Agenda Item VI
Resolution 06-19-15

STAFF REPORT/RESOLUTION

TO: Southwest Washington Regional Transportation Council Board of Directors

FROM: Matt Ransom, Executive Director

DATE: May 28, 2019

SUBJECT: **2018 Congestion Management Process-Monitoring Report, Resolution 06-19-15**

AT A GLANCE - *ACTION*

The action requested is to accept the Congestion Management Process 2018 Monitoring Report as completion of the annual Congestion Management Process. The Congestion Management Process is a federal planning requirement. The 2018 Monitoring Report helps the region to meet this federal requirement by collecting and analyzing transportation system data, by providing information on regional transportation system performance measures, and by identifying potential strategies to help the region manage congestion.

INTRODUCTION

The Congestion Management Process (CMP) is a federal planning requirement for all metropolitan transportation planning organizations with a population of over 200,000. The CMP serves as the foundation for managing congestion on the regional transportation system.

The monitoring element of the congestion management process is designed as an informational tool to be used within the MPO transportation decision-making process. Overall, the Monitoring Report provides a summary assessment of the regional transportation system's operating conditions and deficiencies. Transportation projects which mitigate deficiencies are identified and implemented by local agencies and compete for federal funding through the regional grant process.

The purpose of this memorandum is to present the Congestion Management Process: 2018 Monitoring Report and Summary Report. The RTC Board was provided information on preliminary data at the May RTC Board meeting. At the June meeting, RTC staff will provide an overview of the 2018 CMP Summary and Full Reports and seek acceptance of the reports.

2018 MONITORING REPORT

The Congestion Management Process Monitoring Report includes transportation system performance measures that address volume, capacity, speed, occupancy, safety, and other multimodal performance measures. When tracked over time, performance measures provide quantitative information to decision makers. Viewed collectively, these performance measures provide a comprehensive assessment of the ongoing needs upon the regional transportation system.

The attached 2018 Congestion Management Summary Report includes key data and findings from the full monitoring report in such a way that the reader can quickly understand the 2018

Congestion Management Process Monitoring Report. The RTC Board mailing will provide a link to the full CMP Report and copies will be available at the June RTC Board Meeting.

KEY FINDINGS

The 2018 data confirms that the region's population and economy continues to grow, resulting in an increase in both morning and evening peak hour congestion.

The I-5 and I-205 corridors are the backbone of the regional transportation system and play a strategic role in regional travel. Meeting the needs of the regional transportation system will require a balanced approach that preserves the existing system, improves system performance, and adds capacity at selective chokepoints.

The implementation of the 20-year Regional Transportation Plan (RTP) is critical to support regional mobility and reduce congestion. However, the lack of transportation revenue for the I-5 Bridge replacement along with other key highway bottlenecks, is contributing to worsening traffic conditions. The lack of progress on select priority projects will result in delay in achieving the RTP benefits and add to future costs.

KEY STRATEGIES

The information and data contained in the Congestion Management Report is used to identify appropriate congestion management strategies:

- Local and state agencies need a robust program to analyze and invest in corridor operational improvements to get the most out of the existing transportation system.
- Transportation System Management and Operations (TSMO) and Transportation Demand Management (TDM) strategies should be a part of the regional solution. This would include transit expansion.
- There is a need to upgrade arterials within the Urban Growth Areas to urban standards, to accommodate all modes.
- High volume intersections can become corridor bottlenecks and agencies need to develop solutions to resolve these bottlenecks.
- The region should continue to work towards implementation of the I-5 bridge replacement project.

POLICY IMPLICATION

The federal planning requirements call for the development and implementation of a Congestion Management Process. The Board's acceptance of the CMP Monitoring Report helps the region to meet this federal requirement. The CMP Reports strategies are drawn from the region's Regional Transportation Plan (RTP) and need to be implemented through the Transportation Improvement Program (TIP).

