

2013 Congestion Management Process Summary Report



Introduction

Most likely every Clark County resident traveling within the county and to Portland has had the experience of sitting in traffic congestion. Congestion can be characterized by heavy volumes, increased travel time, and a decrease in traffic safety. While it may be impossible to totally remove all congestion, congestion needs to be managed in order to provide a reliable transportation system and economic vitality.

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. It is a tool to be used within the transportation decision-making process.

The information and data contained in the congestion management process is used to identify transportation needs and encourages cost-effective strategies that complement major capital needs. Within the annual transportation funding program, prioritization is given to projects which address deficiencies identified through the CMP.

The 2013 CMP monitoring shows an increase in the number of major streets with slower travel times, while the list of major streets where volumes exceeds capacity remains the same. Adding additional travel lanes has become very costly, and the region is focusing additional efforts on low-cost traffic management and operational alternatives that help get the most out of the existing transportation system.

The purpose of this summary is to provide a snapshot of the region's most congested roadways and a quick look at some of the recent transportation projects that improved system performance.

Transportation System Performance

Transportation system performance can be measured in several ways, especially when considering a multimodal transportation system. RTC's congestion management process includes performance measures related to volume, capacity, speed, occupancy, safety, trucks, and transit. When viewed collectively, these performance measures provide a more comprehensive view of the transportation needs within the region. This summary report includes a snapshot of only a few of the performance measures included in the full 2013 congestion report.



For More Information

You can get more information on the Congestion Management Process by contacting the Regional Transportation Council at 360-397-6067 or by visiting the project website at <http://www.rtc.wa.gov/data/cmp>.

Corridors: Volume to Capacity

The five worst traffic volume to capacity ratio corridors are shown on Map 1. The corridor capacity ratio is an aggregation of the volume/capacity ratios for the individual segments that make up a corridor. The capacity ratio provides an indication of how well the transportation facility carries the existing traffic volumes. The closer the ratio is to one, the worse the traffic congestion. A ratio above 0.90 is an indicator of significant congestion.

The five worst volume to capacity corridors are:

- | | | |
|----------|---|------------------|
| 1 | I-5, Main St. to Jantzen Beach (AM) | >1.00* |
| 2 | 18th St., 112th Ave. to 162nd Ave. (PM) | 1.01 |
| 3 | SR-14, I-205 to 164th Ave. (PM) | 1.00 |
| 4 | I-205, Airport Way to SR-500 (PM) | 0.93 |
| 5 | Fourth Plain, SR-503 to 162 nd Ave. (PM) | 0.92 |

* At the I-5 Bridge, traffic demand exceeds available capacity during the morning commute. The result is that fewer vehicles are able to get through the corridor.



Corridors: Lowest Speed Percentage

Illustrated on Map 2 are the five lowest percentage of speed compared to speed limit corridors. The level of speed in the corridor is ranked by comparing actual measured travel speed to the posted speed limit. The percentage along arterials is often directly connected to delay at signalized intersections. Improved progression and coordination between signals will improve overall travel time and safety. A travel speed lower than 60% of the posted speed limit is below average and is an indicator of delay.

The five lowest speed percentage corridors are:

- | | | |
|----------|---|------------|
| 1 | I-5, Main St. to Jantzen Beach (AM) | 35% |
| 2 | Main St., Ross St. to Mill Plain (AM) | 48% |
| 3 | Fourth Plain, SR-503 to 162 nd Ave. (PM) | 49% |
| 4 | Mill Plain, I-205 to 164 th Ave. (PM) | 50% |
| 5 | Andresen Rd., Mill Plain to SR-500. (PM) | 53% |



Intersection Delay

Illustrated on Map 3 are the five intersections with the longest delay by direction. Delay represents the period of time travel speed is below 5 mph due to the intersection control. The delay time at an intersection was averaged for the multiple travel time runs. This delay is only calculated for through movement on the congestion management corridor. A delay greater than 45 seconds can lead to backups and generate additional congestion.

