

# CONGESTION MANAGEMENT PROCESS

2025 Update



# Spokane Regional Transportation Council Membership

City of Airway Heights

City of Cheney

City of Deer Park

City of Liberty Lake

City of Medical Lake

City of Millwood

City of Spokane

City of Spokane Valley

Kalispel Tribe of Indians

**Spokane County** 

**Spokane Transit Authority** 

**Spokane Tribe of Indians** 

Town of Fairfield

Town of Latah

Town of Rockford

Town of Spangle

Town of Waverely

Washington State Department of Transportation

**Washington State Transportation Commission** 



# Congestion Management Process 2025 Update

Approved May 8, 2025

Please email contact.srtc@srtc.org or call (509) 343-6370 to receive additional copies of this document.

### **Title VI Statement**

SRTC is committed to nondiscrimination in accordance with Title VI of the Civil Rights Act of 1964, and Civil Rights Restoration Act of 1987 (P.O. 100.259) and the Americans with Disabilities Act, as well as related statutes and regulations, in all programs and activities. Reasonable accommodations, including materials translated or in alternative formats, may be requested by contacting the SRTC office by telephone at (509) 343-6370 or by email at contact.srtc@srtc.org at least 48 hours in advance. Persons who are deaf or hard of hearing may contact (509) 343-6387 through the Washington Relay Service at 7-1-1. Title VI Complaint Forms may be obtained through the same contact information.

Para obtener más información sobre el Plan de transporte metropolitano, Horizon 2045, comuníquese con el Consejo de Transporte Regional (Regional Transportation Council) de Spokane al (509) 343-6370 o en contact.srtc@srtc. org. Puede disponerse de servicios de lenguaje de señas, traducción y provisión de materiales de comunicación en otros formatos si sepiden oportunamente.



# **Contents**

Introduction	5
What is Congestion?	6
What is Congestion Management?	
Regional Objectives for Congestion Management	9
CMP Network	10
CMP Corridor Analysis	10
Multimodal Performance Measures	14
Data Collection and Monitoring System Performance	15
Corridor Profiles and CMP Network Performance Map	15
Identify and Evaluate Strategies	17
CMP Toolkit of Strategies	17
Analyzing Congestion Problems and Needs	19
Program and Implement Strategies	20
Evaluating Strategy Effectiveness	tion?
List of Appendices	23
Appendix A: CMP Performance Measure Methodologies	
Appendix B: CMP Toolkit of Strategies	23
Appendix C: CMP Strategies Matrix	23



# **Introduction**

Congestion management is a critical component of regional transportation planning, particularly in growing metropolitan areas like Spokane. While the Spokane region may not be as widely recognized for severe traffic issues as larger Pacific Northwest cities like Seattle and Portland, its increasing population and shifting travel patterns are leading to both recurring and non-recurring congestion challenges. With the region's population projected to grow from 560,000 in 2024¹ to nearly 670,000 by 2050,² these challenges are likely to intensify. The Congestion Management Process (CMP) provides a structured framework to monitor, assess, and address these challenges, ensuring the region's transportation system remains efficient, sustainable, and responsive to the region's needs.

The CMP serves as a data-driven approach to understanding congestion that emphasizes the importance of collaboration among stakeholders. By collecting and analyzing reliable data, the CMP identifies the region's most congested corridors, evaluates existing issues, and prioritizes solutions tailored to the region's unique characteristics.

Recognizing the economic, environmental, and societal impacts of congestion is crucial to the CMP. Delays and inefficiencies caused by congestion affect businesses, increase vehicle emissions, and reduce the quality of life for residents. The CMP aims to mitigate these impacts by focusing on cost-effective solutions that align with SRTC's Guiding Principles, shown in Figure 1.

<sup>2</sup> OFM 2022 Growth Management Act County Projections, Medium Series.



Figure 1: SRTC Guilding Principles



<sup>1</sup> Washington State Office of Financial Management (OFM), April 1, 2024 Official Population Estimates.

# What is Congestion?

Although individual definitions of congestion differ, "in the transportation realm, congestion usually relates to an excess of vehicles on a portion of a roadway at a particular time resulting in speeds that are slower...than normal or 'free flow' speeds."<sup>3</sup> It is important to recognize that tolerance for congestion varies among travelers. Given these differing viewpoints, relying on data is crucial to accurately frame and effectively address the issue.