BUDGET IMPLICATION

There is no direct budget impact to RTC. The budget for the Congestion Management Process comes from the federal Surface Transportation Program and local match funds. These funds are included in the annual adopted RTC Budget and Unified Planning Work Program.

ACTION REQUESTED

Adoption of Resolution 06-19-15, acceptance of the 2018 Congestion Management Process – Monitoring Report.

ADOPTED this 4th day of June 2019, by the Southwest Washington Regional Transportation Council.

SOUTHWEST WASHINGTON
REGIONAL TRANSPORTATION COUNCIL

Anne McEnerny-Ogle
Chair of the Board

ATTEST:

Matt Ransom
Executive Director

Attachment

2018 Congestion Management Process Summary Report

Introduction

Southwest Washington Regional Transportation Council's (RTC's) federally required Congestion Management Process (CMP) is a regional program that analyzes travel delay characteristics and provides system performance information on major streets and state highways. Monitoring of congestion is a planning tool that provides reliable data to identify traffic problems to support wise investment decisions to enhance the movement of people and goods.

Key Findings

Transportation congestion is an ever increasing concern for those who live and work within the Portland-Vancouver metropolitan area. With rapid growth of population and employment comes increasing vehicular travel and congestion.

Congestion is defined as the level at which transportation system performance is no longer acceptable due to traffic interference resulting in decreased speeds and increased travel times. Traffic congestion is an inherent result of a healthy economic urban area.

Congestion results in loss of time, increased fuel consumption, decreased air quality, and hindrance to economic development. The impacts and costs due to transportation congestion go well beyond the less efficient movement of people and goods. Economic development and quality of life are significantly dependent upon implementing an effective and efficient congestion management process.

The I-5 and I-205 corridors are the backbone of the regional transportation system and play a strategic role in regional travel. Active traffic management strategies, which manage the transportation system by responding to existing traffic conditions, are needed in both the I-5 and I-205 corridors during peak hours. Meeting the needs of the regional transportation system will require a balanced approach that preserves the existing system, improves system performance and safety, while adding capacity at selective chokepoints.

The implementation of the 20-year Regional Transportation Plan (RTP) is critical to support regional mobility and manage congestion. However, the lack of transportation revenue for the I-5 Bridge replacement along with other key highway bottlenecks, is contributing to worsening traffic conditions. The lack of progress on funding priority projects will result in delayed achievement of the Regional Transportation Plan benefits and increased future costs.

