Executive Summary

INTRODUCTION

In accordance with 40 CFR 1508.9, this programmatic Environmental Assessment (EA) of the Comprehensive Port Improvement Plan (CPIP) for the Port of New York and New Jersey (Port) has been prepared pursuant to the National Environmental Policy Act (NEPA) of 1969 and its implementing regulations, and associated rules and regulations of the Council on Environmental Quality. The EA considers alternative conceptual, long-term scenarios for port improvements and associated transportation improvements for seven Port facility sites included in the CPIP. The EA identifies the types of potential impacts to the natural and manmade environments that may be anticipated from future projects or actions that may be proposed in the vicinities of the CPIP port sites. The EA further identifies the environmental review processes and permits and approvals that may be required for future CPIP-related projects and actions.

The Draft CPIP Environmental Assessment was made available on October 3, 2005, for public and agency review. Public meetings at which the EA's findings were presented and discussed were held on October 18th in New York and on October 20th in New Jersey. Comments on the Draft EA were accepted through November 9, 2005. Responses to comments received on the Draft EA are provided in Chapter 7.0 and associated revisions have been made to this Final EA.

CPIP PROJECT HISTORY

The Port plays a vital part in the economy of the New York/New Jersey metropolitan area. As the demand for goods in the region has grown, the Port has developed in response, but without unified planning for its development. To address the issue of how to proceed with development at the Port in an efficient and environmentally protective manner, a Memorandum of Understanding (MOU) to prepare a CPIP for the Port was executed in January 2000. Signatories to the MOU included project sponsors (identified as the CPIP Consortium), regulatory agencies, resource agencies, and regional stakeholders. The CPIP planning horizon extended to the year 2060, the year for which the United States Army Corps of Engineers (USACE) had previously forecast cargo demand in its consideration of navigation improvements. The CPIP was to consider port terminal operations, intermodal transportation services, landside logistical operations, and environmental considerations. While considering the Port's individual facilities, the CPIP was to address future cargo demand and port capacity from the perspective of the Port, as a whole.

The CPIP planning effort was to focus on seven principal terminal sites in the Port (Table ES-1 and Figure ES-1). The CPIP was to identify port and associated transportation improvement options for each of the port facility sites and integrate the site-specific options into Port-wide improvement scenarios that would be regionally supported, environmentally protective and economically viable.

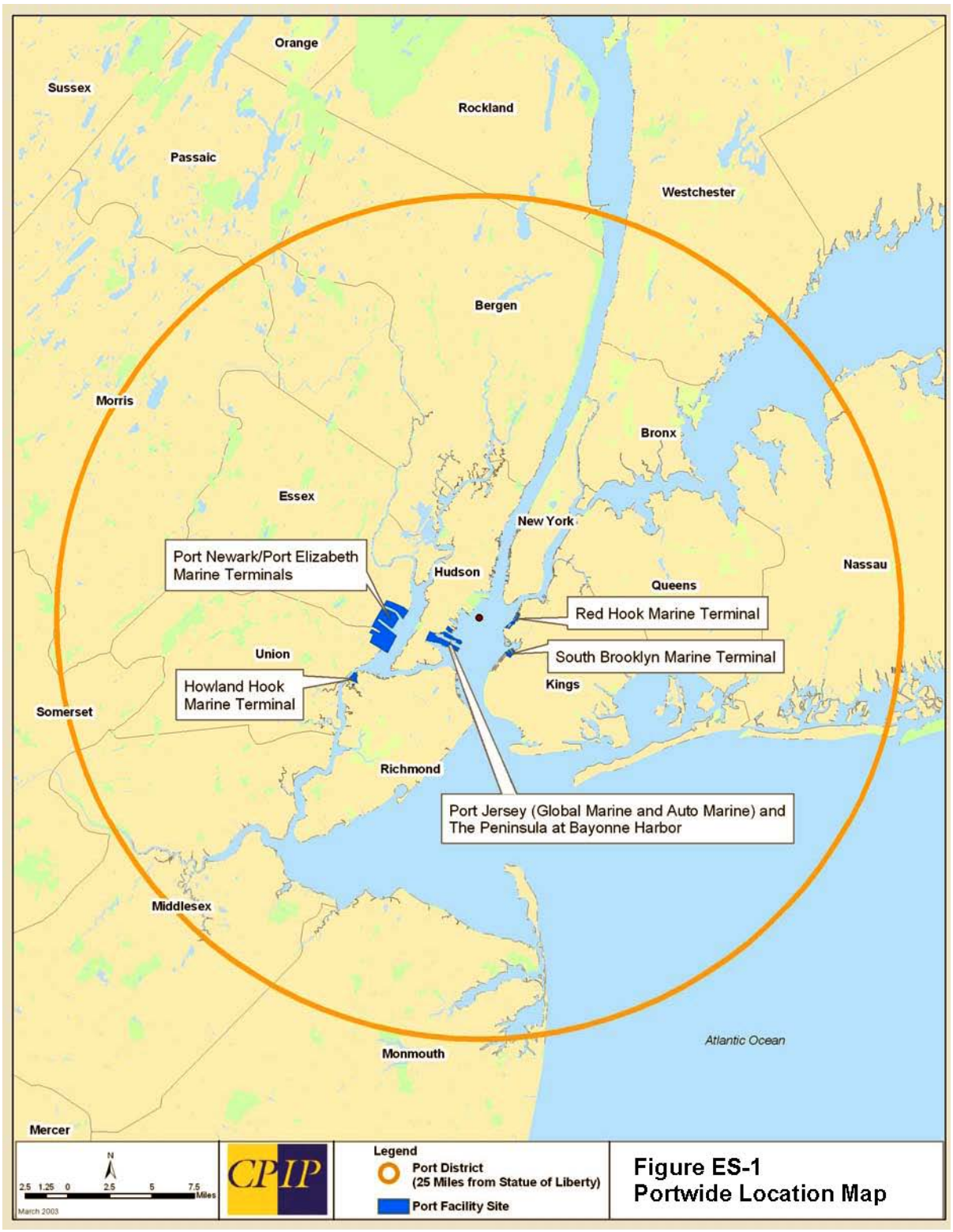
Orange
Sussex
Rockland
Passaic
Westchester
Bergen
Morris
Bronx
Essex
New York
Port Newark/Port Elizabeth Marine Terminals
Hudson
Queens
Nassau
Red Hook Marine Terminal
South Brooklyn Marine Terminal
Union
Howland Hook Marine Terminal
Kings
Somerset
Richmond
Port Jersey (Global Marine and Auto Marine) and The Peninsula at Bayonne Harbor
Middlesex
Atlantic Ocean
Monmouth
Mercer
N
2.5 1.25 0 2.5 5 7.5 Miles
March 2003
CPIP
Legend
Port District
(25 Miles from Statue of Liberty)
Port Facility Site
Figure ES-1
Portwide Location Map

