

# HRTPO REGIONAL PERFORMANCE MEASURES (RPM's)



Fy15 UPDATE

the *heartbeat* of  
**HAMPTON  
ROADS** **TPO**  
TRANSPORTATION PLANNING ORGANIZATION  
SEPTEMBER 2015

T15-09

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# HRTPO Regional Performance Measures (RPMs)

FY15 Update



September 2015

**TITLE**

HRTPO Regional Performance Measures (RPMs):  
FY15 Update

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**ABSTRACT**

Although the current federal transportation legislation—MAP-21—newly focuses on performance management, the HRTPO has been conducting transportation performance management for 20 years. This report presents the latest values for one of the components of our performance management system: Regional Performance Measures originally developed in response to Virginia HB 30 (2010).

**REPORT DATE**

September 2015

**GRANT/SPONSORING AGENCY**

FHWA/VDOT/LOCAL FUNDS

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**ACKNOWLEDGMENTS**

This report was prepared by the Hampton Roads Transportation Planning Organization (HRTPO) in cooperation with the U.S. Department of Transportation (USDOT), the Federal Highway Administration (FHWA), the Virginia Department of Transportation (VDOT), and the localities of Hampton Roads. The contents of this report reflect the views of the HRTPO. The HRTPO staff is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the FHWA or VDOT. This report does not constitute a standard, specification, or regulation. FHWA or VDOT acceptance of this planning study does not constitute endorsement/approval of the need for any recommended improvements nor does it constitute the approval of their location and design or a commitment to fund any such improvements. Additional project level environmental impact assessments and/or studies of alternative may be necessary.

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## Introduction

Although the current federal transportation legislation—MAP-21—newly focuses on performance management, the HRTPO has been conducting transportation performance management for 20 years. This report presents the latest values for one of the components of our performance management system: Regional Performance Measures originally developed in response to Virginia HB 30 (2010).

### “Regional Performance Measures”

In 2009, the General Assembly passed legislation granting the Commonwealth Transportation Board (CTB) authority to:

*“require that appropriate regional organizations develop...quantifiable measures and achievable goals for the urban region relating to, but not limited to, congestion reduction and safety, transit and high-occupancy vehicle (HOV) usage, job-to-housing ratios, job and housing access to transit and pedestrian facilities, air quality, movement of freight by rail, and per capita vehicle miles traveled.”*

In 2010, the General Assembly passed legislation that:

1. Established a July 1, 2011 deadline for large MPOs to have regional performance measures approved by the CTB, and
2. Tied the state match for Regional Surface

Transportation Program (RSTP) funds to the successful meeting of the July 1, 2011 deadline

In January of 2011, the Hampton Roads Transportation Planning Organization (HRTPO) Board approved a list of Regional Performance Measures (RPMs) for Hampton Roads. On June 15, 2011, the CTB passed a resolution approving various MPO RPMs, including those for Hampton Roads, and set a May 30, 2012 date for targets to be developed. On February 8, 2012, the Transportation Technical Advisory Committee (TTAC) RPM Task Force met and developed draft directional targets for each RPM.

In April 2012, the HRTPO Board approved the first RPM document which contained directional targets for Hampton Roads’ Regional Performance Measures (RPMs) and the latest values for these RPMs (mostly 2011 values), and forwarded both to the Office of the Secretary of Transportation. In September 2013, the Board approved the second RPM document which contained the latest RPM values (mostly 2012 values). In FY14, HRTPO staff included an overview of HRTPO Performance Management with its annual update of RPM values.

This FY15 document contains the latest data available (mostly 2014 values). Staff made this data available for public review and comment from Wednesday, July 1, 2015 through Wednesday, July 15, 2015. No public comments were received.

## RPM Categories

The Hampton Roads RPMs, approximately 70 measures, are organized in the following 12 categories:

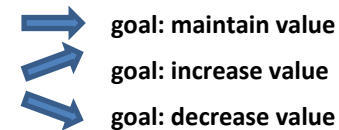
### A. Transportation System Measures

1. Congestion Reduction
2. Safety
3. Transit Usage
4. HOV Usage
5. Job-to-Housing Ratios
6. Job and Housing Access to Transit
7. Job and Housing Access to Pedestrian Facilities
8. Air Quality
9. Movement of Freight
10. Vehicle Miles Traveled (VMT)
11. Maintenance

### B. Financial System Measures




























The first ten categories were suggested by the Commonwealth; the last two—Maintenance and Financial—were added by the TTAC.

