



2015 4th Quarter Report

Quarterly Performance Report





## High Quality Service through Continuous Improvement

### 2015 4th Quarter Performance Report

TriMet Board Meeting February 24, 2016

Quality is a never ending quest and continuous improvement is a never ending way to discover and eliminate the root causes of problems. It accomplishes this by using sustainable, small-steps improvements rather than implementing one huge improvement. It is simply a way of looking at how we can do our work better.

Key performance indicators are performance measurements that identify the level of continual progress toward attaining stated objectives.

#### APPROACH

Focus on TriMet's three primary areas for improvement:

##### 1. Vehicle and System Reliability

Goal: Reduce service disruptions through effective preventive maintenance and asset management.

Key Performance Indicators: preventive maintenance schedule compliance, mean distance traveled between mechanical failures, and maintenance attendance.

- *Bus Maintenance, Maintenance of Way, and Fare Equipment Maintenance all exceeded preventive maintenance objectives for the 2015 4th Quarter as set by the Federal Transit Administration. Rail Equipment Maintenance (REM) fell 5.4% below the objective for the Quarter. The decline in REM was due in part to unplanned maintenance requirements generated by the light rail vehicle water intrusion event on October 31. All 19 light rail vehicles that were affected by the water intrusion are back in service.*
- *Fixed route bus improved in miles traveled between service related repairs over the 2015 4th Quarter. This gain reflects the improving reliability of the new bus fleets.*
- *MAX light rail declined 27.9% from the 2014 4<sup>th</sup> Quarter mean distance between failures (MBDF). This decline reflects the "breaking in" of the new rail vehicles. Improvements and modifications are already underway and the rail MBDF is expected to improve in the months ahead as the engineering and maintenance teams continue to identify specific issues requiring resolution for our supplier associated with any new vehicle fleet expansion. These issues get identified as the new vehicles accumulate more revenue mileage. In addition, a major program to perform overhauls on our 35-year old Type 1 vehicles, should improve miles travelled between service related repairs over time.*
- *Overall Maintenance attendance remains steady overall.*

## 2. Service Delivery

Goal: Ensure efficient service delivery by creating staffing levels and reporting structure that increase the ability to respond quickly to service needs and customers. Improve route design and service delivery through ongoing line reviews.

Key Performance Indicators: On time performance, operator attendance, and boarding rides per revenue hour.

- *Fixed route bus on time performance has remained flat since the 2014 4<sup>th</sup> Quarter increasing by only .7% in the 2015 4<sup>th</sup> Quarter.*
- *MAX on time performance declined by 4% from the 2014 4th Quarter. This decrease in rail on time performance is attributable to many new light rail operators and rail controllers who continue to learn and refine their skills while operating in real time revenue service. Also contributing to the decline in MAX on time performance was the new line start-up, which generally requires a smoothing out of the new schedule over a period of time. A recent schedule change has been made and with early positive impacts being achieved. Additionally, the light rail vehicle water intrusion event in late October contributed to the drop off in MAX on time performance. WES Commuter Rail on time performance is getting back to normal from the 3<sup>rd</sup> Quarter 2015. On time performance was 94.1% in the 2015 4<sup>th</sup> Quarter down slightly from 95.5% in the 2014 4th Quarter. The decrease is primarily related to: PTC software implementation, significant flooding along the railroad and numerous switch and signal issues.*
- *Transportation employee attendance is trending up from 90.4% in the 2014 4<sup>th</sup> Quarter to 91.2% in the 2015 4<sup>th</sup> Quarter.*
- *A significant initiative to improve and focus on time performance is underway. Included in our plans are physical improvements to the system, more support for frontline employees, reviewing policy and practices and working with our city and regional partners to limit delays. Examples of some of the positive changes are providing more rail operator trainers and Control Room management.*
- *System-wide boarding rides per revenue hour decreased by 6.8% from the 2014 4<sup>th</sup> Quarter. This reflects slight declines in ridership in the Quarter and the impact of low fuel prices, which generally increase motorists' car miles driven, and weak on time performance. In addition to the On Time Performance improvements program, follow up research on the Attitude and Awareness study is also being initiated to better understand our customers' transit habits.*

### 3. Operator Support

Goal: Improve safety and customer service through customized training programs for operators and supervisors.

Key Performance Indicators: annual operator recertification training rate, collisions, complaints and commendations.

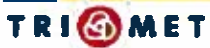
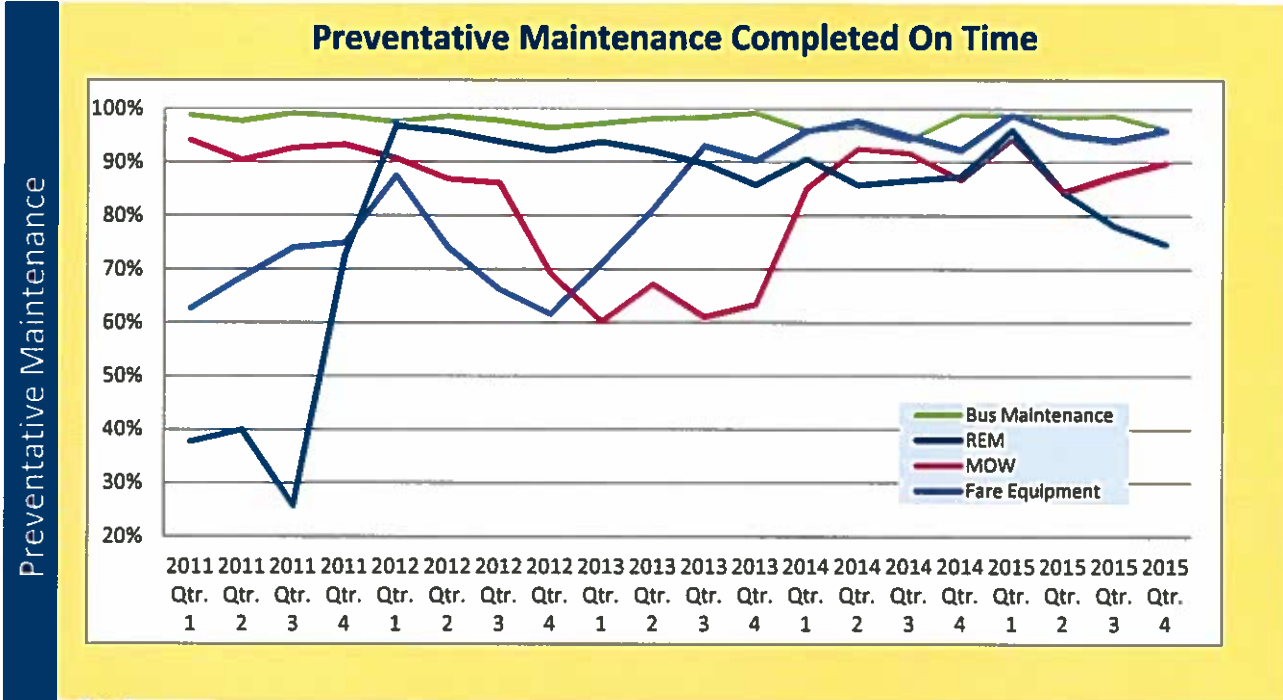
- *Bus and MAX light rail operator annual training and recertification for Fiscal Year 2016 commenced in October for bus operators and in November for light rail employees. The recertification training is above or on target for completion as scheduled.*
- *Bus collisions per 100,000 miles decreased .7% since the 2014 4<sup>th</sup> Quarter. A large number are collisions with fixed objects, which is indicative of new operators becoming accustomed to driving buses in new environments.*
- *MAX light rail collisions per 100,000 miles traveled doubled from the 2014 4<sup>th</sup> Quarter. The majority of these incidents were not preventable and include a high rate of vehicles coming into the ROW and colliding with trains. Also, three derailments are reflected here as well: one at Lloyd Center, which we reported on at an earlier Board meeting, and two in the TriMet rail yard.*
- *Bus operator complaints per 100,000 boarding rides have decreased overall from 19.6 in the 2014 4<sup>th</sup> Quarter to 18.6 in the 2015 4<sup>th</sup> Quarter. MAX operator complaints per 100,000 boarding rides increased, going from 4.1 complaints per 100,000 boarding rides in the 2014 4<sup>th</sup> Quarter to 6.0 in the 2015 4<sup>th</sup> Quarter. This increase was mostly in the broad category called "Service Delivery" and reflects the large number of new light rail operators as well as the drop in MAX on time performance referenced above in Service Delivery. The long-term trend is that complaints are increasing. Our plan to improve on time performance should turn this trend around.*
- *Commendations received for fixed route bus per 100,000 boarding rides increased by 14.5%, going from 3.3 commendations per 100,000 boarding rides in the 2014 4<sup>th</sup> Quarter to 3.8 commendations in the 2015 4<sup>th</sup> Quarter. MAX commendations increased by 50.7% from 2.1 commendations per million boardings in 2014 4<sup>th</sup> Quarter to 3.1 in 2015 4<sup>th</sup> Quarter.*



