NJTPA
Connecting
Communities

NJTPA NORTH JERSEY TRANSPORTATION PLANNING AUTHORITY

APPENDIX H: Planning and Environmental Linkages

Environmental Mitigation

The North Jersey Transportation Planning Authority's (NJTPA's) planning and project development programs are designed to consider the impacts transportation projects can have on both the human and natural environments. Multi-disciplinary teams from the subregions, the NJTPA and New Jersey Department of Transportation (NJDOT) work together on project development with the goal of avoiding impacts and minimizing and/or mitigating impacts that do occur. Project delivery processes can be streamlined through early coordination with environmental agencies during the planning phase.

The NJTPA's environmental protection and mitigation activities are guided by key federal and state requirements including:

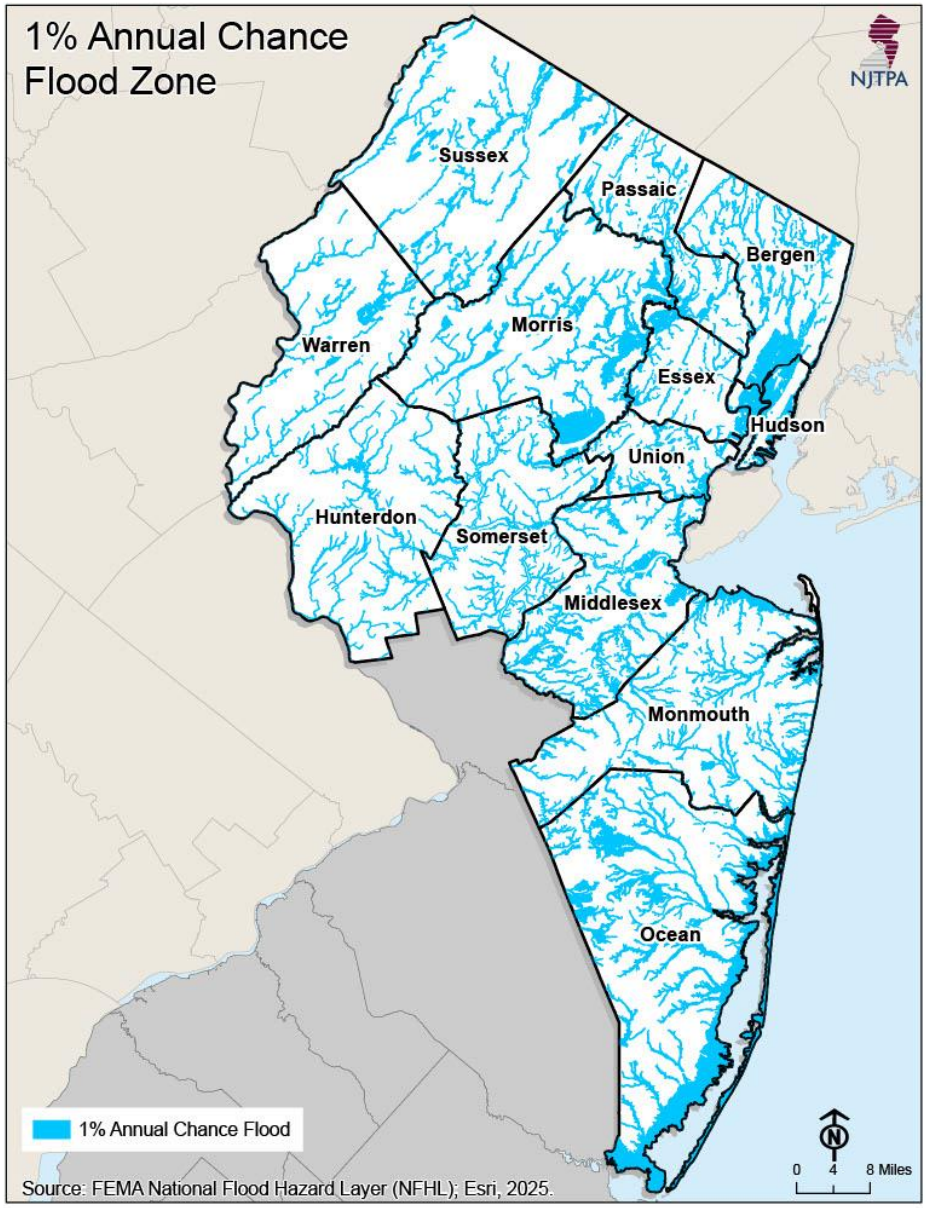
- National Environmental Policy Act (NEPA) – A federal law that requires agencies to conduct environmental reviews and consider the potential impacts of projects on the natural and social environments.
- Fixing America's Surace Transportation (FAST) Act – Regulations implementing this federal law encourage a program for Planning and Environmental Linkages, which incorporate environmental and community values into transportation decisions early in planning and carrying these considerations through project development and delivery.
- Land Use Management Regulations – These rules, administered by the New Jersey Department of Environmental Protection (NJDEP), strive to balance responsible land development and protection of New Jersey's valuable natural resources.
- Historic Preservation Regulations – These rules, administered by NJDEP's Historic Preservation Office, focus on identifying, preserving, protecting, and sustaining historic and archaeological resources.

