

## 4.25 Indirect and Cumulative Impacts

This section provides a description of the cumulative effects on a natural resource, ecosystem or human community. In order to determine the cumulative effects of the proposed action combined with other past, present and reasonably foreseeable major actions, it is necessary to take an overview approach to the projects implemented in the past and planned for the future in the project study area. The methodology used in this analysis has been developed according to the guidance presented in the 1997 CEQ publication, *Considering Cumulative Effects Under the National Environmental Policy Act*, and other professional guidance publications on the assessment of cumulative impacts.

For the purposes of this EIS, cumulative effects are defined as the impact on the environment from the incremental impact of the proposed action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal; public or private) or person undertakes such actions (40 CFR-1508.7). Indirect impacts are environmental impacts caused by the proposed project that occur later in time or are further removed in distance but still reasonably foreseeable (40 CFR-1508.8 (b)). Table 4.25-1 summarizes the indirect impacts and cumulative effects as a result of the No-Action and Preferred Alternatives.

For this cumulative impacts analysis, the No-Action Alternative assumes existing conditions, plus any committed or proposed project within the Hackensack Meadowlands District. Of the following 20 projects, 13 are scheduled for completion by the 2007 build year:

- **Meadowlands Xanadu Redevelopment Project:** As approved, the proposed 4.96 million square foot Meadowlands Xanadu Redevelopment Project would occupy much of the land currently used for parking at the Continental Airlines Arena site in 2007. The project is comprised of 2.2 million square feet of entertainment/retail space including a 6,000 to 8,000 seat athletic stadium; 1.76 million square feet of office space in four structures; a 520 room, 500,000 square foot hotel and 500,000 square feet of common space that will be constructed around the existing arena structure. The construction of six parking decks containing a total of 12,500 spaces would replace the surface parking displaced as a result of the redevelopment. Roadway improvements to upgrade access to and from the uses that are located at the proposed Meadowlands Xanadu Redevelopment Project would include a new ramp from eastbound NJ Route 3 to northbound NJ Route 120 that requires the acquisition of a portion of an adjacent parcel, the reconfiguration of a driveway leading from NJ Route 120 to the proposed project site and other improvements that are expected to occur within the existing rights-of-way. The extent of construction of this mixed-use development would require minor alteration of wetlands and landscaped upland areas.
- **Baker/Riverwalk Townhouse Development:** As approved, the Baker/Riverwalk townhouse development, which is located in Secaucus, is comprised of 212 residential units. This project is currently 50 percent completed.

- **AvalonBay Communities Apartment Complex:** As approved the AvalonBay Communities apartment complex, which is situated in Lyndhurst, includes 328 residential units. Commencement of construction is scheduled for 2005.
- **Hartz Mountain Industries/Linen-N-Things:** As approved, a 47,015 square foot Linens-N-Things will be constructed on Route 3 in Secaucus. Project completion is expected in the fall of 2005.
- **1627 Paterson Plank Realty/Residential Development:** As approved, a 26 unit residential development will be constructed in Secaucus. An initial zoning certificate was issued in October 2003; the construction start date is unknown.
- **Mill Creek Associates/Townhouses:** A proposal to construct 43 townhomes in Secaucus was granted conditional zoning approval in March 2005. The construction start date is unknown.
- **Russo/Barszcewski Street Development:** As approved, two warehouse distribution buildings totaling 291,108 square feet will be built in Kearny. The project is currently under construction. One warehouse is slated for completion in the fall of 2005.
- **East Rutherford Residence Inn:** A 133 room hotel situated in East Rutherford was granted conditional zoning approval in July 2004. The hotel is currently under construction and is slated for completion in the spring of 2006.
- **Group @ Route 3 LLC/Residential Towers:** 614 residential units are proposed for construction in East Rutherford. Approval for the project is conditional on the NJMC's receipt of the Tidelands Resource Council minutes granting an interim riparian license.
- **Fraternity Meadows, LLC/Site Improvement (Secaucus Transit Village):** Upon approval of an amended Landfill Disruption Permit by the NJDEP and a satisfactory response to NJMC's concerns regarding drainage, a 1,700 unit transit village will be constructed in Secaucus. The project is scheduled to commence in the summer of 2005.
- **359 Veterans Boulevard/Addition and Variance:** As approved, a 14,987 square foot building addition for a new window manufacturing facility will be constructed in Rutherford. Construction is expected to commence in the summer of 2005.
- **CSR Realty Ventures LLC/New Warehouse:** As approved, a 18,280 square foot warehouse-office building will be constructed in Carlstadt. The project is scheduled for completion in the summer of 2005.
- **Bhasin/Warehouse-Office Buildings:** As approved, two warehouse-office buildings totaling 155,449 square feet will be built in Secaucus. The project was approved in January 2001 and is currently 50 percent complete. Building #1 is constructed and