Preventative Maintenance Completed On Time

	<u>2015 Qtr. 4</u>	<u>2015 Qtr. 3</u>	<u>2014 Qtr. 4</u>	<u>2015 - 2014</u> <u>Percent Pt. Change</u>
Bus Maintenance	95.9%	98.5%	98.8%	-2.9%
REM	74.6%	78.0%	87.2%	-12.6%
MOW	89.8%	87.5%	86.6%	3.2%
Fare Equipment	95.9%	93.9%	92.2%	3.7%

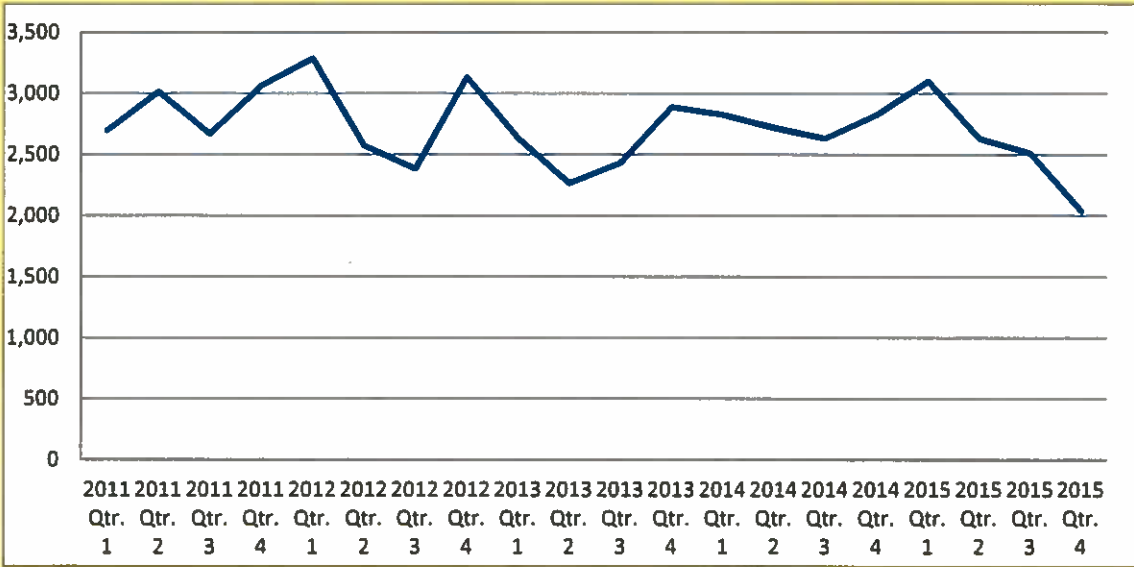
Preventative Maintenance Completed On Time



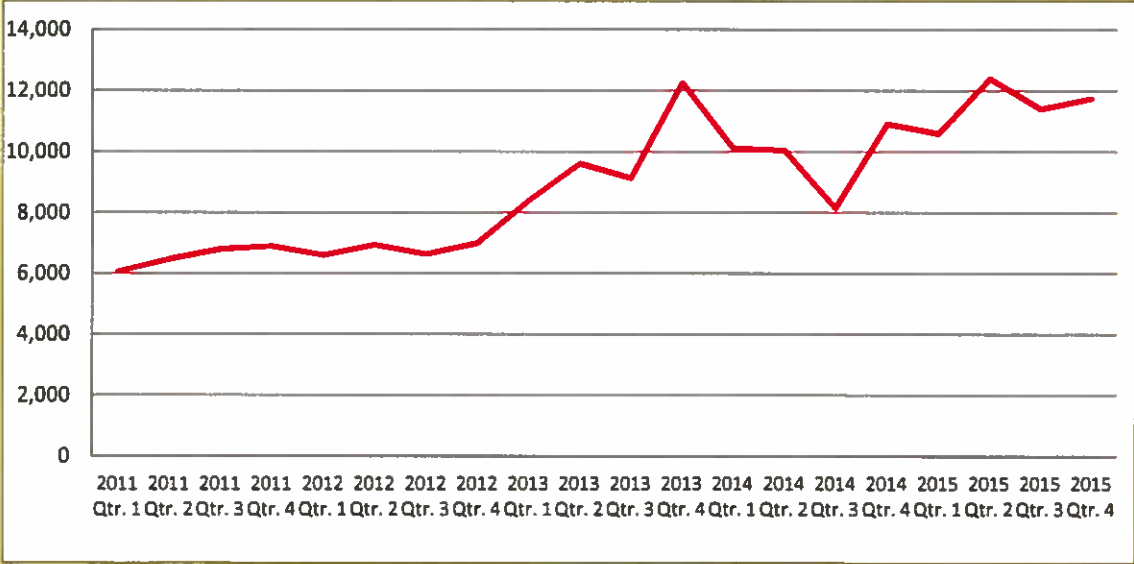
Mean Distance Between Failures (MDBF)