These and other requirements guide project development work beginning at the concept development phase. During this phase, the NJTPA seeks to ensure early coordination with review agencies and collaboration with local governments and communities, all while identifying and comparing reasonable alternatives and the selection of a preliminary preferred alternative. This early consideration of environmental concerns can avoid confronting impacts when plans are already in place and difficult to alter and help streamline project delivery. It exemplifies NJTPA's goals to balance and integrate efforts to both safeguard the environment and enhance regional accessibility as discussed in this plan.

NJTPA's mitigation of project impacts is part of ongoing environmental planning activities beyond the project development process. In addition to extreme weather impacts

(discussed in Chapter 3) and air quality planning discussed in Chapter 3 and Appendix B, the NJTPA also considers water, cultural, and historic resources, as well as other natural features, in its planning work. These are discussed below.

Figure 1: Flood Zones in the NJTPA Region

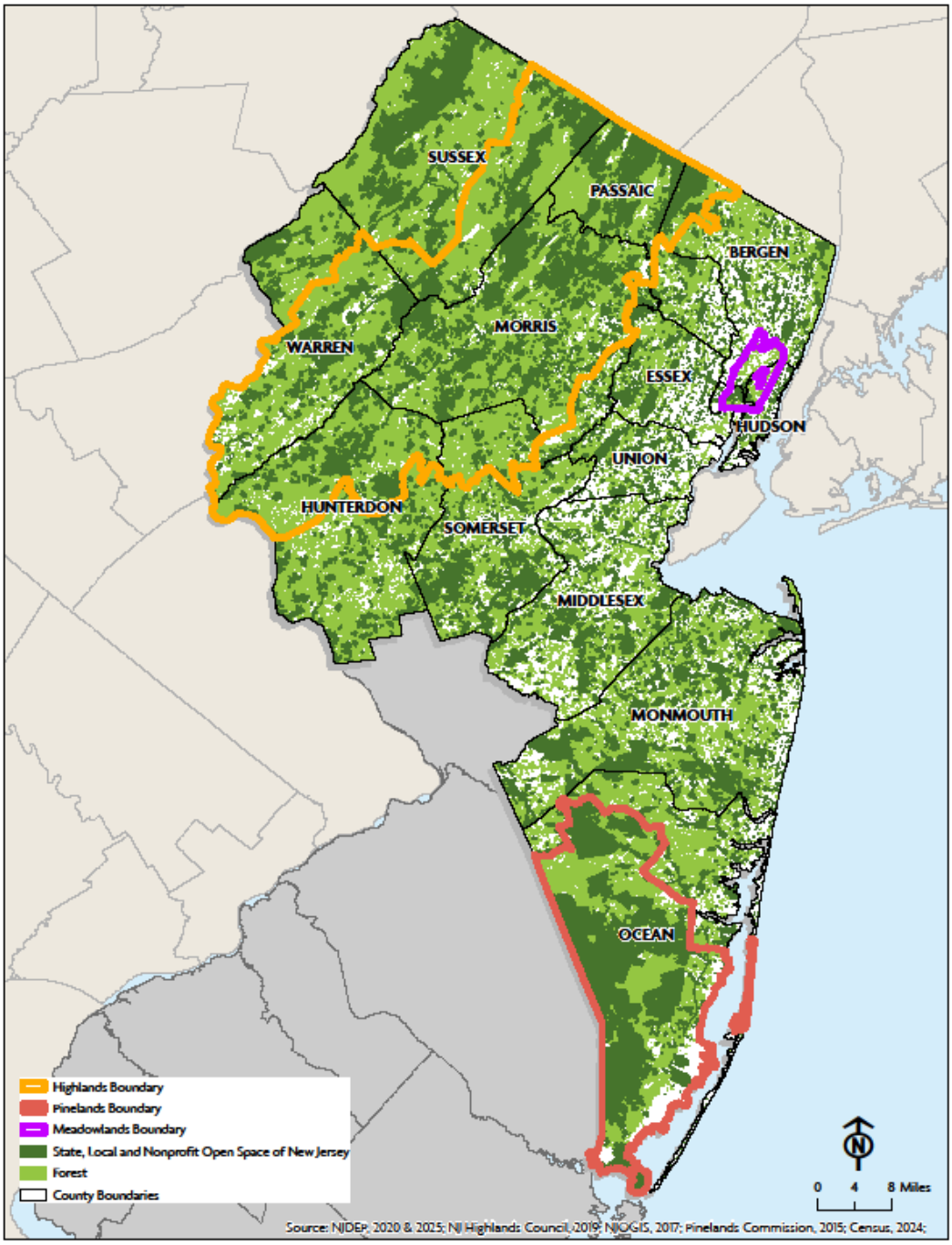


Water Quality

As the region continues to grow, protecting the sources of drinking water becomes increasingly important. One method is to create special districts such as through the Highlands Water Protection and Planning Act and the creation of the Pinelands National

