – discontinued operation on the Port many years ago. Because of the present federal and state security mandates, no other such private property open to the general public has been established and no such facility is envisioned within the secure zone of the PJA.

c. *Other legal means of public access*. Access to Port Everglades, which was once an open port, is now controlled by four manned security gates, in compliance with federal and state security mandates. The general public, therefore, no longer has unlimited legal access to the PJA, but must show appropriate identification and have a specific Port-related purpose for accessing the Port.

d. *Parking facilities*. To accommodate the anticipated needs of future cruise passengers, the 5-year Master Plan includes a new parking garage adjacent to Terminal 4 in Northport. This parking structure, which is already under construction, includes 1,818 new spaces. See Section K.3.b.i. for additional details of this project. In the 10-year Vision Plan, a new 1,600-space structured parking facility will be constructed above the filled-in Tracor Basin to serve the new cruise node that is created once Terminal 29 and 26 are redeveloped.

e. *Coastal roads and facilities providing scenic overlooks*. The PJA contains several roads that provide scenic overlooks of the working harbor; these are not, however, accessible to the general public. In addition, the Port maintains Marinelli Gardens, a small park located at Eller Drive on the FPL Discharge Canal. Scenic overlooks are not, however, compatible with commercial port operations, particularly in the era of heightened security; therefore, no additional scenic overlooks are recommended in the working harbor area.

f. *Marinas*. The privately owned and operated dry marina, previously located in the PJA has moved from the Port; but a small parcel in the southwest corner of the Port has been identified for a potential dry-storage facility in the future. The Florida Marine Patrol operates a dry storage and repair facility adjacent to the

FPL Discharge Canal. In addition, small boat docks are maintained by the U.S Navy, the USCG, and Nova Southeastern University at the northern end of Dr. Von D. Mizell-Eula Johnson State Park. These operations are expected to continue without impact to Port operations or living marine resources.

g. *Boat ramps*. The only public boat ramps in the PJA are located in the Dr. Von D. Mizell-Eula Johnson State Park. A boat ramp is also located at the Florida Marine Patrol facility, which is utilized exclusively for patrol boats. Public boat ramps are not compatible with commercial port operations and are not recommended within the working harbor area.

h. *Public docks*. The only public dock in the PJA is located in the Dr. Von D. Mizell-Eula Johnson State Park. Public docks are not compatible with commercial port operations and are not recommended within the working harbor area.

i. *Fishing piers*. There are no fishing piers in the PJA; however, there is a catwalk along the south jetty of the Port Everglades Entrance Channel which may be accessed for fishing. As the PJA is a manatee sanctuary, designated by state statute; fishing is a prohibited use. Further, fishing piers are not compatible with commercial port operations and are, therefore, not recommended within the working harbor area.

j. *Fishing area*. As the PJA is a manatee sanctuary, designated by state statute; land-based fishing is a prohibited use west of the east line of the Intracoastal Waterway. It is recommended that land-based fishing continue to be prohibited within the PJA, with the exception of the catwalk along the south jetty of the Port Everglades Entrance Channel. In addition, fishing from small boats is not compatible with the navigation of large ships and tugs in a confined harbor.

2. Coordination of above analysis with Recreation and Open Space Element and the County-Wide Manatee Protection and Boat Facility Siting Plan (if applicable). The PJA includes portions of Fort Lauderdale, Hollywood, Dania Beach, and unincorporated Broward County. In accordance with the Interlocal Agreement dated May 6, 1994 between Broward County and the affected municipal jurisdictions, the Port will continue to be responsible for maintaining access to facilities in the PJA, consistent with federal and state security mandates. The PJA includes the marina-like facilities operated by the USCG, the U.S. Navy, and Nova Southeastern University in the northern portion of the Dr. Von D. Mizell-Eula Johnson State Park; these are not public facilities.

I. Infrastructure Analysis

1. Analysis of existing activity and infrastructure.

a. *Demand upon, capacity of, and areas served by roadways*. Tables P-10a – P-10e provide a summary of vehicular traffic conditions at key locations within the PJA as of the first quarter of 2018. The source of all data shown is FDOT as compiled by HDR for the Port Everglades Master/Vision Plan (2018 Update). Based on the analysis, all intersections examined are currently operating at level of service (LOS) D or better during the morning peak hours. During the weekday midday peak hour, all intersections are operating at LOS C or better except the intersection of U.S. 1 and SR 84/Spangler Boulevard, which is operating at LOS F. During the weekend midday peak hour, when cruise traffic is heaviest, all intersections are operating at LOS D or better except the intersection of Eller Drive and McIntosh Road, which is operating at LOS F. The queues on the eastbound approach at this intersection extend all the way onto I-595 during this period due to high cruise traffic volumes.