TABLE ES-1: PORT FACILITY SITES

Port Identification	State/Water Body	Municipality
Port Newark Marine Terminal	New Jersey/Newark Bay	City of Newark, Essex County
Port Elizabeth Marine Terminal	New Jersey/Newark Bay	City of Elizabeth, Union County
Port Jersey (Global Marine and Auto Marine Terminal	New Jersey/Port Jersey Channel New York/Upper New York Bay	City of Jersey City, Hudson County
The Peninsula at Bayonne Harbor (formerly Military Ocean Terminal at Bayonne (MOTBY))	New Jersey/Port Jersey Channel New York/Upper New York Bay	City of Bayonne, Hudson County
Howland Hook Marine Terminal	New York/Arthur Kill, Kill Van Kull	Borough of Staten Island, Richmond County, City of New York
South Brooklyn Marine Terminal	New York/Upper New York Bay	Borough of Brooklyn, Kings County, City of New York
Red Hook Container Terminal	New York/Upper New York Bay	Borough of Brooklyn, Kings County, City of New York

BASIS FOR FEDERAL AGENCIES' ORIGINAL DETERMINATION FOR NEPA EIS

Given the forecasted growth in cargo demand, the need for significant port infrastructure improvements, and the geographic scope of the CPIP planning effort, the United States Environmental Protection Agency (USEPA), the USACE, and the Federal Highway Administration (FHWA) determined that the products of the CPIP process could constitute major federal actions significantly affecting the quality of the human environment, such that preparation of a Federal environmental impact statement (EIS) was required, under Section 102(2) of NEPA.

In August 2002, a Memorandum of Agreement (MOA) was executed, providing a framework for the preparation of an EIS for the CPIP. The CPIP EIS was to serve as a planning tool in support of the CPIP's development. Environmental review and evaluation of port and associated transportation improvement options during Plan development was to serve to highlight potential adverse effects and identify opportunities for environmental enhancements, such that improvement options could be refined. While the CPIP and CPIP EIS were to be separate documents, they were to be prepared in an iterative manner and be closely coordinated to achieve the purpose of the CPIP project.

To the extent that the EIS could do so while complying with federal law, it was also to comply with the provisions of the New York State Environmental Quality Review (SEQRA), the New York City Environmental Quality Review (CEQR), New Jersey Executive Order No. 215 (EO 215) and as well as all other applicable federal, state, and local laws and pertinent environmental requirements. Upon its completion, the EIS was to be used by the federal, state, and local agencies in their respective decision-making processes.

BASIS FOR FEDERAL AGENCIES' DECISION TO DEVELOP AN EA AND NOT TO PROCEED WITH EIS AT THIS TIME

The analyses of port, transportation network, and warehousing capacity conducted as part of the CPIP planning process indicated that CPIP-associated improvements will not need to occur for several decades. The CPIP forecasts of future cargo volumes and assessment of Port-wide capacity indicate that the capacity in the Port is sufficient for several decades for all cargo types, such that implementation of port improvements is not required in the near-term.

