

2021-2023 Regional/Local CMAQ Initiatives Program

Information Session
March 12, 2020



Planning Department

North Jersey Transportation Planning Authority

NJTPA Region

Bergen

Essex

Hudson

Hunterdon

Jersey City

Middlesex

Monmouth

Morris

Newark

Ocean

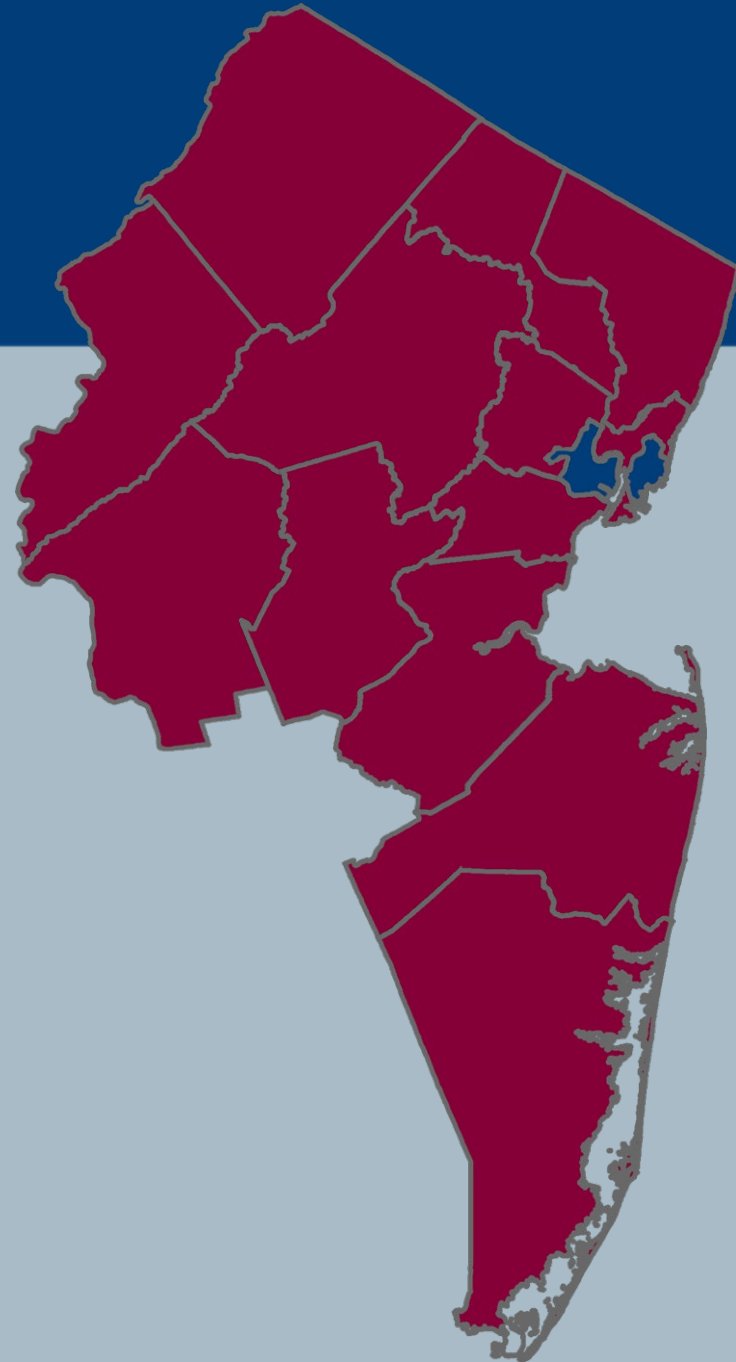
Passaic

Somerset

Sussex

Union

Warren



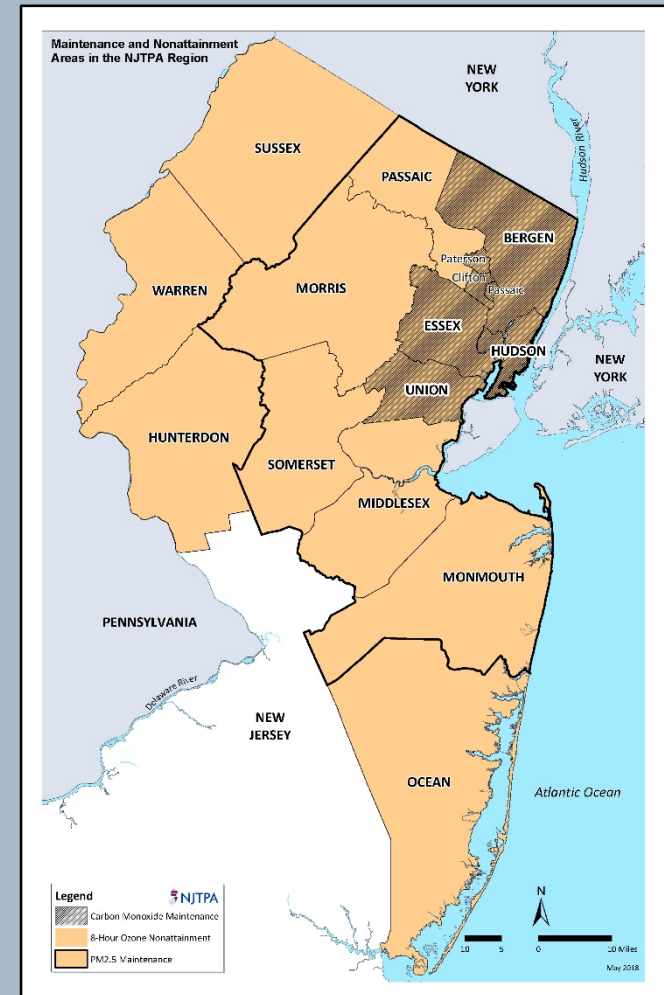
CMAQ Initiatives

- The NJTPA receives Congestion Mitigation and Air Quality (CMAQ) funds for projects that help improve air quality in the region
- These funds are allocated on a competitive basis to projects that best meet the federal CMAQ goals
- \$7.5 million per year over three years



Maintenance and Nonattainment Areas in the NJTPA Region