Table P-10a: Eller Dr Traffic, East of Gate (Q1, 2018)

	Entry (Eastbound)	Exit (Westbound)	Total
Average Daily Traffic (ADT)	4,770	3,517	8,287
Truck Percentage	29%	31%	30%
Peak Days (ADT)	5,608	4,223	9,831
AM Peak Hour	10am-11am		
AM Peak Hour Volume	686	479	1,165
PM Peak Hour	12pm-1pm		
PM Peak Hour Volume	514	445	959

Table P-10b: Eisenhower Blvd Traffic, South of Southeast 17th St (Q1, 2018)

	Entry (Southbound)	Exit (Northbound)	Total
Average Daily Traffic (ADT)	2,551	2,912	5,463
Truck Percentage	35%	8%	21%
Peak Days (ADT)	2,649	4,665	7,314
AM Peak Hour	11am-12pm		
AM Peak Hour Volume	296	711	1,007
PM Peak Hour	1pm-2pm		
PM Peak Hour Volume	284	666	950

Table P-10c: McIntosh Rd Traffic, South of Eller Dr (Q1, 2018)

	Entry (Southbound)	Exit (Northbound)	Total
Average Daily Traffic (ADT)	2,887	2,328	5,215
Truck Percentage	43%	53%	48%
Peak Days (ADT)	3,474	3,237	6,711
AM Peak Hour	11am-12pm		
AM Peak Hour Volume	255	256	511
PM Peak Hour	1pm-2pm		
PM Peak Hour Volume	338	300	638

Table P-10d: Spangler Blvd (SR 84) Traffic, West of Miami Rd (Q1, 2018)

	Entry (Eastbound)	Exit (Westbound)	Total
Average Daily Traffic (ADT)	2,199	2,165	4,364
Truck Percentage	35%	28%	32%
Peak Days (ADT)	2,620	3,056	5,676
AM Peak Hour	10am-11am		
AM Peak Hour Volume	304	414	718
PM Peak Hour	12pm-1pm		
PM Peak Hour Volume	302	319	621

Table P-10e: Summary of Port Everglades Traffic Count Data (Q1, 2018)

	Entry (Southbound)	Exit (Northbound)	Total
Eller Drive Gate	4,770	3,517	8,287
Eisenhower Boulevard Gate	2,551	2,912	5,463
McIntosh Road gate	2,887	2,328	5,215
Spangler Boulevard Gate	2,199	2,165	4,364
Combined Total	**12,407**	**10,922**	**23,329**

2. Demand upon, capacity of, and areas served by bridges or causeways. A 4-lane bridge along Eller Drive spans the FPL Discharge Canal. This bridge was expanded from a 2-lane bridge to a 4-lane bridge as part of the widening of Eller Drive. A secondary bridge also spans the FPL Discharge Canal to facilitate truck traffic between Midport and Southport and eliminate the need for trucks and other vehicles to pass through security between the two destinations. The rebuilt SE 17th Street Causeway Bridge, with its higher vertical clearance, helps relieve congestion in proximity to the Port.

3. Demand upon, capacity of, and areas served by sanitary sewer facilities. The adopted Large User Agreement between the City of Fort Lauderdale and the PED obligates the City to accommodate all existing and future sewage treatment demand in the PJA

throughout the planning period. It is anticipated that the sewage treatment plant serving the Port will have adequate available capacity to meet Port needs through at least the near-term (5-year) planning horizon.

4. Demand upon, capacity of, and areas served by potable water facilities. The adopted Large User Agreement between the City of Fort Lauderdale and the PED obligates the City to accommodate all existing and future potable water demand in the PJA throughout the planning period. It is anticipated that the potable water plants serving the Port will have adequate available capacity to meet Port needs through at least the near-term (5-year) planning horizon. A significant factor includes that water samples taken at Port Everglades have shown that lead content at some locations exceeded the 90th percentile lead action level of 0.015 mg/L. The Port has completed nitrification and other causation studies (including for water age in the pipes) and implemented control measures to mitigate exceedances. Port Everglades anticipates conducting further assessment of the existing physical conditions and performing hydraulic model simulations to determine the system's sustainability and the impact of future demand on the underground utilities infrastructure.

5. Demand upon, capacity of, and areas served by solid waste facilities. Since Port Everglades has not experienced any difficulties in solid waste collection and disposal, it may be assumed that capacity exists to handle the Port's existing needs. Due to the long-term capacity of the Southwest Regional Landfill and the South County Resource Recovery Facility, it is expected that there will be sufficient capacity to accommodate Port Everglades' anticipated solid waste demands through at least the near-term (5-year) planning horizon.

6. Demand upon, capacity of, and areas served by man-made drainage facilities. Maintaining its drainage system in accordance with a National Pollution Discharge Elimination System (NPDES) permit, Port Everglades expects it will be able to accommodate all existing and anticipated drainage demand in the PJA without impacting natural resources. Periodic flooding along some of the Port's internal roadways and upland areas during peak rainstorm events may, however, require additional improvements and maintenance. It is recommended that the Port continue to monitor the man-made drainage system to identify and mitigate inadequate drainage conditions when they occur.

7. Demand upon, capacity of, and areas served by public shore protection structures. The jetties along the Port Everglades Entrance Channel and the riprap shore-protection structures placed along the Southport Turning Notch have been adequately protecting the Port's channel and berth depths for many years, which is necessary for the continued economic viability of the Port. These assets have also been adequately

protecting adjacent upland areas from erosion resulting from waves and boat wakes. The Port's upland areas will continue to be protected during the planning period by existing and/or replacement infrastructure as part of the deepening and widening and Southport Turning Notch expansion projects, respectively. Both projects will make improvements to existing shore protection structures. In the case of the Southport Turning Notch, the former riprap is already in the process of being replaced with environmentally friendly bulkheads.