Through the planning process, it was also determined that the acreage of wetland and waterfront fill that might be needed to create new upland acreage to support future Port development would be substantially less than was estimated when the CPIP project was initiated. New techniques of cargo handling at container terminals have resulted in more efficient use of land, superseding the need to make new land with waterfront fills, reducing the need for fill in waters and eliminating the need for federal action. The CPIP's four scenarios for future Port-wide development would involve between 23 and 153 acres of impact to aquatic habitat, rather than the more than 500 acres of waterfront fill originally estimated (*Feasibility Report for New York and New Jersey Harbor Navigation Study FEIS*, December 1999), and the fill associated with the CPIP scenarios would not need to occur for several decades, when additional port capacity will be required.

The CPIP planning process forecast that future Port-related truck trips will continue to comprise a very small percentage of total regional traffic. Traffic growth projected for future decades will result principally from growth due to general population and employment increases in the region and to traffic generated by future non-Port-related development projects. For the specific highway corridors serving the Port sites, total truck travel patterns will likely remain similar to today's patterns. On local roadways in the vicinity of the Port Sites, Port-related truck traffic will increase significantly by 2060, but will remain a small percentage (0.12 percent) of overall traffic in those areas.

While significant constraints in the freight rail network serving the Port, the entire New York/New Jersey region, and the broader national rail network emanating from the region were identified during the CPIP planning process, CPIP determined that Port-related rail generates only a small percentage of overall forecasted rail growth.

The CPIP planning process also considered the need for future additions to the warehousing stock that serves the Port area. While warehouse demand will increase significantly by 2060, adequate suitable acreage for warehouse development is currently available in the Port area. Assuming this suitable land is not used up for other purposes, accommodation of this future warehousing demand related to the Port's future ocean-borne cargo volumes will not require use of wetlands or other environmentally sensitive areas.

Based on these conclusions of the CPIP planning process, the Federal Co-lead Agencies determined that there are no necessary near-term federal actions associated with CPIP's forecasted cargo demand. Further, given the considerable time period that may elapse before the conceptual improvements identified in the CPIP would need to become actual, proposed projects with sponsors, the Federal Co-lead Agencies determined that a detailed environmental review and analysis, as conducted in an EIS, was not warranted. In the absence of federal action, the NEPA EIS process was discontinued. A "Notice of Termination of Environmental Impact Statement for the Comprehensive Port Improvement Plan Within the Port of New York and New Jersey (PONYNJ)" was issued by the Federal Co-lead Agencies in the *Federal Register* (Vol. 70, No. 166), dated August 29, 2005.

However, the CPIP considers an array of potential long-term port improvements, some of which may involve future federal actions that will require analysis under NEPA. Therefore, the Co-lead Agencies determined that a programmatic analysis in the form of an EA is the appropriate level of environmental review at this point, and directed preparation of this CPIP EA, which includes the following:

- Discussion of the purpose and need for CPIP;
- Description of existing conditions in the vicinities of the seven port sites considered in the CPIP;
- Summary of the alternatives planning and development process that resulted in identification of four CPIP scenarios for port development;

- Qualitative discussion of potential 2020 No-Action port, transportation and warehousing conditions in the Port area; and
- Qualitative discussion of the types of impacts that may result with future projects consistent with the CPIP scenarios, and the environmental reviews, permits, approvals, and agency consultations that may be required of future site-specific projects.

PURPOSE AND NEED FOR THE PROJECT

The purpose of the CPIP project is for the CPIP Consortium to prepare a comprehensive port improvement plan for the Port of New York and New Jersey that will address projected cargo demand to the year 2060; is economically viable and environmentally sustainable; and will support the ongoing restoration of the harbor and its environment.

The principal factors that underlie the need for the CPIP are:

- Forecasts of significant growth in cargo volumes passing through the Port, and associated transportation needs; and
- Existing Port cargo-handling and associated transportation network capacities, and projected future capacity shortfalls to meet the increasing cargo volumes.

1. Cargo Forecasts and Assessed Capacity of Port Facilities

The volume of cargo passing through the Port has increased dramatically in recent years. In 2002, the Port handled 3.7 million 20-foot container equivalent units (TEU),[1] a 13 percent increase over 2001 figures, and an 85 percent increase over the 2 million TEUs (empty and loaded) handled in the Port 10 years ago. Much of the Port's recent growth has been based upon imports from the Far East, principally using the all-water route via the Panama Canal and bypassing West Coast ports. Labor strife and congestion at West Coast ports have also influenced the recent growth in cargo at the Port. However, the all-water route via Panama is not available to the largest ships being built now, which are expected to dominate world trade in the near future. The mean size of the largest 200 container ships trading in the year 2000 was 5,000 TEU; by 2008, based on ships on order, the mean size of the largest 200 container ships trading will approach 8,500 TEU, twice the capacity of 'Panamax' vessels. If the size constraints on the all-water route via Panama were removed, the CPIP forecast for the Port would rise substantially. Currently, however, there are no fixed and/or funded plans to widen the Panama Canal.

In addition, the CPIP forecast assumed that the U.S. railroad industry would continue to be able to absorb trade growth via the West Coast at existing rates. However, handling trade growth volumes will involve investment levels that the railroads may or may not wish to address. A lack of investment in railroad infrastructure across the continent might also bring about higher forecast demand for the Port. For the purposes of the CPIP study, however, the railroad business was considered as a market driven industry, which would adjust to demand levels.