Lacking a basis for setting numerical targets, the RPM Task Force decided to set directional—as opposed to numerical—targets, based on the following options:


















The current RPM values (and historical values) are presented on the following pages.

## Hampton Roads Regional Performance Measures

	<u>Data Source</u>	<u>Year</u> <u>2005</u>	<u>Year</u> <u>2006</u>	<u>Year</u> <u>2007</u>	<u>Year</u> <u>2008</u>	<u>Year</u> <u>2009</u>	<u>Year</u> <u>2010</u>	<u>Year</u> <u>2011</u>	<u>Year</u> <u>2012</u>	<u>Year</u> <u>2013</u>	<u>Year</u> <u>2014</u>	<u>Year</u> <u>2015</u>	<u>Year</u> <u>2016</u>	<u>Desired</u> <u>Trend</u>
<b>A. Transportation System Performance Measures<sup>13</sup></b>														
<div> <div>Actual Trend is Following Desired Trend</div> <div>Actual Trend is Going Against Desired Trend</div> <div>Actual Trend Unclear</div> </div>														
<u>1. congestion reduction</u>														
Annual Delay, hours per peak auto commuter	Texas Transportation Inst. (TTI)	n.a.	n.a.	n.a.	44	40	43	43	n.a.	n.a.	n.a.	n.a.	n.a.	
Annual Excess Fuel Consumed, gallons per peak auto commuter	Texas Transportation Inst. (TTI)	n.a.	n.a.	n.a.	17	17	19	19	n.a.	n.a.	n.a.	n.a.	n.a.	
INRIX Index (extra time during peak period), %	Inrix	n.a.	n.a.	n.a.	n.a.	13	18	13	10	11	12	n.a.	n.a.	
<u>2. safety</u>														
Annual Roadway Fatalities, number	NHTSA <sup>24</sup> and Va. DMV	139	141	155	153	124	121	136	99	131	125	n.a.	n.a.	
Annual Roadway Fatalities, per 100 million VMT <sup>25</sup>	NHTSA <sup>24</sup> and Va. DMV	0.91	0.94	0.99	1.01	0.97	0.89	0.86	0.81	0.84	n.a.	n.a.	n.a.	
Annual Roadway Injuries, number	NHTSA <sup>24</sup> and Va. DMV	16,999	16,026	14,494	14,465	14,004	13,449	14,038	15,034	15,432	14,715	n.a.	n.a.	
Annual Roadway Injuries, per million VMT	NHTSA <sup>24</sup> and Va. DMV	1.16	1.10	0.98	0.97	0.95	0.90	0.96	1.04	1.07	n.a.	n.a.	n.a.	
Annual Roadway Crashes, number	NHTSA <sup>24</sup> and Va. DMV	32,629	32,019	30,276	27,599	24,005	23,142	24,115	25,192	25,374	24,874	n.a.	n.a.	
Annual Roadway Crashes, per million VMT	NHTSA <sup>24</sup> and Va. DMV	2.22	2.19	2.05	1.86	1.63	1.55	1.65	1.74	1.77	n.a.	n.a.	n.a.	
Annual Transit Fatalities, number	Federal Transit Administration (FTA) <sup>6</sup>	0	0	0	0	0	0	1	1	0	0	n.a.	n.a.	
Annual Transit Fatalities, per 100 million PMT	Federal Transit Administration (FTA) <sup>6</sup>	0.00	0.00	0.00	0.00	0.00	0.85	0.81	0.00	0.00	n.a.	n.a.	n.a.	
Annual Transit Injuries, number	Federal Transit Administration (FTA) <sup>6</sup>	98	40	71	81	109	135	113	73	95	98	n.a.	n.a.	
Annual Transit Injuries, per 100 million PMT	Federal Transit Administration (FTA) <sup>6</sup>	91	37	69	69	102	118	96	59	86	n.a. <sup>29</sup>	n.a.	n.a.	
Annual Transit Collisions <sup>19</sup> , number	Federal Transit Administration (FTA) <sup>6</sup>	70	19	25	15	27	40	30	26	35	30	n.a.	n.a.	
Annual Transit Collisions <sup>19</sup> , per 100 million PMT	Federal Transit Administration (FTA) <sup>6</sup>	65	17	24	13	25	35	26	21	32	n.a. <sup>29</sup>	n.a.	n.a.	
Annual Aviation Fatalities <sup>22</sup> , number <sup>23</sup>	National Transp. Safety Board (NTSB)	1	3	3	0	0	1	2	0	8	0	n.a.	n.a.	
Annual Aviation Accidents <sup>22</sup> , number <sup>23</sup>	National Transp. Safety Board (NTSB)	2	5	10	5	6	8	3	1	5	3	n.a.	n.a.	
Annual Highway-Rail Crossing Accidents <sup>20</sup> , per million population	Federal Railroad Administration (FRA)	6	4	5	4	5	2	1	4	4	5	n.a.	n.a.	
<u>3. transit usage</u>														
Annual Unlinked Passenger Trips (UPT), number	Federal Transit Administration (FTA) <sup>6</sup>	2.4.E+07	2.4.E+07	2.7.E+07	2.9.E+07	1.9.E+07	1.9.E+07	1.9.E+07	2.1.E+07	2.1.E+07	n.a.	n.a.	n.a.	
Annual Unlinked Passenger Trips (UPT), per capita <sup>21</sup>	HRTPO Calculation	17	16	18	20	13	13	13	14	14	n.a.	n.a.	n.a.	
Annual Vehicle Revenue Miles (VRM), number	Federal Transit Administration (FTA) <sup>6</sup>	1.3.E+07	1.5.E+07	1.5.E+07	1.6.E+07	1.7.E+07	1.6.E+07	1.6.E+07	1.6.E+07	1.6.E+07	n.a.	n.a.	n.a.	
Annual Vehicle Revenue Miles (VRM), per capita <sup>21</sup>	HRTPO Calculation	9	10	10	11	11	11	11	11	10	n.a.	n.a.	n.a.	
Annual Passenger Miles Traveled (PMT), number	Federal Transit Administration (FTA) <sup>6</sup>	1.1.E+08	1.1.E+08	1.0.E+08	1.2.E+08	1.1.E+08	1.1.E+08	1.2.E+08	1.2.E+08	1.1.E+08	n.a.	n.a.	n.a.	
Annual Passenger Miles Traveled (PMT), per capita <sup>21</sup>	HRTPO Calculation	74	75	70	80	72	77	78	82	72	n.a.	n.a.	n.a.	
Passengers Boarding or Departing Amtrak Trains (HR) <sup>32</sup>	Amtrak	129,832	128,837	138,414	166,839	158,914	163,405	175,494	195,263	229,524	215,578	n.a.	n.a.	
Endpoint On-Time Performance, Amtrak (Rich/NN/Nor <sup>32</sup> ) <sup>5 32</sup>	Amtrak	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	76%	85%	84%	73%	n.a.	n.a.	
Operating Cost Ratio <sup>30</sup> , Amtrak ("Washington-Newport News") <sup>5</sup>	Amtrak	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.99	0.87	0.98	0.76	n.a.	n.a.	