8. Demand upon, capacity of, and areas served by beach renourishment projects. As recommended in the previous Deepwater Port Component, the PED is continuing to encourage and coordinate with the EPGMD with respect to constructing a sand bypass system to transport sand from the north side of the Port's Entrance Channel north jetty to the south side of the south jetty.

9. Analysis of future activity and infrastructure as proposed in the Master/Vision Plan (2018 Update).

    a. *Demand upon, capacity of, and areas served by roadways.* Table P-11 provides a traffic analysis of key roadways within the PJA for the 5-year Master Plan and 10- and 20-year Vision Plan periods. The analysis methodology is described in detail in Element 4 of the Master/Vision Plan (2018 Update).

    The future build scenario includes a number of projects, particularly in Southport, that will improve the capacity and operations of the roadway network in and around Port Everglades; these roadway improvements are described in Section K.3 and include:

    - I-595 flyover
    - Griffin Road extension/NE 7th Avenue improvements
    - McIntosh Road realignment
    - Removal of the security checkpoints on McIntosh Road immediately following the opening of the secondary Southport access point included as part of the Griffin Road extension project
    - Improvements to the intersection at Eller Drive and SE 19th Avenue

    The following is a summary of conclusions derived from the 2019 traffic study conducted in conjunction with the Master/Vision Plan update. All "build

scenario" conclusions assume full, on-schedule implementation of projects included in the 2018 Update. Only conclusions pertaining to the initial 10-year planning period are included here.

i. Weekday morning peak hour.

- Traffic during the weekday morning peak period consists of heavy commuter traffic to work, a modest amount of cruise passenger traffic and truck traffic.
- Vehicle processing time at the Port's security checkpoints has a significant impact on traffic operations in and around the Port.
- The intersection of U.S. 1 and SR 84/Spangler Boulevard will reach capacity in 2023 and operate at LOS E with an average delay of 57.7 seconds per vehicle under build scenario. This intersection is expected to experience longer delays in all future analysis years under the build scenario as compared to the no-build scenario – even though the LOS will remain E under both scenarios – due to increased northbound turning movements and westbound left-turning movements resulting from traffic diversion caused by the construction of the new Port Access Road.
- The intersection of SE 17th Street and Eisenhower Boulevard will operate at LOS C for all future years under both the no-build and build scenarios. Similar to the intersection of U.S. 1 and SR 84/Spangler Boulevard, this intersection will also experience longer delays under the build vs. no-build scenario as the result of traffic diversion to and from the new Port Access Road.
- The intersection of Eisenhower Boulevard and Spangler Boulevard will also operate at LOS C during all future analysis years under both the no-build and build scenarios. This intersection will experience more delays in future years as traffic continues to grow, but no operational issues are expected.
- The intersection of Eller Drive and McIntosh Road is operating at LOS C under existing conditions; it will fail in 2023 and remain problematic for all future analysis years under the no-build scenario. Under the build scenario, the intersection of Eller Drive and McIntosh Road will still fail in 2023 but with slightly shorter delays.

- By 2028, once the I-595 flyover opens to traffic and both the Griffin Road extension/NE 7th Avenue improvements and the McIntosh Road realignment projects are completed, this intersection will see significant improvement compared to the no-build scenario. An average vehicle will experience about 65 seconds of delay after these projects are implemented (build scenario) compared to 109 seconds if these projects are not implemented (no-build scenario).
- The intersection of Eller Drive and SE 19th Avenue will operate at LOS C or better through all future years. With an additional left-turn lane on the eastbound approach on Eller Drive, the intersection will experience shorter delays under the build scenario than under the no-build scenario for all analysis years.

ii. Weekday midday peak hour.

- There is minimal cruise passenger traffic during the weekday midday peak period but truck traffic is the heaviest.
- Compared to the weekday morning peak hour, the intersection of U.S. 1 and SR 84/Spangler Boulevard experiences much longer delays during the weekday midday peak hour because of the commercial activities in areas surrounding the intersection. The LOS at this intersection will remain F throughout the analysis years for both the no-build and build scenarios; longer delays are experienced under the build scenario than under the no-build scenario because of the traffic diversion from and to the new Port Access Road.
- The intersection of SE 17th Street and Eisenhower Boulevard will operate at LOS D or better until year 2033 under both the no-build and the build scenario.
- The intersection of Eisenhower Boulevard and Spangler Boulevard will operate at LOS B throughout future analysis years under both the no-build and build scenarios. This intersection will experience more delays in future years as traffic continues to grow, but no operational issues are anticipated.
- The intersection of Eller Drive and McIntosh Road is operating at LOS C under existing conditions but will fail in 2023 with a much longer delay compared to the weekday morning peak hour. The LOS will remain F for

all future analysis years under the no-build scenario. Under the build scenario, this intersection will still fail in 2023 but with shorter delays. In 2028 when the I-595 flyover opens to traffic and other aforementioned projects are implemented, the intersection will see significant improvement under the build scenario compared to under the no-build scenario. With most truck traffic accessing Southport using the I-595 flyover and very few cruise passenger trips; the intersection will experience minimal delays under the build scenario in all future analysis years.