The total tonnage passing through the Port – including general cargo, as well as petroleum and other bulk shipments – rose from 65 million tons in 2000 to 70 million tons in 2002. Nearly 589,000 automobiles and other vehicles were imported and exported through the Port in 2002, a 7 percent increase over 2001 figures. The CPIP forecasts of cargo demand increases by the years 2040 and 2060 are shown in Table ES-2.

[1] A TEU refers to a 20-foot-long container. Maritime containers come in several lengths. Amounts provided in TEU units mean that the various sizes of containers coming through a port have been translated into the equivalent amount of 20-foot containers. A 20-foot container represents one TEU, and a 40-foot container is two TEUs.

TABLE ES-2: CPIP PLAN FORECAST: CARGO DEMAND BY 2040 AND 2060

Cargo Type	Portwide Assessed Capacity (2005)	2040 Demand/Yr.	2060 Demand/Yr.
Containers	8.6 m TEUs	8.5 m TEUs	11.3 m TEUs
Automobiles	0.93 m units	0.87 m units	1.1 m units
General Cargo	3.7 m tons/yr.	1.9 m tons/yr.	2.5 m tons/yr.
Bulk (Dry and Liquid) Cargo	10.6 m tons/yr.	8.5 m tons/yr.	11.3 m tons/yr.

m = million TEU = twenty-foot-equivalent unit.

The Port's terminals handle predominantly container cargo, automobiles, bulk cargo, or general cargo. Port capacity, including enhancements from recently completed projects and some that are currently underway, will be sufficient for some cargo types in coming years. Additional capacity enhancements will be necessary to accommodate cargo volume growth to 2060.

The entire Port's aggregate container capacity is assessed at 8.6 million TEUs per year, which is anticipated to be sufficient for several decades. However, by 2040, the forecast container volume in the Port will increase to 8.5 million TEUs, just marginally less than the assessed capacity. By 2060, the aggregate assessed capacity for all of the Port's container terminals is expected to fall short of the needed capacity (11.3 million TEUs) by 32 percent. However, some individual container terminals will reach capacity on their existing acreage sooner than others, requiring some capacity enhancement improvements before 2060 in order for those terminals to remain competitive and play their part in supporting the increasing consumer-driven demand for goods in the region.

By 2040 and 2060, the capacity requirements of the Port's auto terminals are forecast at 872,000 and 1.1 million vehicles per year, respectively. By 2060, the increase will be 18 percent over current assessed capacity (930,000 vehicles), but 82 percent greater than the currently realized throughput capacity of 604,400 vehicles per year. The CPIP forecasts indicate that the aggregate assessed capacity for handling of automobiles in the Port will be adequate until 2045, but individual auto-handling terminals within the Port will likely require operational improvements and/or capacity enhancements before then.

For general and bulk cargo, forecasts of growth to 2040 and 2060 indicate that the assessed capacities of existing terminals will be sufficient to handle the increased volumes, except for dry bulk cargo. Assuming that operational efficiencies implemented in the nearer term will improve throughput capacity above the actual throughput achieved at present, the Port-wide assessed capacity for dry bulk cargo handling will be sufficient for forecast demand until 2044. The need for and timing of capacity-enhancing improvements to the dry bulk cargo facilities will be dictated by both commercial and physical factors.

As is true for all long-term forecasts, the CPIP forecast of future cargo demand in the Port of New York and New Jersey will need to be re-evaluated and refined, as appropriate, at periodic intervals in the coming decades. Underlying assumptions and data should be reviewed and updated with information current at the time of each forecast update, and the Port improvements necessary to accommodate the updated forecasts should be adjusted accordingly.

TRAFFIC AND TRANSPORTATION FORECASTS

CPIP forecasts of travel on the region's highway network show total regional traffic growing by 55 percent by the year 2060. Total regional truck traffic is expected to increase by 43 percent by 2060. As highway congestion increases over the decades, travel delay is forecast to nearly double between

2000 and 2060 as the average speed across the system drops appreciably from 22 miles per hour (mph) to 11 mph. While Port-related truck traffic is projected to grow by nearly 170 percent by 2060, it will still constitute a small percentage of total traffic (0.12 percent) and total truck traffic (1.4 percent) on the region's highways. Although truck traffic in the region will increase significantly, increases in auto travel are forecast to be the major factor for future congestion on the regional highway system. In major roadway corridors serving the Port sites, Port-related truck volumes will increase as a percentage of total traffic, and will continue to be the predominant issue for Port-related truck-based goods movement in the future. Potential impacts of increased Port-related truck traffic in future decades will be most evident on the local connector roads serving the seven Port sites considered in the CPIP.

An extensive network of rail lines, yards, intermodal facilities, and terminals serves the Port, but will be unable to accommodate the sustained cargo growth predicted. Despite a number of capacity improvement projects that are being implemented, constraints related to capacity, congestion and resultant choke points, inadequate clearances for double-stack railcars, conflicts with passenger services, freight rail policies, and competition among freight railroad companies are forecast for future decades, implying continued heavy reliance on truck-based transport of cargo to and from the Port.