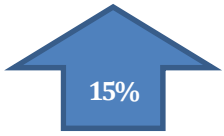
Regional Summary

Clark Co. Population

2013 – 435,500
vs.
2018 – 479,500
OFM Populations

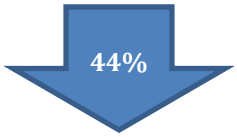
Portland/Vancouver Employment

2013 – 1.10
vs.
2018 – 1.27
In millions of jobs BLS



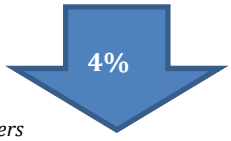
Unemployment Rate

2013 – 6.6%
vs.
2018 – 3.7%
Percent of labor force



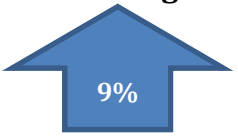
Bi-State C-TRAN Ridership

2013 – 1,640
vs.
2018 – 1,581
Daily Evening Peak Riders



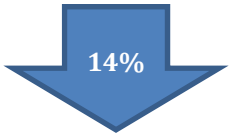
Columbia River Crossings

2013 – 278,700
vs.
2018 – 303,500
Daily I-5 and I-205 Bridge Volumes

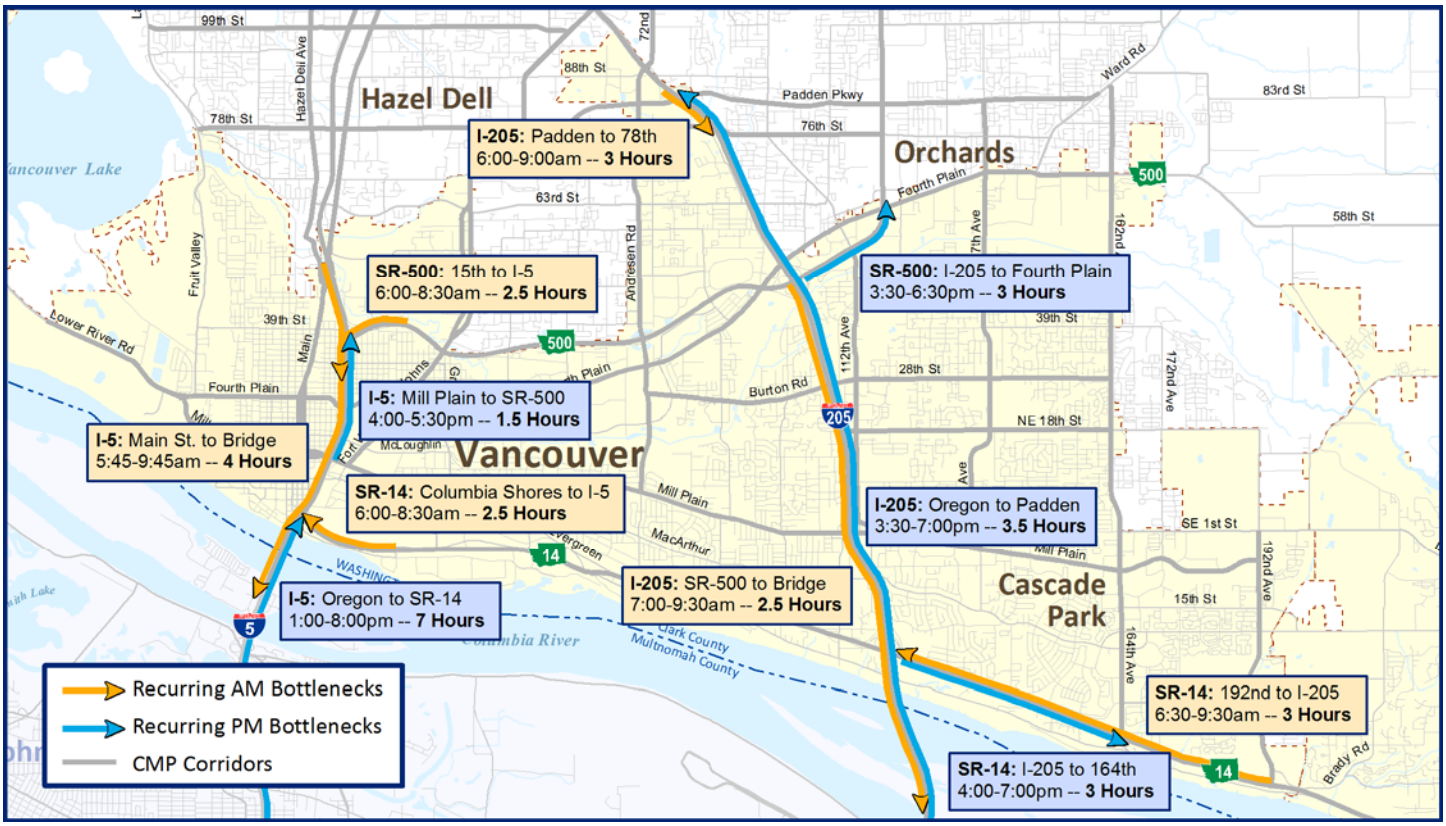


Evening Travel Speed

2013 – 37.9
vs.
2018 – 32.6
Average system speed



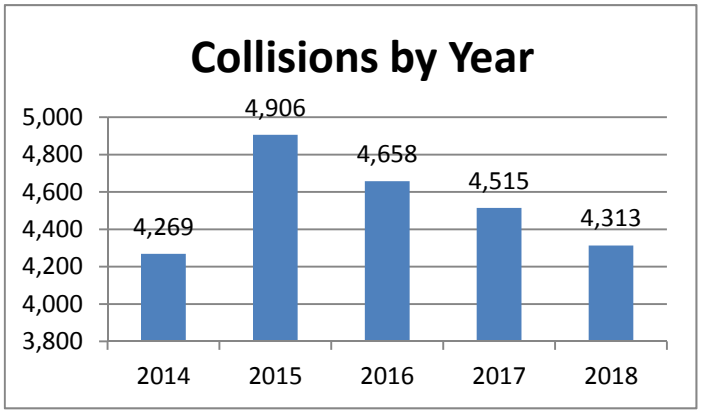
Freeway Peak Hour Congestion

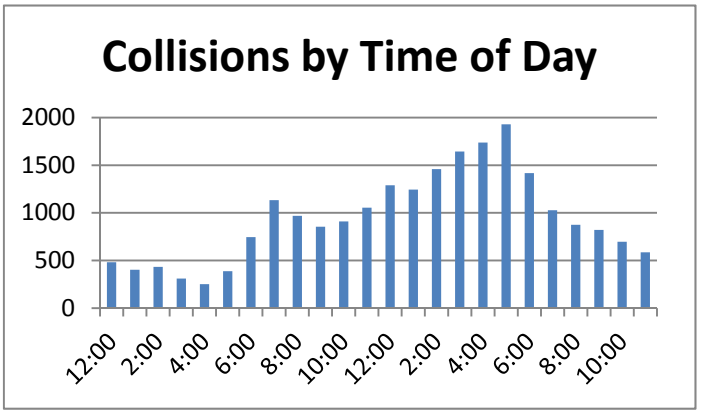


Collision Data