Proposed CMAQ projects must reduce emissions and/or traffic congestion in the NJTPA air quality maintenance and nonattainment areas.



Two Program Elements

1. Local Mobility Initiatives (Shuttle Services)
 - Operational support
 - Vehicle replacement
2. Transportation Clean Air Measures (TCAMs)
 - All non-shuttle proposals

Who Can Apply

- NJTPA subregions
- Municipalities
- Transportation Management Associations (TMAs)
- State agencies and authorities (TCAMS only)
- Non-profit agencies
- Private firms (TCAMs only)



Partnerships are strongly encouraged

Local Mobility Initiatives



Shuttle Program Purpose

- Alternative to single-occupant vehicle travel
- First mile – from home to transit
- Last mile – from transit to work/school

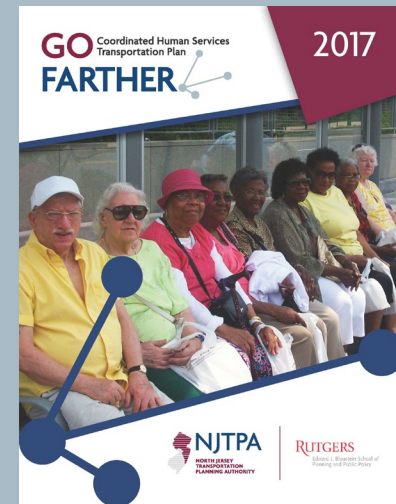
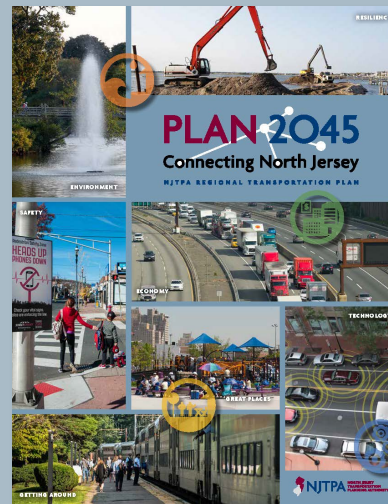