WAREHOUSE DEMAND FORECASTS

Warehouse demand in 2060 is forecast to be 8.0 million square feet, a nearly threefold increase over warehouse floor space in the Port area in 1999. The acreage required in 2060 to house such warehouse demand is projected to be 457 acres, which represents only 6 percent of the total acreage of sites in New Jersey towns around the Port that were identified as suitable for such development. The identified acreage would avoid the use of areas of wetlands or other environmental sensitivity to meet future warehouse demand for the Port.

ALTERNATIVES PLANNING AND DEVELOPMENT PROCESS

Port improvement alternatives were developed through a formal planning process that focused on identifying Port-wide improvement strategies that could accommodate forecasted cargo demand and consequent capacity shortfalls. The planning horizon extended to the year 2060, consistent with the forecasts of future cargo demand.

As the CPIP planning process resulted in a finding that no near-term improvement projects are required to handle cargo demand in the next several decades, the port and associated transportation improvement alternatives defined in the CPIP are generalized strategies to guide future port development. The alternatives do not define specific future projects that would be required to implement a given development scenario, as future decisions about the scope and timing of individual port site improvements and/or expansions will be dictated both by capacity needs and market forces.

A critical factor considered early in the alternatives development process was the overall land acreage required to accommodate future cargo demand. Port-wide land area requirements in 2060 were estimated at 1,330 acres for containers; 580 acres for autos; 130 acres for general cargo; 90 acres for dry bulk; 20 acres for liquid bulk; 350 acres for road and rail facilities; 140 acres for terminal warehousing; and 140 acres for support space for amenities and services such as fueling stops. These requirements total 2,780 acres (about 4.3 square miles) required for all cargo and transportation types.

The required water depths in the approach channels and berths – 50 feet for container ships, 37 feet for auto carriers, and 40 feet for general cargo ships and dry and liquid bulk ships – were determined

by vessel type, as were the minimum channel widths in the berthing areas (where the same type of ships are moored on both sides) and the required berth "pocket" lengths and widths.

New building needs considered in the assessment of required acreage for different cargo types included administration buildings, encompassing customs and inspection functions, for container terminals; gate systems; workshops; warehouse facilities for load lightening of overweight containers, only for new port sites; auto processing sheds; and additional tanks for liquid bulk.

Following calculation of land acreage required per cargo type by 2060, site-specific attributes of the port sites were examined to determine their relative suitability to accommodate portions of the required acreage. Based on the port site attributes and guided by various port-planning considerations, 36 site-specific improvement options were defined. Each option assumed a different quantity of land that could be allocated to different cargo types, together with the associated berth space. During the development of the CPIP scenarios, efforts were made to avoid or minimize impacts to wetlands and aquatic habitat, while still meeting the CPIP goals and objectives.

Site-specific options were combined into four Port-wide scenarios, designated for ease of reference as Orange, Red, Yellow, and Blue. (A fifth scenario, designated as Green, was eliminated during the alternatives development and evaluation process as it would result in Port over-capacity for containers. See Chapter 4.0, Section B). Each scenario represents a combination of provisions for different types of cargo at the seven port sites that would meet or exceed the overall Port-wide demand for each cargo type in 2060. Table ES-3 indicates the land allocations, by acreage, and the future cargo-specific capacities achieved with each Port-wide scenario. Each of the alternative scenarios is further described below.

TABLE ES-3: LAND ALLOCATIONS AND CAPACITIES PROVIDED IN 2060 WITH PORT-WIDE SCENARIOS

Scenario	Containers		Autos		General Cargo		Dry Bulk		Liquid Bulk	
	acres	mTEUs	acres	mUnits	acres	mTons	acres	mTons	acres	mTons
Existing	1,265	8.6	489	0.93	183	3.6	68	4.8	20	5.7
Orange	1,567	13.3	680	1.29	130	2.61	87	6.22	38	10.83
Red	1,597	13.6	585	1.11	130	2.61	90	6.44	30	8.55
Yellow	1,577	13.4	600	1.14	130	2.61	87	6.22	38	10.83
Blue	1,502	12.8	665	1.26	130	2.61	87	6.22	38	6.93

Note: Existing acreages derived from Tables 5.11–5.25 in *Port of New York & New Jersey Comprehensive Port Improvement Plan, Volume1: The Plan* (September 2005)
Existing capacities derived from Table ES2 in *Port of New York & New Jersey Comprehensive Port Improvement Plan, Volume1: The Plan* (September 2005)
m = million

Alternative Scenario Orange, 2060 – Alternative Scenario Orange proposes elimination of dry bulk cargo use at Port Newark South, auto use at Port Elizabeth and Port Jersey, general cargo use at Howland Hook, and container use at North Brooklyn (Red Hook). It would introduce auto use at the Bayonne Peninsula, and auto and general cargo uses at South Brooklyn. Scenario Orange would require acquisition of 230 acres of land at Port Elizabeth, 118 acres at Howland Hook, and 20 acres at Red Hook/North Brooklyn. It would also anticipate 20 acres of fill at Port Jersey and 3 acres of fill at Howland Hook.

