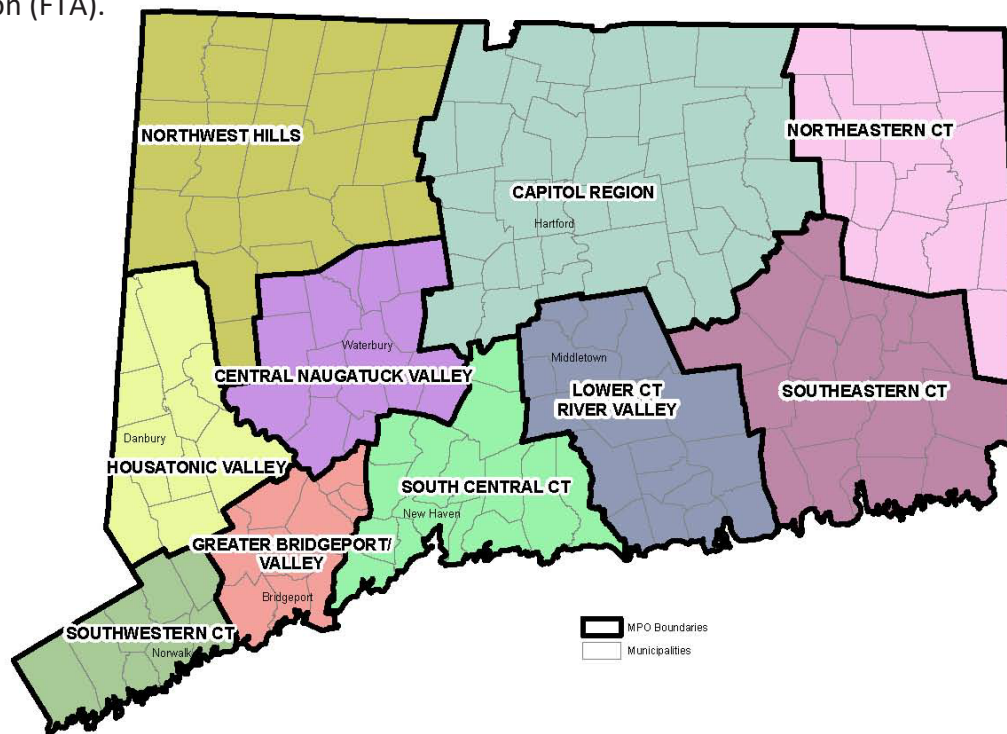


2.0 METROPOLITAN TRANSPORTATION PLANNING PROCESS

Federal regulations require any urbanized area with a population greater than 50,000 to designate a metropolitan planning organization (MPO) to evaluate and assess its transportation systems, identify needed improvements, and help decide how investments in the transportation systems will be made. Federal regulations, as provided in Title 23 Code of Federal Regulations Part 450, Subpart C, and applicable federal acts, stipulate a planning process that is continuous, cooperative, and comprehensive.

The Naugatuck Valley Council of Governments (NVCOG) is a multi-discipline, regional planning organization for the Naugatuck Valley planning region and is the federally designated transportation planning agency for the Waterbury Urban Area. It serves as the transportation planning agency for the Central Naugatuck Valley Metropolitan Planning Organization (CNVMPO) and provides planning support to the Greater Bridgeport and Valley Metropolitan Planning Organization (GBVMPO). The NVCOG is also the designated FTA grant recipient for the portion of the Bridgeport-Stamford urban area that is within the Naugatuck Valley planning region. This designation includes the capital program for the Valley Transit District (VTD).

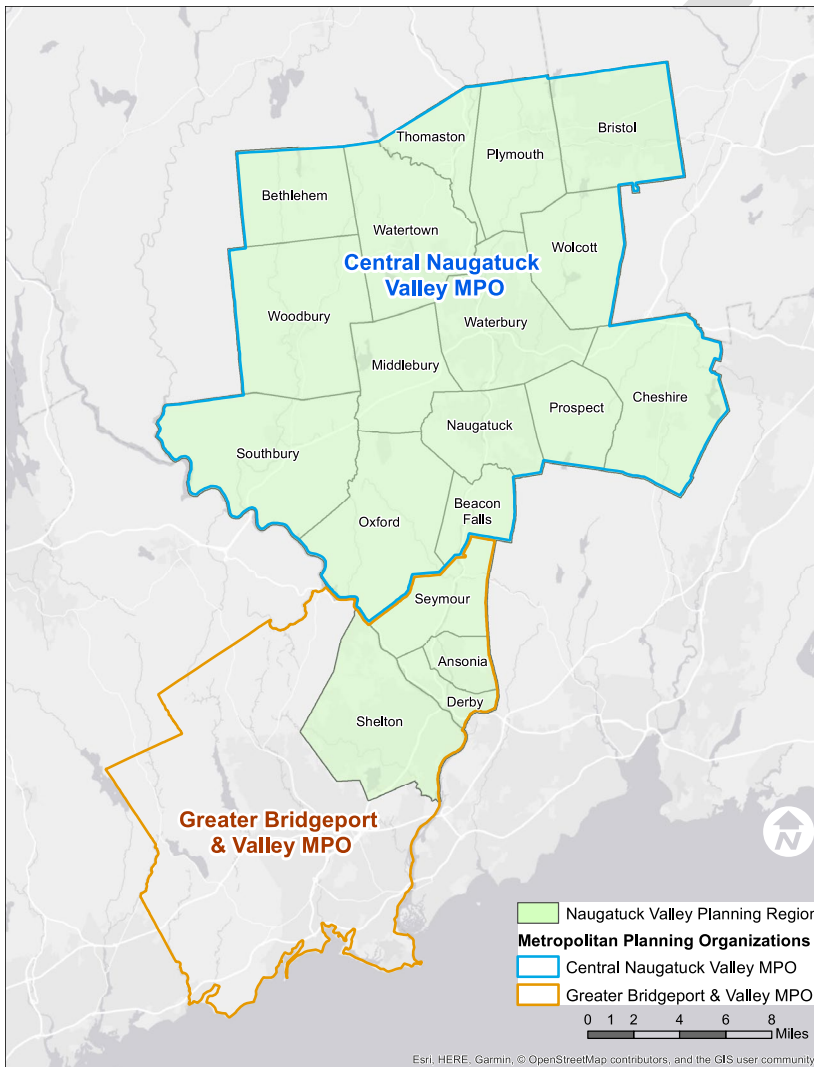
As the host agency for the CNVMPO and co-host of GBVMPO, the NVCOG coordinates planning activities and provides technical and support services to the region's transportation policy-making and technical groups. The metropolitan transportation planning process is conducted in accordance with federal regulations. Oversight of the metropolitan transportation planning process is jointly provided by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA).



2.1 CENTRAL NAUGATUCK VALLEY MPO

The Central Naugatuck Valley MPO (CNVMPO) comprises 15 municipalities with membership by the chief elected official of each municipality in the MPA. The member municipalities are:

- Beacon Falls
- Bethlehem
- Bristol
- Cheshire
- Middlebury
- Naugatuck
- Oxford
- Plymouth
- Prospect
- Southbury
- Thomaston
- Waterbury
- Watertown
- Wolcott
- Woodbury



The metropolitan planning area covered by the CNVMPO is shown in the map at left.

Representatives of the FHWA, FTA, Connecticut Department of Transportation (CTDOT), and the Connecticut Department of Energy and Environmental Protection (CTDEEP) are included as "Ex Officio" members of the CNVMPO. The CTDOT Bureau Chief of Policy and Planning has been designated as a non-voting member.

The CNVMPO policy board oversees the regional transportation planning and capital programs for the planning area and prepares and maintains a unified planning work program (UPWP), a short-range transportation improvement program (TIP), a long-range metropolitan transportation plan

(MTP) and determines the conformity of its transportation improvement projects, plans and program to attainment of air quality goals.

UNIFIED PLANNING WORK PROGRAM

The Unified Planning Work Program documents the planning tasks and activities to be undertaken by the NVCOG in support of its transportation improvement program. The multi-task planning program includes: data collection and analysis; multi-modal transportation planning; program management and administration; technical assistance; and program implementation

TRANSPORTATION IMPROVEMENT PROGRAM

The Transportation Improvement Program (TIP) lists all proposed highway and transit improvement projects within the Naugatuck Valley planning region programmed to receive federal assistance over a period of four federal fiscal years. The TIP is incorporated into the State Transportation Improvement Program (STIP), and is collectively referred to as the TIP/STIP.

The TIP/STIP is organized by federal funding program and must be "*financially constrained*." This means there must be a reasonable expectation of federal financial assistance to implement endorsed projects and that the funding sources must be identified for each project. Federal transportation planning regulations, as amended, also stipulate who selects projects under the various funding categories.

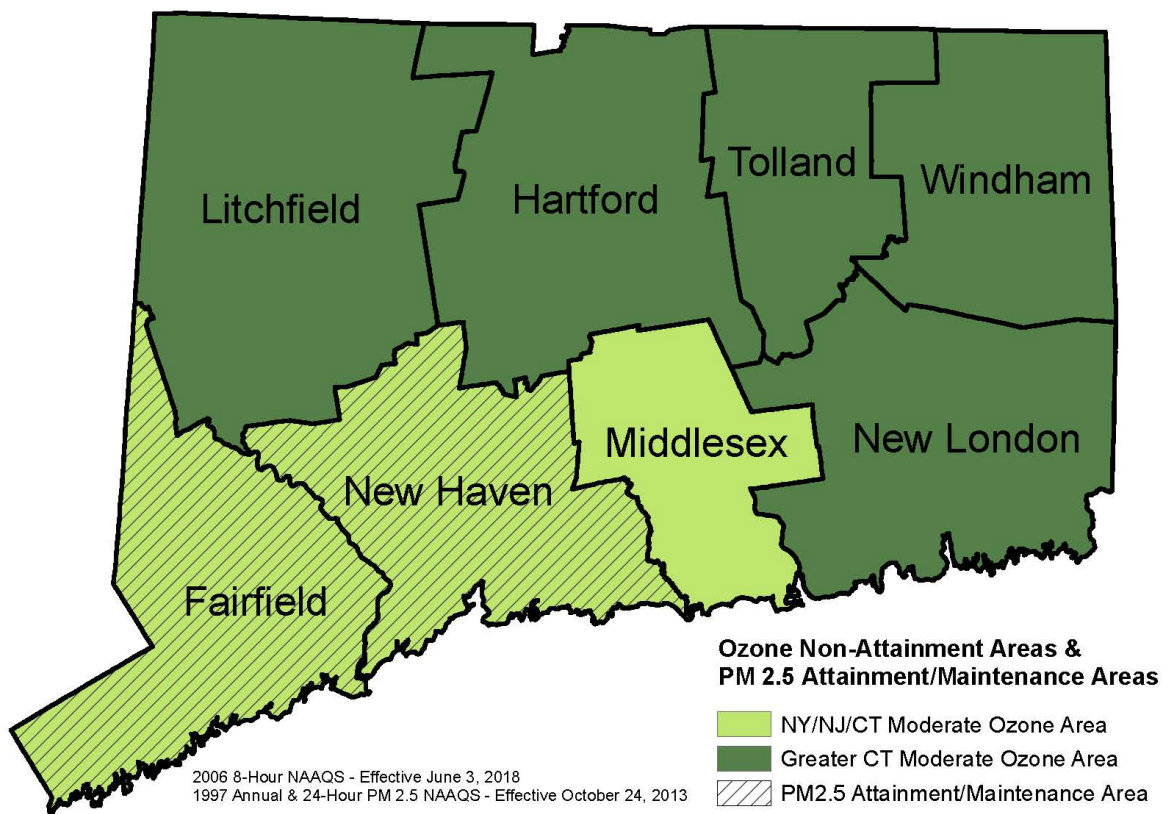
The TIP/STIP is periodically amended to advance priority projects and maintain a financially constrained program. It is a goal of the TIP/STIP to ensure full obligation of available federal funds in each fiscal year.

LONG-RANGE METROPOLITAN TRANSPORTATION PLAN

The Metropolitan Transportation Plan (MTP) identifies transportation deficiencies, recommends improvements, and advances priority transportation projects in cooperation with the CTDOT, municipal officials, other state agencies, stakeholder organizations and interested residents. The MTP must consider the entire range of transportation choices and modes. The first four years of the MTP must be "*financially constrained*" and be consistent with the amount of funding that can be reasonably expected to be available over its horizon year. Programs of projects in future years beyond year four are more illustrative and do not to be financially constrained. Priority projects from the MTP are advanced for funding and implementation through the TIP/STIP process.

AIR QUALITY CONFORMITY

The *Clean Air Act Amendments (CAAA) of 1990* and federal transportation regulations and legislation recognized the major contributions of transportation sources to the overall air quality problem evidenced throughout the country. To effectuate a reduction in transportation-related emissions and a corresponding improvement in air quality, areas designated as non-attainment or maintenance for any of the six criterion pollutants are required to demonstrate that their transportation plans, programs, and projects contribute to the attainment of *National Ambient Air Quality Standards (NAAQS)* and will not cause a new violation or delay attainment of the NAAQS. This process is referred to as Air Quality Conformity. The air quality non-attainment and maintenance areas in Connecticut are depicted in the following map.

