

# South Western Region Congestion Management Process

Progress Report: June 2006 – June 2007

July 2007

## I. Background

The metropolitan planning region covered by the South Western Region Metropolitan Planning Organization (SWRMPO) was designated as a Transportation Management Area (TMA) as a result of population growth measured by the 2000 Census. Consequently, the SWRMPO is required to develop and implement a congestion management process (CMP) as part of its Long Range Transportation Plan.

The SWRMPO, through the South Western Regional Planning Agency (SWRPA), anticipated the future need to comply with federal CMP (formally CMS<sup>1</sup>) requirements. In 1999, SWRPA sought funding for a corridor-level congestion mitigation study through the Connecticut Department of Transportation (ConnDOT). In early 2001, ConnDOT entered into an agreement with SWRPA that provided federal CMAQ and state funds to conduct such a study. The study, called the Congestion Mitigation Systems “Vision 2020” Plan, commenced in May 2001 and was completed in February 2003. Study products include technical memoranda summarizing existing conditions and predicted future travel demand, preliminary analysis of possible “visions” for mitigating traffic congestion over time, and detailed market research reports that identify the types of options supported by commuters and shippers. A final report outlining a twenty-year plan for implementation of transportation improvements and the likely benefits of implementing such a plan also was prepared.

The *Vision 2020* planning process provided the foundation for the South Western Region Congestion Management System Technical Memorandum, which was released in January 2004. The purpose of this Technical Memorandum was to outline the steps taken by the SWRMPO to prepare for its designation as a Transportation Management Area (TMA) and to establish a plan of future actions to satisfy the associated Congestion Management System requirements.

This report is the fourth update to that Technical Memorandum.

## II. Applicability and Purpose

**Area of Application:** This report focuses on the eight (8) municipalities in the South Western Region. The Region’s connections with the transportation networks and economies of adjacent regions also are considered to the extent they impact travel demand and trip patterns within and through the Region.

**Purpose:** This report was developed to satisfy requirements of ConnDOT and the Federal Highway Administration and follows the recommended format.

## III. Report: Status and Achievements

Using the South Western Region Congestion Management System Technical Memorandum (hereinafter “Technical Memorandum”) as a guide, SWRPA commenced implementation of its CMP in early 2004 as required by federal transportation planning program regulations. This section provides an update on activities undertaken and/or planned by SWRPA.

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<sup>1</sup> SWRPA has retitled its Congestion Management System (CMS) to comply with the naming conventions passed in August 2005 as part of Pub. L. 109-59, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: a Legacy for Users (SAFETEA-LU). Its CMS is now referred to as its Congestion Management Process or CMP.

Determine CMS network in the Region. The CMS network includes the following roadways and transportation systems:

- Limited access highways, such as I-95 and CT-15 (Merritt Parkway);
- Arterials, including US 1 and US 7;
- Rail lines and services (passenger and freight);
- Bus transit including local, regional and commuter connections services; and
- Navigable waterways including Long Island Sound, Norwalk and Stamford Harbors, and the Norwalk, Saugatuck and Mianus Rivers.

Define congestion. The FHWA defines congestion as:

The level at which transportation system performance is no longer acceptable due to traffic interference. The level of acceptable system performance may vary by type of transportation facility, geographic location and/or time of day. Growth in traffic has out paced the ability of State and local governments to be able to implement capacity solutions to eliminate congestion.

Using this definition as a guide, SWRPA has determined that:

- Many of the Region’s transportation facilities experience congestion during peak and off-peak hours;
- Peak traffic periods continue to spread as housing and employment centers move farther apart;
- Congestion needs to be considered from both a technical and a policy perspective;
- The Region experiences significant recurring and non-recurring congestion on a daily basis; and
- Performance measures should be established in order to promote investment in transportation strategies that are likely to improve system performance.

SWRPA will continue to refine this definition through development of performance measures that identify the thresholds at which system performance becomes unacceptable. Measures and/or thresholds used to further define congestion may include:

- Volume Demand-to-Capacity (V/C) ratio during peak periods of 0.9 or greater<sup>2</sup>;
- Travel time and speed data collected using a probe vehicle equipped with a GPS device;
- Average speeds that are at least 15% below posted speed limits;
- Time of day parameters, such as variations in V/C, vehicle miles traveled (VMT), and average speed during peak and off-peak hours;
- VMT in excess of a facility’s capabilities;
- Transit load factors during peak and off-peak periods; and
- Patterns of delay: recurring v. incident-specific.

SWRPA also will use such data to identify choke points resulting in time-of-day or spot congestion and examine incident patterns to identify locations that may be in need of operational improvements.