- The intersection of Eller Drive and SE 19th Avenue will operate at LOS B or better through all future years. With an additional left-turn lane on the eastbound approach on Eller Drive, the intersection will experience shorter delays under the build scenario than under the no-build scenario for all analysis years.

iii. Weekend midday peak hour.

- The traffic for the weekend midday peak period consists primarily of cruise passenger trips with very few commuter trips and minimal truck trips.

- The intersection of U.S. 1 and SR 84/Spangler Boulevard will reach capacity in 2033 for both the no-build and the build scenarios. This intersection will see longer delays under the no-build condition than under the build condition due to the traffic diversion from and to the new Port Access Road.

- The intersection of SE 17th Street and Eisenhower Boulevard will operate at LOS D or better until 2028 under both scenarios. This intersection will experience longer delays under the build scenario than under the no-build scenario as a result of traffic diversion to and from the new Port Access Road.

- The intersection of Eisenhower Boulevard and Spangler Boulevard will operate at LOS B throughout future analysis years under both scenarios. The intersection will experience more delays in future years as traffic continues to grow, but no operational issues are foreseen.

- The intersection of Eller Drive and McIntosh Road will experience heavy delays due to the substantial increase in cruise traffic in future years. The

LOS will remain F for both the no-build and the build scenario throughout future analysis years. The proposed I-595 flyover, Griffin Road extension/NE 7th Avenue improvements and McIntosh Road realignment projects will not bring relief to Midport cruise traffic. Vehicle processing times at the security checkpoints on Eller Drive are the primary reason for the long delays, even though high traffic volumes are also a major contributing factor. Based on simulation run by CTS Engineering, Inc. eastbound queues will extend all the way onto I-595. The queues will also affect the eastbound right turning movement although the volume of these movements is low.

- The intersection of Eller Drive at SE 19th Avenue will operate at LOS E through Year 2033 and then it will fail in 2038 under the no-build scenario; the same is true for the build scenario despite the addition of another left turn lane on eastbound Eller Drive; delays are shorter under the build scenario than under the no-build scenario, however.

- Two signalized intersections are proposed for McIntosh Road between the I-595 flyover and the Griffin Road extension access point. The proposed intersections will operate at LOS B or better during all three peak periods in all future analysis years. The maximum queue on the southbound left turn is around 500 feet, which is shorter than the proposed storage length. No other operational issues are anticipated at these intersections; however, gate fluidity at the different Southport container terminals will have varying impacts on overall future McIntosh Road traffic flows.

Table P-11: Projected Annual Average Daily Traffic by Milestone Year

Location	2023		2028		2033		2038	
	AADT	%Truck	AADT	%Truck	AADT	%Truck	AADT	%Truck
I-595 (west of McIntosh Rd)	19,100	39.7%	20,700	37.7%	22,500	36.0%	24,600	34.4%
Eller Dr (north of I-595)	3,900	4.8%	4,300	4.5%	4,800	4.2%	5,300	4.0%
McIntosh Rd (south of Eller Dr)	6,000	60.2%	7,000	61.1%	7,900	61.7%	8,900	61.6%
Eller Dr (east of McIntosh Rd)	15,600	26.4%	17,000	24.9%	18,700	23.5%	20,600	22.3%
SE 19th Ave (north of Eller Dr)	16,200	3.0%	18,000	2.8%	20,100	2.6%	22,600	2.4%
Eller Dr (east of SE 19th Ave)	1,400	2.0%	1,600	1.8%	1,800	1.7%	2,000	1.6%
SE 19th Ave (south of Eller Dr)	2,300	33.4%	2,500	31.6%	2,700	30.4%	3,000	28.6%
US 1 (north of Spangler Blvd)	57,600	4.4%	59,300	4.4%	61,000	4.4%	62,900	4.3%
Spangler Blvd (east of US 1)	12,300	19.2%	13,500	17.9%	14,800	16.8%	16,400	15.5%
US 1 (south of Spangler Blvd)	59,400	6.4%	61,500	6.4%	63,600	6.3%	65,800	6.3%
SE 24th St (west of US 1)	20,700	7.5%	21,800	7.3%	23,100	7.0%	24,600	6.8%
Eisenhower (north of SE 17th St)	6,300	2.0%	6,400	2.0%	6,600	2.0%	6,800	2.0%
SE 17th St (east of Eisenhower)	32,900	3.6%	33,800	3.6%	34,700	3.6%	35,700	3.6%
SE 17th St (west of Eisenhower)	47,900	3.7%	49,400	3.7%	50,900	3.6%	52,500	3.6%
Eisenhower (south of SE 17th St)	3,600	9.5%	4,000	8.8%	4,400	8.2%	5,000	7.4%
Eisenhower (north of Spangler Blvd)	3,800	9.6%	4,200	8.9%	4,700	8.1%	5,300	7.4%
Spangler Blvd (west of Eisenhower)	6,200	19.2%	6,800	18.0%	7,500	16.7%	8,300	15.5%
Eisenhower (south of Spangler Blvd)	3,600	3.1%	4,000	2.8%	4,500	2.6%	5,100	2.4%