### **Types and Causes of Congestion**

Regular (i.e., recurring) congestion typically occurs on weekdays around the traditional peak commute periods of 7 to 9 AM and 4 to 6 PM in most cities. It accounts for most congestion nationally, as shown in Figure 2. Common causes of recurring congestion include excessive demand, diminished roadway capacity, and bottlenecks. Non-recurring congestion is generally caused by construction activities, special events, or other traffic incidents, such as collisions, breakdowns, or debris in the roadway.

In addition to these common causes of congestion, other less frequently cited factors contribute to traffic problems in metropolitan areas. These include poor roadway design that increases the risk of collisions and poor street circulation that decreases accessibility and can confuse commuters and travelers.

<sup>3</sup> Federal Highway Administration (FHWA), Traffic Congestion and Reliability: Trends and Advanced Strategies for Congestion Mitigation. (n.d.). Retrieved January 13, 2025, from FHWA: https://ops.fhwa.dot.gov/congestion\_report/ executive\_summary.htm.

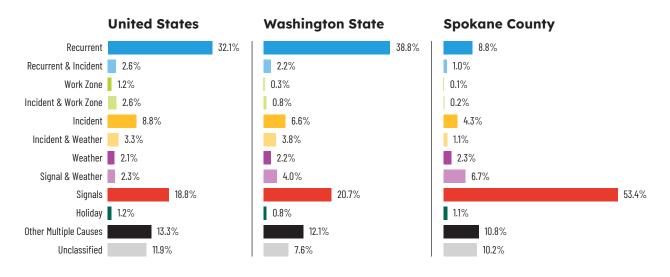


Figure 2: Causes of Congestion in the United States, Washington State, and Spokane County

Source: Regional Integrated Transportation Information System (RITIS), Congestions Causes for the National Highway System (NHS), 2019.



### The Complex Relationship Between Congestion and Economic Vitality

The costs of congestion are well documented and far reaching, impacting economies, the environment and our time. Delays and inefficiencies caused by congestion affect businesses, increase vehicle emissions, and reduce the quality of life for residents.

State and local transportation departments have traditionally focused on mitigating congestion through various strategies aimed at improving travel times and reducing the economic costs associated with vehicle delays. The prevailing assumption is that congestion relief is inherently beneficial, as vehicle delay costs Americans billions of dollars in wasted fuel and time each year. However, a common misconception is that eliminating urban congestion would significantly enhance economic productivity. Studies show that increased travel delays often correlate with higher gross domestic product (GDP) per capita in cities across the United States. In essence, more vehicles stuck in traffic reflect a higher volume of people traveling for work, meetings, shopping, and recreation—all indicators of a vibrant, economically productive city.<sup>4</sup> Increased travel demand on transportation infrastructure often signifies a thriving urban environment, even though certain industries, such as freight shipping or warehousing, may avoid highly congested areas.

Moreover, traffic congestion can influence changes in travel behavior, encouraging shorter commutes, residential proximity to workplaces, reduced travel frequency, or shifts to alternative transportation modes. Thus, while economic activity fuels travel demand and subsequent congestion, congestion itself is neither the root cause of urban challenges nor a standalone solution for economic growth. Effective congestion management requires distinguishing between negative causes, such as poorly designed traffic signals, and positive causes, such as increased activity from a newly expanded convention center.

### **What is Congestion Management?**

Congestion management involves applying strategies to enhance transportation system performance and reliability by minimizing congestion's negative effects on the movement of people and goods. A CMP provides a systematic, regionally accepted framework for managing congestion, delivering accurate, up-to-date information on the transportation system's performance and evaluating alternative strategies to manage congestion that meet state and local needs.

A CMP is mandatory in metropolitan areas with populations exceeding 200,000, known as Transportation Management Areas (TMAs). According to the Code of Federal Regulations (CFR), TMAs "shall address congestion management through a process that provides for safe and effective integrated management

<sup>4</sup> Dumbaugh, E. (2012, June 1). Rethinking the Economics of Traffic Congestion. Retrieved September 23, 2014, from City Lab: http://www.citylab.com/commute/2012/06/defense-congestion/2118



and operation of the multimodal transportation system...through the use of travel demand reduction...and operational management strategies."5

### **Incorporating the CMP Into the Metropolitan Planning Process**

The CMP should address regional congestion challenges while aligning with the specific goals and objectives of the Spokane region. It is meant to be integrated throughout the comprehensive, continuing, and cooperative (3C) metropolitan transportation planning process. This integration is accomplished through an iterative, eight step CMP process model (illustrated in Figure 3), developed through a multi-jurisdictional planning framework. The model is continuously refined to address the results of performance measures, respond to emerging congestion issues, and align with any new goals and objectives established in the region's Metropolitan Transportation Plan (MTP).