Identify congested links. SWRPA will use data collected by ConnDOT to assess levels of congestion. SWRPA also will ask the New York Metropolitan Transportation Council (NYMTC) to share its Best

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<sup>2</sup> These V/C ratios were recommended in SWRPA’s Congestion Mitigation Systems “Vision 2020” Plan. The CMS report prepared by the New York Metropolitan Transportation Council identifies roadways with V/C of 0.8-1.0 as “congested” and roadways with a V/C of greater than 1.0 as “severely congested.”

Practices Model data to evaluate the relationship between congestion in the South Western Region and congestion in the New York metropolitan area.

SWRPA will request data from ConnDOT and NYMTC in electronic form.

Develop strategies. The “Vision 2020” and Long Range Transportation Plans identify multimodal strategies to improve mobility, accessibility and connectivity. Such projects are incorporated into the Transportation Improvement Program (TIP) as funding becomes available.

Implement strategies. SWRPA commenced implementation of its CMP in early 2004. This section provides an update of activities planned and undertaken by SWRPA during the period June 2006 through June 2007. Activities include efforts to improve passenger and freight transport services, to enhance coordination between SWRPA and its partners in adjacent planning regions, and to better link land use and transportation planning within the South Western Region. Descriptions of selected efforts are below:

<b>Activity</b>	<b>Level of SWRPA Involvement</b>	<b>Time Frame</b>	<b>Outcome</b>
Formation of a CMP committee.	Lead agency	Current activity	SWRPA staff has developed the structure for a regional CMP committee and identified potential members.
Update of Long Range Transportation Plan (LRTP)	Lead agency	Completed; Ongoing	Update of the LRTP was completed during reporting period. Efforts were focused on both the update of data and the revision of current practice and policy to come into compliance with new metropolitan planning requirements. Next steps include developing a revised set of project selection criteria with an emphasis on how well a proposed project supports the CMP.
Data Collection	Lead agency	On-going	Collect, organize and analyze data critical to the development and monitoring of a CMP. Data collection activities will be conducted in partnership with ConnDOT and NYMTC. During this reporting period, SWRPA obtained 2006 CMP data – in electronic format – from ConnDOT.
Travel Time Data Collection	Lead agency	On-going	Collect, and analyze travel time data using a probe vehicle equipped with a GPS device. SWRPA is developing its own travel time data to support and expand on the CMP data provide by its partners. GPS/travel time data collection will become an ongoing and integral part of SWRPA’s overall CMP. Summary data will be made available to the public.
ITS Systems Plan	Lead agency	Current activity	Regional ITS systems plan including recommendations to enhance accessibility/use of transit and improve coordination and performance of critical transportation

			networks in the region. Consultant for quantitative evaluation of project was selected and brought under contract during this reporting period. Strategies for use of ITS as data collection and monitoring tool to support CMP will be explored. Findings are expected by the second half of FY 2007-08.
East of Hudson Rail Operations Task Force	Participant in bimonthly dialogue	On-going	Develop recommendations/build support for infrastructure improvements to enhance cross-Hudson freight mobility.
SWR Incident Management Task Force	Lead agency	On-going	Continued coordination and improved management of highway incidents. Regional model and strategies have been used to shape development of statewide strategy and implementation plan.
Bridgeport-Stamford Urbanized Area Planning and Coordination	Co-lead agency	On-going	Build consensus regarding major transportation projects in the Bridgeport-Stamford Urbanized Area.
I-95 Operational Improvements: Project Design	Participant	On-going	Design phase for operational improvements identified through the CMS 2020 and I-95 Corridor Study.
Bridgeport-Stamford Urbanized Area: STP Coordination	Participant	On-going	Participate in and provide leadership to support planning, development and coordination of STP-funded projects within the Bridgeport-Stamford Urbanized Area.
Bridgeport-Stamford Urbanized Area: FTA Enhancement Coordination	Participant	On-going	Participate in and provide leadership to support planning, development and coordination of FTA Enhancement-funded projects within the Bridgeport-Stamford Urbanized Area.
Darien/Route 1 Downtown Circulation Study and Plan	Lead agency	Current activity	Develop a plan to improve traffic operations and safety on US 1 in Darien including pedestrian safety, access management, maintaining traffic flow, minimizing congestion, and associated land use issues. Project mobilization is underway. Request for qualifications for consultant services will be issued by second half of FY 2007-08
South Norwalk Intermodal Center Plan	Participant	Current activity	Neighborhood plan has been completed and will be incorporated into local Master Plan. Project mobilization for intermodal center component is underway.
Transportation Technical Assistance Program (TTAP)	Lead agency	Current activity	Program helps member municipalities access professional services such as traffic engineering to implement local projects that improve mobility, accessibility and connectivity. Three projects will begin during the second half of FY 2007-08.