Alternative Scenario Red, 2060 – Alternative Scenario Red would eliminate dry bulk use at Port Newark South, auto use at Port Elizabeth and Port Jersey, general cargo at Howland Hook, and

container use at North Brooklyn (Red Hook). It would introduce container use at Bayonne Peninsula, and general cargo and dry bulk uses at South Brooklyn. Scenario Red would require acquisition of 230 acres of land at Port Elizabeth, 85 acres at Howland Hook, and 20 acres at Red Hook/North Brooklyn. It would also anticipate 20 acres of fill at Port Jersey.

Alternative Scenario Yellow, 2060 – Alternative Scenario Yellow would eliminate dry bulk use at Port Newark South, auto use at Port Elizabeth, general cargo use at Howland Hook, and container use at Red Hook/North Brooklyn. It would introduce land uses for containers and autos at Bayonne Peninsula and for autos at South Brooklyn. Scenario Yellow would require the acquisition of 85 acres of land at Howland Hook and 50 acres at Red Hook/North Brooklyn. It would also anticipate 6 acres of fill at Port Jersey.

Alternative Scenario Blue, 2060 – Alternative Scenario Blue would eliminate dry bulk use at Port Newark South, auto use at Port Elizabeth, general cargo use at Howland Hook, and container and general cargo uses at Red Hook/North Brooklyn. It would introduce general cargo use at Port Newark South, auto use at Bayonne Peninsula, non-Port-related uses at Red Hook/North Brooklyn, and container cargo use at South Brooklyn. Scenario Blue would require the acquisition of 85 acres of land at Howland Hook and 112 acres at South Brooklyn. It would also anticipate 6 acres of fill at Port Jersey and 130 acres of fill at South Brooklyn.

Associated Transportation Improvements

The CPIP also addressed the potential need for highway and rail improvements to the transportation infrastructure serving the Port. It was assumed in the CPIP planning process that highway improvements would be required to reduce any delays from increased Port-related traffic congestion. However, based on the analyses conducted, it was determined that traffic growth related to the proposed port improvements to accommodate future cargo demand would not require significant local road or highway improvements. Forecasts indicated that the need for future roadway improvements would be due to growth in background traffic and non-Port-related development projects, not to Port growth.

Local rail infrastructure improvements would be required to address capacity constraints of the existing rail network, even assuming capacity enhancements that are underway or programmed and committed for implementation. The CPIP suggested several on-dock rail terminal projects, as well as regional and wider rail system improvements for consideration.

No-Action Alternative

While no near-term port improvement or associated transportation improvement projects are required to handle cargo demand in the next several decades, CPIP-associated improvement projects that will be proposed in the future will undergo required environmental reviews, either in environmental assessments or environmental impact statements, depending on the specifics of the proposed projects. In either form of environmental review, a No-Action alternative will need to be defined for comparison with the proposed project's and any project alternatives' potential impacts. The No-Action alternative will depict future social, economic, and environmental conditions, absent construction and implementation of the proposed project, within the proposed project's study area and, for certain environmental considerations, e.g., air quality, on a broader, regional basis.

2020 PORT, WAREHOUSING, AND TRAFFIC CONDITIONS

Future port, warehousing, and traffic conditions without implementation of any CPIP-associated port or transportation improvement projects were qualitatively assessed for the year 2020. While no CPIP-associated projects are yet needed or proposed, the description of 2020 conditions is provided as an interim forecast of potential future conditions. This information may facilitate analysis of future projects in that a possible future baseline is identified; this information will need to be updated and extended to the future year(s) suitable for environmental review of projects that are proposed in the future.

A key element of the CPIP forecast for the year 2020 is that containers will continue to constitute a significant and rising share of the Port's trade, with the volume of total containers nearly doubling, from approximately 3 million TEUs in 2000 to 5.9 million by 2020. Based on this forecast, the 2020 characterizations provided in this EA (see Chapter 5.0) are in terms of the capacity requirements and constraints that would relate to accommodating growth in demand for the Port's cargo-handling services; future needs for warehousing of container imports to the 17-county Port region; and the potential for shift in cargo transport from truck to rail.

In 2020, 241 acres of land would be required for warehouse related to ocean-borne cargo to meet the forecasted demand, an increase of 89 acres over the land area used for this purpose in 1999. The CPIP assumed sufficient acreage would be available, as the additional warehousing need in 2020 represents only 2 percent of the total acreage of sites in New Jersey's inventory of acreage that is available and suitable for warehouse development.

The CPIP estimates that between 85 and 95 percent of all commodities leaving Port terminals are currently transported by truck, rather than by rail or barge services. The Port terminal connector roads, which provide access between the terminals and the major highway corridors and currently carry the majority of Port-related truck movements, would continue to do so in 2020. Specific projects identified by the CPIP from the 2002-2005 Transportation Improvement Programs of the Port region's two Metropolitan Planning Organizations would improve some of the Port-area roadways and rail infrastructure by 2020. The Port Inland Distribution Network (PIDN), a newly emerging system for distributing containers moving through the Port, envisions a mode share under which 23 percent of containers would leave the Port via non-highway modes (rail, barge) by 2010 and 33 percent by 2020.