occupied, and Building #2 is under construction and scheduled for completion in the winter of 2005.

- **Linque H.C. Partners/Spring Hill Suites Hotel:** As approved, a 216-suite hotel will be constructed in Rutherford. The project received a conditional zoning certificate in May 2002; the construction start date is unknown.
- **Linque H.C. Partners/Office Development:** As approved, two 461,488 square feet office buildings and two parking garages are planned for construction in Rutherford. A conditional zoning certificate was issued in May 2003; the construction start date is unknown.
- **Vineland Construction/New Retail Building:** A 163,193 square foot Wal-Mart, a gas station, and 32,939 square foot retail building are proposed for development in Kearny. The project's application is currently under review by the NJMC. Approval is anticipated in the spring of 2005.
- **Hartz HCW/400 Mill Creek Drive:** As approved, an 118,218 square foot retail building will be constructed in Secaucus. The structure is currently under construction and is anticipated for completion in spring 2005.
- **WXIII/Whitehall Distribution Center 2:** As approved, a 43,493 square foot warehouse and a 3,055 square foot office building will be built in Carlstadt. A conditional zoning certificate was issued for the proposed project in May 2004; a construction start date is unknown.
- **UNI/Independent Living Senior Housing:** An application for a 117-unit senior housing residence, which is situated in Little Ferry, is currently under review by the NJMC.
- **EnCap/Meadowlands Golf Redevelopment Project:** A Master Plan Application was submitted to the NJMC in March 2005. The Master Plan is comprised of the following components:
  - 350 room, 308,000 square foot hotel
  - 100,000 square feet of retail space
  - 2 golf courses, each comprised of 18-holes
  - 50,000 square feet of golf course support buildings
  - 1,980 residential units, 1,130 of which are active-adult residences, and 850 of which are market value units. An amendment was requested by EnCap to include an additional 600 market rate units; approval is pending.
  - 35,000 square feet of residential support buildings

Site preparation and environmental remediation began in 2004 and construction of the above-mentioned components is staged over the next eight years. If approved, the additional 600 market rate residential units are planned for construction in June 2006 and

completion is expected in June 2009. The first golf course is slated for construction beginning in January 2008 with a completion date of June 2009. Construction of the second golf course will commence in January 2009 and completion is expected in June 2010. Two hundred residential units are planned for construction in June 2008 and completion in March 2010. Construction of the remaining 1,780 residential units will be initiated in June 2009 and completion is expected in December 2013. Finally, the hotel is planned for construction in January 2009 and completion is expected in December 2010.

The Preferred Alternative, as described in Section 1.2, is a new 2.3-mile rail alignment that would run southeast from the NJ TRANSIT Pascack Valley Line and terminate at a new rail station centrally located between Giants Stadium, the Continental Airlines Arena and the Meadowlands Racetrack on Meadowlands Sports Complex property. The proposed project includes new trackwork, viaducts and a new rail station. In addition, several roadway improvements would be constructed.

Field investigations and a review of available information identified resources potentially affected by direct impacts, indirect impacts and cumulative effects. These resources are described in Table 4-25.1.