	<u>2015 Qtr. 4</u>	<u>2015 Qtr. 3</u>	<u>2014 Qtr. 4</u>	<u>2015 - 2014 Percent Change</u>
MAX Light Rail	2,036	2,507	2,823	-27.9%
Fixed Route Bus	11,746	11,399	10,907	7.7%

MAX Light Rail Car Miles / Service Related Repairs



Fixed Route Bus Miles Between Mechanical Failures - Lost Service



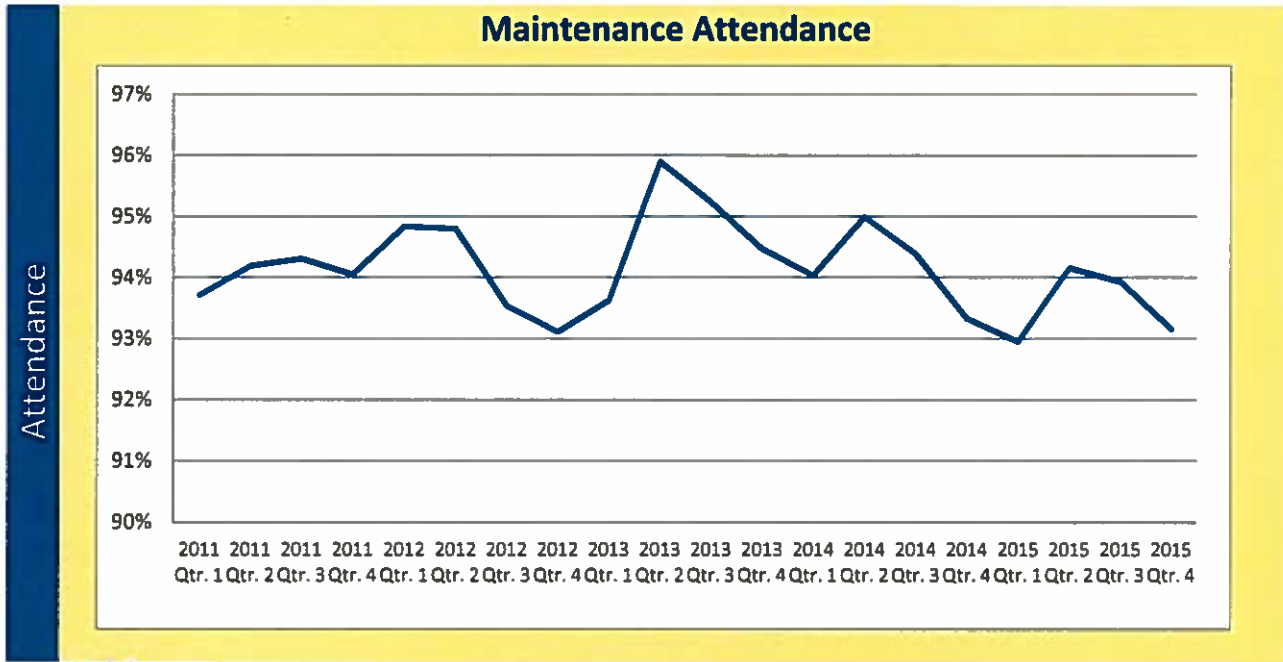
Mean Distance Between Failures (MDBF)





### Maintenance Employee Attendance

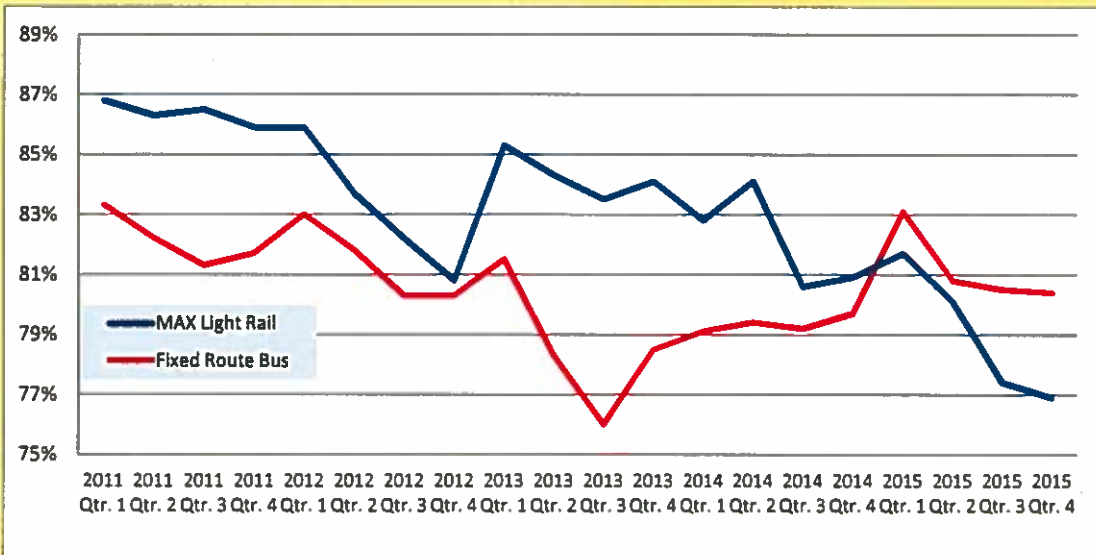
	<u>2015 Qtr. 4</u>	<u>2015 Qtr. 3</u>	<u>2014 Qtr. 4</u>	<u>2015 - 2014</u> <u>Percent Pt. Change</u>
Maintenance	93.2%	93.9%	93.3%	-0.2%