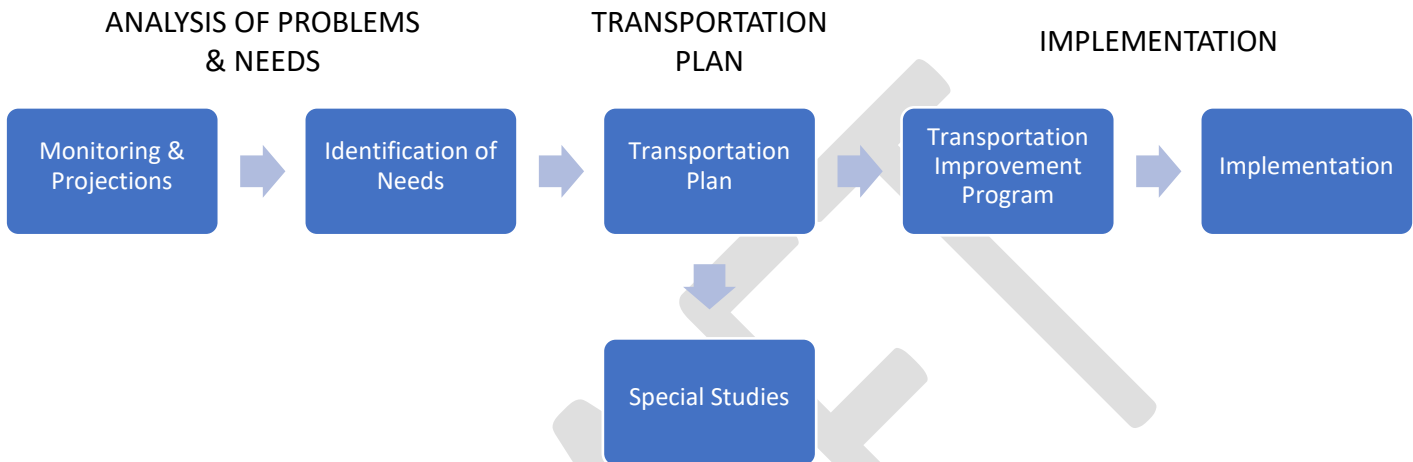


Map 1 Air Quality Non-Attainment Areas in CT

The CTDOT is responsible for conducting the detailed transportation and air quality modeling required to demonstrate conformity. Project recommendations in the TIP/STIP and MTP are incorporated into the statewide transportation network and analyzed for their potential impact on air quality. The results of the modeling are estimates of transportation-related emissions that are expected to be generated after constructing all regionally significant transportation improvements. To be responsive to the goals of the *State Implementation Plan for Air Quality*,

the TIP/STIP is required to contribute to annual reductions in transportation- related emissions. In addition, the total emissions generated by the transportation system need to be lower than emission budgets that have been approved for the non-attainment or maintenance area.

The transportation planning and project implementation process conducted by the NVCOG is outlined in the diagram below.



The Waterbury urban area is not designated as a Transportation Management Area (TMA). A TMA is designated for urban areas that have a population over 200,000. Despite the region's 2020 Census population of 450,367, which is well over the threshold needed for a TMA designation, the population of the Waterbury urban area, released in late 2022 as 199,317, remains just under the 200,000-resident threshold.

Federal metropolitan planning regulations require an enhanced transportation planning process for a TMA and the US Department of Transportation (USDOT) conducts a review of a TMA's planning process every three years. In addition, USDOT funding programs authorize MPOs in TMAs to select and program projects directly, whereas non-TMA MPOs must coordinate with the state DOT on project selection, with the state DOT having the final ability to select projects.

While the federal certification of the CNVMPO's transportation planning process is not required, it is conducted in conformity with applicable metropolitan planning requirements and the CNVMPO self certifies that its planning process conforms to the Metropolitan Planning Rule, 23 CFR Part 450 Subpart C and 49 CFR Part 613. Also, the NVCOG participates in the federal certification process of adjacent MPOs, as several member municipalities are in urban areas that are designated as a TMA, including Bridgeport-Stamford and Hartford.

2.2 MPO COORDINATION

Federal regulations state that *“If more than one MPO has been designated to serve an urbanized area there shall be a written agreement among the MPOs, the State(s), and the public transportation operator(s) describing how the metropolitan transportation planning processes will be coordinated to assure the development of consistent metropolitan transportation plans and TIPs across the MPA boundaries...”* (23 CFR § 450.314)

To comply with this requirement, the NVCOG has entered into several transportation planning agreements with partner MPOs. These agreements define mutual responsibilities in carrying out the metropolitan planning process.

TRANSPORTATION PLANNING PROCESS IN THE BRIDGEPORT-STAMFORD TMA

This MOU was initially executed in 2002 and updated and revised 2021. The MOU defines the responsibilities of each MPO for carrying out the transportation planning program in the Bridgeport-Stamford TMA and describes how the MPOs with jurisdiction in the TMA will coordinate transportation planning. The MPOs in the Bridgeport-Stamford Urban Area are: the Greater Bridgeport and Valley MPO (GBVMPO); the South Western Region MPO (SWRMPO); the Housatonic Valley MPO (HVMPO); the South Central Regional Council of Governments (SCRCOG); and, the Central Naugatuck Valley MPO (CNVMPO). The transit operators include: the Greater Bridgeport Transit Authority (GBTA); the Housatonic Area Regional Transit (HART); the Norwalk Transit District (NTD); the Milford Transit District (MTD); the Valley Transit District (VTD); CTtransit New Haven Division, and the City of Stamford.

TRANSPORTATION PLANNING PROCESS IN THE HARTFORD TMA

This MOU was established among the four MPOs within the Hartford TMA, as well as the Connecticut Department of Transportation (CTDOT). The COGs include the Capitol Region Council of Governments (CRCOG), the Naugatuck Valley Council of Governments (NVCOG), the Lower Connecticut River Valley Council of Governments (RiverCOG), and the Northwest Hills Council of Governments (NHCOG). The purpose of the MOU is to define the method for distributing metropolitan planning funds and the responsibilities of each COG for carrying out its respective transportation planning program and coordinating with the other partner COGs.

The MOU was executed in May 2018.

TRANSPORTATION PLANNING PROCESS IN THE MULTI-STATE NEW YORK-NEW JERSEY-CONNECTICUT-PENNSYLVANIA METROPOLITAN REGION

This MOU is made and entered into by and among the New York Metropolitan Transportation Council (NYMTC) and the Orange County Transportation Council (OCTC) in the State of New York; the North Jersey Transportation Planning Authority (NJTPA) in the State of New Jersey; the Western Connecticut Council of Governments (WestCOG), Connecticut Metro Council of Governments (MetroCOG), Naugatuck Valley Council of Governments (NVCOG), South Central Regional Council of Governments (SCRCOG), and Lower Connecticut River Valley Council of Governments (RiverCOG) in the State of Connecticut, and the Lehigh Valley Planning Commission (LVPC) in the State of Pennsylvania. This group of agencies is collectively referred to as the Metropolitan Area Planning (MAP) Forum. It establishes a mechanism for perform voluntary coordination, cooperation, and consultation among the organizations. The intent is to cooperate in efforts to achieve general consistency of planning products, analyses and tools through informal communication and document exchange.

The original MOU was updated and revised in 2017 to expand the boundaries of the MAP Forum. It was executed in September 2017.

AIR QUALITY PLANNING AND CONFORMITY

The GBVMPO and the Connecticut Department of Energy and Environmental Protection (DEEP) developed a letter of understanding to define roles and responsibilities for air quality planning, particularly as it pertains to the development of transportation control measures (TCMs) and the *State Implementation Plan for Air Quality (SIP)*.

The MOU and letter of understanding was signed in April, 1996.

2.3 MAP FORUM

The Metropolitan Area Planning (MAP) Forum is a consortium of metropolitan planning organizations (MPOs) in New York, New Jersey, Connecticut, and Pennsylvania that have signed a Memorandum of Understanding (MOU) for the coordination of planning activities in the multi-state metropolitan region. The MAP Forum was established in 2008 to coordinate transportation planning activities in the New York City metropolitan area. The Valley COG, as co-host of the GBVMPO, was an original member of the MAP Forum, and NVCOG assumed the membership when the VCOG and COGCNV merged.

Members are:

- New York Metropolitan Transportation Council (NYMTC)
- Orange County Transportation Council (OCTC)
- North Jersey Transportation Planning Authority (NJTPA)
- Western Connecticut Council of Governments (WestCOG)
- Connecticut Metro Council of Governments (MetroCOG)
- Naugatuck Valley Council of Governments (NVCOG)
- South Central Regional Council of Governments (SCRCOG)
- Lower Connecticut River Valley Council of Governments (RiverCOG)
- Capital Region Council of Governments (CRCOG)
- Lehigh Valley Planning Commission (LVPC)

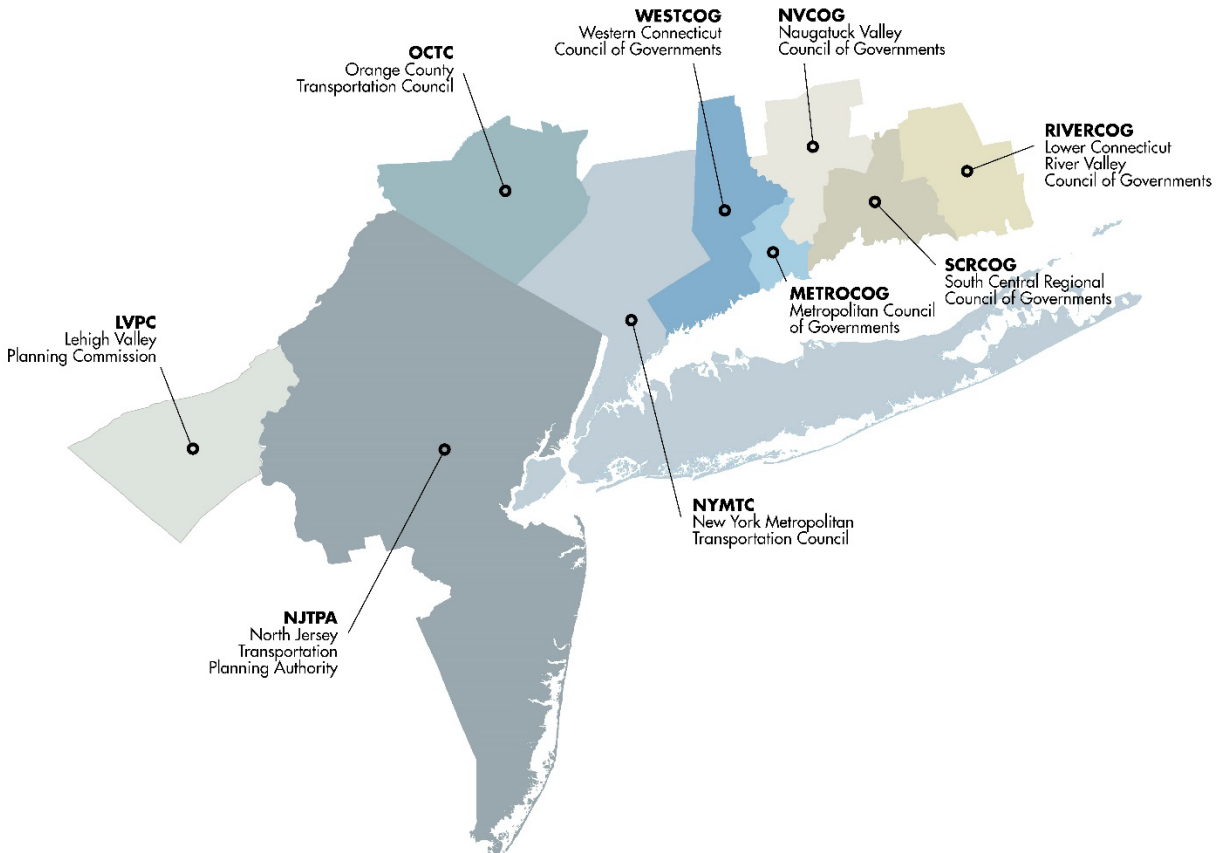
The MAP Forum provides organizational and strategic guidance to member MPOs in planning for and understanding mega-regional and boundary transportation projects. Because of the size, complexities, and interdependence of the New York-New Jersey-Connecticut-Pennsylvania region, a major transportation investment in one area can and will have implications throughout the region. It is imperative to be properly informed about these projects and fully understand how they will affect travel into, out of, and through the component metropolitan planning areas. The networking capabilities of the MAP Forum as it relates to federally mandated products and analyses is a critical function of the group. While the exchange of planning products is a key aspect of the MAP Forum's work program, it is the access to expertise and resources of member organizations that provides the greatest benefits.