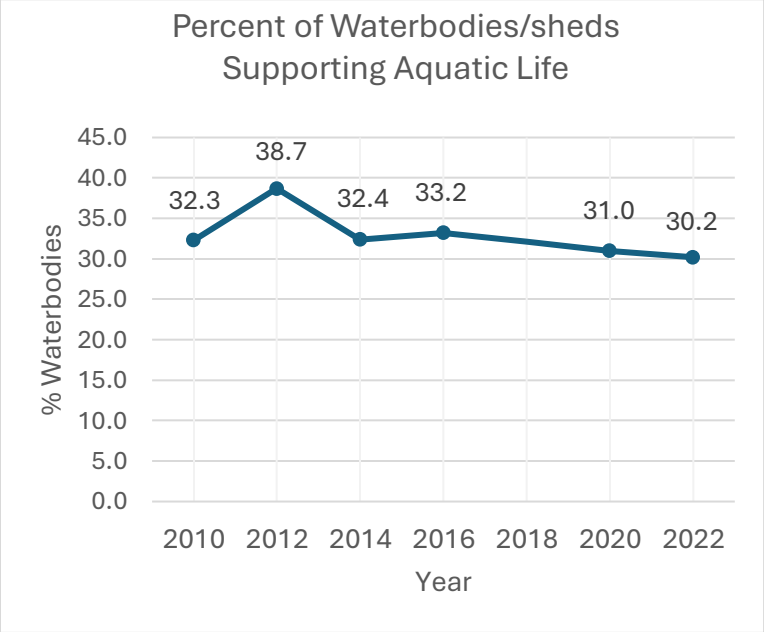
Reserve. The Highlands encompasses over 850,000 acres in the northwest portion of the NJTPA region. The Pinelands, partially located in Ocean County, sit on one of the largest and cleanest sources of drinking water in the country, the Kirkwood-Cohansey Aquifer. Both special districts help define areas where growth can be supported while preserving more sensitive lands.

Figure 2: Highlands and Pinelands Special Districts



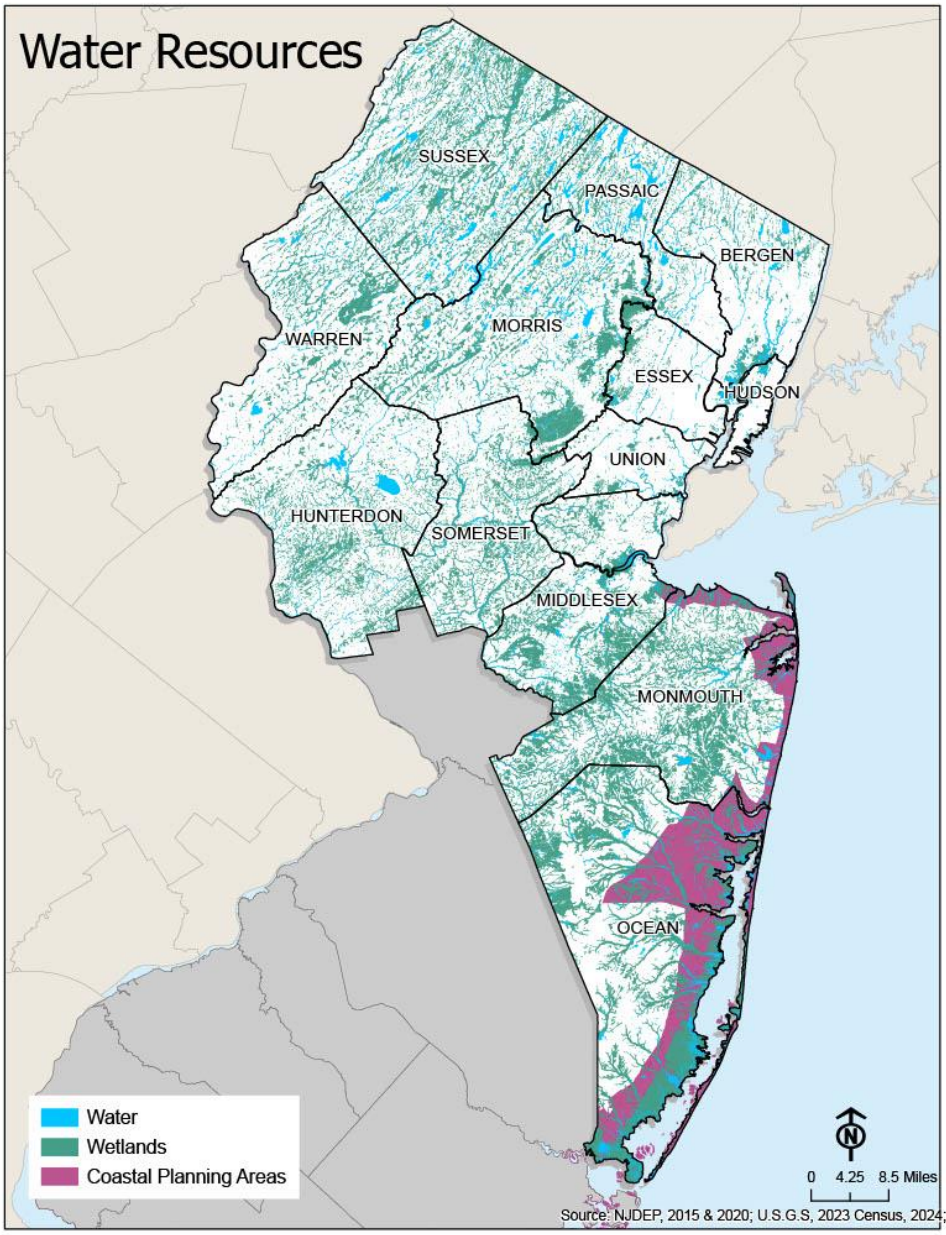
Throughout the region, stormwater runoff from paved surfaces and transportation facilities can pollute waterways and threaten aquatic life. As Figure 3 demonstrates, less than a third of waterbodies/sheds in the NJTPA region fully support aquatic life, in large part due to stormwater runoff. Furthermore, over the past decade or so, there has been a slow decline in waterbodies/sheds in the region that support aquatic life.