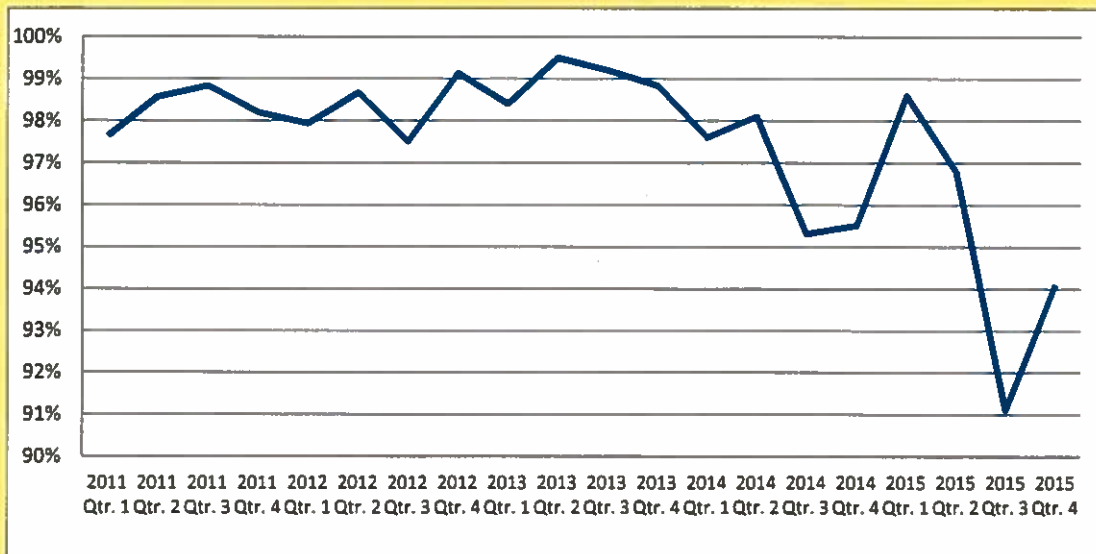
### On Time Performance

	<u>2015 Qtr. 4</u>	<u>2015 Qtr. 3</u>	<u>2014 Qtr. 4</u>	<u>2015 - 2014</u> <u>Percent Pt. Change</u>
<b>Fixed Route Bus</b>	80.4%	80.5%	79.7%	0.7%
<b>MAX Light Rail</b>	76.9%	77.4%	80.9%	-4.0%
<b>WES Commuter Rail</b>	94.1%	91.1%	95.5%	-1.4%

#### Bus and MAX Light Rail OTP



#### WES Commuter Rail OTP

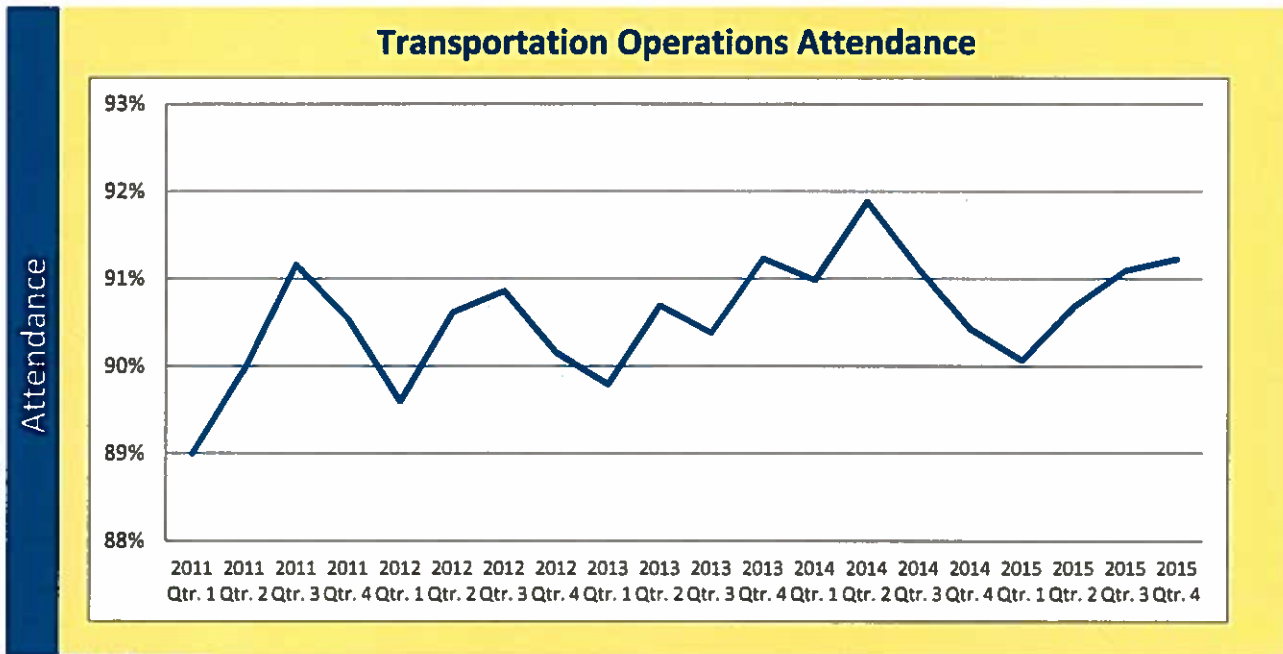


On Time Performance



### Transportation Operations Employee Attendance

	<u>2015 Qtr. 4</u>	<u>2015 Qtr. 3</u>	<u>2014 Qtr. 4</u>	<u>2015 - 2014</u> <u>Percent Pt. Change</u>
TransOps	91.2%	91.1%	90.4%	0.8%