Source: CTS Engineering, Inc.; Bermello, Ajamil & Partners, Inc. (2019)

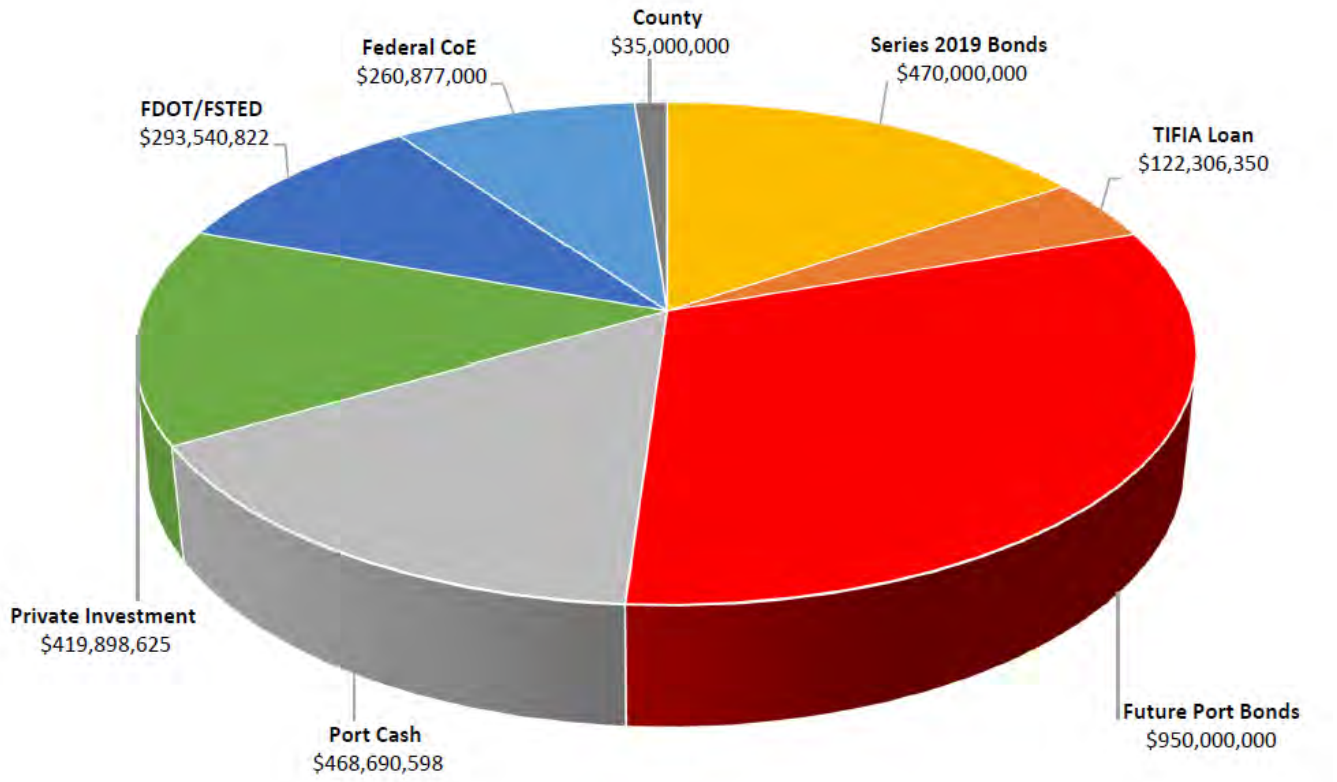
10. Funding sources for Master/Vision Plan capital program.

The 2018 Update assumes that Port Everglades will continue to be successful not only in securing State and Federal grant dollars but in achieving a greater degree of

public/private co-investment in its facilities in partnership with its tenants and other users. Specifically, the 2018 Update assumes that Port Everglades will be responsible for roughly two thirds ($2.01 billion) of the $3.02 billion overall capital improvement program. Figure P-21 presents the assumed distribution of 20-year capital contributions associated with the 50 projects included in the 2018 Update by funding source. A separate distribution analysis was not performed for the 5-year Master Plan and 10-year Vision Plan periods.

Figure P-21: 20-year Distribution of Capital Contributions ($3.02B)

Source: Bermello, Ajamil & Partners, Inc.



As is often the case at seaports in the U.S., the largest source of future capital for the Port will be Port-issued bonds, with just under half (~$1.42 billion) of the funds required to implement the 50 projects included in the 2018 Update expected to come from this source.

Surplus revenues (Port cash) not required to cover the Port's bond commitments will account for the second largest source of future capital (~$469 million).

Direct capital contributions from the private sector, including Port tenants and other users, will account for the third largest source of capital during the 20-year life of the 2018 Update (~$420 million).

The Federal government is expected to be the fourth largest contributor to the 2018 Update as the result of an approximately $261 million contribution to the deepening and widening project plus a separate Transportation Infrastructure Finance and Innovation Act (TIFIA) loan of approximately $122 million.