Figure 3: Waterbodies/sheds Supporting Aquatic Life



Environmental regulations governing transportation projects at the state and federal levels require the NJTPA and its partner agencies to assess and mitigate non-point source pollution from transportation projects including water runoff. Green infrastructure measures to improve water quality are also increasingly being integrated in street designs, including Complete Street and resiliency initiatives, to slow and better manage stormwater runoff that can overwhelm sewer systems and contaminate waterways and drinking water. Measures include installing curbside planters or bioswales, permeable pavements, vegetated strips and rain catchment systems. Among communities in the region planning and implementing such measures are Paterson's Lakeview Corridor in Passaic County and Hoboken and Jersey City in Hudson County. The NJTPA encourages their incorporation into the planning process and use in the construction of transportation projects.

Figure 4: Water Resources in the NJTPA Region



Open Space & Wildlife Habitats

Despite its dense population, New Jersey has among the nation's most successful programs for preserving open space and natural resources. According to NJDEP, the state's Green Acres program, created in 1961 with public and nonprofit partners, has directly protected more than 725,000 acres of open space and parkland and has funded over 1300 local and nonprofit park development and stewardship projects. State efforts support and are coordinated with county and municipal programs, many of which make yearly allocations to open space preservation and to the work of numerous non-profit and

private sector organizations. New Jersey voters have consistently shown support for referendums providing funding for open space initiatives. These efforts are supplemented by state programs to support farmland preservation and to relocate homes from flood prone areas.

Transportation improvements sometimes can present threats to open space preservation, opening areas for new development. The NJTPA, through its project prioritization criteria, favors projects that provide access to areas already designated for development that have infrastructure in place to support it, particularly formerly contaminated buildings or sites, known as brownfields. NJTPA planning programs support studies and projects making sustainable use of available land. Chapter 3 discusses land use and transportation coordination further.

Preserving and enhancing wildlife habitat must be part of sustainable transportation. Transportation facilities can reduce and fragment forests, wetlands and other spaces that are critical habitat for the state's wildlife, including threatened/endangered species. In addition, transportation facilities can present barriers to wildlife movement and migration, isolating animals from food and resources or forcing them into dangerous road crossings. Mitigation can include tunnels, green bridges and fencing to channel animals to these crossings. Transportation project development must investigate habitat concerns as part of the early stages of project planning where strategies are most easily incorporated. NJDEP offers interactive maps of wildlife crossings and document for including crossings in projects through its Connecting Habitat Across NJ, (CHANJ) program (CHANJ).