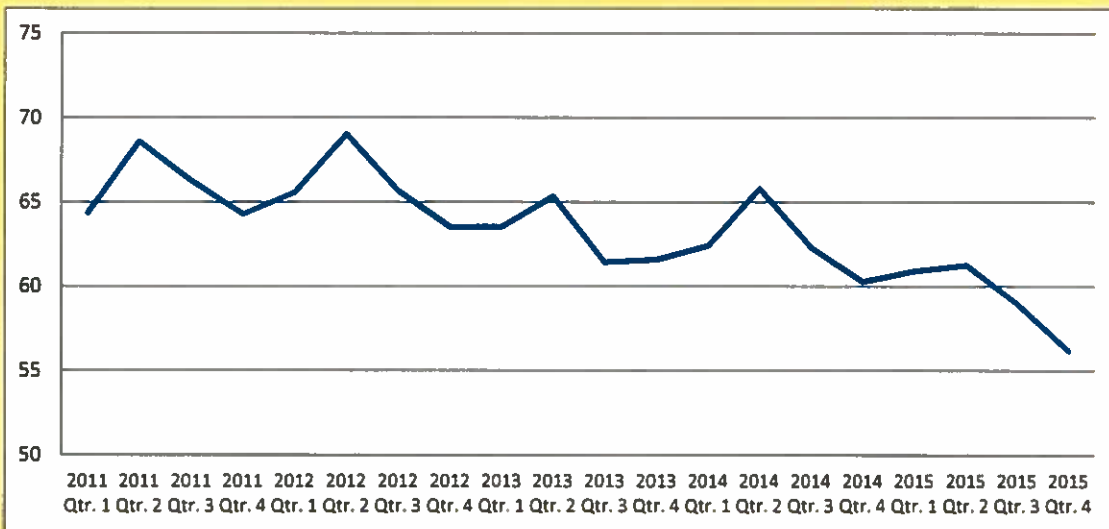


### Boarding Rides Per Revenue Hour

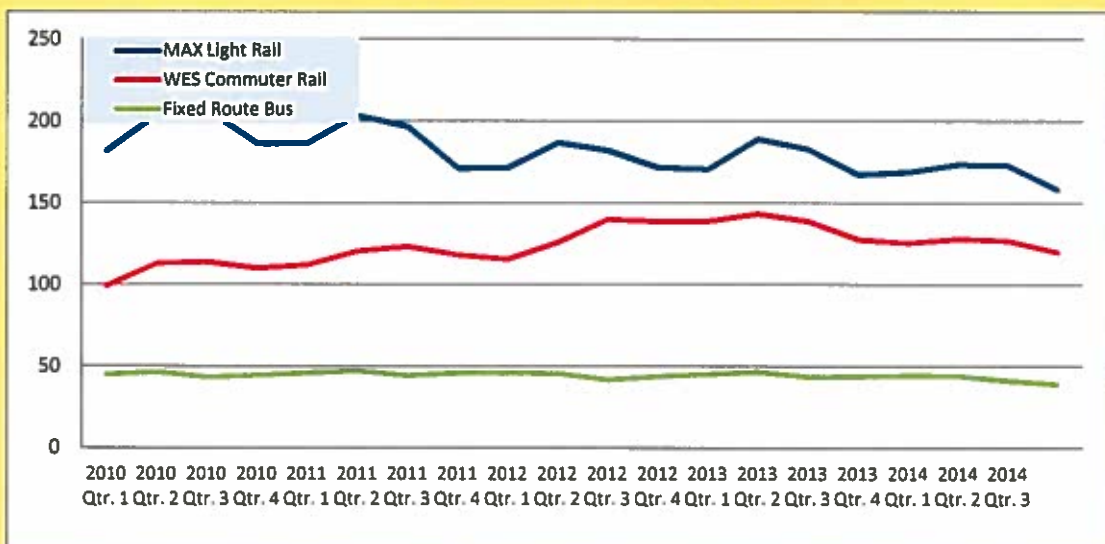
	<u>2015 Qtr. 4</u>	<u>2015 Qtr. 3</u>	<u>2014 Qtr. 4</u>	<u>2015 - 2014</u> <u>Percent Change</u>
<b>Total</b>	56.2	59.0	60.3	-6.8%
<b>Fixed Route Bus</b>	39.1	41.3	43.6	-10.4%
<b>MAX Light Rail</b>	157.9	172.9	167.1	-5.5%
<b>WES Commuter Rail</b>	119.8	126.9	127.5	-6.0%

TriMet Boarding Rides Per Revenue Hour

#### Total Fixed Route Rides Per Revenue Hour



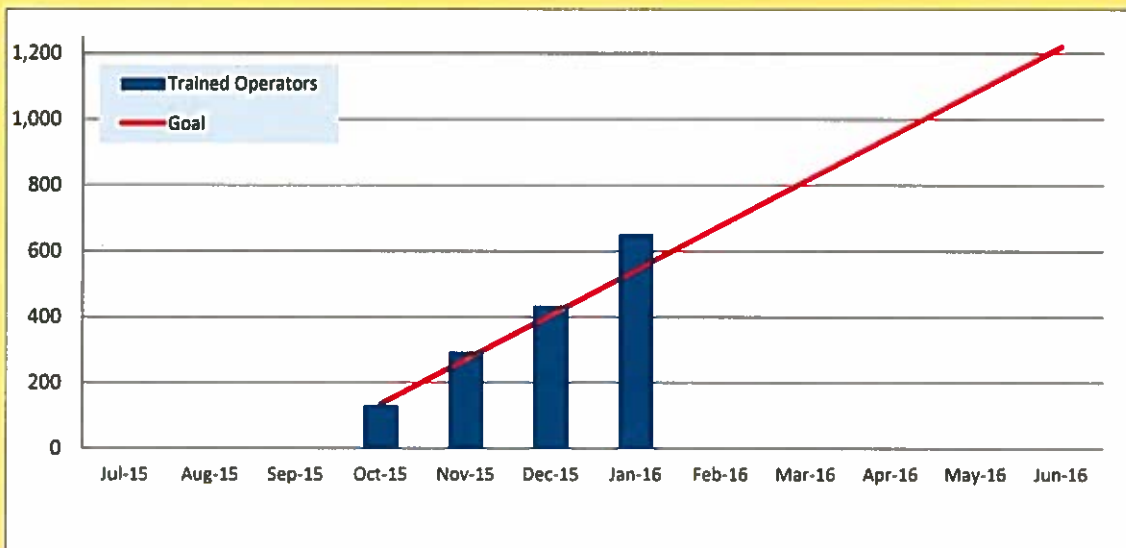
#### Rides Per Revenue Hour By Mode



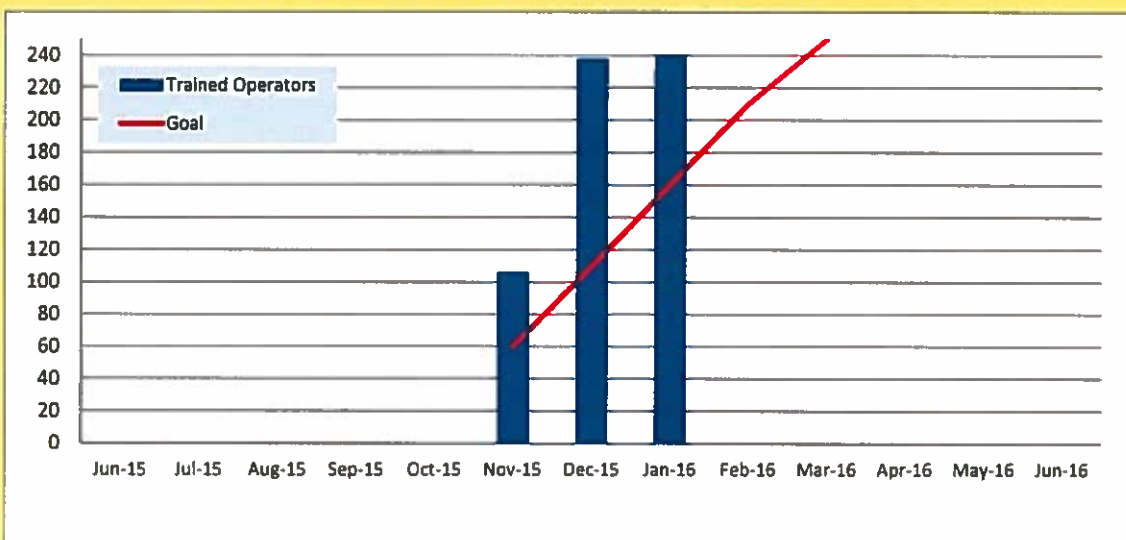
### Annual Operator Recertification Training

	<u>Nov-15</u>	<u>Dec-15</u>	<u>Jan-16</u>	<u>Fiscal Year</u>
<b>Bus Trained</b>	293	433	651	
<b>Cumulative Goal</b>	271	407	542	1,220
<b>MAX Trained</b>	106	238	240	
<b>Cumulative Goal</b>	60	110	160	243