Key accomplishments of the MAP Forum are:

- Holds two annual meetings, one in the Spring and one in late Autumn. Agendas focus on critical mega-regional and boundary challenges and products.

- Developed a work program that centers on maintaining the critical networking capability of the MAP Forum.
- Established a Freight Working Group to handle issues related to goods movement within the multi-state metropolitan region, such as the increase in home delivery, supply chain changes resulting from COVID-19 impacts, and dramatic expansion of warehouse space in northeastern Pennsylvania and Central New Jersey.
- Established a Multi-State Resilience Working Group to discuss issues related to climate change and sea level rise. The group's mission is to build on the Federal Highway Administration's Post Hurricane Sandy Transportation Resilience Study of New York, New Jersey and Connecticut that was completed in 2017. It also looks to expand its purview to include vehicle electrification, greenhouse gas mitigation, and transportation impacts from health-related events.
- Coordinated on the development of a Congestion Management Process for the metro area.
- Coordinated on establishing transportation performance measures and targets.

Metropolitan Area Planning (MAP) Forum Member Organizations



GEOGRAPHY AND ENVIRONMENT

The MAP Forum region is geographically centered on New York City. The City possesses a well-used natural harbor and sits at the southern end of the Hudson River. East of Queens lie Nassau and Suffolk counties in suburban Long Island, known for its beach-lined coastline and barrier islands.

Across the Hudson River to the west, lies northern New Jersey, an area which contains thirteen individual counties and several significant cities. North of the New Jersey-New York state border lies the Lower Hudson Valley, a hilly region comprised of seven counties (Westchester, Rockland, Putnam, Orange, Ulster, Dutchess, and Sullivan Counties) and dotted with suburban communities of varying size.

Southwest-central Connecticut is located to the east of these Hudson Valley counties and across Long Island Sound. The area of Connecticut included in the MAP Forum region encompasses almost the entire state, with only the far southeastern portion and the rural areas of northwest and northeast of Connecticut not represented by a member. About 86% of the state's population is represented in the MAP Forum region, including the seven most populous cities in the state: Bridgeport, Stamford, New Haven, Hartford, Waterbury, Norwalk, and Danbury. It is an area characterized by small but interconnected cities, with many wealthy suburban towns along the coast.

The Pennsylvania portion of the four-state region lies at the foothills of the Pocono Mountains and is characterized by the valleys formed by the Lehigh River and Delaware River, the latter of which creates the border between Pennsylvania and New Jersey, and the Susquehanna River.

ECONOMY

The MAP Forum Region's economy is large, diverse, and international. In 2018, the region produced a gross metropolitan product of \$1.7¹ trillion, the largest in the country among metropolitan regions. The multi-state gross metropolitan product would rank 11th among the nations of the world, ahead of Canada, Russia, South Korea, and Spain. The region's economic output is nearly twice that of the Los Angeles Metropolitan area². In 2018, a report by Oxford Economics projected that it will be the top urban economy in the world in 2035, having a GDP of \$2.5 trillion, with the largest financial and business sector, while Tokyo will come in second with a GDP of \$1.9 trillion and Los Angeles third with a GDP of \$1.5 trillion³.

Although significant numbers of workers who reside in the four-state region commute to New York City, particularly Manhattan, suburban Long Island, the Lower Hudson Valley, northern New Jersey, and southwestern Connecticut are all home to numerous industries and contribute substantially to the region's economy.

- Agriculture and tourism are important to the suburban Long Island and Lower Hudson Valley economies.

¹ U.S. Bureau of Economic Analysis. 2018. CAGDP2 Gross domestic product (GDP) by county and metropolitan area. <https://apps.bea.gov>.

² American Enterprise Institute. Perry, J. Mark. February 28, 2019. Putting America's huge \$20.5T economy into perspective by comparing US state GDPs to entire countries. <https://www.aei.org/carpe-diem/putting-americas-enormous-20-5t-economy-into-perspective-by-comparing-us-state-gdps-to-entire-countries-2/>

³ Oxford Economics. 2018. Which cities will be leading the global economy in 2035? <https://resources.oxfordeconomics.com/global-cities-2035>

- Northern New Jersey is home to the busiest port on the United States' east coast, the Newark-Elizabeth Marine Terminal
- The suburban areas close to New York City, for instance Westchester County in New York and Fairfield County in Connecticut, are home to major corporations.
- Fairfield County, Connecticut, is home to many large hedge funds and financial services.

Areas further from the New York City core have varied demographic and economic profiles. Eastern Pennsylvania, for example, has historically been manufacturing-based, and is currently the site of a variety of industrial-related firms and is becoming a major warehousing and distribution center.

DEMOGRAPHICS

ACS 2019 data shows the multi-state region's population, based on the 2020 census, at 24,004,477. While New York City is famous for its diversity, the region as a whole is also quite ethnically and racially diverse, with large communities hailing from all over the world. The same data source shows that the four-state region has become a majority-minority region, with 52.4% of the population identifying as a minority race or ethnicity. 11,060,334 employees work for 914,309 businesses within the area.

TRANSPORTATION SYSTEMS

The transportation system of the MAP Forum Region is large and complex, tied together by a network of highways, rail lines, bridges, tunnels, and other infrastructure. However, the system as a whole is aging and in need of renewal. As the largest metropolitan area in the nation, it is critical that key infrastructure is maintained and upgraded to accommodate future growth, allowing the region to continue serving as a major economic driver for the nation.

- Interstate Highways:
 - I-78 connects Harrisburg and points west to New York City through the Holland Tunnel, terminating in lower Manhattan.
 - I-80 crosses the United States between New York City in the east, over the George Washington Bridge, and continues through Northern New Jersey, through Scranton, Pennsylvania, eventually terminating in San Francisco, California.
 - I-84 extends from Connecticut along the north tier of the MAP Forum, passing through Orange County, New York. It connects Hartford, Waterbury, and Danbury to the northern Pennsylvania region.

- I-87 travels between I-278 in the Bronx, up through New York State and across the Mario Cuomo Bridge (Tappan Zee Bridge), connecting to Albany as the New York Thruway, and continuing north to the Canadian border.
- I-95 connects the east coast states, from Miami, Florida, in the south to the Canadian border in Maine. It overlaps with the New Jersey Turnpike through north New Jersey, crosses into New York City over the George Washington Bridge, continues as the Cross Bronx Expressway, to and through Connecticut as the Connecticut Turnpike before continuing to Boston along the coast.
- Several interstate spurs and beltways connect the interstate network and provide access to major points throughout the MAP Forum region. I-280 extends from lower Manhattan west to I-80 in central New Jersey; I-287 functions as a beltway around the core New York City area extending from I-95 near the New York-Connecticut state line to I-95 south of Newark, New Jersey; I-495, also referred as the Long Island Expressway, extends from mid-town Manhattan through the length of Long Island; I-684 connects southern Westchester County and the I-287 loop to I-84; and I-678 serves to connect main interstate routes with JFK International Airport. .
- Passenger Rail Lines: The region is home to the busiest passenger rail network in the country, including: New Jersey Transit, MTA Metro-North Railroad, and MTA Long Island Railroad commuter rail networks; the CT*rail* Hartford Line and Shore Line East commuter rail services; MTA New York City Transit's subway network; the Port Authority of New York & New Jersey's PATH rail rapid transit service; and New Jersey Transit's Hudson-Bergen Light Rail and Newark Light Rail systems.
- Intercity Rail: Amtrak runs a variety of services through the region, with New York's Penn Station serving as a major hub. Throughout the region, the Northeast Regional and high-speed Acela service utilize the Northeast Corridor, traveling from Washington, DC, to Boston.
- Maritime: freight facilities at the Port of New York & New Jersey and reliever ports in Bridgeport, New Haven, and New London.
- Major Commercial Airports: John F. Kennedy International Airport (JFK) in southern Queens, Newark Liberty International Airport (EWR) in Newark, and LaGuardia Airport (LGA) in northern Queens, and Bradley International Airport (BDL) in Windsor Locks, Connecticut.

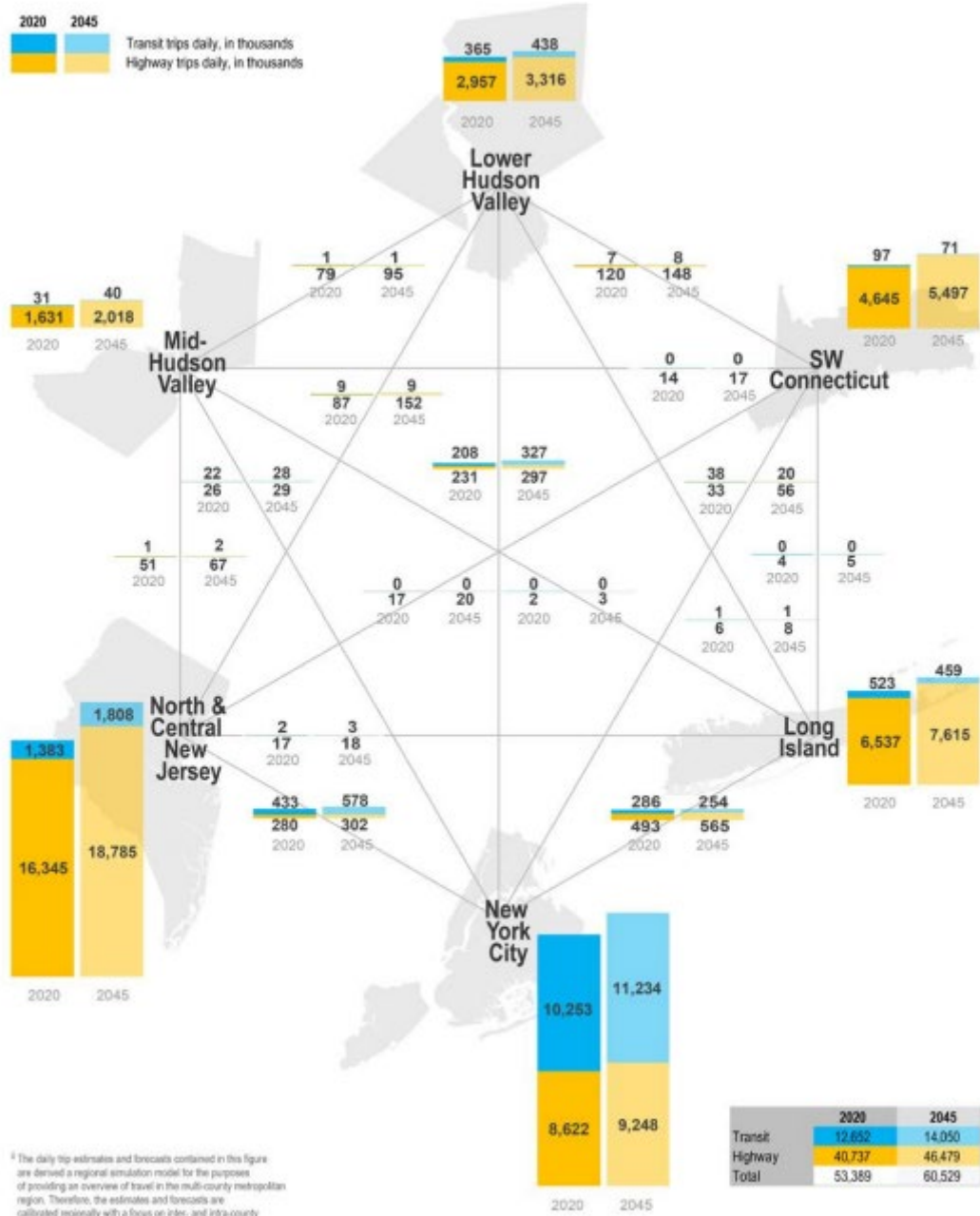
- Smaller Commercial and General Aviation Airports: Lehigh Valley International Airport (ABE) in Lehigh County, Pennsylvania, Long Island MacArthur Airport (ISP) in Suffolk County, New York, Stewart International Airport (SWF) in Orange County, New York, Trenton-Mercer Airport (TTN) in Mercer County, New Jersey, Westchester County Airport (HPN) and Tweed New Haven Regional Airport (HVN) in New Haven, Connecticut.
- Bridges and Tunnels: Due to the large number of islands, rivers, and other geographic features, bridges and tunnels are common throughout the four-state region, carrying both roadways and rail lines across or under various topographical features. Major Hudson River bridge crossings include: Governor Mario Cuomo Bridge (Tappan Zee Bridge), George Washington Bridge, and Verrazzano-Narrows Bridge. The Lincoln Tunnel, Holland Tunnel, and several major rail tunnels cross between New York and New Jersey under the Hudson River.