	<u>Data Source</u>	<u>Year</u> <u>2005</u>	<u>Year</u> <u>2006</u>	<u>Year</u> <u>2007</u>	<u>Year</u> <u>2008</u>	<u>Year</u> <u>2009</u>	<u>Year</u> <u>2010</u>	<u>Year</u> <u>2011</u>	<u>Year</u> <u>2012</u>	<u>Year</u> <u>2013</u>	<u>Year</u> <u>2014</u>	<u>Year</u> <u>2015</u>	<u>Year</u> <u>2016</u>	<u>Desired</u> <u>Trend</u>
<u>4. HOV usage</u>														
Persons per Hour per HOV Ln During Peak Period, avg of count st	Va. Dept. of Transportation (VDOT)	747	572	703	598	637	685	571	638	598	612	n.a.	n.a.	
# of Park and Ride Spaces	Va. Dept. of Transportation (VDOT)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	4,423	n.a.	n.a.	4,193	n.a.	
# of Occupied Park and Ride Spaces, per 100,000 population	Va. Dept. of Transportation (VDOT)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	63	n.a.	
% of Commuters with Journey-to-Work via Carpool <sup>10</sup>	American Community Survey (ACS)	n.a.	n.a.	n.a.	n.a.	n.a.	9.4%	8.1%	8.9%	8.3%	n.a.	n.a.	n.a.	
<u>5. job-to-housing ratios</u>														
Ratio of Jobs to Labor Force <sup>2</sup>														
Hampton Roads	VWC <sup>34</sup> : thru 2012; HRPDC: 2013+	0.97	0.97	0.96	0.95	0.94	0.93	0.93	0.93	0.93	n.a.	n.a.	n.a.	
Chesapeake	VWC <sup>34</sup> : thru 2012; HRPDC: 2013+	0.88	0.90	0.90	0.89	0.87	0.88	0.86	0.86	0.85	n.a.	n.a.	n.a.	n.a.
Gloucester	VWC <sup>34</sup> : thru 2012; HRPDC: 2013+	0.51	0.51	0.50	0.49	0.49	0.47	0.51	0.51	0.51	n.a.	n.a.	n.a.	n.a.
Hampton	VWC <sup>34</sup> : thru 2012; HRPDC: 2013+	0.92	0.90	0.89	0.90	0.90	0.90	0.93	0.93	0.92	n.a.	n.a.	n.a.	n.a.
Isle of Wight	VWC <sup>34</sup> : thru 2012; HRPDC: 2013+	0.74	0.66	0.65	0.65	0.63	0.57	0.55	0.57	0.59	n.a.	n.a.	n.a.	n.a.
James City	VWC <sup>34</sup> : thru 2012; HRPDC: 2013+	0.84	0.84	0.84	0.87	0.85	0.85	0.80	0.82	0.80	n.a.	n.a.	n.a.	n.a.
Newport News	VWC <sup>34</sup> : thru 2012; HRPDC: 2013+	1.18	1.18	1.16	1.16	1.08	1.08	1.18	1.18	1.18	n.a.	n.a.	n.a.	n.a.
Norfolk	VWC <sup>34</sup> : thru 2012; HRPDC: 2013+	1.57	1.55	1.49	1.51	1.51	1.50	1.45	1.44	1.40	n.a.	n.a.	n.a.	n.a.
Poquoson	VWC <sup>34</sup> : thru 2012; HRPDC: 2013+	0.34	0.33	0.33	0.33	0.34	0.30	0.29	0.29	0.27	n.a.	n.a.	n.a.	n.a.
Portsmouth	VWC <sup>34</sup> : thru 2012; HRPDC: 2013+	0.99	0.98	0.97	0.98	1.02	1.02	1.08	1.09	1.10	n.a.	n.a.	n.a.	n.a.
Suffolk	VWC <sup>34</sup> : thru 2012; HRPDC: 2013+	0.65	0.64	0.65	0.65	0.65	0.66	0.64	0.69	0.69	n.a.	n.a.	n.a.	n.a.
Virginia Beach	VWC <sup>34</sup> : thru 2012; HRPDC: 2013+	0.82	0.83	0.82	0.80	0.79	0.79	0.76	0.77	0.78	n.a.	n.a.	n.a.	n.a.
Williamsburg	VWC <sup>34</sup> : thru 2012; HRPDC: 2013+	3.73	3.67	3.29	3.11	2.98	2.99	2.48	2.52	2.37	n.a.	n.a.	n.a.	n.a.