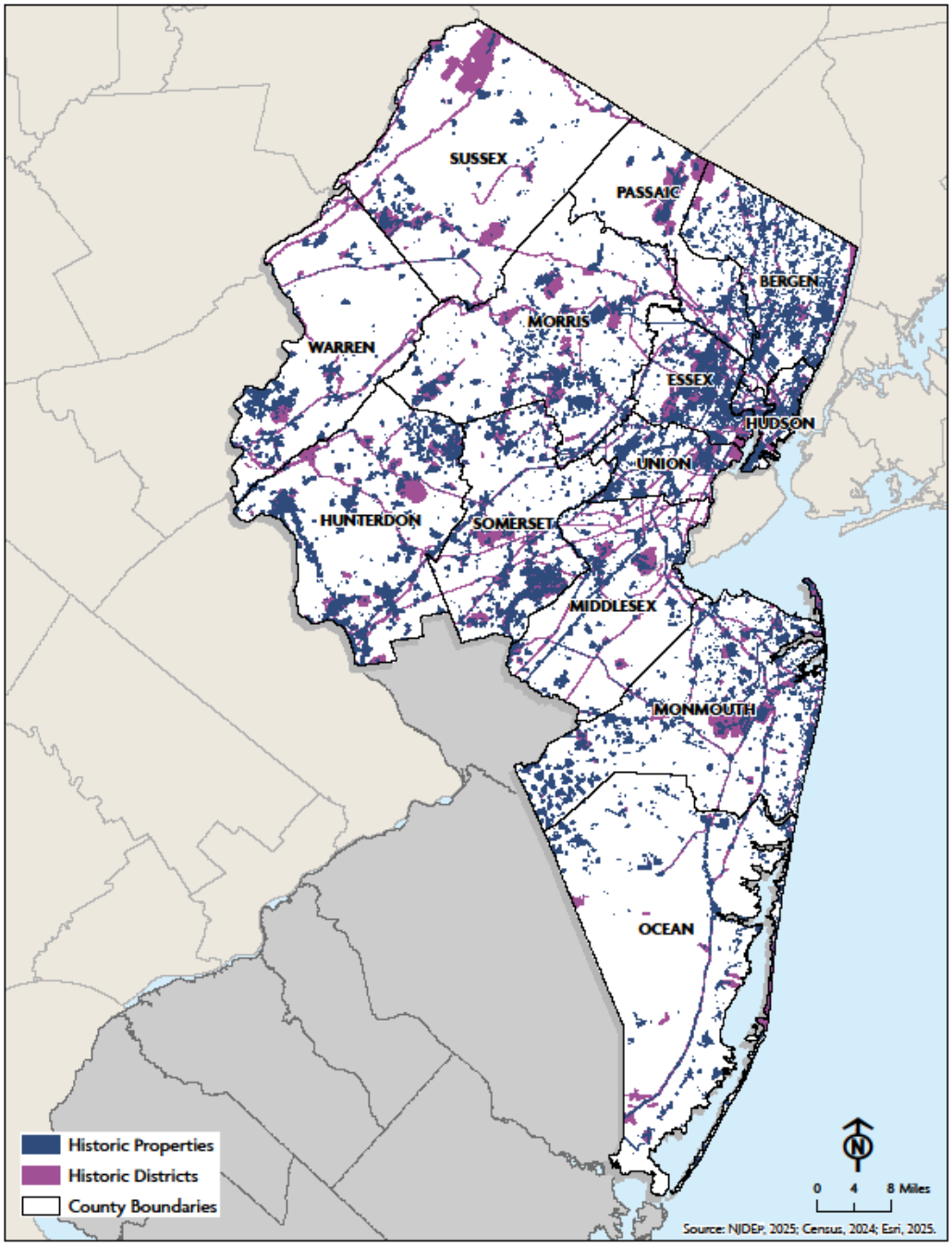
Active transportation infrastructure, such as trails and bike paths, typically presents fewer negative impacts on wildlife habitat and its natural character than other transportation facilities such as roads or rail, and can be a feasible alternative in some cases. The NJTPA's Regional Active Transportation Plan (ATP) identifies a network of potential on- and off-road routes that, when built-out, would provide a safe, functional, and connected system that accommodates a variety of trip types and users, including local and regional recreation and utilitarian trips for people walking and biking. The ATP can be used by jurisdictions — municipal, county, and state — to refer to while planning for active transportation facilities. More information on the ATP is in Chapter 3.

Cultural and Historic Resources

Environmental mitigation extends to preserving cultural and historical resources. New Jersey has been home to indigenous peoples for thousands of years, as well as people from around the world for hundreds of years. All these human settlements have left behind historic cultural resources and artifacts, ranging from ancient sacred sites to industrial

revolution artifacts. The region was the site of important routes and stops on the Underground Railroad, particularly in Jersey City in Hudson County and Warren County and home to numerous historic colonial settlements, leaving a rich and diverse multicultural legacy.

Figure 5: Historic Resources in the NJTPA Region



Planning and Environmental Linkages (PEL) in NJTPA Project Development

The NJTPA region is made up of diverse ecological, stormwater and cultural resources, as outlined above, making for a variety of approaches to program and project delivery that includes carefully considered environmental mitigation in all phases of planning and project development. Various PEL tools and approaches are used in the Local Concept Development (LCD) phase of the NJTPA's Local Capital Project Delivery Program (LCPD). The PEL approach to project delivery calls for a collaborative process to transportation decision making that considers the impacts of proposed transportation system improvements to the environment, community and economy as issues are studied and advance towards transportation improvements.

Project delivery processes can be streamlined through early coordination with environmental agencies during the planning phase. Early coordination can produce time and cost savings for future phases of work as well, resulting in a well-constructed project that meets identified needs without causing unintentional disadvantages to the surrounding area's residents or harm to the environment. This is one way that the NJTPA meet its Connecting Communities goals to create a transportation system that meets the needs of all travelers and is more resilient to extreme weather and other hazards.

Considering the region's complex and diverse environment, the NJTPA uses readily available environmental inventories to identify protected landscapes and historical features. The NJTPA also conducts site visits and coordinates with review and permitting agencies. Beginning at the early stages in the planning process and continuing throughout, this information is used in part as a contextual backdrop for the identification of transportation needs, and later as an important factor in prioritizing and selecting the most appropriate transportation improvement alternatives for specific locations. Early consideration of environmental impacts also helps address NEPA requirements more effectively than if such issues would be left for consideration later in the project development process.

The NJTPA's Morris Canal Greenway Corridor Study, completed in 2018, and subsequent federally funded projects that grew out of it exemplifies this approach. Additional examples are outlined at the end of this appendix.

The Morris Canal study identifies a continuous 111 mile greenway route across six counties following the historic canal to the extent possible. (See MorrisCanalStudy) The plan's recommendations outline specific sections, that, when built, will create a world-class greenway with pedestrian and bicycle facilities. The study identified 76 projects categorized as short-, medium-, and long-term. Municipalities and counties along the

proposed greenway have used the study to seek federal funding through the Transportation Alternatives Set-Aside Program overseen by NJDOT and the state's three metropolitan planning organizations, including the NJTPA.