# **Congestion Management Process**

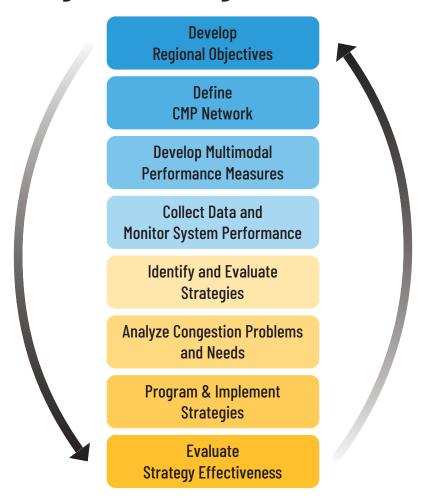


Figure 3: Steps of the CMP

<sup>5 23</sup> CFR § 450.322(a)

# **Regional Objectives for Congestion** Management

The first step of the CMP is to establish clear regional objectives that define the region's priorities for managing congestion. Recognizing the importance of integrating the CMP into the broader metropolitan transportation planning process, the guiding principles from the region's MTP, Horizon 2045, have been incorporated to ensure alignment and consistency across planning efforts. These principles shaped the development of regional congestion management objectives that support overarching transportation goals, promote the efficient use of resources, and guide the creation of performance measures and strategies for congestion management that reflect our shared regional vision. Regional objectives for congestion management, aligned with each guiding principle, are shown in Figure 4.

Figure 4: CMP Guilding Principles and Regional Objectives

Guiding Principles	Regional Objectives	
Economic Vitality	Raise awareness that congestion is related to economic vitality and ensure that the benefits of improved economic vitality may outweigh the disadvantages of congestion.	
Cooperation and Leadership	Sustain coordination and follow-through with a multi-jurisdictional CMP working group.	
Stewardship	Invest in projects that maximize the use of existing facilities across modes in identified CMP corridors and emphasize system redundancy to improve the resiliency and reliability of the transportation network.	
Operations, Maintenance, and Preservation	Pursue solutions that are low cost/high benefit toward maintaining and preserving reliable transportation corridors and networks.	
Quality of Life	Accessible, mutimodal transportation for all abilities; facilities should blend in with or enhance the human environment (i.e., context sensitive design) and limit impacts to the natural environment.  Prioritize future investments to align with regional priority networks to improve connectivity and mobility.	
Safety and Security	Improve safety and reduce non-recurring congestion by reducing collisions.	

# **CMP Network**

The second step of the CMP involves defining the regional CMP network. This network delineates the geographic area where data is collected and monitored for the CMP. Several critical factors were considered in defining this network, including existing and anticipated congestion levels, travel time reliability, travel demand, regional significance, and connectivity.

To establish the network, SRTC conducted a comprehensive inventory of all roadways within the SRTC Metropolitan Planning Area (MPA) classified as minor arterials or higher, according to the Federal Highway Administration's (FHWA) Federal Functional Classification (FFC). Additionally, select major collectors were included due to their existing congestion levels and connections to regional activity centers. The primary objective of this effort was to identify regionally significant corridors with the highest congestion levels, rather than focusing on smaller segments or localized congestion hot spots more appropriate for local-level analysis and improvement.

The inventory integrated a variety of travel data sources reflecting congestion conditions across the multimodal transportation system. Data sources included the National Performance Management Research Data Set (NPMRDS), the Highway Performance Monitoring System (HPMS), and the SRTC Travel Demand Model. Additional data was provided by the Washington State Department of Transportation (WSDOT), Spokane Transit Authority (STA), the City of Spokane, Spokane County, and other local jurisdictions. Key considerations for determining a roadway's regional importance included commuter, freight, and transit travel patterns, its role as a barrier or critical connection for bicycle and pedestrian travelers, and its connectivity to other arterials and regional activity centers.

## **CMP Corridor Analysis**

The CMP network is split into 57 individual corridors, which establish the basic unit for describing, analyzing, and reporting on the network. These corridors were delineated in consultation with staff from SRTC member agencies, with consideration of travel patterns and connections to regional activity centers and other key destinations.