York	VWC <sup>34</sup> : thru 2012; HRPDC: 2013+	0.66	0.69	0.74	0.72	0.73	0.72	0.68	0.66	0.66	n.a.	n.a.	n.a.	n.a.
Jobs - Labor Force <sup>2</sup> Regional Linear Dissimilarity Index, 0.0 to 1.0 <sup>3</sup>	VWC <sup>34</sup> : thru 2012; HRPDC: 2013+	0.12	0.12	0.11	0.11	0.11	0.11	0.12	0.12	0.12	n.a.	n.a.	n.a.	
% of Workers Working Outside Locality (City/County) in Which T	American Community Survey (ACS)	50%	49%	50%	48%	49%	48%	47%	49%	46%	n.a.	n.a.	n.a.	
Mean Travel Time to Work, minutes	American Community Survey (ACS)	23.4	23.5	23.3	23.6	23.2	23.7	23.3	24.0	24.0	n.a.	n.a.	n.a.	
<u>6. job and housing access to transit</u>														
% of Employment in TAZs <sup>1</sup> Served by Transit <sup>18</sup>	HR Transp. Planning Org. (HRTPO) <sup>1</sup>	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	84%	84%	84%	84%	85%	n.a.	
% of Households in TAZs <sup>1</sup> Served by Transit <sup>18</sup>	HR Transp. Planning Org. (HRTPO) <sup>1</sup>	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	73%	73%	73%	73%	75%	n.a.	
<u>7. job and housing access to pedestrian facilities</u>														
% of Housing Units <sup>9</sup> in TAZs <sup>17</sup> with 1%+ Walk-To-Work Mode Sha	CTTP: 2000, 2008; ACS: 2011 <sup>33</sup>	n.a.	n.a.	n.a.	43%	n.a.	n.a.	37%	n.a.	n.a.	n.a.	n.a.	n.a.	
<u>8. air quality</u>														
Annual # of Days when Ozone Levels were Above 8-Hour Standar	Dept. of Environmental Quality (DEQ)	12	10	9	7	0	6	7	3	0	0	n.a.	n.a.	0
NOx <sup>7</sup> (from motor vehicles), tons per day (near future) <sup>15</sup>	Va. Dept. of Transportation (VDOT)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	43	n.a.	n.a.	n.a.	n.a.	n.a.	32
NOx <sup>7</sup> (from motor vehicles), grams per capita per day (near futur	Va. Dept. of Transportation (VDOT)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	23	n.a.	n.a.	n.a.	n.a.	n.a.	
VOC <sup>7</sup> (from motor vehicles), tons per day (near future) <sup>15</sup>	Va. Dept. of Transportation (VDOT)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	35	n.a.	n.a.	n.a.	n.a.	n.a.	28
VOC <sup>7</sup> (from motor vehicles), grams per capita per day (near futu	Va. Dept. of Transportation (VDOT)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	19	n.a.	n.a.	n.a.	n.a.	n.a.	
CO <sub>2</sub> (greenhouse gas, from motor veh's), tons per day (near futu	Va. Dept. of Transportation (VDOT) <sup>16</sup>	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	22,464	n.a.	n.a.	n.a.	n.a.	n.a.	
CO <sub>2</sub> (greenhouse gas, from motor veh's), grams/capita/day (near	Va. Dept. of Transportation (VDOT) <sup>1b</sup>	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	12,076	n.a.	n.a.	n.a.	n.a.	n.a.	