The State will also contribute approximately $294 million to help implement the 2018 Update in the form of both Florida Department of Transportation (FDOT) and Florida Seaport Transportation and Economic Development (FSTED) grants.

Last but not least, Broward County will make major contributions to two specific projects included in the 2018 Update. County contributions will include approximately $35 million to design and construct the proposed Port Access Road connecting U.S. 1 to SE 17th Street and an as-yet unknown amount to design and construct the proposed Automated People Mover (APM) connecting Fort Lauderdale-Hollywood International Airport to the several Port Everglades cruise terminals as well as the Broward County Convention Center.

11. Deepwater Port Infrastructure.

a. *In-water facilities*. The in-water facilities to be improved during the 5- and 10-year planning periods are identified above.

b. *Maintenance of in-water facilities*. Port Everglades will continue to perform regular depth soundings throughout the long-term planning horizon to monitor the siltation rate and depth changes at the Port's berths and in the turning basins. These facilities will be maintained when the project depth requirements may become compromised through siltation, seawall undermining, and prop backwashing.

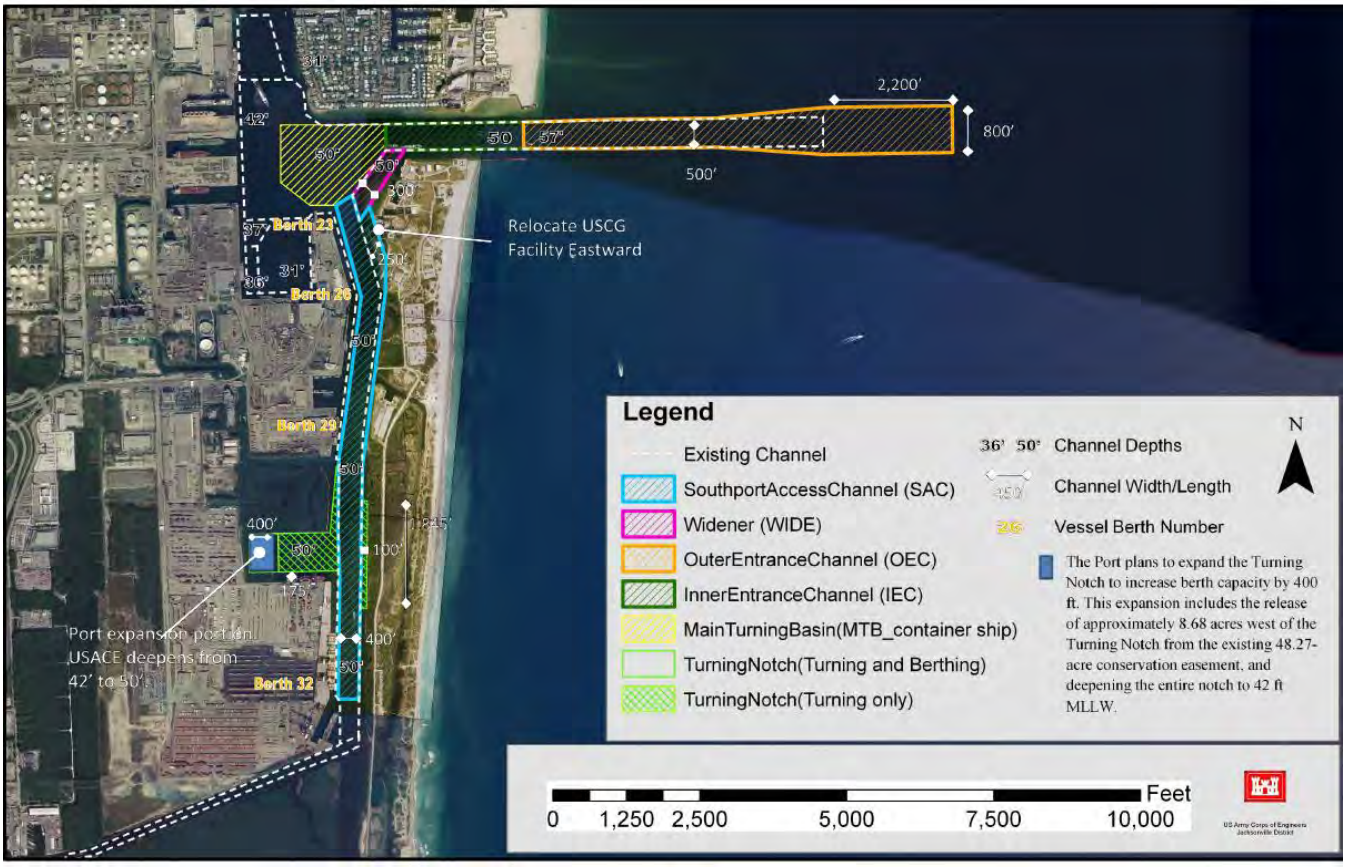
   Maintenance of the Port's bulkheads is essential to its continued economic viability. The previously cited Bulkhead Study Update and Cathodic Protection System Evaluation for Port Everglades Berths 1 through 29, completed in 2010, provides scheduling recommendations for the replacement of existing bulkheads; these recommendations have been generally followed (with some exceptions in the scheduling of new bulkheads over the 5-, 10, and 20-year planning periods in the Port Master/Vision Plan.