The total numbers of collision in Clark County has been declining over the last four years (2015-2018), while the number of serious injuries and fatalities seem to vary year by year.

Higher congestion levels often result in more but less severe collisions. The number of collisions seems to directly correlate with times of higher traffic volumes. Collisions and other incidents can generate significant traffic congestion.





Most Congested Corridors

Using corridor capacity ratio the following corridors are the most congested:

1	I-5, Main St. to Jantzen Beach (AM)	**1.00**
2	Main Street, I-5 to Mill Plain (AM)	**0.97**
3	I-205, SR-500 to Airport Way (AM)	**0.95**
4	SR-14, I-205 to 164th Av. (PM)	**0.93**
5	SR-503, Fourth Plain to 119th St. (PM)	**0.87**

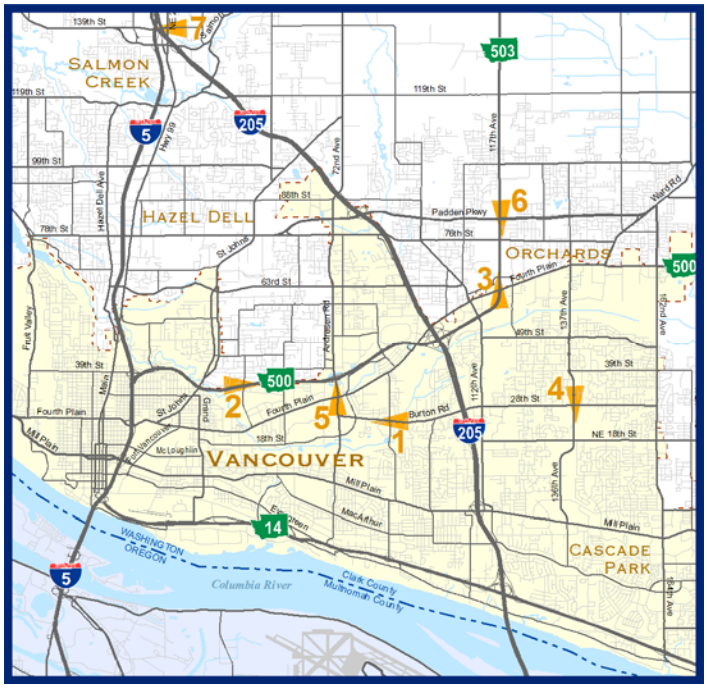
A corridor with capacity ratio above 0.90 is very congested and a corridor above 0.80 will feel congestion.