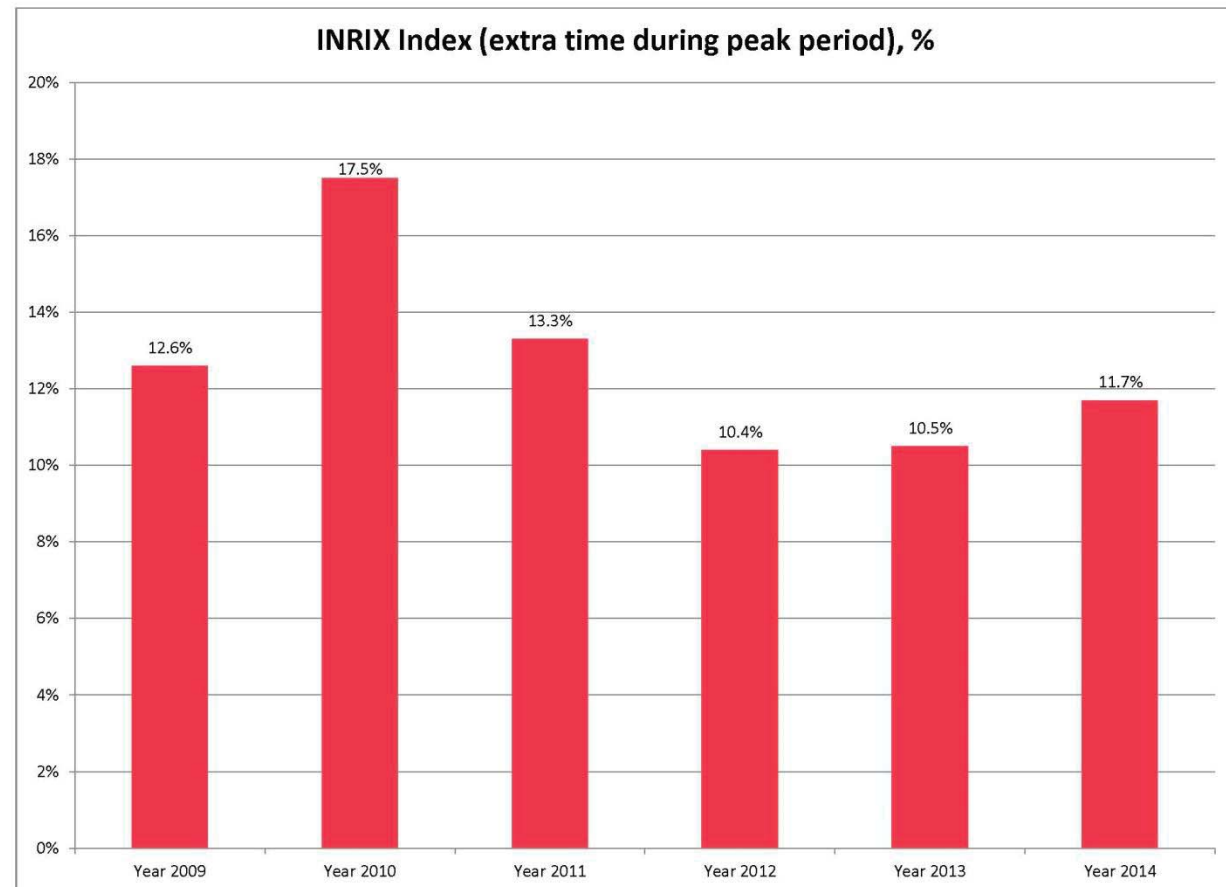
		<u>Year</u> <u>2005</u>	<u>Year</u> <u>2006</u>	<u>Year</u> <u>2007</u>	<u>Year</u> <u>2008</u>	<u>Year</u> <u>2009</u>	<u>Year</u> <u>2010</u>	<u>Year</u> <u>2011</u>	<u>Year</u> <u>2012</u>	<u>Year</u> <u>2013</u>	<u>Year</u> <u>2014</u>	<u>Year</u> <u>2015</u>	<u>Year</u> <u>2016</u>	<u>Desired</u> <u>Trend</u>
<u>9. movement of freight</u>														
Shares (%) of General Cargo Handled by Port of Virginia, by weight	Virginia Port Authority (VPA)													
Barge	VPA	8%	10%	4%	5%	4%	4%	4%	4%	4%	4%	n.a.	n.a.	
Rail	VPA	25%	24%	31%	31%	30%	28%	30%	32%	34%	33%	n.a.	n.a.	
Truck	VPA	67%	66%	65%	64%	66%	68%	66%	64%	62%	63%	n.a.	n.a.	
		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%			
Rail Mode Share (%), freight with HR origins, by value and tonnage <sup>26</sup>	Freight Analysis Framework (FAF3)													
by tonnage <sup>26</sup>	FAF3	n.a.	n.a.	29%	n.a.	n.a.	35%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
by value <sup>26</sup>	FAF3	n.a.	n.a.	3%	n.a.	n.a.	3%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Rail Mode Share (%), freight with HR destinations, by value and tonnage <sup>26</sup>	Freight Analysis Framework (FAF3)													
by tonnage <sup>26</sup>	FAF3	n.a.	n.a.	40%	n.a.	n.a.	44%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
by value <sup>26</sup>	FAF3	n.a.	n.a.	4%	n.a.	n.a.	5%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
<u>10. per capita vehicle miles traveled</u>														
Daily Vehicle Miles Traveled (VMT) per capita	Va. Dept. of Transportation (VDOT)	24	24	24	24	24	24	24	23	23	n.a.	n.a.	n.a.	
% of Commuters with Journey-to-Work by Alternate Modes <sup>8</sup>	Census	17%	21%	20%	20%	18%	19%	19%	19%	18%	n.a.	n.a.	n.a.	
<u>11. maintenance</u>														