Table 4.25-1: Cumulative Effects on Resources Based on Implementation of the Proposed Project

Impact Area	Past Action	Indirect Impacts	Cumulative Effects
Landforms, Geology, and Soils	Regional urbanization greatly altered subsurface resources.	<p><b>No-Action Alternative:</b> The No-Action Alternative would result in no indirect impacts to landforms, geology, and soils. Planned development within the project study area would be conducted to avoid any adverse impacts to these physical resources and would be in accordance to the regulations set forth in local, regional, county, and state regulations, if applicable.</p> <p><b>Preferred Alternative:</b> The Preferred Alternative would not present any impacts to major landforms and would involve the grading of mostly man made features. Therefore indirect impacts to landforms and geology along the project corridor occur are not expected to occur. The majority of soils in the project study area are previously disturbed or fill materials that possess little or no ecological value. Any impacts to Walden Marsh are expected to be minimal and short-term in nature; therefore, no indirect impacts are anticipated.</p>	<p><b>No-Action Alternative:</b> Under the No-Action Alternative, other planned projects could affect landforms, geology, and soils due to additional excavation and grading associated with construction activities.</p> <p><b>Preferred Alternative:</b> Construction of the Preferred Alternative in addition to all the other major actions would result in minimal landform, geology, and soils cumulative impacts beyond those described in the No-Action Alternative. Best management practices and specific design standards would be required for all major actions.</p>
Wetlands	Prior to the implementation of wetland preservation initiatives, filling/reduction in acreage of wetlands occurred.	<p><b>No-Action Alternative:</b> The No-Action Alternative could cause indirect impacts to wetlands due to growth occurring within the project study area. Impacts could occur in areas most suitable to development and could include wetland loss and potential degradation of wetland quality and function. All growth activities would be pursuant to federal, state, regional, and local wetland policies and regulations.</p> <p><b>Preferred Alternative:</b> Approximately 1.6 acres of wetlands will be permanently impacted and approximately 1.1 acres of wetlands will be temporarily impacted as a result of the Preferred Alternative. The development of a Wetland Mitigation Plan would include a ratio for wetland banking credits that is expected to be between 2:1 and 4:1.</p>	<p><b>No-Action Alternative:</b> The No-Action Alternative could result in cumulative effects to wetlands. Other major proposed projects could disturb wetlands. However, all projects disturbing wetlands are subject to regulations set forth by NJDEP and the USACOE, which require mitigation efforts that would preserve or restore wetlands on-site or within the region. Wetland mitigation activities serve as an opportunity to expand the existing regional wetland base.</p> <p><b>Preferred Alternative:</b> The Preferred Alternative could cause cumulative effects to wetlands. The proposed project would permanently disturb approximately 1.6 acres of wetlands and 1.1 acres of wetland temporarily. Other proposed projects could also cause some degradation of wetland quality and function. All projects are subject to NJDEP and USACOE regulations and the permitting process will stipulate measures to mitigate wetlands impacts.</p>
Water Resources	Prior to the implementation of water quality legislation, severe reduction in surface and ground water quality.	<p><b>No-Action Alternative:</b> For the No-Action Alternative, growth could occur in some areas of the project study area resulting in the creation of more impervious surfaces causing increased stormwater runoff. Project sanitary wastewater flows as a result of planned projects would be analyzed to ensure adequate service.</p> <p><b>Preferred Alternative:</b> The Preferred Alternative would result in an increase of seven acres of impervious surface, four acres of which are a result of the proposed rail alignment, and three acres of which are a result of the planned roadway improvements. No indirect impacts are anticipated, as the existing lagoon system is capable of accommodating any additional runoff. Additionally, through strict adherence to regulations laid out by the NJDEP, as well as the utilization of Best Management Practices, no adverse indirect impacts to water quality would occur as a result of the proposed project.</p>	<p><b>No-Action Alternative:</b> Under the No-Action Alternative, the proposed projects, which include commercial and industrial space, could affect surface water quality and cause an increase in storm water runoff from impervious surfaces.</p> <p><b>Preferred Alternative:</b> Construction of the Preferred Alternative would result in an increase in seven acres of impervious surface. However, no cumulative effects are expected, as the existing storm water drainage systems would be able to accommodate increases in runoff. Additionally, Best Management Practices and specific design standards would be required for all major actions.</p>
Floodplains	Development occurred in floodplain and flood fringe areas.	<p><b>No-Action Alternative:</b> The No-Action Alternative would have no indirect impact on floodplains.</p> <p><b>Preferred Alternative:</b> Approximately one mile of the rail alignment, which is situated west of the Meadowlands Sports Complex, would traverse the 100-year floodplain. The NJDEP would require permits. Mitigation measures would be utilized to minimize indirect impacts.</p>	<p><b>No-Action Alternative:</b> Other improvements under the No-Action Alternative could affect floodplains due to construction activities. All development would occur in accordance with NJDEP regulations.</p> <p><b>Preferred Alternative:</b> Construction of the Preferred Alternative in addition to all other major actions could result in cumulative effects on floodplains. However, the NJDEP would regulate all actions and ensure measures are utilized to protect areas prone to flooding.</p>