Local Capital Project Delivery (LCPD) Process

As mentioned earlier, PEL plays a critical role in the LCD program, which is the planning phase of the LCPD program. The LCD phase is designed to ensure early coordination with review agencies, collaboration with local governments and communities, all while identifying and comparing reasonable alternatives and the selection of a preliminary preferred alternative (PPA). The PPA meets the project's purpose and need statement as well as identifies the required NEPA document that should be pursued during the next phase, Local Preliminary Engineering (LPE).

Once a concept development report is completed, the project sponsor presents the project, including the PPA and NEPA recommendations, to the Interagency Review Committee (IRC) for final review and approval. The IRC is comprised of representatives from NJTPA, NJDOT-Local Aid, NJDOT-Bureau of Environmental Program Resources, and the Federal Highway Administration. With the IRC's approval, projects can advance to LPE.

Figure 5: The Local Capital Project Delivery Process

Local Concept Development	Local Preliminary Engineering	Final Design	Construction
Data Collection and Environmental Screening Report Final Purpose and Need Statement Alternatives Development Recommendation of Preliminary Preferred Alternative (PPA) Local Concept Development Report	Preliminary Design Plans Cost Estimates (Final Design, Right of Way & Construction) Approved Project Plan Approved Design Exception Report Approved Environmental Document Preliminary Engineering Report	Final Design Plans Environmental Reevaluations Environmental Permits Acquisition of Right of Way Construction Contract Documents, and Plans, Specs. & Estimates	Completed Construction As-Builts Close-out Documentation
Approximately 2 years	Approximately 2 years	Approximately 2 years	Design Dependent

Projects in the LCD phase often come from larger planning efforts at the subregional level such as studies completed through the NJTPA's Subregional Studies Program or county or municipal master plans. Local bridges projects are often recommended based on NJDOT's annual Bridge Inspection Program.

In addition to reviewing environmental inventories to identify protected landscapes, historical and cultural resources near or within project limits, NJTPA staff conduct site visits with partners agencies to verify field conditions. Beginning at the early stages in the planning process and continuing throughout, this information is used as important inputs for the identification of transportation needs, and later as factors when identifying the most appropriate transportation improvement strategies.

Environmental mitigation measures are established in consultation with numerous federal, state and local agencies as well as interested parties responsible for and interested in environmental stewardship, including the agencies listed under partnerships.

The specific types of environmental mitigation activities implemented are ultimately determined by the governing regulatory authority and are dependent upon the resource being impacted and the severity of that impact. Among the key environmental areas of concern to the NJTPA are shown under the environmental screening section in Figure 7.

Using this approach, insights gained from stakeholders, established and new interagency partners, and contextual use of gathered data often lead to innovative solutions. Outlined below are examples of successful approaches to PEL in the NJTPA region.

Figure 6: Major Tasks in the LCD Phase

Tasks	Tasks	Disciplines	Descriptions
Project Development		Project Prioritization Purpose and Need	• Criteria considers resiliency, environmental impacts, land use compliance, and economic impacts • Data and Criteria Evaluations shared with Subregions
Environmental Screening		National Environmental Policy Act • Cultural Resources • Air & Water Quality Management • Storm water Management • Flood Hazard Areas • Wetlands • Highlands/Pinelands • Wildlife (including threatened/endangered species) • hazardous/contaminated sites • Parks and Recreation Area (Section 4(f) • Socioeconomics • NEPA Classification	• Implementation of Planning and Environment Linkages (PEL) tools to streamline the project delivery process • Protecting historical and cultural resources • Maintaining/Improving air and water quality • Determine permit requirements • Avoid or minimize impacts to Green Acres • Identify Title VI
Public Outreach		Consult with Environmental Agencies Stakeholder Coordination Local Officials	• Initiate Environmental mitigation discussion • Environmental Agencies consulted • Identify affected communities for each project and evaluate potential impacts and public participation strategies in the Public Involvement Action Plan (PIAP) • Identify Context Sensitive Solutions

Local Concept Development Coordination and Outreach

As mentioned earlier, coordination with partner agencies and the public is vital to a comprehensive project development process. Outreach is tailored to each individual project, but all LCD studies involve the same public and stakeholder engagement elements. LCD studies are led by subregions (one of 13 counties or two cities) with consultant support provided by the NJTPA. As appropriate, the following are among those consulted:

- Tribal Nations
- New Jersey Department of Environmental Protection
- N.J. Highlands Council
- Delaware & Raritan Canal Commission
- New Jersey Department of Transportation, Bureau of Environmental Program Resources
- NJ TRANSIT
- New Jersey Office of Planning Advocacy
- Federal Highway Administration
- Federal Transit Administration
- U.S. Environmental Protection Agency
- U.S. Army Corp of Engineers
- U. S. Coast Guard
- NJTPA member agencies and non-subregion municipalities

During an LCD study, meetings are held with local officials in the study area, which can include mayors, municipal governing bodies, county and state elected officials and professional staff; key stakeholders, which can include residents, community groups, businesses and others; and the public. Meetings are held at key points throughout the project to introduce the study and its goals, develop a purpose and need statement, present draft concepts and ultimately select a Preliminary Preferred Alternative (PPA), which can be advanced for further consideration.