Once delineated, CMP corridors were classified as either Tier 1 or Tier 2. The Tier 1 corridor designation identifies the region's most important corridors or those with the most need for congestion relief. They are selected for detailed congestion management strategies to mitigate these issues. Conditions on Tier 2 corridors are monitored due to their regional importance; however, specific strategies will not be assigned to these corridors in the CMP until conditions worsen. A map of the CMP network's is provided in Figure 5. Figure 6 contains a complete list of the CMP network's Tier 1 and Tier 2 corridors.



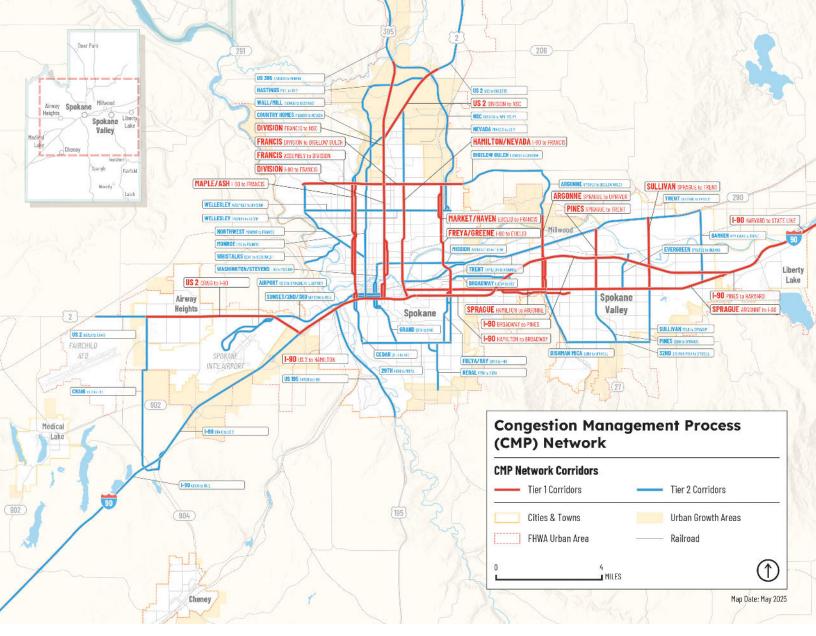


Figure 5: CMP Network Map

The following indicators were used to identify Tier 1 corridors. A more detailed description of the methodology used to evaluate and classify CMP network corridors is provided in Appendix A.

### 1. **Travel Demand**

Travel demand is a major factor for determining the regional significance of a roadway, and regional significance is a major factor in defining a CMP network. Travel demand was measured using Average Annual Daily Traffic (AADT), which reflects the average daily traffic flow on a roadway throughout a given year. Tier 1 corridors generally have an AADT of 20,000 or higher.

### **Level of Travel Time Reliability** 2.

Level of Travel Time Reliability (LOTTR) indicates how much extra time needs to be added to a trip to arrive on time 80 percent of the time. It is calculated as the ratio of the 80th percentile travel time to the 50th percentile trave time, with lower values indicating more reliable travel conditions, and is used in the calculation of reliability measures in the federal PM3 performance measure rule. Corridors with segments containing LOTTR values of 1.5 or higher were classified as Tier 1 corridors.

### 3. Peak Hour Excessive Delay

Peak Hours of Excessive Delay (PHED) is also used in the calculation of reliability measures in the federal PM3 performance measure rule. It measures the annual hours during the peak period, defined as 3 to 7 PM, spent in congested conditions. For the sake of this measure, excessive delay is defined using a threshold of 20 miles per hour or 60 percent of the posted speed limit, whichever is greater. Corridors with segments in the region's 80th percentile for PHED were classified as Tier 1 corridors.

### 4. Travel Time Index

Travel Time Index (TTI) refers to the ratio of travel time in the peak period to the travel time during free-flow conditions. It indicates the average recurring congestion that occurs on a roadway. Corridors with a TTI value of 1.2 were classified as Tier 1 corridors. This value is often set at a higher threshold when identifying congestion in other metropolitan areas, but as mentioned earlier in this report, Spokane commuters are likely willing to tolerate less delay and expect their daily commute to be more consistent through the week.