c. *Management of dredged material.*

i. Dredging for harbor and channel deepening and widening. This project, which has been in the planning stage for more than 20 years, calls for deepening the port's navigational channels, and just as importantly, widening the ICW along the Northeast side of the channel to allow larger vessels to access Southport in the future, including while one or more cruise ships are berthed in Midport (T25, T26, and/or T29). This project is currently in the pre-construction engineering and design phase, after receiving a signed Chief of Engineers Report from the USACE on June 26, 2015, and U.S. Congressional authorization in December 2016. In addition to widening the Port Everglades channel, the Project calls for deepening and widening the Outer Entrance Channel from an existing 45-foot project depth over a 500-foot channel width to a 55-foot depth over an 800-foot channel width. The project will also deepen the Inner Entrance Channel and Main Turning Basin from 42 feet to 48 feet (with a 2-foot overdredge allowance), and widen the channels within the Port to increase the margin of safety for ships transiting to berth. The total estimated cost is $423 million, which includes approximately $39 million to relocate the existing USCG facility. The Port's share of this total cost is approximately $67 million. Crucially, widening and deepening the channel is projected to create 4,789 construction jobs in the near term, and 1,491 regional jobs when cargo usage is operating at full capacity (i.e. 10 years after completion).

Source: Port Everglades

Figure P-22: ACOE Tentatively Selected Plan



ii. Management of dredged material. As previously discussed, the existing ocean dredged material disposal site (ODMDS) has been designated to accommodate dredged material from periodic maintenance events in the Port. However, preliminary results of the modeling conducted in 2009 by the ACOE regarding the capacity of the existing ODMDS indicated that it is insufficient in size to contain the potential volume of dredge material (not to exceed 6.63 million cubic yards) resulting from the Port Everglades deepening and widening project. ACOE and EPA worked cooperatively on the development of an Environmental Assessment (EA), supporting the ODMDS expansion. Figure P-14 shows the location of the two proposed alternatives, the existing ODMDS, and the entrance to Port Everglades, approximately 3.25 nautical miles offshore of Fort Lauderdale.

The Southport Turning Notch expansion at existing water depth is a separate project from the deepening and widening project and is the sole responsibility of the sponsor, the Port as is management of dredged material

associated with the project. As previously discussed, Phase 1 of this project is well underway as of July, 2020.

d. *Hazardous material handling and cleanup*. The Port's procedures for the handling and disposal of regulated or hazardous materials in the PJA have been successful in meeting the needs mandated by federal, state, and local government standards. It is recommended that these procedures be annually updated to insure consistency with current plans and procedures of the Broward County Emergency Management Division.

e. *Handling and cleanup of petroleum products*. The Port's procedures for the handling and cleanup of petroleum products in the PJA have been successful in meeting the needs mandated by federal, state and local government standards. It is recommended that these procedures be annually updated to insure consistency with current standards and protocols as well as the current plans and procedures of the Broward County Emergency Management Division.

12. Requirements for maintaining in-water facilities and for management of dredged material from both maintenance and expansion. Requirements for maintaining in-water facilities and for the management of dredged material from both maintenance and expansion are discussed above.

13. Impact of Port maintenance and expansion.

a. *Vegetative cover, wetlands, and wildlife habitats*. Port maintenance and expansion proposed in the Port Master/Vision Plan will have minimal impact on the existing natural resources in the PJA. The proposed water-dependent and water-related Port infrastructure improvements occur on urban land that contains no existing natural resources. The Southport Turning Notch expansion was allowed to proceed once FDEP accepted the initial mitigation program as productive and the required permits were issued.

b. *Beaches and Dunes*. Port maintenance and expansion plans proposed in the Port Master/Vision Plan will have no impact on existing beaches and dunes in the PJA, which include only the northern beachfront of Dr. Von D. Mizell-Eula Johnson State Park. It is expected that any beach erosion associated with the impact of the Port Everglades Entrance Channel jetties will be continually monitored by the FDEP and the Environmental Protection and Community Resilience Division of the EPGMD. Short-term storms tend to be more damaging to beaches and dunes than the ongoing littoral drift.

c. *Submerged lands*. Port maintenance and expansion plans proposed in the Port Master/Vision Plan will have minimal impact on submerged lands in the PJA. The Port owns the submerged lands in the PJA that are not owned by the State of Florida. It is expected that no submerged lands in the PJA will be impacted, with the exception of periodic berth depth maintenance resulting from siltation, undermining by ship and tug propeller backwashing, and debris deposited by loading and unloading ships.

d. *Floodplains*. Port maintenance and expansion plans proposed in the Port Master/Vision Plan will have minimal impact on floodplains in the PJA. New development and redevelopment in upland portions of the PJA will continue to be constructed in compliance with the standards specified by the building codes and land development regulations of the affected local government, including sea level rise projections, models and requirements.