Required Elements For A Shuttle Application

1. Complete narrative
2. Map
3. Emissions reduction spreadsheet
4. Budget spreadsheet (operations)
5. Vehicle inventory (vehicle replacement)
6. Letters of subregional support (if necessary)

Demonstration of Need

- Describe how the service will meet the identified need
- Reference a plan or study



Potential For Success

- Run Efficiently
 - High potential ridership
 - Effective schedule
- Serve a Variety of Riders
 - Previous success stories all serve either major public transit or several employers linked to transit

Innovation

Examples

- Use of low carbon fuels
- Anti-idling measures
- Driver training
- Driver performance monitoring
- Measures to enhance customer satisfaction

Selection Criteria

1. Demonstration of Need

- Proposal demonstrates a strong link to a well-defined need



Selection Criteria

2. Potential/Demonstrated Success

- Addresses a transportation demand
- Reduces single-occupancy vehicle trips
- Demonstrates regional impacts
- Provides a usable connection to transit
- Describes marketing and communications to attract and retain ridership
- Includes plans for financial support

Selection Criteria

3. Operations

- Accurate and clear budget
- Integration with existing public transit, without duplication
- Ability to implement in a timely manner
- Quantifiable benefits for congestion mitigation and air quality
- Staffing capabilities
- Successful record of shared ride services

Selection Criteria

4. Innovation

- Utilization of low-carbon fuel sources
- Implementation of enhanced customer satisfaction measures
- Increased service attractiveness
- Implementation of cost reduction tactics

Recent Operational Support Awards

FY 2018-2020

- Sandy Hook Shuttle, EZ Ride (pending start 2020)
- Hazlet-Holmdel Shuttle, EZ Ride (pending start 2020)

FY 2014-2017

- Hackensack Bus and Rail Connection, Bergen County
- Kearny Circulator, EZ Ride (ended April 2019)
- Long Beach Island Shuttle Service, Long Beach Twp.
(graduated to local funding)



Vehicle Replacement Program

- Must include vehicle replacement data
- NJ TRANSIT purchases vehicles to ensure compliance
- Vehicles are lift or ramp equipped, with securement locations for people using mobility devices
- Vehicles are titled to the subrecipient, NJ TRANSIT is first lien holder to ensure federal compliance
- Vehicles are leased to subrecipient (no fee) until FTA useful life is reached



General Vehicle Requirements

- Vehicles are for general public transportation
- Must undergo annual inspections by NJ TRANSIT
- Required to submit monthly ridership and maintenance reports to NJ TRANSIT
- Maintain per manufacturer-recommended guidelines
- New FTA vehicles cannot be used as spares and must be used as per application and award
- Minimum combined single limit liability insurance policy of \$5,000,000 required
- Certificates of insurance must be sent annually



FTA Vehicle Requirements

Vehicles are considered FTA Section 5307 funded.
All subrecipients must comply with:

- FTA drug and alcohol requirement
- Title VI of the Civil Rights Act, including preparing a Title VI plan
- Must sign off Annual FTA certifications and assurances
- Comply with the ADA including having a “reasonable modification” policy

Vehicle Types

1. Minibus (small cutaway)
2. Minibus (standard cutaway)
3. Extended Minibus
 - CNG engine option
 - low floor option
4. Transit style (medium duty cutaway)



Minibus (small cutaway)