The CPIP's regional highway baseline estimates the following year 2000 statistics: 320 million daily vehicle miles traveled (VMT); 14 million daily vehicle hours traveled (VHT); 22 mph average speed; 32 million daily total trips; and Port-related truck trips comprising 0.05 percent of the total volume. The CPIP forecasts 2020 regional highway conditions of 410 million daily VMT; 22 million daily VHT; 18 mph average speed; 41 million total daily trips; and Port-related truck trips comprising 0.06 percent of the total. As traffic increases by 2020 would not be attributable to Port-related truck trips, the CPIP concludes that Port-related trucks would not have direct significant impact on the regional highway network.

The CPIP's traffic forecast for local Port roadways anticipates the following conditions near the Port sites by 2020:

- *Port Newark/Port Elizabeth* – increase in daily traffic volumes; growth in rail mode split.
- *Port Jersey* – large percent increase in daily volume, particularly on NJ Route 440. The majority of this growth would result from the proposed non-Port-related development of The Peninsula at

Bayonne Harbor, which is forecast to produce up to 80,000 daily vehicle trips on area roadways at full build-out, when considered without proposed infrastructure improvements.[2]

- *Bayonne* – large percent increase in daily volumes, particularly on Port Terminal Road (due to the proposed non-Port-related development of The Peninsula at Bayonne Harbor).
- *Howland Hook* – likelihood that roads will continue to operate below capacity; growth in rail mode split.
- *Red Hook* – slight increase in daily volumes; no growth in rail mode split, due to limited rail access; Hamilton Avenue connectors would operate below capacity; Columbia Street south of the BQE ramp at capacity.
- *South Brooklyn* – increased daily volumes would be attributed to new non-Port-related development; 39th Street and 2nd Avenue would operate below capacity.

Changes to rail infrastructure by 2020, as inventoried in the CPIP, relate to on-dock rail terminals, rail yards, rail terminals, the Conrail Shared Assets system (shared CSX and Norfolk Southern access to terminals and yards), and the wider rail system (mid-Atlantic and New England), with congestion occurring by or before 2020 at several terminals and rail connections.

POTENTIAL IMPACTS OF CPIP SCENARIOS

The alternative port improvement scenarios (Orange, Red, Yellow and Blue) represent combinations of port site-specific uses and Port-wide arrangements of uses that collectively would address future cargo-handling needs to 2060, the CPIP forecast horizon year. The scenarios do not define specific actions or projects that would be necessary to implement any of the scenarios. Therefore, a qualitative assessment was undertaken to identify the potential environmental issues and concerns with each scenario related to land use/property acquisition; adjacent/proximate roadways; regional air quality; nearby noise-sensitive receptors; nearby historic resources; on- and off-site hazardous materials and regulated materials; nearby open space resources; on- and off-site protected species and special habitats; water quality; on- and off-site aquatic habitat; and environmental justice populations.

When CPIP-associated improvements are proposed in the future and the requisite environmental reviews are undertaken, such evaluations must also define future No-Action conditions – i.e., future conditions in the proposed project's build year but absent the proposed project itself. The future No-Action condition will serve as the point of comparison against which the proposed project will be evaluated to determine the project's potential social, economic, and environmental impacts.

The principal findings of environmental concerns near the port sites and the types of potential impacts that may result with each of the scenarios are as follow:

- *Scenario Orange* – potential impacts at all seven port sites:
  - Acquisition of 230 acres at Port Elizabeth, 118 acres at Howland Hook, and 20 acres at Red Hook/North Brooklyn;
  - Traffic impacts at roadways near all of the port sites, except South Brooklyn;
  - Potential air quality concerns related to $PM_{2.5}$, for which the New York/New Jersey region has been designated as non-attainment;
  - Noise-sensitive uses near all of the port sites;
  - Historic resources and/or historic districts near each of the port sites;
  - Known contaminated sites on or proximate to all of the port sites;

[2] *The Peninsula at Bayonne Harbor: Local Roadway Connector Study* (June 2003, City of Bayonne).

  - Open space resources near Port Jersey, at Bayonne Peninsula; and Howland Hook;
  - Protected species and special habitats on and/or proximate to all of the port sites;
  - Potential impact to 27 acres of aquatic habitat at Port Elizabeth; 20 acres at Port Jersey; 17 acres at Bayonne; and 20 acres at Howland Hook; and
  - Potential environmental justice impacts near Port Newark, Port Elizabeth, and Howland Hook, although the specific type and degree of adverse impact cannot be ascertained at this point.

- *Scenario Red* – potential impacts at all seven port sites:
  - Same potential impacts as with Scenario Orange at Port Newark, Port Elizabeth, Port Jersey, and Red Hook/North Brooklyn, and same air quality concern related to $PM_{2.5}$ at all sites;
  - Traffic impacts at Bayonne Peninsula, Howland Hook, and South Brooklyn;
  - Noise-sensitive uses near Bayonne Peninsula, Howland Hook, and South Brooklyn;
  - Historic resources near Bayonne Peninsula and Howland Hook;
  - Known contaminated sites on or proximate to Bayonne Peninsula, Howland Hook and South Brooklyn;
  - Open space resources near Howland Hook;
  - Protected species and special habitats on and/or proximate to Bayonne Peninsula, Howland Hook, and South Brooklyn;
  - Potential impact to 17 acres of aquatic habitat at Bayonne Peninsula; and
  - Potential environmental justice impacts near Howland Hook.