#### Bus Operator Annual Recertification - Actual to Goal



#### MAX Light Rail Annual Recertification - Actual to Goal

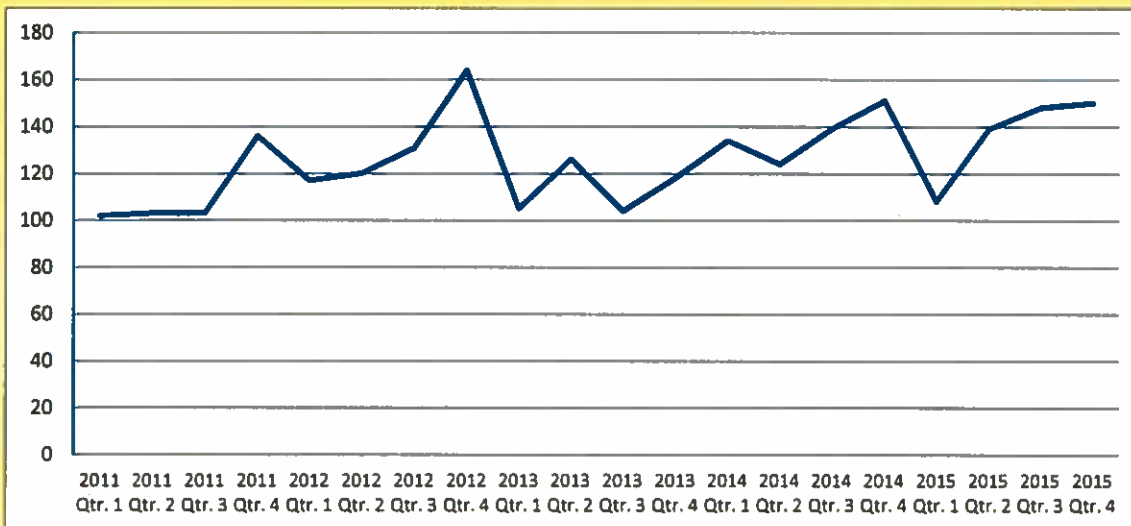


Operator Recertification Training

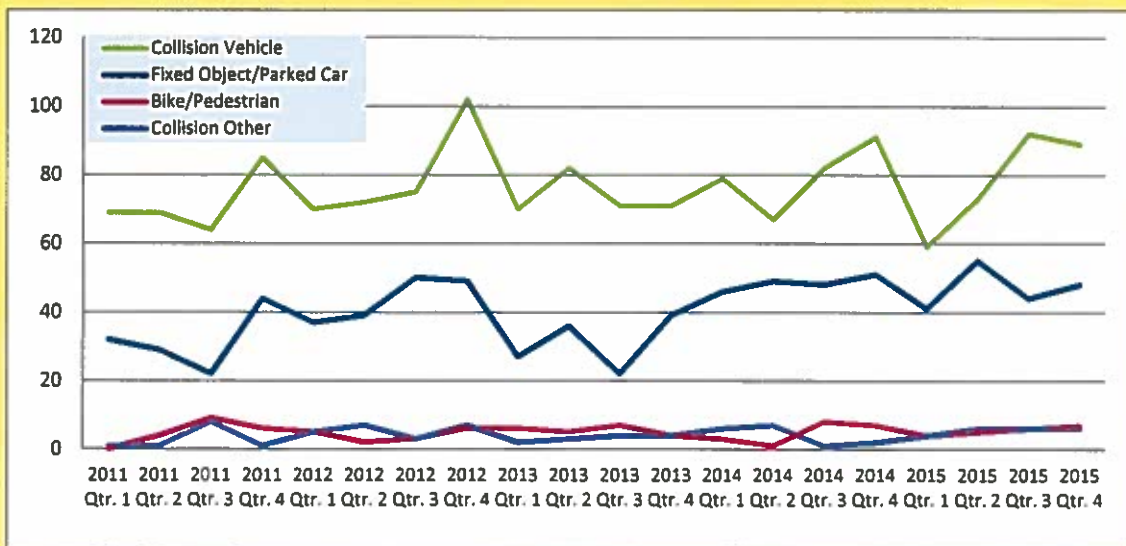
### Fixed Route Bus Collisions

	<u>2015 Qtr. 4</u>	<u>2015 Qtr. 3</u>	<u>2014 Qtr. 4</u>	<u>2015 - 2014</u> <u>Percent Change</u>
<b>Total</b>	150	148	151	-0.7%
<b>Collision Vehicle</b>	89	92	91	-2.2%
<b>Fixed Object/Parked Car</b>	48	44	51	-5.9%
<b>Bike/Pedestrian</b>	7	6	7	0.0%
<b>Collision Other</b>	6	6	2	200.0%