TTAP: Route 136 Project	Participant	Planned activity	Design of operational and sightline improvements on Route 136 in Westport under the auspices of the TTAP.
TTAP: Route 57	Participant	Planned activity	Identification of necessary traffic improvements at Route 57 and School Road in Weston, under the auspices of the TTAP.
TTAP: Route 1 at I-95/Exit 5	Participant	Planned activity	Assess existing conditions and develop a plan of recommended improvements for the intersection of U.S. Route 1 (East Putnam Avenue) at I-95 Exit 5/Neil Avenue in Greenwich, under the auspices of the TTAP.
Greenwich – Stamford Route 1 Corridor Congestion, Circulation and Access Management Study	Lead Agency	Planned activity	Develop a plan to improve traffic operations and safety on US 1 between Greenwich and Stamford including pedestrian safety, access management, maintaining traffic flow, minimizing congestion, and associated land use issues. Request for qualifications for consultant services will be issued by the second half of FY 2007-08.
Bus Rapid Transit (BRT) Study – Route 1 from Greenwich to Norwalk	Lead Agency	Planned activity	Develop an implementation study of bus rapid transit (BRT) service on US 1 between Greenwich and Norwalk. BRT was a recommended strategy in the CMS 2020 study. Request for qualifications for consultant services will be issued by the first half of FY 2007-08
Freight Assessment and Needs	Lead Agency	Planned activity	Develop a strategy for collection and analysis of freight flow data. Information to be sought includes origin/destination and commodity flows by ton, hazardous materials transport data, highway utilizations data including numbers of trucks, VMT, average weights, and violations, and opportunities for diversion of freight to non-highway modes. Will consult state and adjacent region freight plans. Project will commence during the first half of FY 2007-08.
Route 7 Corridor Needs Assessment: Wilton - Redding	Participant	Planned activity	Develop a plan to improve traffic operations and safety on US 7. Plan will address access management, congestion, transit opportunities and needs, as well as land use issues. Project mobilization will commence during FY 2007-08.
FHWA Value Pricing & Urban Partnership	Participant	On-going	SWRPA and FHWA, held a “Value Pricing 101” session in March 2007 introducing state and local leaders to the concept. Staff participated in a Value Pricing Working Group session hosted by FHWA in Washington, D.C. in March 2007. Staff assisted ConnDOT advance Value Pricing and

			Urban Partnership grant applications during the reporting period.
Express Bus Technical Memorandum	Lead Agency	Current activity	Developed a memorandum explaining the differences between express bus and bus rapid transit services. Described merits of each service in relation to transportation needs in the South Western Region.

In addition to those activities listed in the chart above, SWRPA also has actively advocated for the development of an urbanized area-wide CMS. SWRPA will continue these efforts and hopes to fully involve ConnDOT and the Federal Highway Administration (FHWA) in these efforts.

SWRPA has consulted with a number of metropolitan planning organizations to identify best practices in CMP development and data collection. Staff consulted with the Capitol Regional Council of Governments to identify their CMP practices. Staff also collected information regarding network monitoring and performance measures from five metropolitan planning organizations outside of Connecticut as part of the regional ITS strategic plan. Although not exclusively solicited to support CMP activities, this information will be critical to future policy decisions regarding network monitoring, establishment of performance benchmarks, and project assessment with respect to the CMP.

Staff regularly participates in online webinars regarding transportation system management and operations, ITS, and freight, which are produced by USDOT and its affiliates. Staff continues to explore best practices and professional development, as appropriate.

Monitor the network. SWRPA will continue to work with ConnDOT and NYMTC to develop a monitoring network and to access transportation data. The statewide Congestion Monitoring System Data and Report, prepared annually by ConnDOT will be one resource used by SWRPA. SWRPA will refine and expand its GPS travel time data collection to perform regular monitoring of all major roadways. GPS travel time data collection will also be expanded to transit services, as appropriate. Additionally, SWRPA will continue to seek the following data and periodic updates of such data:

- Transit ridership data – by mode, operator, route, time of day;
- Transportation Demand Management program data including
  - Number and location of participating companies,
  - Enrollment of commuters, by company and company location,
  - Vanpool and shuttle utilization statistics,
  - Actual participation rates of enrolled commuters, and
  - Marketing data – outreach v. yield;
- Vehicle registration data, by class;
- Drivers’ license data, by class;
- Number and distribution of households without vehicles;
- Rail and commuter parking lot utilization; and
- Bike rack (transit stations and vehicles) utilization statistics.