METROPOLITAN TRAVEL SHED

Based on a four-step transportation demand model maintained by the NYMTC, an estimated 53.4 million trips are made each day within and between the sub-regional area made up of northern and central New Jersey, New York City, suburban Long Island, southwestern Connecticut, the lower Hudson valley, and the mid-Hudson Valley. (Note: Lehigh Valley in Pennsylvania was not included in the model). About 22% or 10.3 million trips are made using a form of public transit. NYMTC's current model predicts to 2045, showing an estimated growth to more than 60.5 million trips per day, a growth of approximately 13%.

The core of the four-state region is notable for its enormous mass transit system. It is estimated that about one in every three users of mass transit, and two out of three rail riders in the United States travel using this system (Facts from Alan Pisarski's *Commuting in America III Study*." Transportation Research Board. (<http://onlinepubs.trb.org/onlinepubs/nchrp/CIAllfacts.pdf>). New York City is served by an intensively used subway and bus system, and its more immediate suburban neighbors are served by commuter rail and smaller state- and county-operated bus systems. Inter-city travel is provided by Amtrak, as well as long-haul buses and air travel facilities. The region is the busiest airspace in the United States, serving over 100 million passengers annually (Fleming, Susan. *FAA Airspace Redesign: An Analysis of the New York/New Jersey/Philadelphia Project*, United States Government Accountability Office Report to the Congressional Requesters." Diane Publishing Company).

Four State Metropolitan Travel Shed



TRANSPORTATION INVESTMENTS

Due to the continued growth of the region and the aging state of many key pieces of infrastructure, a number of regionally-significant improvements to the transportation infrastructure are either planned or moving forward in the MAP Forum Region. Examples of these “*boundary projects*” whose impacts cut across planning areas and state lines include:

- The Penn Station (New York) Access project that would provide direct access for the MTA Metro-North Railroad’s New Haven Line to Manhattan’s Penn Station, while redeveloping infill stations in the eastern Bronx.
- Interstate 95 improvement projects from Stamford to Bridgeport and Old Lyme to New London, along with New Haven Line commuter rail service improvements.
- Various improvement projects along Interstate 84 in both Connecticut and the Hudson Valley, including a rehabilitation and reconstruction of the I-84/Route 8 interchange in Waterbury.
- A Cross Long Island Sound Connection between suburban Long Island and either the Bronx, Westchester or Connecticut.
- West-of-Hudson transit improvements, including improvements to the Port Jervis Line in Orange County, New York.
- The replacement of the Lincoln Tunnel Helix in Weehawken, New Jersey.
- The Hudson Tunnel Project to create an additional rail tunnel that would preserve the current functionality and strengthen the resiliency of the Northeast Corridor’s Hudson River rail crossing between New Jersey and New York.
- The Amtrak Gateway Program’s strategic rail infrastructure improvements designed to improve current services and create new capacity that will allow the doubling of passenger trains running under the Hudson River.
- The replacement of the Port Authority Bus Terminal and the redevelopment of Penn Station on Manhattan’s west side.
- The Cross Harbor Freight Program for rail freight across New York Harbor.

- Airport access improvements, including the extension of the Port Authority Trans-Hudson rail service to Newark Liberty Airport, the extension of Air Train service to LaGuardia Airport and transit and roadway improvement for John F. Kennedy International Airport.

While passenger transport is critical, these important projects are not limited to the movement of people. In such a densely populated and economically active region, freight transportation is critical as well, and there are several major projects dedicated to freight in the region. For example, the Port Authority's Cross Harbor Freight Program is seeking to address the difficulty of moving freight from one side of New York Harbor to the other by examining a wide range of alternatives, including railcar and truck floats, container barges, and a cross-harbor rail tunnel. After review, the enhanced railcar float and double-track rail tunnel emerged as the preferred alternatives ("Cross Harbor Freight Program." <http://www.panynj.gov/port/cross-harbor.html>).

DRAFT

2.4 MEGA-REGIONAL PLANNING CONTEXT: THE FOUR STATE METROPOLITAN REGION

The Four State Metropolitan Region that comprises the MAP Forum lies at the heart of the Northeast Mega-region, the most densely populated, urbanized land in the country. The Mega-region includes the metropolitan areas of Washington, D.C., Baltimore, Philadelphia, New York City and Boston and is home to 49.5 million people. This translates to nearly 18% of the nation's total population. It is also a major contributor to the United States' economy, producing one-fifth of the national GDP in 2010 (The Regional Plan Association. November 2007. *Northeast Megaregion 2050: A Common Future*. http://www.rpa.org/pdf/Northeast_Report_sm.pdf).

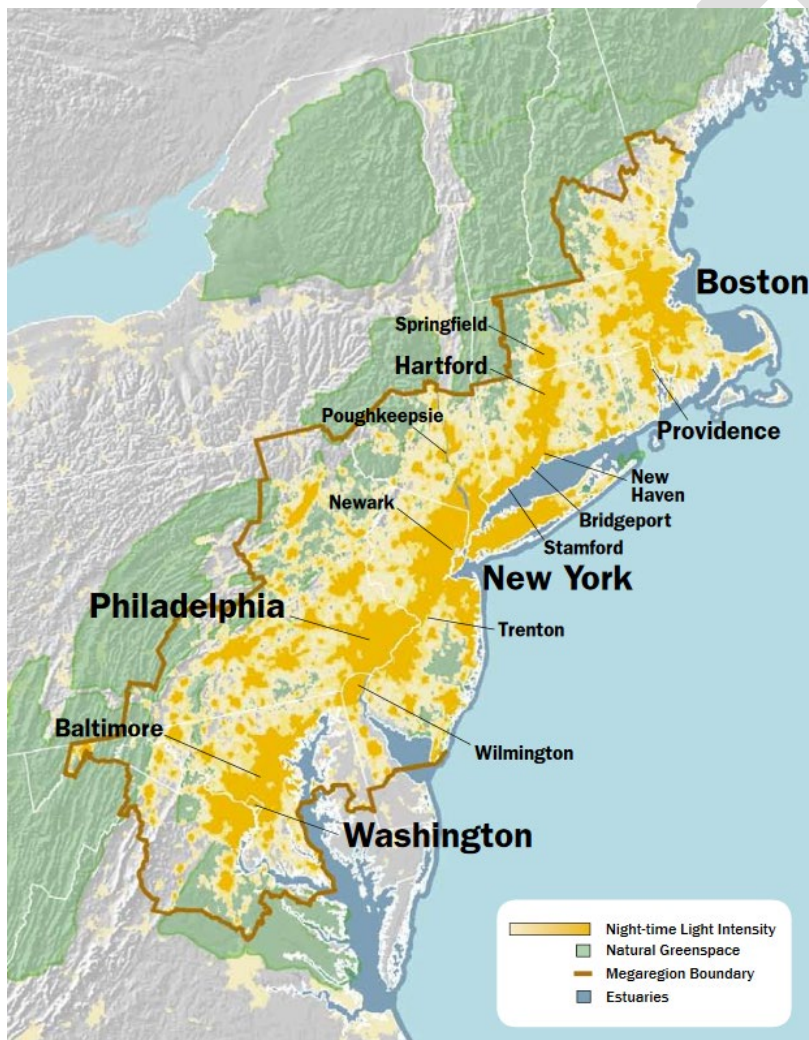


Figure 1 Light intensity map within the Northeast Mega-Region

The MAP Forum region includes the metropolitan planning areas under the jurisdiction of each of its member MPO and COG. While it is centered on New York City, it also contains some of the largest cities in New Jersey (Newark, Jersey City, and Paterson) and Connecticut (Hartford, Stamford, Bridgeport, New Haven, and Waterbury) as well as large suburban towns on Long Island, in the lower Hudson Valley, Fairfield and New Haven County and north New Jersey. The Lehigh Valley area in Pennsylvania includes the cities of Allentown, third largest city in Pennsylvania, and Bethlehem. The region is experiencing a change to a major warehousing and distribution hub.

2.5 FEDERAL PLANNING FACTORS

Federal metropolitan transportation regulations, specifically Title 23 CFR Part 450.306, require the MTP to consider projects and strategies that will address ten specific planning factors. The planning factors and how the MTP addresses each factor are as follows:

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.

- Revitalize and support the economic redevelopment of the urban core areas through the implementation of TOD projects and station area plans.
- Reconstruct and modernize interchange areas on Route 8 to improve efficiency and safety and provide better access to the urban core areas.
- Expand the incident management program and related ITS elements along the entire length of Route 8.
- Construct a connector road between Route 42 in Beacon Falls and Route 67 in Seymour to spur economic development along the new corridor and provide access to potential development sites.
- Construct a new rail spur and related infrastructure on the Waterbury branch line in Naugatuck in support of plans to develop an inland port facility.
- Maintain I-84 and Route 8 in a state-of-good repair to support efficient movement of freight and improve truck travel time reliability.

2. Increase the safety of the transportation system for motorized and non-motorized users.

- The MTP supports and is consistent with the CTDOT's highway safety improvement program (HSIP) and integrates recommendations from the *State Highway Safety Plan*.
- Construct Route 8 operational improvements and modernize interchange areas.
- Construct intersection projects that address high hazard locations.
- Extend the NRG Trail to provide a safe and attractive transportation corridor for bicyclists and pedestrians.
- Expand the incident management program and related ITS elements along the entire length of Route 8.
- Address pedestrian safety by implementing a regionwide pedestrian safety program that will close gaps in the existing sidewalk network, construct new sidewalks, maintain pedestrian signals, and implement a "Complete Streets" policy to accommodate travel of all users.
- Install advanced traffic signal systems.

3. Increase the security of the transportation system for motorized and non-motorized users.

- Support transportation emergency management activities as part of the Regional Emergency Planning Team – REPT1, REPT2 and REPT5.
- Identify critical transportation infrastructure in the Naugatuck Valley planning region vulnerable to natural and manmade disasters and implement resiliency and security measures.
- Install security monitoring and response equipment at rail stations and on board transit vehicles.

4. Increase the accessibility and mobility of people and for freight.

- Traffic signal modernization program – upgrade to include pedestrian signals, countdown signals, and accessible features (audible features).
- Redevelop and revitalize urban core areas, including TOD and station area projects.
- Enhance sidewalks and crosswalks with curb ramps, curb extensions and use of textured pavement material – “*Complete Streets*” program.
- Enhance and facilitate multi-modal connections between local bus service and commuter rail service at commuter rail stations.
- Consolidate local bus services and implement fixed bus route connections between Bristol, Waterbury, and Shelton, including points in between.
- Expand the incident management program and related ITS elements along the entire length of Route 8.
- Construct operational improvements Route 8 and modernize interchange areas.
- Integrate goods movement and freight planning with the State Freight Plan.
- Support advancements and deployment of autonomous and connected technologies and vehicles.

5. Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.

- Consult with state and local land use managers and environmental protection agencies.
- Enhance and expand commuter rail service along the Waterbury branch line, including acquiring new locomotives and train sets to allow 30-minute peak hour service, constructing new station buildings and installing high-level platforms, and

constructing a permanent transfer station at the Devon wye and instituting shuttle rail service along the WBL.

- Complete the Naugatuck River Greenway Trail through the region.
- Implement congestion management process and travel demand management actions.
- Implement “Complete Streets” initiatives and green infrastructure/Low Impact Development projects.
- Promote transit orient development (TOD) and station area plans to support downtown revitalization.
- Implement alternative modes of transportation projects along the Route 8 corridor, including Bus Rapid Transit and express bus service to complement commuter rail service.
- Construct pedestrian and bicycle connections and safety-related projects – Community Connectivity Program.
- Participate in the *Sustainable CT* program and encourage development of walkable and livable downtown areas.

6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.

- Enhance rail-bus transfer connections at commuter rail stations
- Preserve and upgrade I-84 and Route 8, as principal freight corridors, to improve the efficient movement of goods and freight.
- Enhanced and expanded commuter rail service along the Waterbury branch line, including constructing a permanent transfer station at the Devon wye and instituting shuttle rail service along the WBL.
- Implement Bus Rapid Transit and express bus service in the Route 8 corridor to complement WBL rail service.

7. Promote efficient system management and operation.

- Expand the incident management program and related ITS elements along the entire length of Route 8.
- Identify and assess intersections and corridors with recurring congestion and develop projects to reduce congestion and improve efficiency – Congestion Management System

- Identify and assess high hazard intersections and corridors and develop a safety improvement program – Safety Management System.
- Develop a ten-year capital plan for VTD and CTDOT to ensure rolling stock and vehicles are replaced on a life-cycle schedule – Public Transit Management System.
- Monitor highway system operations and performance through the acquisition of “*Big Data*”, analysis of travel patterns available from the *National Performance Management Research Data Set (NPMRDS)*, and assessment of highway, bicyclist and pedestrian safety based on the analysis of crash data available from the CTDOT crash repository.
- Implement traffic signal system modernization and interconnection projects.