Table 4.25-1 (continued): Cumulative Effects on Resources Based on Implementation of the Proposed Project

<u>Impact Area</u>	<u>Past Action</u>	<u>Indirect Impacts</u>	<u>Cumulative Effects</u>
Navigable Waterways	Navigable waterways are used for the transport of interstate and foreign commerce as well as for recreational activities.	<p><b>No-Action Alternative:</b> The No-Action Alternative would result in no indirect impacts. The area in which the Meadowlands Railroad and Roadway Improvement Project is located does not depend heavily upon navigation of its waterways.</p> <p><b>Preferred Alternative:</b> No indirect impacts are expected as a result of the Preferred Alternative. The rail alignment would require a viaduct spanning Berry's Creek and would be constructed according to US Coast Guard parameters. No indirect impacts are expected to Berry's Creek as it is not sufficient to support the transportation of commerce, and is not considered a popular recreation waterway.</p>	<p><b>No-Action Alternative:</b> Under the No-Action result, cumulative effects are not anticipated. A minimal number of the proposed projects are situated in areas proximate to navigable waterways. No change in the flow or overall condition of navigable waterways is expected.</p> <p><b>Preferred Alternative:</b> The Preferred Alternative would not result in any cumulative effects to navigable waterways beyond what is described in the No-Action Alternative. No change in the flow or overall condition of navigable waterways is expected.</p>
Vegetation	Decrease in overall natural vegetation due to urbanization of surrounding services.	<p><b>No-Action Alternative:</b> The No-Action Alternative would result in no indirect impacts. Development in this urban area would occur primarily through redevelopment efforts.</p> <p><b>Preferred Alternative:</b> 1.9 acres of naturally vegetated areas and 4.2 acres of maintained vegetated areas would be impacted as a result of the Preferred Alternative. Neither the natural vegetation nor the maintained vegetation are considered unique vegetative communities; therefore no adverse indirect impacts would be anticipated.</p>	<p><b>No-Action Alternative:</b> Other improvements under the No-Action Alternative could affect vegetation due to construction activities. All development would occur in accordance with NJDEP regulations.</p> <p><b>Preferred Alternative:</b> The Preferred Alternative in conjunction with the other planned projects would result in no adverse cumulative effects.</p>
Fish and Wildlife Resources	Decrease in numbers and diversity of species, as well as habitats from development.	<p><b>No-Action Alternative:</b> The No-Action Alternative could result in indirect impacts with regard to critical fish and wildlife habitats. The potential indirect impacts of disturbance or habitat fragmentation from increased traffic and noise would not likely jeopardize fish and wildlife habitats.</p> <p><b>Preferred Alternative:</b> The Preferred Alternative would directly impact nearly two acres of undeveloped areas considered suitable for fish and wildlife habitat. Past development activities have fragmented the limited fish and wildlife habitat remaining in this area, including Walden Marsh, therefore, no long-term indirect impacts are anticipated as a result of the proposed project.</p>	<p><b>No-Action Alternative:</b> Under the No-Action Alternative, the major planned projects could affect critical fish and wildlife habitats.</p> <p><b>Preferred Alternative:</b> No direct impacts to critical fish and wildlife habitats are expected as a result of the proposed project. Other planned projects could affect these habitats; however, no cumulative effects to these resources are anticipated.</p>
Hazardous Waste	Unregulated pollution and storage of hazardous materials.	<p><b>No-Action Alternative:</b> The No-Action Alternative would not result in the exposure of hazardous materials. Environmental regulations prohibit dumping and mandate clean up activity.</p> <p><b>Preferred Alternative:</b> Under the Preferred Alternative, there is the potential for exposure to hazardous waste contamination during construction of the proposed project. Health and safety protocols will be established to ensure no further contamination of neighboring sites and to provide a safe working environment during construction. These protocols would include the preparation of a Health and Safety Plan (HASP); a soil management plan; sediment control plan; and federal, state and local permits. As a result of the above-mentioned efforts as well as oversight by and consultation with NJDEP, indirect effects are expected to be controlled.</p>	<p><b>No-Action Alternative:</b> For the No-Action Alternative, cumulative effects from exposure to hazardous materials are not anticipated. Continued regulation, clean-up activity and incentives to redevelop brownfields will gradually slow pollution and provide for ongoing clean up of contaminated areas.</p> <p><b>Preferred Alternative:</b> Construction of the Preferred Alternative in addition to all other major actions could result in exposure to hazardous materials during construction. Continued regulation, clean-up activity and incentives to redevelop brownfields will gradually slow pollution and provide for ongoing clean up of contaminated areas.</p>