- Gas engine
- Transports 8 ambulatory passengers and one or two forward facing mobility device (depends on location of lift)
- Rear or front lift
- Useful life 5 years or 150,000 miles
- CDL may be required

Minibus (standard cutaway)

- Gas engine
- Transports 11-12 ambulatory passengers and one or two forward facing mobility device (depends on lift location)
- If no mobility devices, transports 14 ambulatory passengers
- Farebox option (required to have destination sign)
- Bike rack option (front of vehicle)
- Shopping racks option (shopping racks located behind driver; passenger seat capacity is lost with this option)
- Rear or front lift

Useful life 5 years or 150,000 miles

CDL may be required



Extended Minibus

- Gas engine or CNG
- Option to have vehicle as standard floor with lift or “low floor” with manual ramp
- Transports 16 ambulatory passengers and two forward facing mobility devices
- 18 ambulatory, one forward facing mobility device
- Optional: farebox, bike rack, shopping racks
- Rear or front lift or front ramp (low floor vehicle only can have front ramp)
- Useful life 5 years or 150,000 miles
- CDL is required



Transit Style (Medium duty cutaway)

- 30 feet or more in length
- Diesel engine
- Transports 22-24 ambulatory and two forward facing mobility devices
- Farebox/destination sign
- Optional: bike rack, shopping racks
- Rear lift
- Useful life 7 years or 200,000 miles
- CDL is required



Transportation Clean Air Measures



Types of Eligible TCAMs

CMAQ Project Type (ranked by cost effectiveness)

1. Diesel Retrofit Technologies
2. Truck Stop Electrification
3. Heavy Vehicle Engine Replacements
4. Park and Ride
5. Incident Management
6. Transit Service Expansion
7. Extreme-Temperature Cold-Start Technologies
8. Bicycle and Pedestrian Paths
9. Transit Amenity Improvements
10. Employee Transit Benefits
11. Carsharing
12. Intermodal Freight Facilities and Programs
13. Intersection Improvements
14. Natural Gas Re-Fueling Infrastructure
15. Rideshare Programs
16. Roundabouts
17. Bikesharing
18. Electric Vehicle Charging Stations (this should change if electric vehicle usage increases in future years)



Nationwide Scan of CMAQ Projects from CMAQ Public Access System

Popular CMAQ Project Types

- Congestion Reduction and Traffic Flow Improvements
- Bicycle and Pedestrian Facilities Programs
- Transit Improvements
- Travel Demand Management
- Ride Sharing
- Alternative Fuels and Vehicles



Source: https://fhwaapps.fhwa.dot.gov/cmaq_pub/

Completed TCAM Projects

Project	Sponsor	CMAQ\$/Match\$	Benefits
NJ TRANSIT Locomotive Idle Reduction Program	NJ TRANSIT/NJDEP	\$537,500/ \$200,000(NJDEP) \$100,000(NJ TRANSIT)	<ul style="list-style-type: none"> • Reduced VOCs, NOX, PM2.5 and GHGs • Reduced fuel consumption and extended engine life • Reduced noise levels • Responded to community concerns • Responded to MAP-21 w hich identifies diesel reduction measures as a priority for CMAQ funds. • Responded to the NJTPA's environmental and livability goals
Private Diesel Freight Locomotive Retrofit/Replacement Program	PANYNJ/CSX Railroad	\$1,800,000/ \$600,000(PANYNJ) \$600,000(CSX)	<ul style="list-style-type: none"> • Reduced VOCs & NOx, PM2.5 and GHGs • Each replaced Tier 0 engine w ith a diesel particulate filter removes 2 tons/yr of PM, and 36 tons/yr of NOx (based on 5000 hrs/yr usage w ith a load factor of 10%). This is an enormous amount. • Reduced fuel consumption (25%) and extended engine life • Reduced noise levels • Responded to community concerns • Responded to MAP-21 w hich identifies diesel reduction measures as a priority for CMAQ funds.
New Jersey Clean Construction Program Phase 1	NJDEP/NJDOT	\$800,000/ \$1,850,000(NJDEP)	<ul style="list-style-type: none"> • Significant and quantifiable reductions in PM 2.5 and NOx • Responded to the Governor's Executive Order #60 • Addressed environmental justice issues w ith emphasis on densely populated urban areas • Laid a strong foundation for future phases, including all state contracts and has great potential for adoption in the private sector • Responded to MAP-21 w hich identifies diesel reduction measures as a priority for CMAQ funds.