8. Emphasize the preservation of the existing transportation system.

- Rebuild and modify interchange areas on Route 8 to improve operations and efficiency and provide better access to the region’s urban core areas.
- Upgrade commuter rail infrastructure – Positive Train Control, full signalization system and bypass sidings.
- Implement traffic signal system modernization and interconnection projects
- Rehabilitate and maintain the existing highway and transit systems in a state-of-good-repair.
- Implement low cost, intersection improvements designed to improve pedestrian safety and connections and enhance traffic flow.
- Transportation management and operations projects.

9. Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation.

- Implement green infrastructure and Low Impact Development projects.
- Integrate road projects included in municipal and multi-jurisdictional *Natural Hazard Mitigation* plans into the MTP.
- Assess the vulnerability of critical transportation infrastructure to impacts of climate change and extreme weather events.

10. Enhance travel and tourism.

- Identified tourist attractions, including amusement parks, regional and local museums, state parks and forests, sports venues, regional performing arts theaters, and seasonal events, and developed a GIS database to define location and attributes.
- Assess travel and traffic characteristics to key attractions to determine if operating problems exist.
- Determine public transit access opportunities to main tourist attractions.

DRAFT

2.6 IJJA

The *Infrastructure Investment and Jobs Act (IJJA)*, also known as the *Bipartisan Infrastructure Law (BIL)*, was signed into law on November 15, 2021. *IJJA* provides a total of \$1.2 trillion over five years to support new and existing programs. Funds are allocated to states, MPOs and cities and towns depending on the eligibility criterion of the particular program. It is comprehensive in that it addresses all the country's infrastructure needs. However, approximately half of the funding will be allocated to the US Department of Transportation (USDOT), reauthorizing the nation's surface transportation program, as provided by the FAST Act. Of the approximate \$567.5 billion authorization for surface transportation improvements, \$293.4 billion represents baseline spending from FAST Act and \$274.1 billion is new funding authority.

The key goals of *IJJA* are:

- Repair and rebuild roads and bridges with a focus on climate change mitigation, resilience, equity, and safety for all users.
- Improve transportation options for millions of Americans and reduce greenhouse emissions through the largest investment in public transit in U.S. history.
- Address growing safety concerns on the nation's roads through a multi-modal safe systems approach.

To achieve these goals, the core transportation programs remain the same as authorized under the FAST Act, but funding allocations to these programs have been increased by anywhere from 10% to 34%. The increase in funding availability is intended to permit states and MPOs to address outstanding infrastructure deficiencies and issues.

The act also made significant changes to the metropolitan transportation planning process that MPOs need to follow. Key among the changes is that funding for metropolitan planning was increased 32% for highway-related planning activities and 42% for transit planning. It also requires MPOs that are designated as a Transportation Management Area to add a housing coordination process to better connect housing and employment as an area of interest. Affordable housing organizations are added as an "interested party" and need to be consulted in development of the MTP. Federal regulations will also be revised to designate outer years in MTP program of projects as beyond the first four years and would no longer need to be fiscally constrained. Only the first four years of the MTP, which corresponds to the short-range Transportation Improvement Program (TIP), would need to be fiscally constrained and the reasonably expected funding needed to implement the projects identified.

2.7 TRANSPORTATION PERFORMANCE MEASURES AND TARGETS

As part of a performance-based approach to transportation planning, states and MPOs set a strategic direction (goals and objectives). Using performance measures and targets helps agencies support these objectives and allows them to compare alternative improvement strategies and track results over time. A performance measure is a metric used to assess progress toward meeting a goal. A performance target is a specific performance level that is desired to be achieved within a certain timeframe.

Federal targets have been established in the following goal areas:

- Highway Safety
- Transit
- Infrastructure Condition – Pavement and Bridge Condition
- System Reliability
- Freight Movement
- Air Quality

The NVCOG has implemented CTDOT's selected performance measures in each goal area and will invest resources in projects to achieve adopted targets.

HIGHWAY SAFETY

Highway Safety is determined by the interaction between drivers, their behavior, and the highway infrastructure. The five (5) performance measures for Highway Safety include:

1. The number of fatalities;
2. The rate of fatalities;
3. The number of serious injuries;
4. The rate of serious injuries; and,
5. The number of non-motorized fatalities and serious injuries.

The CTDOT and the CNVMPO will collaborate to program appropriate Highway Safety Improvement Program (HSIP) safety projects and the TIP/STIP will program projects to meet the targets set by the CTDOT and agreed upon by the CNVMPO. Projects will include:

- Programmatic highway safety improvements: Projects or programs that are conducted regularly throughout the state such as signing and pavement marking programs.

- Programmatic driver safety activities: Projects or programs that are conducted regularly on an ongoing basis. These include Highway Safety behavioral programs such as Impaired Driving, Occupant Protection, Distracted Driving, Speeding, Motorcycle Safety, and Teen Driving grants for State and Municipal Police Departments using National Highway Traffic Safety Administration (NHTSA) funds.
- Location-specific highway safety projects: This includes roadway safety improvements selected to correct known safety problems at locations with a high frequency or severity of crashes.
- Systemic highway safety improvement projects: This includes roadway safety improvements that are widely implemented based on high-risk roadway features that are correlated with particular severe crash types.

The Safety Performance Management Measures regulation supports the Highway Safety Improvement Program (HSIP) and requires State Departments of Transportation and MPOs to set HSIP targets for the five safety performance measures that cover all public roadways regardless of ownership or functional classification.

The CTDOT, upon review of the 5-year rolling average for each measure, has determined that the targets will be to maintain the current five year moving average.

| Safety Performance Management Measure Target Summary | |
|---|--|
| Measures | Target |
| Number of fatalities | 270 fatalities/year |
| Rate of fatalities | 0.850 fatalities/100 Million VMT |
| Number of serious injuries | 1,300 serious injuries/year |
| Rate of serious injuries | 4.300 serious injuries/100 Million VMT |
| Number of non-motorized fatalities and non-motorized serious injuries | 280 fatalities and serious injuries/year |

These targets were included in the CTDOT’s 2022 Highway Safety Plan. The targets were also incorporated in the state’s Highway Safety Improvement Program annual report. The CNVMPO endorsed the state safety targets November 4, 2022.

TRANSIT

The Transit Asset Management (TAM) rule requires recipients and sub-recipients of FTA funds to set annual performance targets for federally established *State of Good Repair (SGR)* measures. Performance targets will be set for one or more asset classes for the following asset categories:

- Rolling Stock – Revenue Vehicles: The goal for this asset category is to maintain vehicles in a state of good repair and replace vehicles based on a Useful Life Benchmark (ULB). The target is the percentage of vehicles that meet or exceed their ULB.
- Equipment – Service Vehicles: The goal for this asset category is to maintain vehicles in a state of good repair and replace vehicles based on a Useful Life Benchmark (ULB). The target is the percentage of vehicles that meet or exceed their ULB.
- Facilities – Revenue Vehicles: The goal for this asset category is to maintain facilities in a state of good repair. The target is the percentage of facilities that have a TERM (Transit Economic Requirements Model) condition rating of less than 3 on a 1-to-5 scale, with 1 indicating a poor condition and 5 an excellent condition.
- Infrastructure – Guideway: The goal for this asset category is to maintain transit guideway in a state of good repair. The target is the percentage of guideway operating under a speed restriction.

The CTDOT identified asset classes for its transit service providers specific to each of the four assets categories in the three public transportation modes of rail, bus and ferry. The following table provides a summary of the performance targets by asset class and lists the current percentage meeting or exceeding the metric for Tier I systems. Tier I transit systems include those under the operating jurisdiction of the CTDOT, including assets operated by Metro North Railroad on the New Haven main and branch lines and CT Transit, including the Waterbury division operated by North East Transportation.

These targets were adopted by the CTDOT on September 30, 2022. The TIP/STIP will program projects to meet the targets set by the CTDOT by utilizing the list of capital prioritized projects, based on projected asset conditions, included in the CTDOT TAM and Transit Group Plans. These prioritized projects will be developed with the aid of CTDOT's analytical decision support tool, Transit Asset Prioritization Tool, better known as TAPT.

Transit Asset Management Performance Measure Target Summary

| Asset Class | Performance Metric | Target | Current Percentage (FY21) |
|----------------------------------|--------------------|--------|---------------------------|
| Transit Bus | ULB 12 years | 14% | 22% |
| Articulated Bus | ULB 12 years | 14% | 49% |
| Over-the-Road Bus | ULB 12 years | 14% | 49% |
| Cutaway Bus | ULB 5 years | 17% | 100% |
| Rail Locomotives | ULB 35 years | 13% | 37% |
| Rail Coaches (Push/Pull) | ULB 35 years | 13% | 38% |
| Rail Self Propelled Cars | ULB 35 years | 13% | 0% |
| Service Vehicles- Trucks | ULB 14 years | 7% | 37% |
| Service Vehicles- Automobiles | ULB 5 years | 17% | 100% |
| Service Vehicles-SUV | ULB 5 years | 17% | 72% |
| Service Vehicles-Van | ULB 5 years | 17% | 100% |
| Rail-Guideway | Slow Zone Miles | 4% | 3% |
| Facilities- Passenger/Parking | TERM >3 | 0% | 0% |
| Facilities- Admin/Maintenance | TERM >3 | 0% | 58% |

PAVEMENT AND BRIDGE CONDITION

There are four performance measures for Pavement condition:

1. The percentage of the pavement on the Interstate system in Good condition;
2. The percentage of the pavement on the Interstate system in Poor condition, with a maximum percentage of lane miles in poor condition at 5%;
3. The percentage of the pavement on the non-Interstate National Highway System (NHS) in Good condition; and
4. The percentage of the pavement on the non-Interstate NHS in Poor condition.

The two performance measures for Bridge deck area condition include:

1. The percentage of NHS bridges by deck area in Good condition; and
2. The percentage of NHS bridges by deck area in Poor condition.

Pavement Condition Performance Measure

Target Summary

| Target | Current Condition (State) | 2-year targets (2024) | 4-year targets (2026) |
|--|---------------------------|-----------------------|-----------------------|
| Percent interstate in good condition | 68.6% | 72.0% | 70.0% |
| Percent interstate in poor condition | 0.2% | 1.0% | 1.3% |
| Percent Non-Interstate NHS in good condition | 37.9% | 37.0% | 35.0% |
| Percent Non-Interstate NHS in poor condition | 1.8% | 2.7% | 3.5% |

Bridge Condition Performance Measure

Target Summary

| Target | Current Condition (State) | 2-year targets (2024) | 4-year targets (2026) |
|---------------------------|---------------------------|-----------------------|-----------------------|
| Percent in good condition | 14.1% | 14.2% | 14.5% |
| Percent in poor condition | 7.7% | 6.2% | 6.0% |

These targets were adopted by the CTDOT on December 16, 2022. The CTDOT in collaboration with the CNVMPO will program projects to meet the targets using the Department's Pavement Management System and the Bridge Management System, which uses a systematic look at conditions to develop optimal strategies. These strategies are included in the CTDOT Transportation Asset Management Plan (TAMP).

TRANSPORTATION ASSET MANAGEMENT PLAN

The TAMP acts as a focal point for information about the assets, their management strategies, long-term expenditure forecasts, and business management processes. The CTDOT is required to develop a risk-based TAMP for the NHS to improve or preserve the condition of the assets and the performance of the system (Title 23 USC 119(e) (1), MAP-21 § 1106). MAP-21 defines asset management as a strategic and systematic process of operating, maintaining, and improving physical assets, with a focus on engineering and economic analysis based upon quality information, to identify a structured sequence of maintenance, preservation, repair, rehabilitation, and replacement actions that will achieve and sustain a desired state of good repair over the lifecycle of the assets at minimum practicable cost (Title 23 U.S.C. 101(a) (2), MAP-21 § 1103).

Pavement and Bridge State of Good Repair needs are identified, quantified, and prioritized through the TAMP process. Projects to address SGR repair needs are selected from the TAMP for inclusion in the TIP/STIP.

SYSTEM RELIABILITY

Highway travel time reliability is closely related to congestion and is greatly influenced by the complex interactions of traffic demand, physical capacity, and roadway "events." Travel time reliability is a significant aspect of transportation system performance.

Operational-improvement, capacity-expansion, and to a certain degree highway road and bridge condition improvement projects, impact both congestion and system reliability. Demand-management initiatives also impact system reliability.

The level of travel time reliability (LOTTR) is expressed as a ratio of the 80th percentile travel time of a reporting segment to the "normal" (50th percentile) travel time of a reporting segment occurring throughout a full calendar year. Segments that have a ratio less than 1.5 are considered "reliable." The performance measure, as defined in Title 23 CFR 490.507, is the percent of the person-miles traveled (PMT) on Interstate and non-Interstate NHS that are reliable.