#### Total Bus Collisions



#### Bus Collision Types

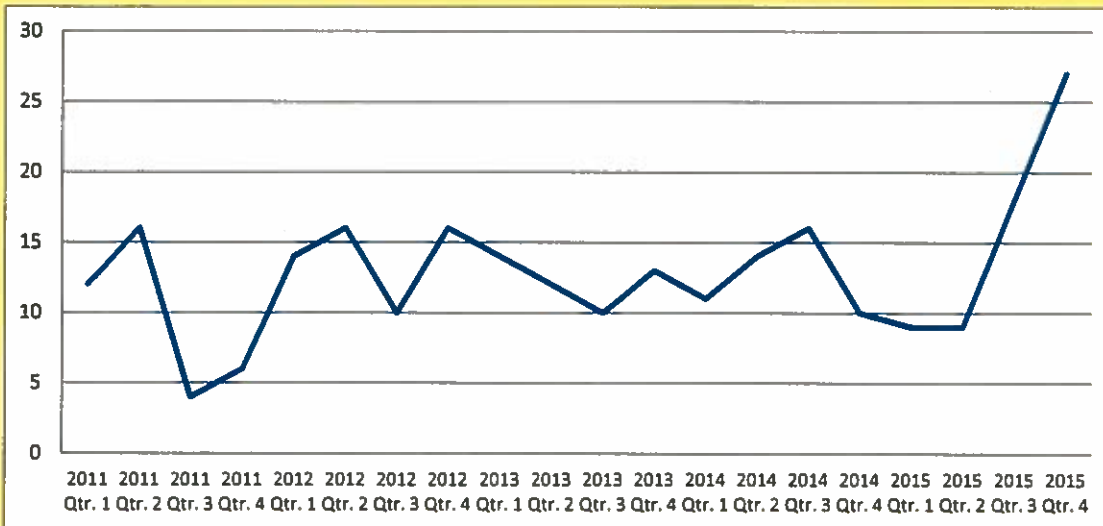


Fixed Route Bus

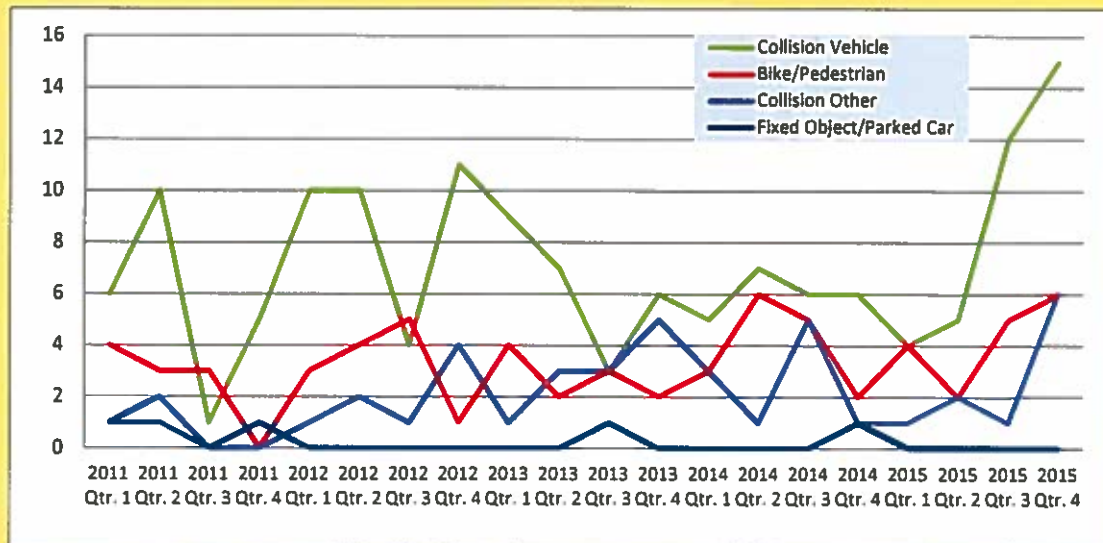
### MAX Light Rail Collisions Per 100,000 Miles

	<u>2015 Qtr. 4</u>	<u>2015 Qtr. 3</u>	<u>2014 Qtr. 4</u>	<u>2015 - 2014</u> <u>Percent Change</u>
<b>Total</b>	27	18	10	170%
<b>Collision Vehicle</b>	15	12	6	150%
<b>Fixed Object/Parked Car</b>	-	-	1	0%
<b>Bike/Pedestrian</b>	6	5	2	200%
<b>Collision Other</b>	6	1	1	500%

### MAX Light Rail Collisions Per 100,000 Miles



### MAX Collision Types Per 100,000 Boarding Rides



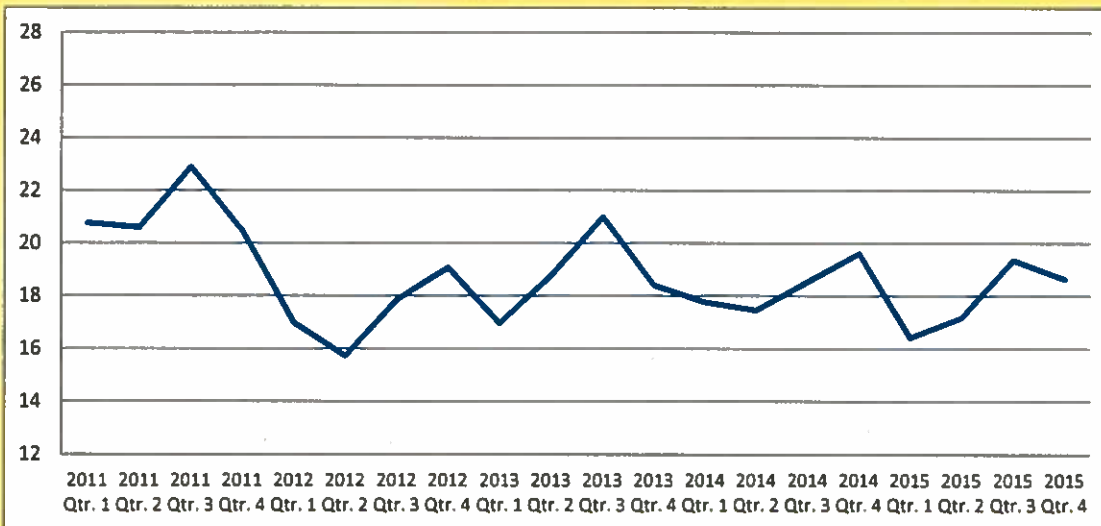
MAX Light Rail



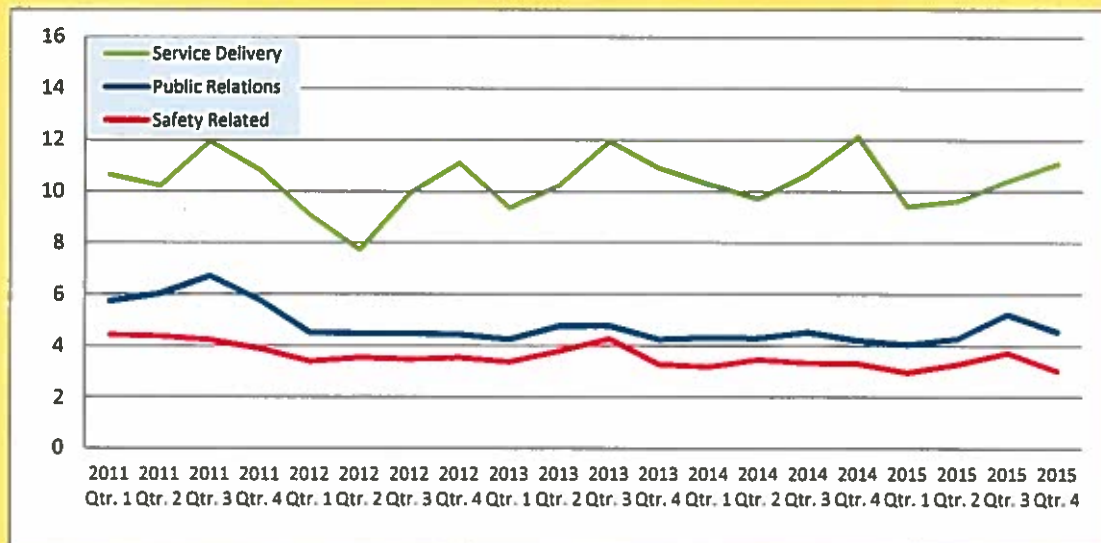
### Fixed Route Bus Complaints Per 100,000 Boarding Rides

	<u>2015 Qtr. 4</u>	<u>2015 Qtr. 3</u>	<u>2014 Qtr. 4</u>	<u>2015 - 2014</u> <u>Percent Change</u>
<b>Total</b>	18.6	19.4	19.6	-5.0%
<b>Service Delivery</b>	11.1	10.4	12.1	-8.7%
<b>Public Relations</b>	4.5	5.2	4.2	8.4%
<b>Safety Related</b>	3.0	3.7	3.3	-8.6%