Intersection Delay

A long average delay for the through movement at an intersection adds to the overall travel time and increases congestion. The following intersections have average evening delays over two minutes for a key through movement:

1	Burton Rd./NE 86th Av. (W)	**194 Sec.**
2	SR-500/NE 42nd Av./Falk Rd. (E)	**167 Sec.**
3	Fourth Plain/SR-503/SR-500 (N)	**154 Sec.**
4	NE 28th St./NE 138th Av. (S)	**139 Sec.**
5	Fourth Plain/Andresen Rd. (N)	**133 Sec.**
6	Padden Parkway/SR-503 (S)	**127 Sec.**
7	NE 139 St./NE 20th Av. (W)	**125 Sec.**

In signal timing, the higher volume movement is generally favored over lower volume movements, to improve the overall intersection operations. The greatest concern is long delays in the eastbound and northbound peak directions.



STRATEGIES

SR-500 Safety Improvements

In response to a safety study, the Washington State Department of Transportation implemented a Right In, Right Out design to improve safety on State Route 500 at NE 42nd Avenue and NE 54th Avenue. The project was implemented in November 2018, and early indications are that both collisions and corridor congestion have been reduced.

Active Traffic Management

Recently, WSDOT has retimed the SR-14 to I-5 southbound ramp meter and utilized variable message signs to improve morning traffic flow. This effort has resulted in improved operation during the morning peak hour on both I-5 South and SR-14 central corridors.

WSDOT is nearing completion of a ramp meter at SR-500 to improve vehicle flows onto I-205 north. WSDOT also has an Active Traffic Management project on I-5 south from 78th Street to the interstate bridge that will be completed in 2020. This project includes variable speed limits to smooth traffic flow and dynamic ramp metering to reduce turbulence and conflicts for vehicles entering the freeway. WSDOT is also planning additional active traffic management projects in other freeway corridors.

Transit

In 2020, C-TRAN, in cooperation with WSDOT, will complete a second Bus on Shoulder project on I-5 south from about 78th Street south to the Interstate Bridge. C-TRAN has also started planning for Bus Rapid Transit along their second busiest route of Mill Plain Boulevard.

Operational Studies

There are several studies underway that are evaluating operational strategies for near term implementation to manage congestion, reduce delay and improve safety on the Clark County freeway system. These studies are analyzing needs on I-5, I-205, SR-500 and SR-14.

They will evaluate technology based 'real-time' active traffic management such as variable speeds, queue warnings, lane assignment, and dynamic ramp metering. Experience in other regions has shown that these techniques can smooth traffic flow, improve safety, and reduce the duration of congestion. The studies will also assess low cost capital improvements, such as lane restriping, lane extensions, ramp modifications, and signage improvements. These strategies can balance lane capacity and reduce weaving and merging conflicts.

The SR-500/Fourth Plain Study is also looking at near term strategies to improve safety, reduce congestion, and improve travel reliability at the County's busiest signalized intersection.

Key Regional Strategies

The information and data contained in the Congestion Management Report is used to identify appropriate congestion management strategies:

- Local and state agencies need a robust program to analyze and invest in corridor operational improvements to get the most out of the existing transportation system.
- Transportation System Management and Operations (TSMO) and Transportation Demand Management (TDM) strategies should be a part of the regional solution. This would include transit expansion.
- There is a need to upgrade arterials within the Urban Growth Areas to urban standards, to accommodate all modes.
- High volume intersections can become corridor bottlenecks and agencies need to develop solutions to resolve these bottlenecks.
- The region should continue to work towards implementation of an I-5 bridge replacement project.

For More Information

You can get more information on the Congestion Management Process by contacting the Regional Transportation Council at 564-397-6067 or by visiting the project website at ***http://www.rtc.wa.gov/programs/cmp****.*