Example LCD Studies

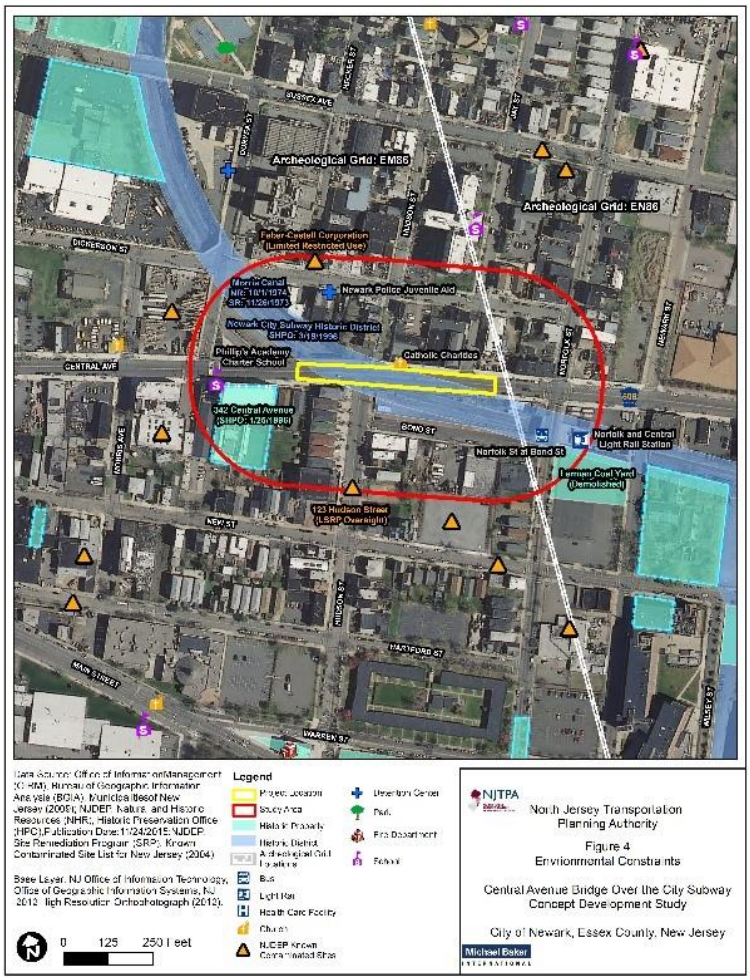
Central Avenue Bridge over NJ TRANSIT City Subway

The Central Avenue Bridge, in Newark (Essex County) was constructed in 1908 and is a critical piece of the city's infrastructure. Central Avenue is a major east-west arterial road utilized by vehicles, pedestrians, bicycles, and commuter bus operators. It is immediately adjacent to Newark's thriving University Heights section and the area has high pedestrian activity. The bridge spans the Newark City Subway, operated by NJ TRANSIT, which provides city and regional transit connections. The Central Avenue Bridge is structurally deficient and functionally obsolete, and its overall condition is defined as critical. It requires extensive ongoing repairs to remain functional.

During the LCD study, the project team consulted with the NJ State Historic Preservation Office (NJSHPO) and identified architectural and archaeological Areas of Potential Effect (APE). Following concurrence on the APE, cultural resources investigations and field investigations for architectural historic resources were conducted. The intensive-level survey included buildings, structures, objects, sites, and districts over 50 years old. Within the APE, architectural historians identified one property, the Morris Canal, listed on the National Register of Historic Places (NRHP) and two previously-surveyed NRHP-eligible resources, the Newark City Subway Historic District and 342 Central Avenue. The survey found an additional 27 previously unidentified historic resources. Of those, three are recommended as eligible for the NRHP, including the Central Avenue Bridge.

NJSHPO and other interested parties were engaged as part of a review mandated by Section 106 of the National Historic Preservation Act consultation and NJ Register of Historic Places Act. This review seeks to accommodate historic preservation concerns.

NJSHPO concluded that the Central Avenue Bridge is not individually eligible for listing on the NRHP, but is contributing resources to the Morris Canal, which is listed on both the state and national registers. Replacing the bridge results in an adverse effect on the Morris Canal and also requires authorization under the NJ Register of Historic Places Act. The adverse impact to the Morris Canal is also a use under Section 4(f) of the U.S. Department of Transportation Act of 1966, which established the requirement for consideration of park and recreational lands, wildlife and waterfowl refuges, and historic sites in transportation project development. As required, a Draft Individual Section 4(f) Evaluation was developed for review by the Federal Highway Administration.



In LPE, a detailed Technical Environmental Study (TES) was conducted, to evaluate the environmental impacts of the proposed projects, including the area of socioeconomics, hazardous materials, construction noise and cultural resources. Coordination with jurisdictional agencies supported the NEPA Categorical Exclusion (CE), which would allow the bridge replacement project to advance. The United States Fish and Wildlife Service was

contacted per Section 7 of the Endangered Species Act regarding protected bat species and monarch butterflies. Though no critical habitats were identified, a timing restriction for tree removal/trimming will be implemented between April 1 and September 30 to preserve critical habitat during the summer months.