#### Total Operator Complaints Per 100,000 Boarding Rides



#### Type of Operator Complaints Per 100,000 Boarding Rides



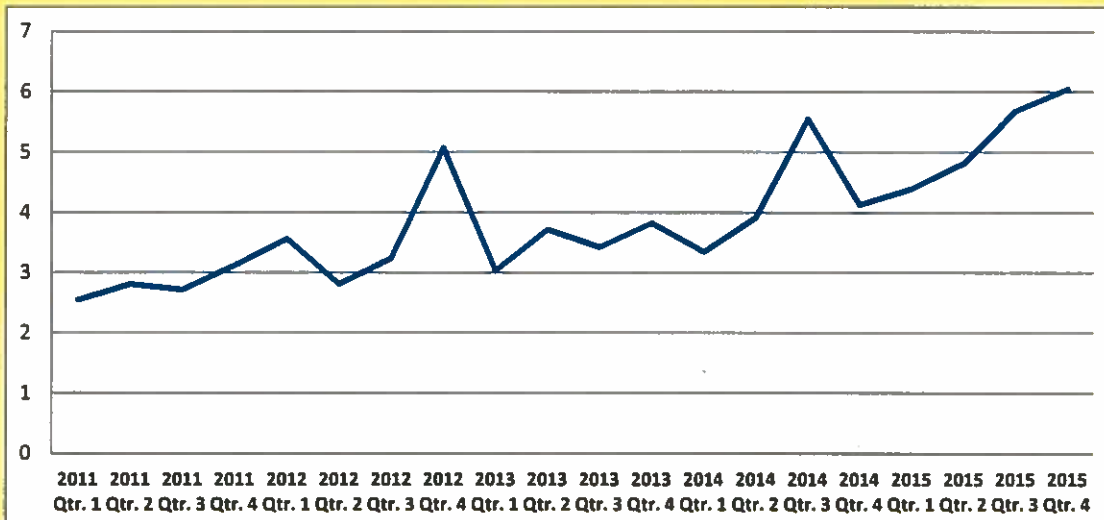
Fixed Route Bus



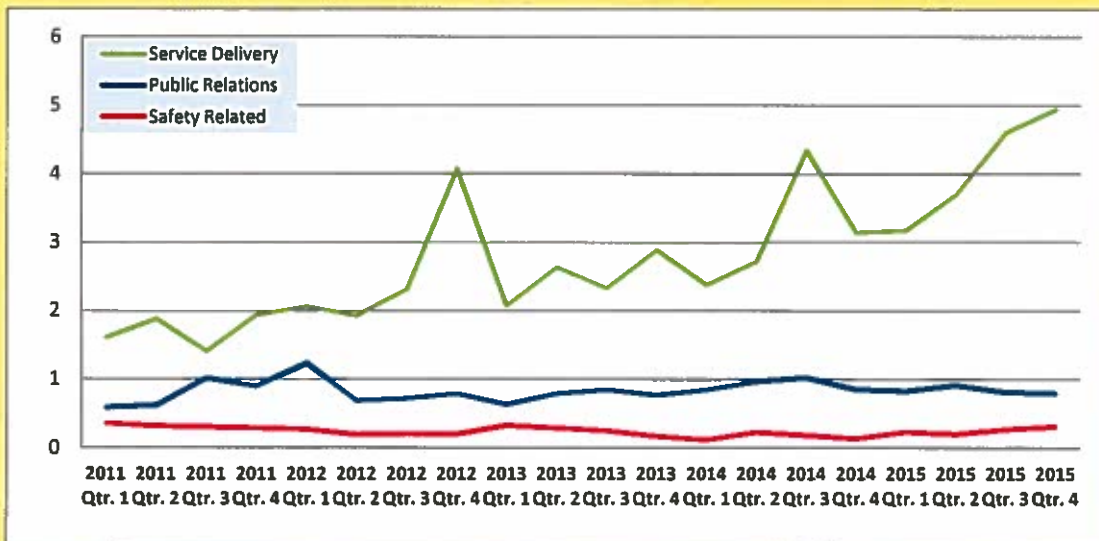
### MAX Light Rail Complaints Per 100,000 Boarding Rides

	<u>2015 Qtr. 4</u>	<u>2015 Qtr. 3</u>	<u>2014 Qtr. 4</u>	<u>2015 - 2014 Percent Change</u>
<b>Total</b>	6.0	5.7	4.1	46.6%
<b>Service Delivery</b>	4.9	4.6	3.1	57.1%
<b>Public Relations</b>	0.8	0.8	0.9	-6.5%
<b>Safety Related</b>	0.3	0.3	0.1	138.6%

#### Total Operator Complaints Per 100,000 Boarding Rides



#### Type of Operator Complaints Per 100,000 Boarding Rides



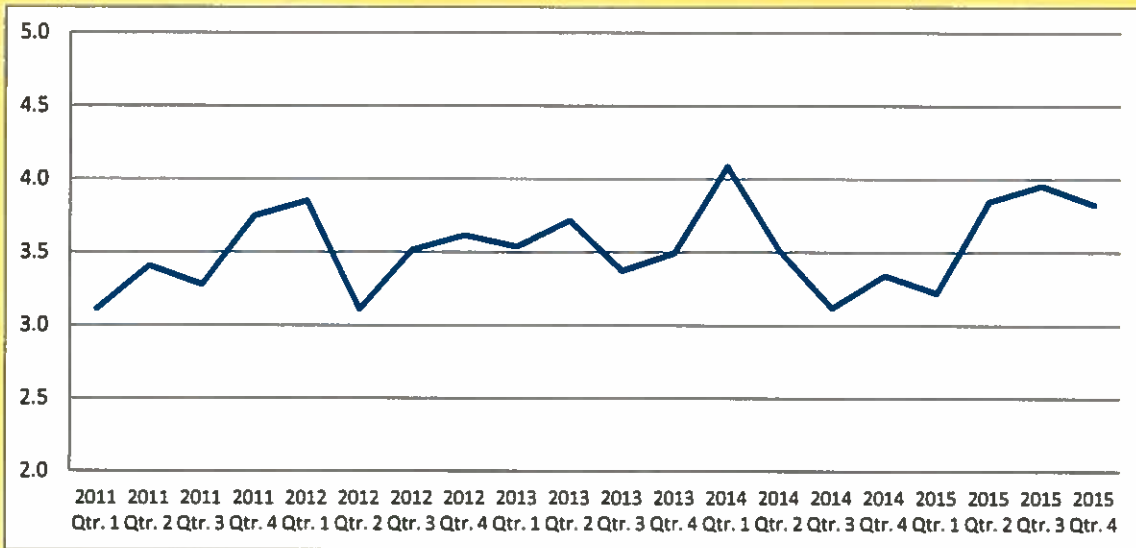
MAX Light Rail

### Fixed Route Bus and MAX Light Rail Commendations

	<u>2015 Qtr. 4</u>	<u>2015 Qtr. 3</u>	<u>2014 Qtr. 4</u>	<u>2015 - 2014 Percent Change</u>
<b>Fixed Route Bus</b> Per 100,000 Boardings	3.8	4.0	3.3	14.5%
<b>MAX Light Rail</b> Per Million Boardings	3.1	1.9	2.1	50.7%

TriMet Bus and MAX Commendations

**Total Bus Operator Commendations Per 100,000 Boarding Rides**



**Total MAX Light Rail Commendations Per Million Boarding Rides**