Completed TCAM Projects

Project	Sponsor	CMAQ\$/Match\$	Benefits
New Jersey Clean Construction Program Phase 2	NJDEP/NJDOT	\$600,000/ \$300,000(NJDEP)	<ul style="list-style-type: none"> • Significant and quantifiable reductions in PM 2.5 and NOx • Responds to the Governor's Executive Order #60 • Addresses environmental justice issues with emphasis on densely populated urban areas • Lays a strong foundation for future phases, including all state construction contracts and has great potential for adoption in the private sector • Responds to MAP-21 which identifies diesel reduction measures as a priority for CMAQ funds.
North Jersey Regional Truck Replacement Program	PANYNJ	\$2,000,000/ \$2,000,000	<ul style="list-style-type: none"> • Reduces NOx, PM 2.5, HC and CO • Responds to community concerns in surrounding environmental justice areas of Essex, Hudson and Union Counties, specifically chronic and acute health issues • Responds to MAP-21 which identifies diesel reduction measures as a priority for CMAQ funds.
Traffic Signal Optimization	Ocean County	\$273,000/ \$68,250	<ul style="list-style-type: none"> • Reduces emissions of criteria pollutants and corresponding fuel usage • Reduces travel delay by approximately 15% • Improves corridor safety and incident management • Responds to MAP-21 • Responds to key principles in the NJTPA's Regional Capital Investment Strategy (RCIS); Safety; Fix it First; Manage Incidents; and Apply Transportation Technology
Morris Canal Greenway	Passaic County	\$468,000/ \$117,000	<ul style="list-style-type: none"> • Reduces emissions of criteria pollutants by increasing non-motorized options • Improves safety by increasing visibility of cyclists and pedestrians • Improves tourism to the area by linking to regional bike and trail systems • Improves economy of the area by linking travelers to stores and services

Ineligible TCAM Projects

- Projects that require further study prior to implementation
- Projects that don't satisfy the non-federal matching funds requirements
- System capacity projects
- Maintenance projects
- Studies

TCAM Selection Criteria

- Achieves primary CMAQ goals of reducing air pollutants and/or traffic congestion
- Has an immediate impact on pollution reduction and congestion mitigation
- Reduces fine particulate matter (PM_{2.5}) pollution
- Innovative approach
- Complements other projects/activities
- Achieves secondary goals, e.g, fuel costs, reducing VMT, noise, community issues
- Advances a recommendation(s) from a specific plan, study or legislation

TCAM Selection Criteria

- Located in an NJTPA maintenance or non-attainment area
- Potential for cross-jurisdictional partnership
- Project sponsor/manager has demonstrated successful implementation of programs/projects as contracted with the NJTPA
- Considers the needs of and specifically benefits environmental justice/low-income/minority communities

Reasonable cost/cost-effectiveness



TCAM Selection Criteria

- Local funding match meets or exceeds requirements and source is identified
- Ability to realistically implement in the specified timeframe

TCAM Success Stories

Retrofitted Freight Diesel Locomotive Engine

Benefits

- Reduced VOCs, NOX, PM 2.5, GHGs
- Reduced noise levels
- Responded to community concerns
- Reduced fuel consumption & extend engine life