Community outreach during the study included the creation of a public website to promote the study and to keep the public informed of the study and overall process. Outreach meetings throughout the two-year study included three local officials meetings, two stakeholder meetings and two public information centers. In advance of the first community stakeholders meeting, a Community Input Survey form was sent out to the local and regional stakeholders to solicit their input on the perceived transportation needs and concerns within the study limits.

In Final Design, the project will incorporate construction noise mitigation measures, aesthetic design and archaeological monitoring, and the vegetation timing restrictions into the contract documents to ensure compliance with the environmental commitments. A licensed site remediation profession will be engaged to oversee the handling and disposal of regulated material for the safety of construction workers and the public. The ultimate design will be compatible with the historic character of this Newark neighborhood.

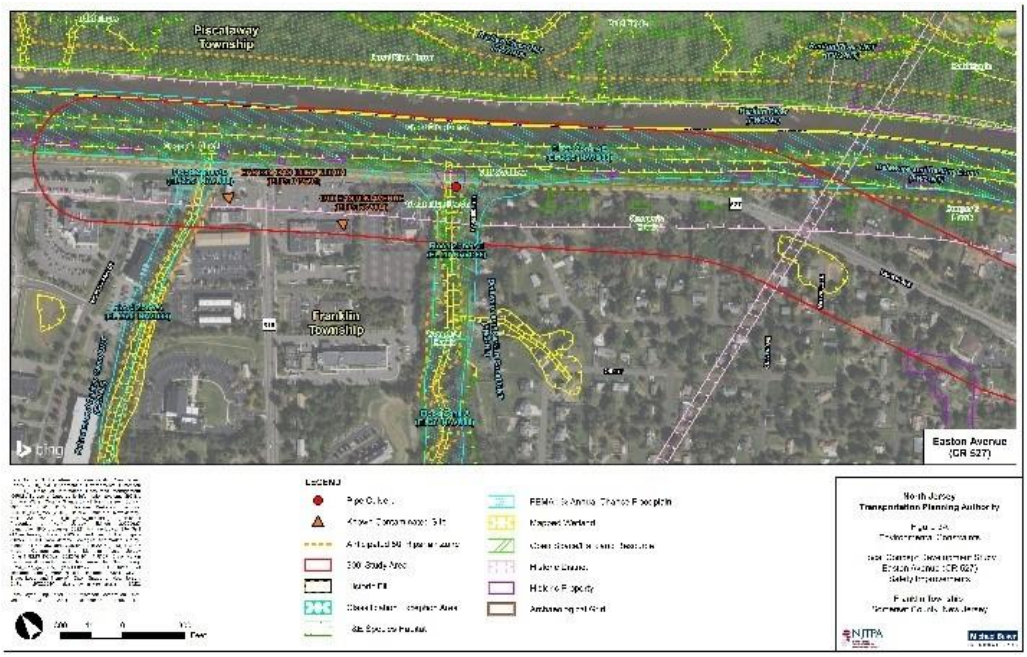
Easton Avenue, Franklin Boulevard to Worlds Fair Drive

This portion of Easton Avenue (CR 527) in Franklin Township (Somerset County) is a four-lane urban principal arterial with an annual average daily traffic (AADT) of approximately 41,000 vehicles per day. It is a critical component of the regional transportation network, connecting Interstate 287, South Bound Brook and Bound Brook in the north, and downtown New Brunswick and a Raritan River crossing via Landing Lane in the south. Access points are frequent along the corridor, with many unsignalized intersections, with residential and commercial driveways within the study limits. The adjacent land uses within the study area are primarily residential and commercial, although educational, parklands, and undeveloped land uses are also present within the approximately 3.2-mile stretch.

The NJTPA funded two prior studies through its Subregional Studies Program — Easton Avenue/Main Street Corridor Plan, developed by Somerset and Middlesex counties, and Somerset County's Bicycle and Pedestrian Facilities and Trails Plan — that identified concerns along this corridor, which Somerset County sought to explore further though an LCD study.

The NJSHPO Cultural Resources Geographic Information System was used to identify recorded and known archaeological and historic architectural resources within the study area. The review identified two historic districts, two known historic properties and one archaeological grid. Available geospatial data from the NJDEP Green Acres Program and Recreational and Open Space Inventory, as well as aerial photography, were also reviewed to identify public parkland, including recreational facilities, publicly owned open space, wildlife refuge or wildlife management areas, school athletic fields, or community parks. There are several Section 4(f) parkland resources in the study area, including three municipal-owned parcels referred to as Meadows Park (Block 259, Lots 85, 86, & 87), municipal-owned Castleton Park (Block 383, Lots 43.01 and 43.03), Marconi Memorial

Park located at the intersection of Easton Avenue and John F. Kennedy Boulevard, and the State-owned Delaware and Raritan Canal State Park, which generally parallels Easton Avenue and encompasses multiple parcels. These properties are also Green Acres sites.



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During the development of alternatives, two additional access points to the Delaware and Raritan (D&R) Canal were proposed. The project team initiated coordination with the D&R Canal Commission to assess potential improvements and environmental constraints. New access points for the public will help provide greater north/south travel for vulnerable road users, as well as provide additional recreational opportunities for residents. Continuous coordination with regulatory agencies will be essential to acquiring permits in the future phases of work.