% of Pavement in Non-Deficient Condition, VDOT-maintained roads	Va. Dept. of Transportation (VDOT)	n.a.	n.a.	n.a.	70%	69%	66%	n.a.	75%	83%	85%	n.a.	n.a.	
% of Bridges Not Structurally Deficient	Va. Dept. of Transportation (VDOT)	n.a.	n.a.	96%	n.a.	95%	94%	94%	94%	94%	94%	93%	n.a.	
Total Transit Revenue Service Interruptions (mechanical) per mill	Federal Transit Administration (FTA) <sup>6</sup>	62	59	56	40	34	45	38	29	27	n.a.	n.a.	n.a.	
<b>B. Financial System Performance Measures</b>														
Actual Obligations / Planned Obligations <sup>11</sup>	Va. Dept. of Transportation (VDOT)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1.28	0.95	1.14	n.a.	n.a.	n.a.
Average Age of Federal Dollars Spent on TIP Projects <sup>14</sup>	Va. Dept. of Transportation (VDOT)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Mid-Fiscal-Year Total of Unspent Obligations for TIP Projects <sup>12</sup>	Va. Dept. of Transportation (VDOT)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
% of Total District Allocation's in SYIP (i.e. omitting Statewide <sup>31</sup> ), year over year	Va. Dept. of Transportation (VDOT)													
Bristol	HRTPO Calculation	8%	7%	10%	8%	8%	8%	10%	10%	11%	8%	5%	5%	n.a.
Culpeper	HRTPO Calculation	3%	2%	4%	4%	3%	3%	2%	3%	8%	5%	3%	4%	n.a.
Fredericksburg	HRTPO Calculation	4%	4%	5%	5%	3%	4%	3%	6%	5%	4%	6%	7%	n.a.
Hampton Roads	HRTPO Calculation	19%	26%	25%	18%	18%	13%	16%	21%	29%	28%	36%	34%	
Lynchburg	HRTPO Calculation	5%	5%	4%	4%	3%	3%	2%	2%	2%	1%	2%	4%	n.a.
Northern VA	HRTPO Calculation	34%	23%	29%	35%	39%	46%	51%	37%	25%	31%	26%	27%	n.a.
Richmond	HRTPO Calculation	15%	20%	13%	12%	13%	11%	8%	8%	8%	7%	9%	10%	n.a.
Salem	HRTPO Calculation	7%	8%	5%	8%	7%	7%	3%	7%	8%	8%	6%	6%	n.a.
Staunton	HRTPO Calculation	5%	4%	5%	7%	5%	6%	5%	6%	4%	7%	6%	4%	n.a.
total		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	