The CTDOT adopted the following targets on December 16, 2022:

| System Reliability Performance Measure | | | |
|--|---------------------------|-----------------------|-----------------------|
| Target Summary | | | |
| Target | Current Condition (State) | 2-year targets (2024) | 4-year targets (2026) |
| Percent PMT on Interstate that are reliable | 86.2% | 78.6% | 78.6% |
| Percent PMT non-Interstate NHS that are reliable | 90.0% | 84.9% | 84.9% |

The CTDOT and the CNVMPO will program projects in the TIP/STIP to meet the targets by considering system reliability in the projects that are selected. Over time, and as quantifiable impacts begin to be observed and measured, the targets will become a formal part of the project selection process.

FREIGHT MOVEMENT

This measure considers factors that are unique to the trucking industry. The unusual characteristics of truck freight include:

- Use of the system during all hours of the day;
- High percentage of travel in off-peak periods; and
- Need for shippers and receivers to factor in more 'buffer' time into their logistics planning for on-time arrivals. [23 CFR 490.607].

Freight movement will be assessed by the Truck Travel Time Reliability (TTTR) index. This index is the regional average of the highest ratios of the 95th percentile travel time for a road segment to the 50th percentile travel time for five statutorily defined time periods:

- AM peak period
- Mid-day period
- PM peak period
- Overnight
- Weekends

This is a measure of truck travel time reliability, not congestion. Segments of the highway that are regularly and predictably congested will not have a high TTTR index number. Rather, those

segments of highway where delays are unpredictable and severe are scored highest. Prioritizing reliability over congestion came from stakeholder outreach with the freight industry where predictability was deemed more important for scheduling. The TTTR index only applies to roads on the National Highway System.

The CNVMPO has access to the data needed to calculate the TTTR. Truck travel times for the Interstate System is included in the FHWA’s *National Performance Management Research Data Set (NPMRDS)*.

The CTDOT adopted the following targets on December 16, 2022:

| Freight Movement Performance Measure | | | |
|---|---------------------------|-----------------------|-----------------------|
| Target Summary | | | |
| Target | Current Condition (State) | 2-year targets (2024) | 4-year targets (2026) |
| Truck Travel Time Reliability (TTTR) for Interstate | 1.56 | 1.95 | 2.02 |

AIR QUALITY

The USDOT requires that states and MPOs assess the impact of their transportation systems on air quality and specifically the impacts from vehicle exhaust emissions. The performance measure for air quality is based only on an assessment of projects selected for funding under the FHWA’s Congestion Mitigation and Air Quality Improvement (CMAQ) program.

The CMAQ program’s purpose is to fund transportation projects or programs that contribute to the attainment or maintenance of National Ambient Air Quality Standards (NAAQS). The TIP/STIP will program projects to meet the targets by selecting appropriate CMAQ eligible projects including: congestion reduction and traffic flow improvements; ridesharing; transit improvements; travel demand management; and bicycle and pedestrian facilities.

The CTDOT adopted the following targets on December 16, 2022:

| Air Quality Performance Measure Target Reductions Produced by CMAQ Projects | | |
|--|------------------|------------------|
| Emissions Component | 2-Year (2024) | 4-Year (2026) |
| Volatile Organic Compounds (VOC) Emissions Reduction (kg/day) | 87.346 | 87.346 |
| Nitrogen Oxide (NOX) Emissions Reduction (kg/day) | 81.978 | 81.978 |
| Particulate Matter PM2.5 Emissions Reduction (kg/day) | 6.290 | 6.290 |

2.8 AIR QUALITY CONFORMITY DETERMINATION

Due to the interconnectedness of MPOs within Connecticut and the misalignment of boundaries for non-attainment areas and MPOs, air quality modeling is completed on a statewide basis by the CTDOT. In February of 2023, the CTDOT released their updated modeling outcomes based on the proposed projects and priorities of the CTDOT and the eight MPOs within the state. The result of this analysis shows notable declines in all three of Connecticut’s non-attainment emissions, and confirms that projects identified within NVision50 and its counterparts from the Connecticut MPOs further advance the goals of improving air quality within the region.

The full air quality conformity determination, including detailed process and modeling information, can be found as Appendix D to this document.

2.9 TITLE VI AND ENVIRONMENTAL JUSTICE

The NVCOG's efforts under Title VI and the Environmental Justice Executive Order 12898 aim to make transportation planning accessible to all NVCOG residents and neighbors, regardless of race, ethnicity, nationality, income, or English proficiency. Since the publication of the previous MTP, the NVCOG has created a separate community engagement office to strengthen public outreach efforts. The objectives of this office are to provide greater opportunities to the public to participate in the transportation planning process and enhance dissemination of information regarding transportations projects, plans and programs.

TITLE VI PROGRAM

Title VI of the Civil Rights Act of 1964 prohibits discrimination on the basis of race, color, or national origin in programs and activities receiving federal funds. As a direct recipient of FTA funds and FTA grant recipient for the Valley Transit District's capital program, the NVCOG is required to follow Title VI rules with respect to its transit capital and planning program as well as the host agency of the CNVMPO and as the co-host and participating agency member of the Greater Bridgeport and Valley MPO. The primary impact of Title VI for MPO activities is to require transportation planning and programming to proactively consider the needs of ethnic and racial minority populations through inclusion in the transportation planning process, and evaluation of the equal availability of transportation opportunities to all residents. Submission of Title VI documentation reports, provision of translated materials, on-demand interpreters, and formal discrimination complaint reviews are all primary means of compliance.

The following are specific activities carried out by the NVCOG to comply with Title VI requirements.

- NVCOG updates its [Title VI and Environmental Justice analysis](#) triennially. The most recent update was published and endorsed by the NVCOG Board in June 2022.
- Language Assistance Plan: NVCOG completed a Language Assistance Plan as part of the Title VI Plan development, using the "Four Factor Analysis" detailed in the FTA Title VI Circular. The process requires the NVCOG to determine the number and proportion of the population with Limited English Proficiency (LEP). The LEP analysis also determined if certain non-English speaking populations required special consideration under the Department of Justice's Safe Harbor provision. Safe Harbor provisions apply if the eligible LEP population in a given language exceeds 5% or 1,000 members of the eligible population for transit district's services. If these thresholds are attained, vital written materials will be translated to accommodate their needs. According to the findings of the

analysis, the most prevalent LEP and Safe Harbor population in the service area speak Spanish.

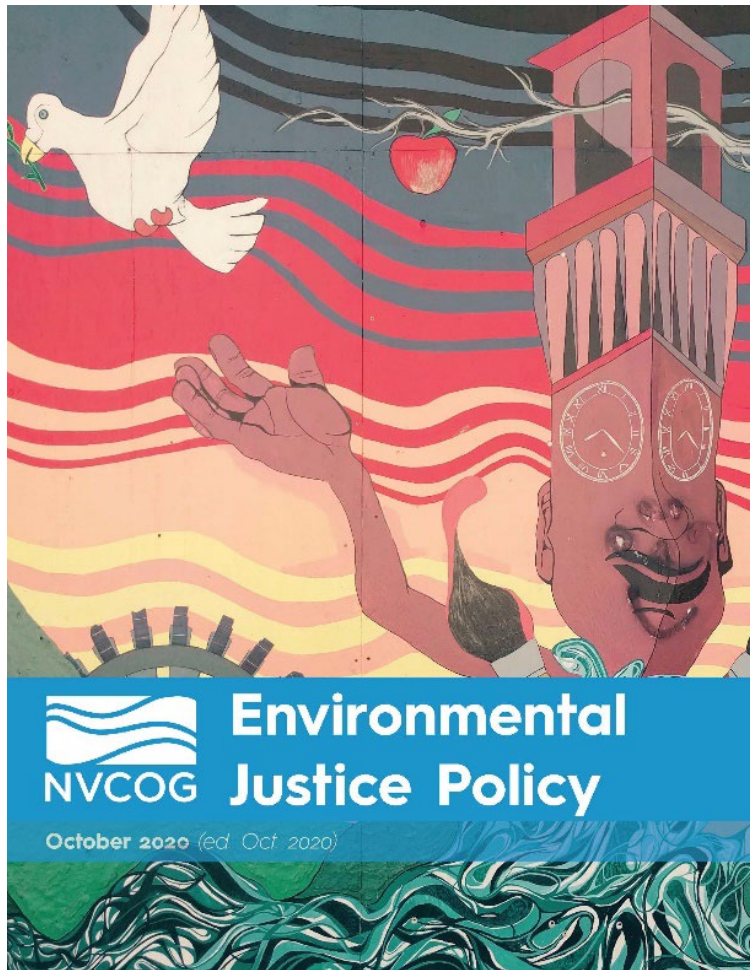
- The Language Assistance Plan will be continuously monitored, evaluated, and updated. NVCOG offers translations of all newly published documents and offers interpretation at all public hearings and events, upon request. The NVCOG has also provided notices of the rights of residents in plain sight on NVCOG-owned transit vehicles operated by the Valley Transit District and in its offices.
- Title VI Complaint Process: The NVCOG has developed a discrimination complaint process and a standard discrimination complaint form <https://nvcogct.gov/wp-content/uploads/2019/06/TitleVI-ComplaintProcess.pdf>

ENVIRONMENTAL JUSTICE

Environmental Justice amplifies the provisions found in Title VI of the Civil Rights Act of 1964. Executive Order 12898 directed each federally funded agency to identify any disproportionately high and adverse health or environmental effects of its programs on minority and low-income populations. In turn, MPOs, as part of the United States Department of Transportation's certification requirements, are charged with evaluating their plans and programs for environmental justice sensitivity, including expanding their outreach efforts to low-income, minority, and other disadvantaged populations. The intent is to ensure that the MPO's transportation projects, plans and/or programs do not adversely or disproportionately impact EJ-defined communities, that the residents of these communities are not overburdened by investments in the transportation network and that fair and equitable investments in the transportation system located in these communities are made.

Executive Order 12898: *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, established the following Environmental Justice (EJ) principles for all federal agencies and agencies receiving federal funds, such as MPOs:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.



- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

The NVCOG updated and adopted the *Environmental Justice Policy for the Naugatuck Planning Region* in October 2020. The policy embodies the Environmental Justice provisions as set forth by E.O 12898. A key aspect of the policy to create and implement a comprehensive public outreach strategy for all nineteen towns in the Naugatuck Valley planning region, above and beyond the minimum requirements of state and federal regulations. The adopted EJ provisions apply to all NVCOG activities regardless of funding source, to the activities of entities using NVCOG funds or facilities and to all actions of the CNVMPO, as well

as NVCOG activities conducted on behalf of the Greater Bridgeport and Valley MPO.

The NVCOG EJ Policy uses the concept of *Equity Emphasis Area (EEA)* to identify areas of particular concern to measure performance and identify neighborhoods where particular low-impact transportation improvements might have outsized benefit. The *EEAs* also enable NVCOG to identify potential partners in the public outreach process who may be able to better inform and connect these communities with the transportation planning process.

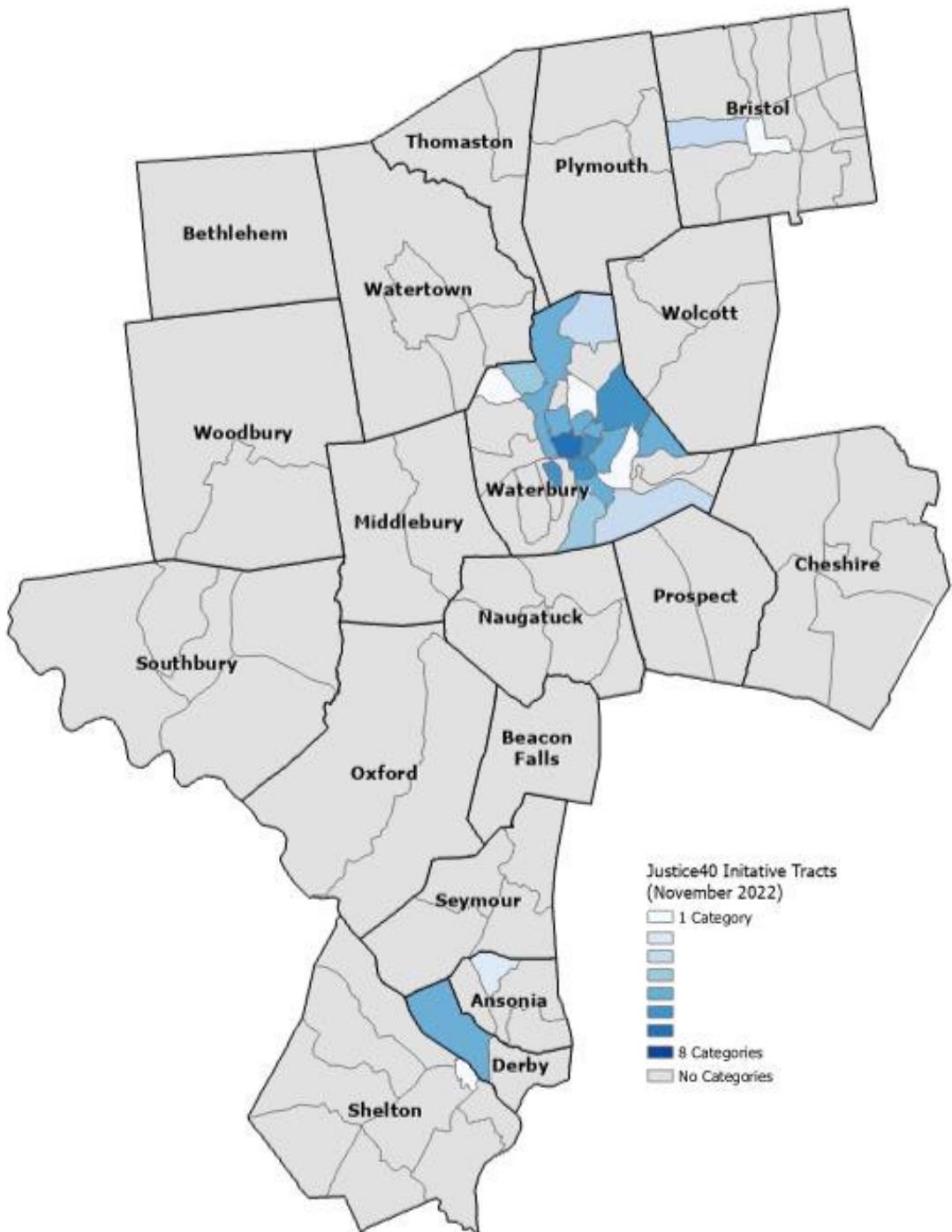
The NVCOG EJ Policy is considered a vital transportation document and has been translated into Spanish and is available on the NVCOG website.