Table 4.25-1 (continued): Cumulative Effects on Resources Based on Implementation of the Proposed Project

Impact Area	Past Action	Indirect Impacts	Cumulative Effects
Traffic, Pedestrian, Transit, Parking and Rail	As a result of suburbanization, auto use increased and transit use and foot travel diminished.	<p><b>No-Action Alternative:</b> Under the No-Build Alternative, traffic within the project study area would increase. It is expected that the demand for bus service to the Meadowlands Sports Complex and the Meadowlands Xanadu Redevelopment Project site would increase.</p> <p><b>Preferred Alternative:</b> Under the Preferred Alternative, there would be a reduction in the amount of vehicular trips to and from the Meadowlands Sports Complex and the Meadowlands Xanadu Redevelopment Project site. Also, the Preferred Alternative would provide an additional mode of transportation to provide service to the project study area. The roadway improvements would enhance access to and from the various facilities within the project study area.</p>	<p><b>No-Action Alternative:</b> As a result of the planned projects, such as the EnCap/Meadowlands Golf Redevelopment Project, the Meadowlands Xanadu Redevelopment Project, and big-box retail, it is anticipated that the amount of vehicular trips would increase. In order to minimize any adverse cumulative effects, the approvals for the planned projects stipulate that either the existing roadway network should efficiently be able accommodate any traffic increases or minor roadway and intersection improvements maybe needed where the existing roadway network cannot efficiently meet the additional demand.</p> <p><b>Preferred Alternative:</b> Under the Preferred Alternative, there would be a reduction in the amount of vehicular trips to and from the Meadowlands Sports Complex and the Meadowlands Xanadu Redevelopment Project site which would alleviate some of the cumulative effects from the other planned projects. Also, the Preferred Alternative would provide an additional mode of transportation to service the project study area. The roadway improvements would enhance access to and from the various facilities within the project study area.</p>
Land Use, Zoning, and Consistency with Local Plans	Over time zoning regulations have separated incompatible uses.	<p><b>No-Action Alternative:</b> The No-Action Alternative would result in no indirect impacts. Development would continue to occur in the project study area in accordance with local and regional land use policy, guidelines and regulations.</p> <p><b>Preferred Alternative:</b> Under the Preferred Alternative, a minimal amount of undeveloped land would be utilized, however, this would not represent a large-scale change in the land use character of the project study area. The proposed project would be in keeping with goals, objectives and policies contained in several local plans.</p>	<p><b>No-Action Alternative:</b> Under the No-Action Alternative, land use and zoning changes, and the development and redevelopment of properties throughout the project study area will continue to occur. The planned projects are constituent with local, regional, and state policy and are generally similar in character with surrounding land uses.</p> <p><b>Preferred Alternative:</b> For the Preferred Alternative, there would be a minimal influence on the location, density and type of development. The planned projects are consistent with surrounding land uses and local zoning regulations. No adverse cumulative affects are anticipated.</p>