## Footnotes

- 1 Transportation Analysis Zone (TAZ) data from regional 4-step model
- 2 Data employment by job location as "jobs" measure; employment by home location as "labor force" measure
- 3 Calculated via equation 2 in "Feasibility of Using Jobs/Housing Balance in Virginia Statewide Planning", VTRC, Aug 2010, pg. 26; 0: perfectly balanced; 1: perfectly unbalanced.
- 4 First fiscal year shown in SYIP, e.g. the "2013" number shown herein comes from the FY13 column of the FY13-18 SYIP.
- 5 New performance measure for FY13 evaluation (i.e. not included in FY12 evaluation).
- 6 FTA's National Transit Database
- 7 These two pollutants (NOx and VOC)--precursors of ground-level ozone--are measured in several Va. MPOs for AQ conformity.  
Note: "2011" numbers are from VDOT's MOBILE 6.2 model; subsequent numbers will be calculated using MOVES model, making comparison to earlier numbers difficult.
- 8 Sum of all modes other than Drove Alone (i.e. including bike, ped, transit, work-at-home, carpool, etc.).
- 9 Given the necessary proximity of jobs to houses of persons who walk to work, this measure is intended to cover both job and housing access to pedestrian facilities.
- 10 The goal of HOV lanes--carpooling--is measured herein.
- 11 Actual obligations ("Obligated") / planned obligations ("TIP"); source: Annual Obligation Report (AOR).
- 12 "Total" = "Unspent Obligations" for each project, summed over all projects in TIP.  
Due to large amount of funds typically obligated near end of fiscal years, "Total" calculated via financial "snapshot" taken near middle of subject fiscal year.  
"Unspent Obligations" for a project = (total obligations for any year up to and including FY of snapshot) - (total spent in any year up to snapshot date).  
Because the "total obligations" will exclude matching funds, the "total spent" should exclude matching funds.
- 13 The source of the first ten category names is Section 33.1-23.03 Code of Va. [amended via Chapter 670], except that "movement of freight" is used herein instead of original "movement of freight by rail"; category 11 and financial RPMs were added by HRTPO.
- 14 This calculation covers all federal transportation dollars spent during the subject fiscal year.  
"Average Age" is a weighted average of the ages of each payment made during the subject fiscal year.  
The age of a specific payment is calculated by comparing the date of the payment to the date of the appropriate obligation for that payment.  
To calculate "Average Age", weight the age of each payment by the amount of that payment.  
If the actual dates are not available, monthly or FY data may be used, e.g. the age of a payment made in FY11 for an obligation made in FY09 is 2.0 years.
- 15 For air quality conformity, VDOT estimates emissions for various future years including one near future year; NOx and VOC emissions for the ozone season, and CO2 emissions as annual averages.
- 16 In addition to the pollutants required for AQ conformity, VDOT calculates CO2 when it conducts analyses for conformity.
- 17 Transportation Analysis Zones (TAZs) are the smallest Census areas for which journey-to-work data is reported for Hampton Roads.
- 18 Due to the relatively large size of a typical TAZ, consider only those TAZs which are bordered or penetrated by transit as being served by transit.
- 19 FTA's "National Transit Database" uses the term "collisions" ("Collision\_Total"), instead of "crashes".
- 20 FRA uses the term "accidents".
- 21 Using July estimates from Weldon Cooper for nine localities (Ches., Norf., Ports., Suf., VaB., Hamp., JCC, NN, Wimb.).  
Note: The Urbanized Area (UZA) population (which is typically used by FTA) could not be found for inter-census years.  
For year 2000, the HR9 Weldon Cooper population (1,413,272) is similar to the Urbanized Area (UZA) population (1,394,439).
- 22 "Fatalities"= number of people died; "Accidents"=number of crash events; NTSB and FAA use the term "accidents".
- 23 No rate (e.g. "per PMT") is included here because the number of person-miles-of-travel (PMT) in the airspace above Hampton Roads is not known.
- 24 "NHTSA": National Highway Traffic Safety Administration.
- 25 Rate shown is for a 3-year period ending in year shown.
- 26 Including domestic portion of international freight movement.
- 27 VDOT-maintained roadways only.
- 28 VMT for this year not yet available.
- 29 PMT for this year not yet available.
- 30 OCR = "Total Costs excl. OPEB's, Capital Charge and Other Costs" / "Total Revenue". (OPEB: other post-employment benefits)
- 31 Note: Some large projects (e.g. US 460, I-95 HOT Lanes) are in "Statewide".
- 32 Note: Norfolk Amtrak began on 12-12-12.
- 33 CTPP: Census Transportation Planning Products; ACS: American Community Survey
- 34 VWC: Virginia Workforce Connection