Connects to existing plans

- PANYNJ Clean Air Strategy
- Reduced emissions in advance of regulations



CSX GenSet

TCAM Success Stories

Retrofitted Freight Diesel Locomotive Engine

Public/Private Partnership

- PANYNJ
- CSX Rail Line
- NJTPA

Leveraged Funds

- PANYNJ: \$600,000
- CSX Rail Line: \$600,000
- NJTPA: \$900,000
- Replaced one engine



CSX GenSet

Success Stories

County Routes 540 & 631 Traffic Signal Optimization – Ocean County

Benefits

- Reduced travel time in corridor by 10-15%
 - Reduced idling and stop/start engine cycles
 - Lowered emissions
 - Reduced fuel consumption
- Reduced traffic accidents, which exceeded state averages

Success Stories

County Routes 540 & 631 Traffic Signal Optimization – Ocean County

Connected to Existing Plans

- Supported RCIS, Plan 2040, Fix it First, MAP 21 / FAST Act Performance Management Goals

Funding

- CMAQ \$273,000
- Local match \$68,250



Emissions Analysis TCAM Program

- The TCAM full proposal requires quantitative emissions reductions analysis
- Applicants can run emissions reductions analysis on their own
 - Subject to acceptance by NJTPA
 - Methodology must be described
- NJTPA can provide guidance to applicants



Emissions Analysis TCAM Program

- For those that require assistance to run emissions analysis
 - NJTPA will provide
 - Help with tools developed for NJDOT and FHWA
 - Decisions on what tool fits the project type applied for
 - Running the analysis at NJTPA
- If needed, NJTPA will assist with emissions analysis on projects as much as possible
 - Requirements include:
 - Project specific inputs
 - NJTPA will spec out what is required for each project type



TCAM Program Emissions Analysis Tools

FHWA CMAQ Emissions Calculator Toolkit

- Managed Lane Facilities and Conversions
- Dust Mitigation
- Bicycle and Pedestrian Improvements
- Diesel Idle Reduction Technologies
- Transit Bus Service and Fleet Expansion
- Transit Bus Retrofits and Replacement
- Carpooling and Vanpooling
- Alternative Fuels and Vehicles
- Advanced Diesel Truck/Engine Technologies
- Congestion Reduction and Traffic Flow Improvements

https://www.fhwa.dot.gov/environment/air_quality/cmaq/toolkit/



TCAM Program Emissions Analysis Tools

NJAQONE

- Idle reduction technology
- Traffic signal optimization and ITS
- Transit improvements
- Bicycle and pedestrian facilities and programs
- Travel demand
- Carpooling, vanpooling and carsharing
- Alternative fuels and vehicles



Resources

- NJTPA's Regional Transportation Plan:
<https://www.njtpa.org/Planning/Plans-Guidance/Plan-2045.aspx>
- Together North Jersey: <http://TogetherNorthJersey.com>
- FHWA CMAQ Guidance:
 - https://www.fhwa.dot.gov/environment/air_quality/cmaq/policy_and_guidance/2013_guidance/index.cfm
 - <https://www.fhwa.dot.gov/fastact/factsheets/cmaqfs.cfm>
 - FHWA CMAQ Project Templates:
www.fhwa.dot.gov/environment/air_quality/cmaq/research/safetea-lu_phase_1/appendix_c/

Application Timeline

March 16	Solicitation inquiry closing date
March 25	Thumbnail sketches due
April 15	Successful thumbnail applicants invited to complete full proposals
May 13	Full proposals due

Contacts

Please submit questions by email by March 16, 2020

Responses will be posted on NJTPA website:

<http://njtpa.org/Projects-Programs/Local-Programs/CMAQ-Local-Mobility.aspx>

Contacts:

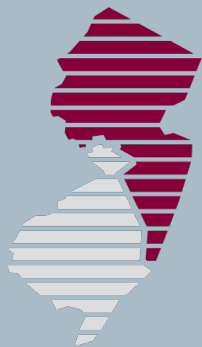
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Questions?

Defining the Vision. Shaping the Future.



NJTPA

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