### 5. Regional Connectivity

The final indicator used to classify Tier 1 corridors was regional connectivity, reflecting a corridor's significance in linking regional activity centers and key destinations, as well as its role in facilitating freight movement. For example, I-90 serves as a critical artery, connecting cities across the region and functioning as the busiest freight corridor. On a smaller scale, US-2 provides essential access to Airway Heights and Fairchild Air Force Base. After identifying an initial set of Tier 1 corridors using other indicators, additional routes were included based on their contribution to the overall regional connectivity of the Tier 1 network.



Figure 6: List of Tier 1 and Tier 2 Corridors on the CMP Network

Tier 1 CMP Corridors			
I-90: Broadway Ave to Pines Rd	US 2: Division St to North Spokane Corridor		
I-90: Hamilton St to Broadway Ave	Argonne Rd: Sprague Ave to Upriver Dr		
I-90: Harvard Rd to State Line	Francis Ave: Division St to Bigelow Gulch Rd		
I-90: Pines Rd to Harvard Rd	Freya St/Greene St: I-90 to Euclid Ave		
I-90: US 2 to Hamilton St	Hamilton St/Nevada St: I-90 to Francis Ave		
Division St: Francis Ave to North Spokane Corridor	Maple St/Ash St: I-90 to Francis Ave		
Division St: I-90 to Francis Ave	Market St/Haven St: Euclid Ave to Francis Ave		
Francis Ave: Assembly St to Division St	Sprague Ave: Argonne Rd to I-90		
Pines Rd: Sprague Ave to Trent Ave	Sprague Ave: Hamilton St to Argonne Rd		
US 2: Craig Rd to I-90	Sullivan Rd: Sprague Ave to Trent Ave		

Tier 2 CMP Corridors		
I-90: County Line to Craig Rd	Craig Rd: I-90 to US 2	
I-90: Craig Rd to US 2	Dishman Mica Rd: 32nd Ave to Sprague Ave	
North Spokane Corridor: Division St to Wellesley Ave	Evergreen Rd: Sprague Ave to Indiana Ave	
Pines Rd: 32nd Ave to Sprague Ave	Freya St/Ray St: 29th Ave to I-90	
Trent Ave: Argonne Rd to Barker Rd	Grand Blvd: 29th Ave to I-90	
Trent Ave: Hamilton St to Argonne Rd	Hastings Rd: Mill Rd to US 2	
US 195: Hatch Rd to I-90	Mission Ave: Washington St to Trent Ave	
US 2: Dover Rd to Craig Rd	Monroe St: I-90 to Francis Ave	
US 2: North Spokane Corridor to Colbert Rd	Nevada St: Francis Ave to US 2	
US 395: Division St to Monroe Rd	Northwest Blvd: Monroe St to Francis Ave	
29th Ave: High Dr to Freya St	Regal St: 57th Ave to 29th Ave	
32nd Ave: Dishman Mica Rd to Sullivan Rd	Sullivan Rd: 32nd Ave to Sprague Ave	
Airport Dr: US 2 to Spokane Int'l Airport	Sunset Blvd/2nd Ave/3rd Ave: Division St to US 2	
Argonne Rd: Upriver Dr to Bigelow Gulch Rd	Wall St/Mill Rd: Francis Ave to Hastings Rd	
Barker Rd: Appleway Ave to Trent Ave	Washington St/Stevens St: I-90 to Mission Ave	
Bigelow Gulch Rd: Francis Ave to Argonne Rd	Wellesley Ave: Assembly St to Division St	
Broadway Ave: Freya St to I-90	Wellesley Ave: Division St to US 395	
Cedar St: 29th Ave to I-90	Whistalks Way: Government Way to Northwest Blvd	
Country Homes Blvd: Francis Ave to Nevada St		



Figure 7: CMP Guilding Principles and Performance Measures

Guiding Principles	Performance Measures
Economic Vitality	Transportation + housing costs as a percentage of median income on CMP corridors
	Existing and forecasted employment density along CMP corridors
	Existing and forecasted population density along CMP corridors
	Freight tonnage on CMP corridors
Cooperation and Leadership	Attendance at CMP working group meetings, committees & public meetings
Stewardship	SRTC call for projects expenditures on CMP projects vs. all SRTC call for projects expenditures
Operations,	Transit performance on CMP corridors
Maintenance, and Preservation	Level of Travel Time Reliability (LOTTR) on CMP corridors
Preservation	Annual Peak Hours of Excessive Delay (PHED) on CMP Corridor
	Existing and forecasted Travel Time Index (TTI) on CMP corridors
	Transit reliability factor
Quality of Life	Total regional miles of bike network
	Percent of households along CMP corridor that are within 0.5 mile of a transit stop
Safety and	Crash rate per million VMT on CMP corridors
Security	• Equivalent Property Damage Only (EPDO) crash rate per million VMT on CMP corridors
	Crash Severity Index (SI) on CMP corridors
	Incidence clearance on I-90

# **Multimodal Performance Measures**

The CMP includes the development of multimodal performance measures related to each of its regional objectives for congestions management. These measures are used to track the region's progress in fulfilling each of these objectives on the CMP network. The measures are also used to monitor changing conditions, identify emerging problem areas, and help communicate system performance to the public and decision makers.