President Biden’s January 2021 Executive Order 14008: *Tackling Climate Change at Home and Abroad* created the government wide *Justice40 Initiative*, establishing the goal of directing at least 40% of the benefits of federal investments to flow to disadvantaged communities. The initiative aims to bring resources to communities most impacted by climate change, pollution, and environmental hazards.

The *Justice40 Initiative* provides an opportunity to address transportation infrastructure and public service gaps to better serve communities. Through this initiative NVCOG will work to identify and prioritize projects that benefit our communities facing barriers to affordable, equitable, reliable, and safe transportation. When developing projects and making selections, consideration will be given to the positive and negative impacts projects will have on disadvantaged populations, as well as the inclusion of these communities in a meaningful public participation process.

The White House Council on Environmental Quality (CEQ) released the Climate and Economic Justice Screening Tool (CEJST). The tool defines and maps disadvantaged communities for the purpose of informing how Federal agencies guide the benefits of certain programs, including through the *Justice40 Initiative*. A *Historically Disadvantaged Community* is a group of individuals living in geographic proximity to one another or sharing common conditions or group experiences that experience cumulative burden across economic, social, and environmental factors. The tool uses a methodology and datasets that identify census tracts that are economically disadvantaged and overburdened by pollution and underinvestment in housing, transportation, water and wastewater infrastructure, and health care. A census tract qualifies as *Historically Disadvantaged Community* if it is above the threshold for one or more environmental or climate indicators and the tract is above the threshold for the socioeconomic indicators.⁴ NVCOG has begun to incorporate the identified disadvantaged tracts into our EJ analysis and mapping as well. The following map shows the (see Map 2).

⁴ <https://screeningtool.geoplatform.gov/en/about>

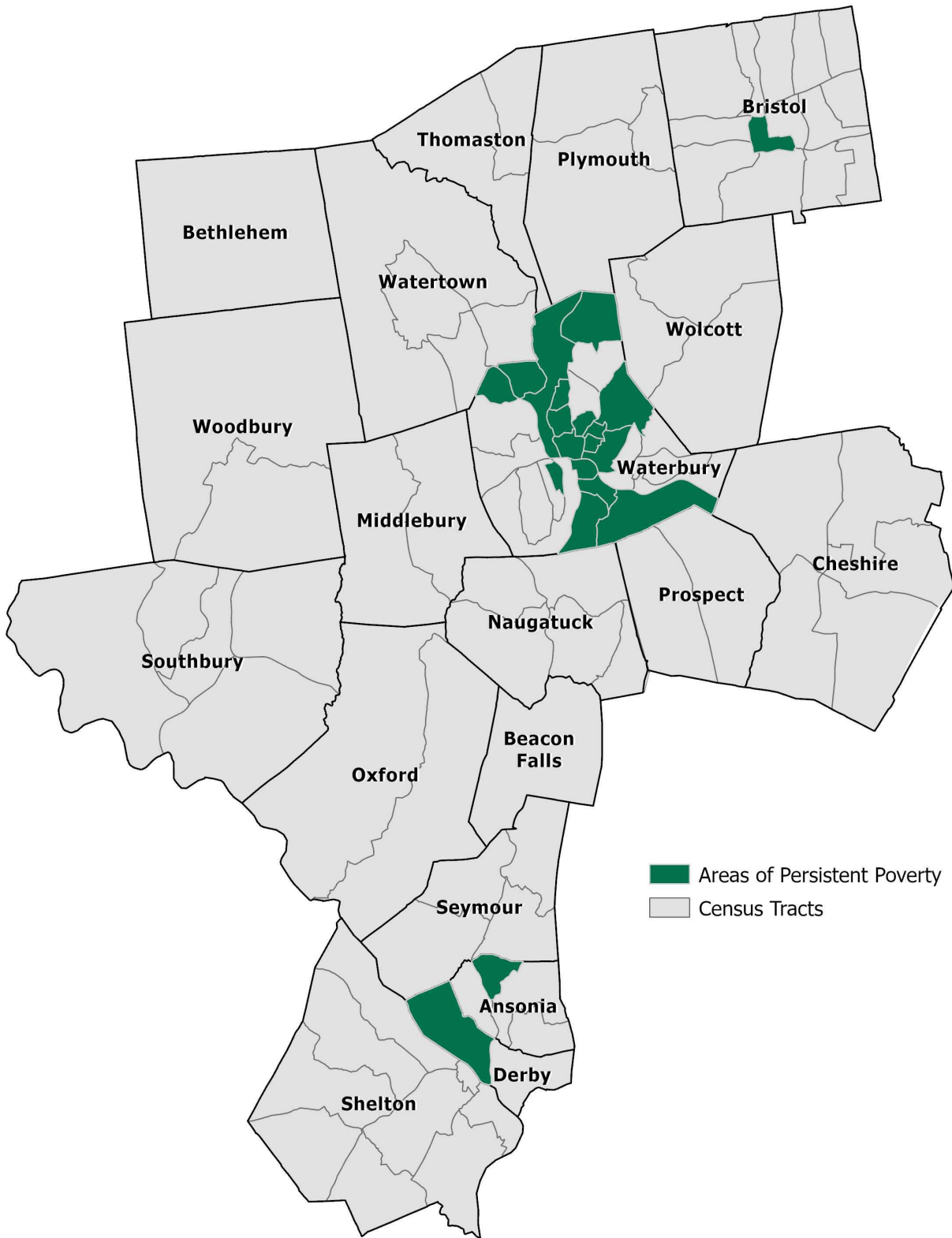


Map 2 Historically disadvantaged communities within the NVCOG region Source: Climate and Economic Justice Screening Tool

AREAS OF PERSISTENT POVERTY

The US Department of Transportation created a mapping tool to identify *Areas of Persistent Poverty*. These areas are defined as those in which more than 20% of the residents live at or below the poverty line. Persons and/or households that earn less than the income needed to meet basic costs of living are disadvantaged communities that are marginalized, underserved, and overburdened. Mobility is critical to the health, welfare, and well-being of a community. Today, car ownership and having a vehicle available is almost a requirement for residents to travel around the region. Those earning less than the poverty line typically lack access to a private vehicle and rely on public forms of transportation. The lack of access poses a significant transportation barrier that causes disparities in access to employment opportunities, services, health care, food, and other basic services. Those without mobility choices are at a great disadvantage economically, socially, and in terms of health and welfare.

The NVCOG uses the USDOT mapping to target transportation improvements in areas most in need of alternative transportation options and enhanced mobility choices. The Areas of Persistent Poverty in the region are depicted in the following map, Map 3.



Map 3 Areas of persistent poverty Source: USDOT Areas of Persistent Poverty Mapping Tool

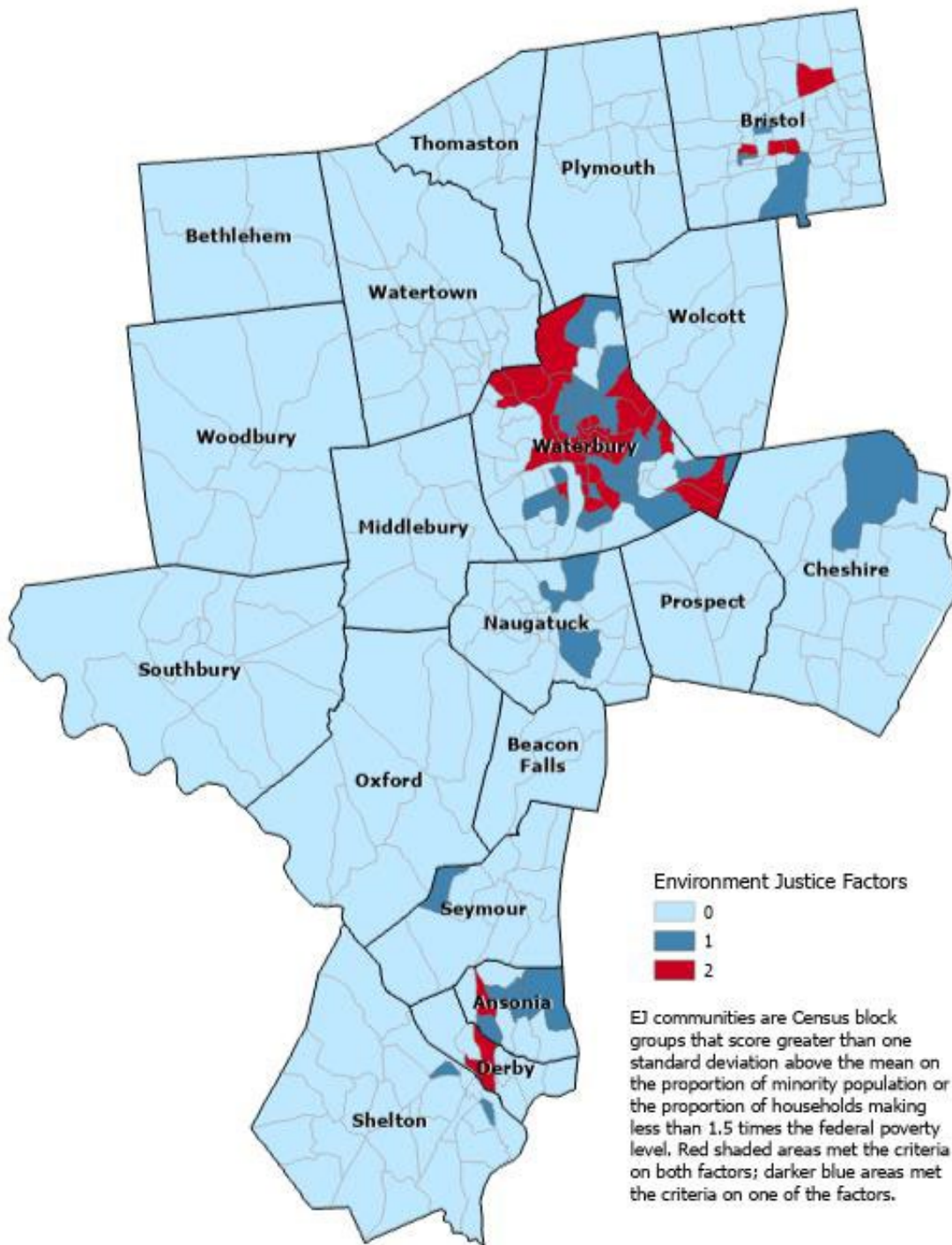
ENVIRONMENTAL JUSTICE ANALYSIS

Metropolitan Planning Organizations (MPOs) are responsible for developing and maintaining a short-term Transportation Improvement Program (TIP) for the metropolitan planning area and a long-range program of future improvements, referred to as the Metropolitan Transportation Plan (MTP). The TIP lists all highway and transit improvement projects in the metropolitan planning area programmed to receive federal assistance from the Federal Highway Administration and the Federal Transit Administration over a four-year time horizon. The program of projects in the metropolitan TIP represents the first five years of the MTP and are, by regulation, financially constrained. The MTP is the MPOs vision for future transportation improvements beyond the horizon of the TIP. As such, the actions are more illustrative and less financially constrained. However, the program is intended to identify improvements to address deficiencies and issues, provide mobility options and choice, and ensure access to jobs, healthcare, education, and all other services to all residents of the region.