e. *Living marine resources*. Port maintenance and expansion plans proposed in the Port Master/Vision Plan will have minimal impact on living marine resources. The Plan provides for the continued maintenance of the Port Everglades Entrance Channel jetties and the former riprap seawall along the Southport Turning Notch prior to its expansion is already in the process of beiong replaced by an environmentally friendly bulkhead, which promotes the protection and proliferation of living marine resources.

    i. The Port Everglades manatee sanctuary, as designated by state statute, will continue to allow the safe haven for the manatees that populate the FPL Discharge Channel during the winter months. The Environmental Protection and Community Resilience Division of the EPGMD and the FDEP will continue to monitor the beachfront for sea turtle nests. In addition, the protection of off-shore coral reefs will continue to be an important factor in the establishment of an ODMDS by the ACOE and the U.S. EPA.

f. *Water quality*. Port maintenance and expansion plans proposed in the Port Master/Vision Plan will have minimal impact on water quality in the PJA. The proximity of the PJA to the Atlantic Ocean facilitates strong tidal flushing which keeps the Port's water areas relatively free of pollutants.

g. *Water quantity*. Port maintenance and expansion plans proposed in the Port Master Plan will have minimal impact on water quantity in the PJA. The Large User Agreement between the Port and the City of Fort Lauderdale insures there

will continue to be adequate potable water available, concurrent with the impact of development in the PJA.

h. *Public access*. Federal and state security measures restrict public access to the Port. The Port Access Road, which is included in the 5-year Master Plan, has been designed to allow the public to travel between the intersection at Eisenhower Boulevard and SE 17th Street to Spangler Boulevard and U.S. 1 without passing through a Port security gate. The public will not, however, have unrestricted access to Port facilities because of security considerations.

i. *Historic Resources*. Anticipated future expansion and operations of Port Everglades will have no impact on historic resources. Any new designation or identification of historic resources in the PJA will be protected, in accordance with the Broward County Code.

j. *Land use and infrastructure of adjacent areas*. The PJA is generally bounded by the 17th Street Causeway to the north, by West Lake Regional Park to the south, by the Atlantic Ocean to the east, and U.S. 1 and FLL to the west. This creates a self-contained, well defined commercial port area. It is anticipated that the Port's future expansion and operations will have only minimal impact on adjacent land uses or adjacent infrastructure, with the exception of the Griffin Road extension and NE 7th Avenue improvement projects. Both of these corridors are located immediately to the west of the Port and immediately adjacent to the southeast corner of FLL. Since the 10-year Vision Plan calls for the extension of Griffin Road into Port Everglades to open up a secondary Southport access point with enhancements also being made to NE 7th Avenue including widening and a new intersection with the extended Griffin Road, there will be additional truck traffic on both of these roads in the future. Such impacts will be a function of final design and truck routing but adjacent land uses along both corridors are likely to be impacted to some degree.

   It is recommended that compatibility between Port-related uses and any adjacent commercial and/or residential uses, including along these corridors as well as in the Northport area, be considered by the affected local jurisdiction during the land use amendment and development order review process.

   The PED shall continue to coordinate regularly with the BCAD and the FAA to ensure that the new berths and crane locations proposed in the Southport Turning Notch expansion plan are compatible with FLL operations and height restrictions for that area of the Port.

The PJA includes portions of the municipalities of Fort Lauderdale, Hollywood, Dania Beach, and Broward County. The Interlocal Agreement dated May 6, 1994 among these respective jurisdictions identifies roles and responsibilities in the PJA. Chapter 163.3178(2)(k)(5) requires the adoption of a procedure by Broward County and the affected jurisdictions which will resolve any inconsistencies between the respective local government comprehensive plans and the Deepwater Port Component through a dispute resolution process. As provided under Chapter 186.509, FS, this procedure is to be utilized in the event the local government and Broward County are unable to resolve the inconsistencies. The dispute resolution process shall be consistent with the Broward County Intergovernmental Coordination Element.

IMPLEMENTATION

A. Authority

1. Chapter 59-1157, Laws of Florida, as amended, defined the PJA and established Port Everglades Authority.

2. Administrative Code of Broward County, Chapter 32, adopted by the Broward County Board of Commissioners in 2001 and updated regularly since, specifies the powers and duties of the Port Everglades Departmenty, together with the rules and regulations which apply within the PJA.

3. Chapter 9-429, Laws of Florida, provides for the assumption by the Broward County Board of County Commissioners of the powers and duties of the Port Everglades Authority.

4. Resolution No. 94-1302, adopted by the Broward County Board of County Commissioners, on October 25, 1994, incorporates the rules and regulations of the Port Everglades Authority into the Broward County Administrative Code.

5. Interlocal Agreement between the Municipalities of Hollywood, Fort Lauderdale, Dania Beach, and Broward County, dated May 6, 1994, defines the roles and responsibilities of the affected jurisdictions in the PJA.

6. Port Everglades Development District (PEDD) specifies the zoning regulations applicable in the PJA which have been adopted by the municipalities of Hollywood, Fort Lauderdale, and Dania Beach.

7. Port Everglades Tariff Number 12, Rules and Regulations, Port Everglades, Florida, updated October 1, 2019.

B. Sources

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