Figure 7 lists the CMP's multimodal performance measures, organized by guiding principle. Unless otherwise noted, these performance measures are tracked at the corridor level and updated on an annual basis. More information regarding the baseline data and methodologies used to calculate each performance measure is provided in Appendix A.



# **Data Collection and Monitoring System Performance**

An essential component of the CMP is developing a comprehensive data collection plan to acquire the necessary data to support performance measures and monitor congestion levels on CMP corridors. SRTC staff reviewed best practices from other Metropolitan Planning Organizations (MPOs) and reviewed available data sources to determine the most relevant and useful data for measuring current and future roadway conditions across the region. The CMP Data Collection Plan, shown in Figure 8, outlines the data collected, the responsible agencies, and the frequency of data collection. This data is collected, analyzed, and used to calculate the CMP's multimodal performance measures and monitor system performance on the CMP network. Continued collaboration and support from planning partners are essential for the ongoing success of this effort.

# **Corridor Profiles and CMP Network Performance Map**

Individual profiles have been developed for each Tier 1 corridor to enable a detailed analysis of the unique factors contributing to congestion. These profiles serve as a baseline for continuous monitoring and future updates. An interactive map of the CMP network, featuring performance data and summaries for all CMP corridors, will be available on SRTC's website. The Tier 1 corridor profiles can also be found in Appendix A and on the SRTC website.6

<sup>6</sup> Both the CMP Tier 1 Corridor Profiles and the interactive CMP Network Performance Map are available at: www.srtc. ora/cmp



Figure 8: CMP Data Collection Plan

Data	Responsibility	Frequency
Federal Functional Classification	SRTC	As Needed
Corridor Centerline Miles	SRTC	As Needed
Corridor Lane Miles	SRTC	As Needed
Average Annual Daily Traffic	SRTC	Every 2 Years
Average Daily Truck % (Select Locations)	WSD0T/Jurisdictions	FGTS Update
Annual Gross Truck Tonnage	WSD0T/Jurisdictions	FGTS Update
Regional Bicycle Network Facilities	SRTC/Jurisdictions	Annual
Peak Period Load Factor on Corridor	STA	Annual
Peak Period Maximum Load Factor	STA	Annual
Peak Hour Number of Buses	STA	Annual
Number of Park & Rides/% Usage	STA	Annual
Transit Usage Change	STA	Annual
Level of Travel Time Reliability—AM/PM Peak	SRTC	Annual
Travel Time Index—AM/PM Peak	SRTC	Annual
Peak Hours of Excessive Delay	SRTC	Annual
Average Speed & Annual % Change—AM/PM Peak	SRTC	Annual
Crash Rate per Million VMT	SRTC	Annual
EPDO Crash Rate per Million VMT	SRTC	Annual
Severity Index	SRTC	Annual
Population Density—Existing*	SRTC	Land Use Update
Population Density—Forecast*	SRTC	Land Use Update
Employment Density—Existing*	SRTC	Land Use Update
Employment Density—Forecast*	SRTC	Land Use Update
Transportation + Housing Costs % of Median HH Income*	SRTC	Annual
% of Population for SRTC Indicator of Potential Disadvantage**	SRTC	Every 2 Years
% of Households Within 0.5 Mile of Transit	SRTC/STA	Land Use Update
Regional Activity Center(s) Along Corridor	SRTC	As Needed

<sup>\*</sup> Calculated based on a 0.25 mile buffer for each corridor

<sup>\*\*</sup> Calculated for each of indicators of potential disadvantage, as identified in Horizon 2045, the region's MTP. These are: 1) low-income households, 2) individuals identifying as a racial or ethnic minority, 3) zero car households, 4) limited English proficiency households, 5) age dependency, and 6) individuals with a disability.