The five intersections with longest delay in seconds:

1	Fourth Plain & SR-500 (PM NB)	129
2	Fourth Plain & Andresen (PM NB)	128
3	Padden Parkway & Andresen. (PM NB)	98
4	Mill Plain & Ft. Vancouver (PM SB)	83
5	Fourth Plain & 162nd Avenue (PM EB)	81



Corridors: Transit Ridership

Illustrated on Map 4 are the five highest transit Ridership corridors during the pm peak period. C-TRAN uses an automated ridership collection system on their vehicles to collect ridership data. Transit ridership represents the number of passengers during the pm peak period at a specific location within each corridor. Transit ridership is often reflective of access to transit including frequency of service and bus capacity. Transit ridership in a corridor increases the person carry capacity of a corridor.

The five highest transit ridership corridors are:

1	I-5, Jantzen Beach to Main St. (PM)	1489
2	Fourth Plain, Andresen to SR-503 (PM)	650
3	Fourth Plain, I-5 to Andresen (PM)	572
4	SR-14, I-205 to 164th Ave. (PM)	522
5	I-5, Main St. to I-205 (PM)	520



Corridors: Truck Routes

Illustrated on Map 5 are the five highest corridors by percentage of trucks in the morning peak period. Classification traffic counts are collected at many locations throughout Clark County. This provides a measure of trucks as a percentage of all vehicles traveling on a roadway. Trucks are defined as vehicles with more than two axles, such as a typical tractor-trailer rig. It is important to note that trucks often travel outside of peak periods.

The five highest corridors by percentage of trucks are:

- | | | |
|----------|---|------------|
| 1 | Fourth Plain, I-5 to NW 26 th Ave. (AM) | 17% |
| 2 | Mill Plain, I-5 to Fourth Plain (AM) | 15% |
| 3 | I-5, 134 th St. to Cowlitz County (AM) | 9% |
| 4 | SR-501, I-5 to S. 9 th St. - Ridgefield (AM) | 8% |
| 5 | SR-503, 119 th St. to Fourth Plain (AM) | 7% |



Monitor Strategy Effectiveness

Through the Transportation Improvement Program, a series of transportation projects to help address congestion are implemented. These projects are designed to improve traffic flow within the region and often provide other benefits such as multimodal options and improved safety.

The congestion monitoring process collects data that allows the region to track the performance of implemented projects. The following is a brief analysis of three congestion projects that were operational prior to the 2013 data collection:

Andresen Road TSMO Pilot Project

Clark County, RTC, Vancouver, and WSDOT worked together to install technology and devices in the Andresen Road corridor to monitor and improve traffic signal performance. An initial retiming of the traffic signals occurred in 2013, with additional enhancements planned in 2014. The project cost approximately \$250,000.

The project improves safety, increases capacity, reduces backups, and reduces travel time.

NE 137th/138th Avenue Roundabouts

The City of Vancouver upgraded 137th/138th Avenue between NE 28th Street and NE 49th Street to arterial standards. The arterial includes two travel lanes,

center median, roundabouts, bike lanes, and sidewalk. The total cost of the project is approximately \$13 million.

The project improves safety, increases capacity, reduces backups, reduces travel time, and provides multimodal options.

SR-14 Camas-Washougal Widening

The Washington State Department of Transportation has widened SR-14 from two lanes to four lanes from the end of the West Camas Slough Bridge to just east of Union Street. With the construction of a split interchange, two traffic signals were removed from SR-14. The Total project cost is approximately \$30 million.

The project improves safety, increases capacity, and reduces travel time.

Congestion Monitoring Report

The Congestion Management Process Monitoring Report includes a warehouse of transportation data and conducts an analysis of transportation system performance. The data is translated into tables and maps that are contained in the full report. The full CMP report including transit and other multimodal data can be located on RTC's website at <http://www.rtc.wa.gov/data/cmp>