- *Scenario Yellow* – potential impacts at all seven port sites:
  - Same potential impacts as with Scenario Orange at Port Newark and Howland Hook, and same air quality concern related to $PM_{2.5}$ at all sites;
  - Acquisition of 50 acres at Red Hook/North Brooklyn;
  - Traffic impacts at Port Elizabeth; Port Jersey, Bayonne Peninsula, and Red Hook/North Brooklyn;
  - Noise-sensitive uses near Port Elizabeth, Port Jersey, Bayonne Peninsula, Red Hook/North Brooklyn, and South Brooklyn;
  - Historic resources and/or historic districts near Port Elizabeth, Port Jersey, Bayonne Peninsula, Red Hook/North Brooklyn, and South Brooklyn;
  - Known contaminated sites on or proximate to Port Elizabeth, Port Jersey, Bayonne Peninsula; Red Hook/North Brooklyn, and South Brooklyn;
  - Open space resources near Port Jersey;
  - Protected species and special habitats on and/or proximate to Port Elizabeth, Port Jersey, Bayonne Peninsula, Red Hook/North Brooklyn, and South Brooklyn;
  - Potential impact to 6 acres of aquatic habitat at Port Jersey, and to 17 acres at Bayonne Peninsula; and
  - Potential environmental justice impacts at Port Elizabeth.

- *Scenario Blue* – potential impacts at all port sites except Red Hook/North Brooklyn, which is assumed to not be developed for Port-related uses:
  - Same potential impacts as with Scenario Orange at Port Newark and Bayonne Peninsula, and same air quality concern related to $PM_{2.5}$ at South Brooklyn;

- Same potential impacts as with Scenario Yellow at Port Elizabeth and Port Jersey;
- Same potential impacts as with Scenario Red at Howland Hook; and
- At South Brooklyn, acquisition of 112 acres, traffic impacts, noise-sensitive uses nearby, historic resource and historic district nearby, on-site contamination, protected species on or in immediate vicinity of the site, potential impact to 130 acres of aquatic habitat, and potential environmental justice impacts.

CPIP CONCLUSIONS

The following are the principal conclusions of the CPIP planning process:

- Forecasts of future cargo volumes and assessment of Port-wide capacity indicate that the capacity in the Port is sufficient for several decades, such that implementation of necessary port improvements is not required in the near-term, beyond projects that are currently programmed and committed, and additional projects to assist in maintaining transportation mobility for port terminal facilities;
- Port-related truck trips will continue to comprise a very small percentage (less than 10 percent) of total regional traffic, and Port-related rail will constitute only a small proportion (4 and 5 percent) of forecasted rail growth;
- Local and regional transportation projects proposed by transportation agencies are related to ongoing increases in background traffic, not to Port improvement projects;
- Adequate suitable acreage for forecasted future warehousing demand is available in the Port area;
- Due to projected productivity improvements, the CPIP scenarios for future Port-wide development would involve substantially less waterfront fill than anticipated at the inception of the CPIP process, and waterfront fill is not required in the near-term; and
- In the absence of statutory authority for the CPIP or a single governing agency, it is not possible to prescribe a pattern of phased implementation for CPIP, but the Port-wide scenarios resulting from the CPIP planning process provide a useful framework for guiding future development of the Port.

The CPIP concluded that no one scenario shows significant advantage over the others and, therefore, the CPIP does not present a single preferred master plan for development of the Port. The CPIP also does not identify specific projects to implement any of the port improvement scenarios; therefore, there is no current Federal action requiring review under NEPA, nor any required federal or state approvals. In the absence of defined projects or actions, this EA provides an indication of the types of impacts that may result with implementation of future projects, based on current conditions on and near the port sites and an understanding of environmental sensitivities and the regulatory framework for environmental reviews. However, the qualitative assessments documented in this EA do not provide the basis or rationale for recommending a preferred alternative scenario, nor for making a finding at this time.

Nonetheless, it is anticipated that future port improvement projects that will be considered within the CPIP framework will be subject to Federal, state, and/or local environmental reviews, depending on the particulars of a given project. Different levels of environmental review may be triggered by CPIP-related port improvement projects, depending upon the likely impacts related to the proposed projects. As projects are brought forward, the type of impacts and their severity must be defined based on site-specific information and the specific construction and operation methods to be used. Similarly, the extent of required environmental review and the specific permits and approvals that

will be required for future CPIP-related projects cannot be identified with certainty until actual projects are proposed with sufficient detail to make such determinations.

Initially, future projects can follow the analyses outlined in the CPIP and this EA, albeit with updated information that is available at such time as those environmental reviews are undertaken. Methodologies for assessment of various environmental impact categories are provided in this EA (Appendix C) as guidance for future environmental reviews, with the caveat that then-current environmental regulations and guidance must be reviewed to update the methodologies, as necessary. Resource and regulatory agencies may also choose to use the CPIP EA for reference.