# **Identify and Evaluate Strategies**

Following the data collection and analysis steps, SRTC worked closely with staff from its member agencies to develop a comprehensive set of congestion management strategies using a least-cost planning approach. This key element of the CMP distinguishes it from other system-wide traffic studies by prioritizing cost-effectiveness.

In Washington state, all regional transportation plans are required to adhere to a least-cost planning methodology, which identifies the most cost-effective facilities, services, and programs. The Washington Administrative Code (WAC) defines least-cost planning as "a process of comparing direct and indirect costs of demand and supply options to meet transportation goals and/or policies, with the intent of identifying the most cost-effective mix of options."

The congestion management strategies identified by SRTC include a combination of low-cost, small-scale capital projects, travel demand management policies and outreach initiatives, operational improvements, intelligent transportation systems, freight and goods transport enhancements, and investments in transit, biking, and pedestrian infrastructure. The SRTC CMP refers to the comprehensive list of these selected strategies for further analysis as the CMP Toolkit of Strategies.

### **CMP Toolkit of Strategies**

The CMP Toolkit of Strategies is a compilation of strategies to address congestion effectively. It contains researched best practices from other model CMPs that could realistically be applied in the Spokane region.8 Developed in coordination with the staff from SRTC member agencies, the Toolkit serves as a resource to guide the development of targeted solutions for congestion issues on the region's CMP Network.

The strategies in the Toolkit are organized into five categories:

### 1. Travel Demand Management (TDM)

These strategies aim to optimize transportation systems by reducing congestion, improving mobility, and minimizing environmental impacts. Examples include promoting public transit, carpooling, walking, bicycling, flexible work schedules, and telecommuting.

<sup>8</sup> In the development of the Toolkit, SRTC staff reviewed and identified best practices from the following agencies' CMPs: Delaware Valley Regional Planning Council (DVRPC), Denver Region Council of Governments (DRCOG), Mid-Region Council of Governments (MRCOG), and Wilmington Area Planning Council (WILMAPCO); as well as the Washington State Department of Transportation's (WSDOT) Transportation Systems Management and Operations (TSMO) strategies and concepts website.



<sup>7</sup> WAC 468-86-030 and WAC 468-86-080

### 2. Operational Improvements

Enhancements focused on maximizing the efficiency and safety of existing transportation systems. Strategies include traffic signal optimization, incident and access management, and intelligent transportation systems (ITS) to improve traffic flow without major infrastructure changes.

### 3. Transit Operational Improvements

Targeted efforts to improve the efficiency, reliability, and capacity of public transit systems. Examples include increasing service frequency, transit signal priority, dedicated transit lanes, and upgrading technologies such as real-time passenger information systems.

### 4. Freight and Goods Movement

Strategies designed to optimize the efficient and reliable transport of goods. These include both operational improvements, such as freight plans or dedicated truck parking, as well as larger capacity improvements.

### 5. Roadway Capacity Improvements

Strategies that expand or enhance transportation infrastructure to accommodate increased traffic volumes and improve flow. These strategies include adding lanes, constructing new roads, and improving interchanges.

The Toolkit includes 43 strategies grouped into these five categories for organizational clarity. While these categories help structure the content, some strategies may overlap across or within them. It is important to note that the Toolkit is not an exhaustive catalog of congestion mitigation strategies. Instead, it presents proven approaches most relevant to addressing congestion in the Spokane region.

Examples of the Toolkit's strategies include promoting a regional commuter benefit program, managing parking, enhancing turning movements, implementing ramp metering, managing incidents, prioritizing transit signals, developing new and improved park-and-ride facilities, investing in freight capacity, and constructing grade-separated railroad crossings. Large capital projects aimed at increasing roadway capacity are also part of the strategy list, but they are assigned lower priority and recommended only when other strategies prove insufficient in alleviating congestion. While some strategies can be applied at a regional level, most are tailored to individual corridors based on existing infrastructure deficiencies. The complete CMP Toolkit of Strategies can be found in Appendix B.

Although the precise benefits of each strategy have not been fully calculated, this process is responsible for tracking benefit-to-cost ratios. Additionally, this process ensures that the evaluation of these strategies is integrated into local planning efforts and corridor studies. If corridor-level analysis determines that a specific strategy lacks sufficient benefits, it should be removed from the corridor strategy list.