NVCOG seeks and considers the needs and interests of individuals, groups, and communities traditionally underserved by transportation system policies and investments. The NVCOG has established an Environmental Justice Analysis process that evaluates the programmed and planned transportation improvement projects for the potential impact on areas with racial minorities at a proportion higher than the average for the region and populations with incomes below the federal poverty level. The first step is to define small geographic areas, referred to as *Equity Emphasis Areas*, on which the analysis is conducted. Unlike the *Justice40* screening tool and the USDOT mapping tool used to identify areas of persistent poverty, both of which are based on census tract level, the *Equity Emphasis Areas* are based on census block group level. Data collected through the most recent American Community Survey and published by the U.S. Census Bureau are used for the analysis. The smaller geographic area was used to better define areas of concern and properly identify the areas that are most vulnerable. The metrics used to determine *Equity Emphasis Areas* are where the proportion of the racial or ethnic minority population and or the proportion of low-income individuals/or the percentage of households below the poverty level is one standard deviation from the mean of the region as a whole. Figure 3 shows the *Equity Emphasis Areas* in the Naugatuck Valley planning area.

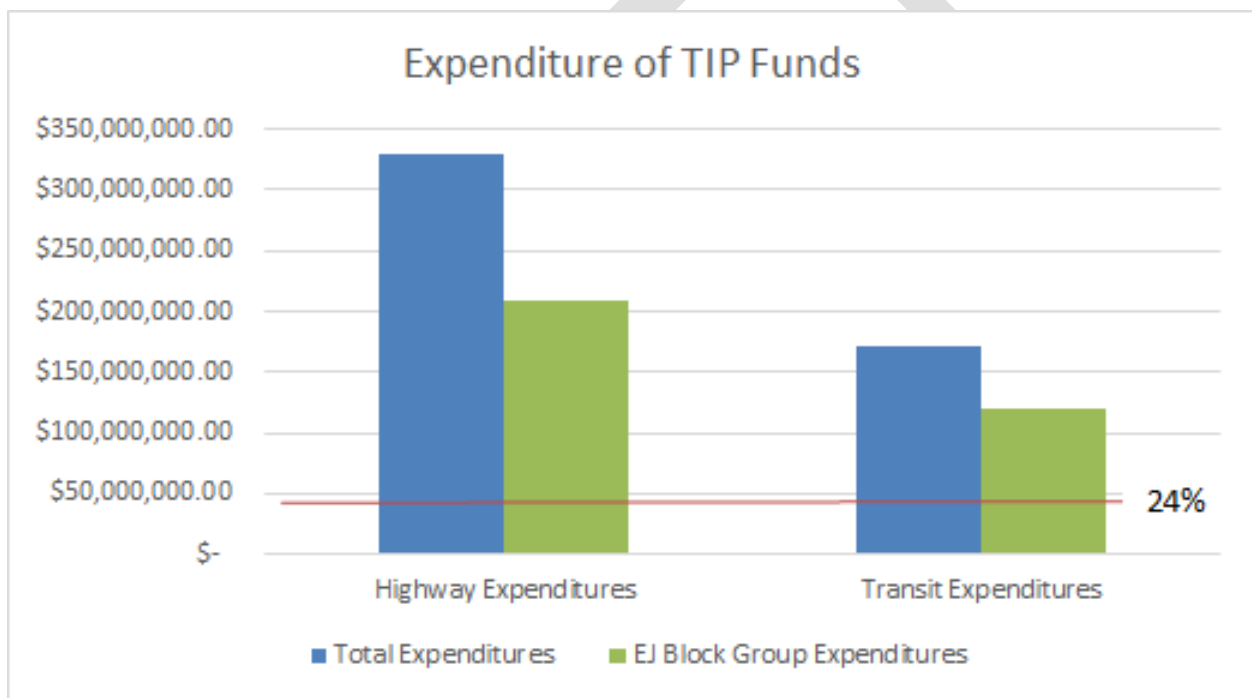
The second step in the analysis examines transportation performance in these areas and compares it with performance in all other areas of the planning area. This process helps determine accessibility and mobility in these areas and assess whether persons living or working the areas are being underserved by the transportation system. As projects identified in the metropolitan TIP or MTP are planned and programmed changes in accessibility and mobility are evaluated, and determinations are made regarding whether the changes constitute a benefit or burden to the area. Comparing benefits and burdens within *EEAs* relative to the rest of the Region determines if a disproportionately high and adverse impact on low-income and minority populations exists.

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Map 4 Equity Emphasis Areas Source: US Census American Community Survey 2016-2020

The *Emphasis Equity Areas* were used to analyze the FFY 2021-2024 metropolitan TIP for the NVCOG planning area for disproportionately high and adverse impacts on low-income and minority populations by comparing the location of projects in these areas compared to the rest of the Region. As of June 2022, the metropolitan TIP has a total of \$499,203,451 programmed for the FFY 2021 through 2024 timeframe. The projects were mapped and overlaid on the Environmental Justice map for the region (Map 4). The total population within *EEAs* of the region is 110,521, representing 24.5% of the total population of the NVCOG municipalities 450,376. The goal is to ensure that the allocation of transportation investments is commensurate with the proportion of population living in an *EEA*.



Equity Emphasis Areas in the Naugatuck Valley region are frequently concentrated in and around older, industrial town centers. Because of the age of these communities, significantly more funding is required to maintain the highway infrastructure in a state of good repair than in the areas of more recent development. Importantly, most of the highway projects currently underway within the region are designed more for preservation of the existing system with minor improvements than for significant expansion of capacity.

A total of \$328,706,089 is programmed in the current TIP for highway improvements. Of this total amount, \$229,409,059 is programmed within areas identified as an *Equity Emphasis Area*. While this suggests a substantially higher percentage of highway-related investments are target in an

area of concern, the majority of this spending is influenced by two projects: the rehabilitation and future reconstruction of the I-84 and Route 8 Interchange in Waterbury and the approximate \$25 million reconstruction of Route 34 in Derby. Furthermore, the I-84/Route 8 interchange project is intended to improve traffic flow through the area and may not provide a direct benefit to those living in vicinity of the interchange. However, residents will experience improved air quality from the reduced congestion on the highways and less frequent use of local streets to bypass problems through the interchange. The Route 34 project will directly improve travel and conditions in an *EEA*. Although Route 34 will be expanded to include an extra travel lane in either direction, significant improvements are being made to calm traffic through the downtown area, support pedestrian and cyclist activity and safety, and install various streetscape elements to enhance aesthetic qualities along the street and make Route 34 more of a complete street.

Investment in public transit services is critical to ensuring access and mode choice to vulnerable populations that do not have a private vehicle available for use. Without a viable and effective public transit system, many residents in an Equity Emphasis Area would not have access to jobs and basic services. Because of the number varying transit operators in the region, investments in transit services may not be perfectly aligned within the region alone. The TIP has about \$170,497,361 programmed for bus and rail capital and operating projects within the region. Of this, nearly \$119,348,153 is targeted at services within *EEA* communities, yielding a similar result of 70.0% being programmed in areas of concern. This allocation in *EEAs* is also much higher than the population in these areas. However, the result is not unexpected as the bus systems operating in the region serve the core downtown areas of the region, including Bristol and Waterbury. These bus services are also designed to connect to regionally significant services, including hospitals and institutions of higher education, which are also clustered around downtown Bristol and Waterbury as well as points in the lower Valley area.

Beyond the timeframe of the TIP, the goal of the MTP is to ensure the delivery of transportation investments are equitably distributed across the region and that residents of *Equity Emphasis Areas* receive a proportional level of investment in improvements and are not over- or disproportionately burdened by a transportation improvement. The assessment of equity in transportation investments is not solely based on location but more on who receives the benefits from the investment. A transportation improvement project may be located in an *EEA*, but the project may cause residential displacements or major disruptions during construction disparate to the likely benefits.

Public participation is integral to good transportation policies, programs, and projects. To prevent disproportionately high and adverse effects on minority or low-income populations early in the planning process, NVCOG makes efforts to encourage high community and stakeholder engagement in the design phase of projects. This is especially important for projects that are located in areas with a disproportionately high minority and/or low-income population.

The following are representative of public involvement NVCOG uses:

- Provide ample opportunity through effective public notices and outreach activities to engage this segment of the population and their respective representation in the early planning phases of a project.
- Identify concentrations of protected classes of people by mapping demographic data.
- Utilize geographical information systems (GIS) to map transportation investments in relation to low income and minority areas with an intent to identify, highlight and analyze projects within these areas; respective to the Metropolitan Transportation Plan (MTP or Transportation Improvement Program (TIP).
- Incorporate Environmental Justice considerations into MTP and TIP criteria to ensure these issues are addressed in the early phases of the planning process.

Furthermore, [NVCOG's Public Outreach Policy](#), which was updated in February 2020, provides a framework for engaging the public in the regional transportation planning and programming process. It is the official policy for how the NVOG will disseminate information to the public and stakeholders, ensuring adequate time for them to provide input.

2.10 PUBLIC OUTREACH

The MTP is the product of collaboration between NVCOG, CTDOT, its member communities, and the public and has been informed by consultation with stakeholders throughout the region. To develop the MTP, the NVCOG gathered input from the diverse groups that make up the region using a variety of methods and means.

- **Mobility Project Reporter:** This is an online application developed on a GIS platform that allows the public to submit problems or observations related to local mobility and transportation for consideration in future planning projects. Users can submit new suggestions or review and vote on existing suggestions submitted by other users. This tool is continuously available on the NVCOG website and will continue to be maintained and monitored past the publishing of this report.
- **Online Survey:** In conjunction with the CT MetroCOG, NVCOG staff developed and collected feedback via an online survey within the ESRI Survey123 platform. This survey, focused on mobility and safety within the region, was published in both English and Spanish for residents and visitors to both the CNVMPO and GBVMPO regions. A total of 687 responses were received during the collection period, and a summary of these responses can be found in Appendix B. To publicize this survey, post cards in English and Spanish were distributed in libraries, town halls, and public facilities throughout the region, and NVCOG staff actively promoted it during appearances at local festivals and civic meetings. Members of the NVCOG Board, the Transportation Technical Advisory Committee (TTAC), Regional Planning Commission (RPC), and community groups were also asked to share survey details.
- **MTP Update Webpage:** A separate webpage was created on the NVCOG website to inform visitors to the site that the long-range transportation plan for the region was being updated. The webpage provides links to the transportation survey, the Mobility Project Reporter, a public draft of the MTP for review and comment, and a summary of transportation within the region and how it will be impacted by this document.
- **Social Media:** NVCOG Communications Staff actively share information related to the MTP and transportation within the region on Facebook and LinkedIn. Feedback received through these platforms is included as comments received in writing.
- **Public Events:** To further share the online survey and gather feedback in real time, NVCOG staff attended Waterbury's Harry Potter Day event, Bristol's Mum Festival, and Shelton's Shelton Day during the fall of 2022. During these events, in addition to

distributing survey post cards, staff engaged with residents and noted their transportation priorities and major concerns.

- NVCOG Board, CNVMPO, TTAC, and RPC Meetings: Progress on updating the MTP was presented at monthly meetings of the NVCOG Board and the CNVMPO, as well as at the bi-monthly meetings of the RPC and TTAC. The chief elected officials of the NVCOG member municipalities comprise the Board and CNVMPO. The RPC is made up of planners and/or planning officials of NVCOG member cities and towns and the TTAC members are the local municipal engineers and/or public works officials. All meetings are open to the public. Members of these boards and committees collaborated with NVCOG staff to finalize the proposed program of projects. Both the TTAC and the RPC endorsed a recommendation to the CNVMPO to adopt the MTP.
- Public Information Material: To ensure that information about the MTP could be easily accessed by residents and interested stakeholders, in addition to a public posting of the draft document, a presentation was consistently posted and made available during the public review period for viewing. This included graphic representations of the most important aspects of NVision50, a self-paced guided tour of the plan's major components, and clear information about how to share feedback.

In addition to the above listed methods, beginning January 17, 2023 and ending February 7, 2023, the NVCOG posted sections of this report for public review and comment outside of the standard 30 day comment period. Ending of February 7th with the posting of the complete document, a 38-day public comment period officially opened. During that period, the NVCOG website included access to the draft MTP and a summary of the draft MTP, a short visual executive summary, and updates about the MTP planning process. Public notice was posted in the Republican-American, the major regional newspaper, on February 8, 2023, and translated into Spanish and posted in La Voz, a major regional Spanish language newspaper, on February 13, 2023. A public information meeting was held February 16, 2023, during the comment period to present the transportation vision for the region, review recommended actions to realize the vision, and solicit comments, and an additional virtual listening session was held on March 9, 2023, to solicit feedback from the community. During the entirety of the public comment period, instructions for providing comment via email, telephone, written mail, and online were maintained on the NVCOG website. The CNVMPO adopted the MTP at its March 17, 2023, meeting, along with formally adopting the Air Quality Conformity Determination attached to this document as Appendix D. The public was afforded an opportunity to address the MPO before a vote on the MTP was taken. A review of all public comments submitted to the NVCOG during the comment period and staff responses is available in Appendix C.