# Analyzing Congestion Problems and Needs

Before identifying congested corridors, it is essential to define what constitutes congestion in the Spokane region. While Spokane does not experience the same level of traffic congestion as larger metropolitan areas like Seattle or Los Angeles, commuters in Spokane may have a lower tolerance for travel delays compared to those in more congested cities. Additionally, non-recurring congestion events such as collisions can cause unexpected and significant slowdowns that people are not prepared for in their daily commutes.

Various factors were selected as indicators of congestion to help identify congested corridors. Poor levels of service (LOS) on roadways can stem from multiple issues beyond traditional congestion, including high collision rates, intersection delays, inadequate accessibility for cyclists and pedestrians, and insufficient facilities for freight vehicles. Although analytical assessments did not reveal widespread peak congestion, these additional challenges necessitate the implementation of congestion management strategies. Interstate 90, for instance, carries over 100,000 vehicles on an average workday and warrants continuous monitoring and intervention.

The SRTC and staff from member agencies reviewed Tier 1 CMP corridors to identify key congestion, operational, and safety issues. Previous studies and plans were also reviewed to align with existing conditions and future visions for each corridor.

After identifying the issues, the group collaboratively recommended appropriate strategies for each corridor. These strategies were identified based on their suitability and potential to mitigate identified problems. Selected strategies are encouraged for further analysis in future corridor studies and at the regional level, throughout planning, implementation, and post-implementation phases. The recommended strategies will be integrated into the region's transportation planning process.

The specific strategies identified for individual Tier 1 corridors are detailed in the CMP Strategies Matrix, provided in Appendix C.



# **Program and Implement Strategies**

The CMP also requires the development of an implementation plan to effectively advance congestion management strategies and ensure that both the Transportation Improvement Program (TIP) and MTP remain in compliance with the CMP.

To achieve this, jurisdictions must submit a Call for Projects application to SRTC before major projects can receive federal funding. New CMP scoring criteria have been integrated into the current application for Surface Transportation Block Grant (STBG), Congestion Management Air Quality (CMAQ), and other SRTC-managed transportation funds. These updated criteria, shown in figure 9, prioritize projects aimed at mitigating congestion and those located on CMP corridors, incentivizing the incorporation of recommended CMP strategies through additional scoring in SRTC's competitive project selection process.

To ensure compliance with the TIP and MTP, agencies are required to certify that projects located on the CMP network and increase Single Occupancy Vehicle (SOV) capacity have undergone a least-cost planning process and are consistent with the CMP prior to their inclusion in either the TIP or the MTP.



# **SRTC Call for Projects Congestion Questions**

25 points possible

### **Ouestion 1:**

Does the project address congestion in any of the following areas?

- ☐ Tier 1 CMP Corridor (15 points)
- Tier 2 CMP Corridor or other roadway bottleneck, as definined in the CMP report (5 points)
- ☐ If a CMP Corridor or defined roadway bottleneck project, please describe current congested conditions and thefuture projected levels of congestion after prject implementation. Explain the methodology used.

### **Question 2:**

Does the project utilize any strategies from the CMP Toolkit of Strategies?

- Select one of the following options if the project is located on a Tier 1 CMP Corridor and includes CMP Toolkit strategies that are listed in the CMP Strategies Matrix for that corridor:
  - ☐ Travel Demand Management Strategies (10 points)
  - Operational Improvement Strategies (8 points)
  - ☐ Capacity Improvement Strategies (4 points)
- Select one of the following options if the project is located on a Tier 1 or Tier 2 CMP Corridor, or another roadway bottleneck defined in the CMP report, and it includes CMP Toolkit strategies not listed in the CMP Strategies Matrix for that corridor:
  - ☐ Travel Demand Management Strategies (4 points)
  - ☐ Operational Improvement Strategies (2 points)
  - ☐ Capacity Improvement Strategies (1 point)

Figure 9: Call for Projects Application Congestion Management Questions



# **Evaluating Strategy Effectiveness**

The formal adoption of the CMP by the SRTC Policy Board ensures that SRTC staff will annually monitor developments on the CMP network using adopted performance measures and evaluate the effectiveness of implemented CMP strategies. A complete list of the performance measures is provided in figure 7, with a detailed inventory describing their associated methodologies available in Appendix A. SRTC will continue to collaborate and meet with staff from member agencies as needed to stay informed on system performance, network conditions, and strategy implementation.



# **List of Appendices**

**Appendix A: CMP Performance Measure Methodologies** 

**Appendix B: CMP Toolkit of Strategies** 

**Appendix C: CMP Strategies Matrix** 