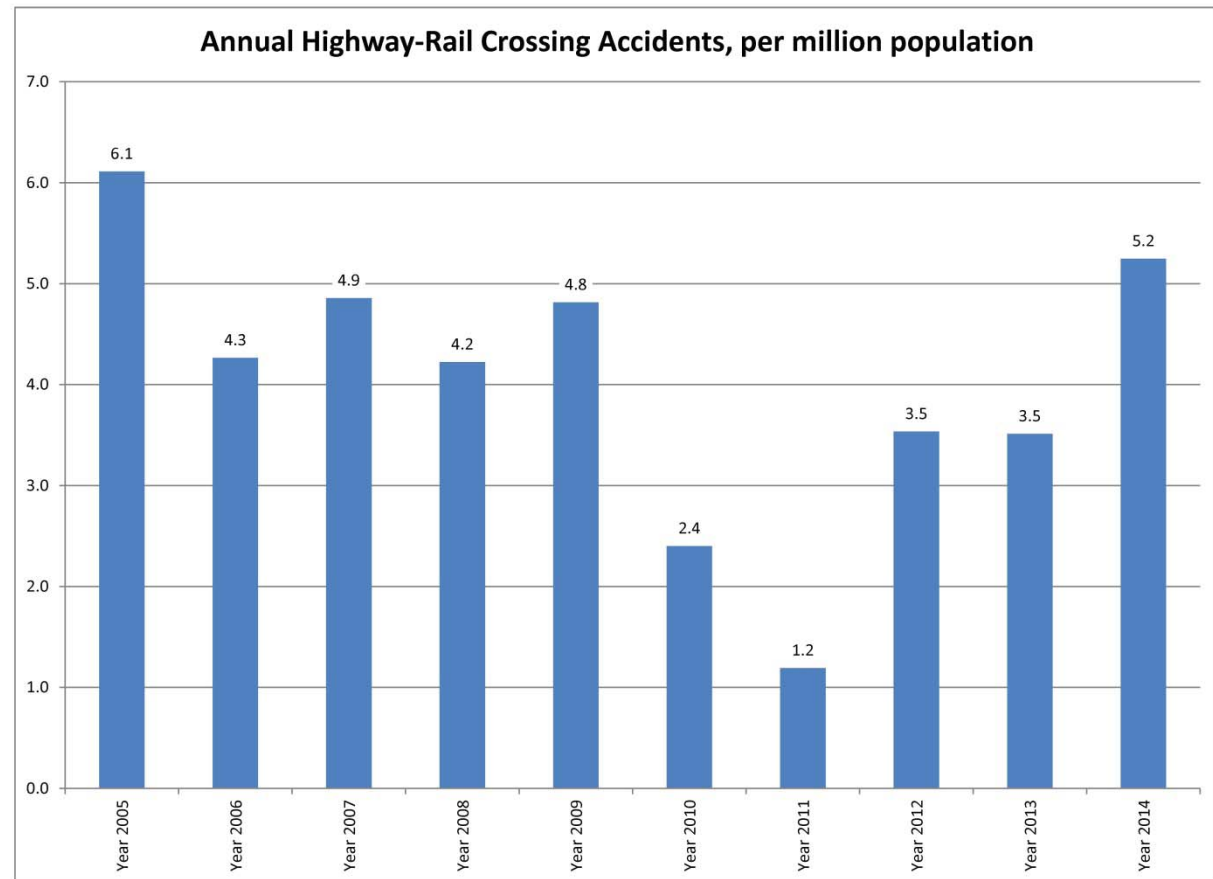


Besides the outlier in 2010, congestion in Hampton Roads has been fairly consistent over this six-year period.



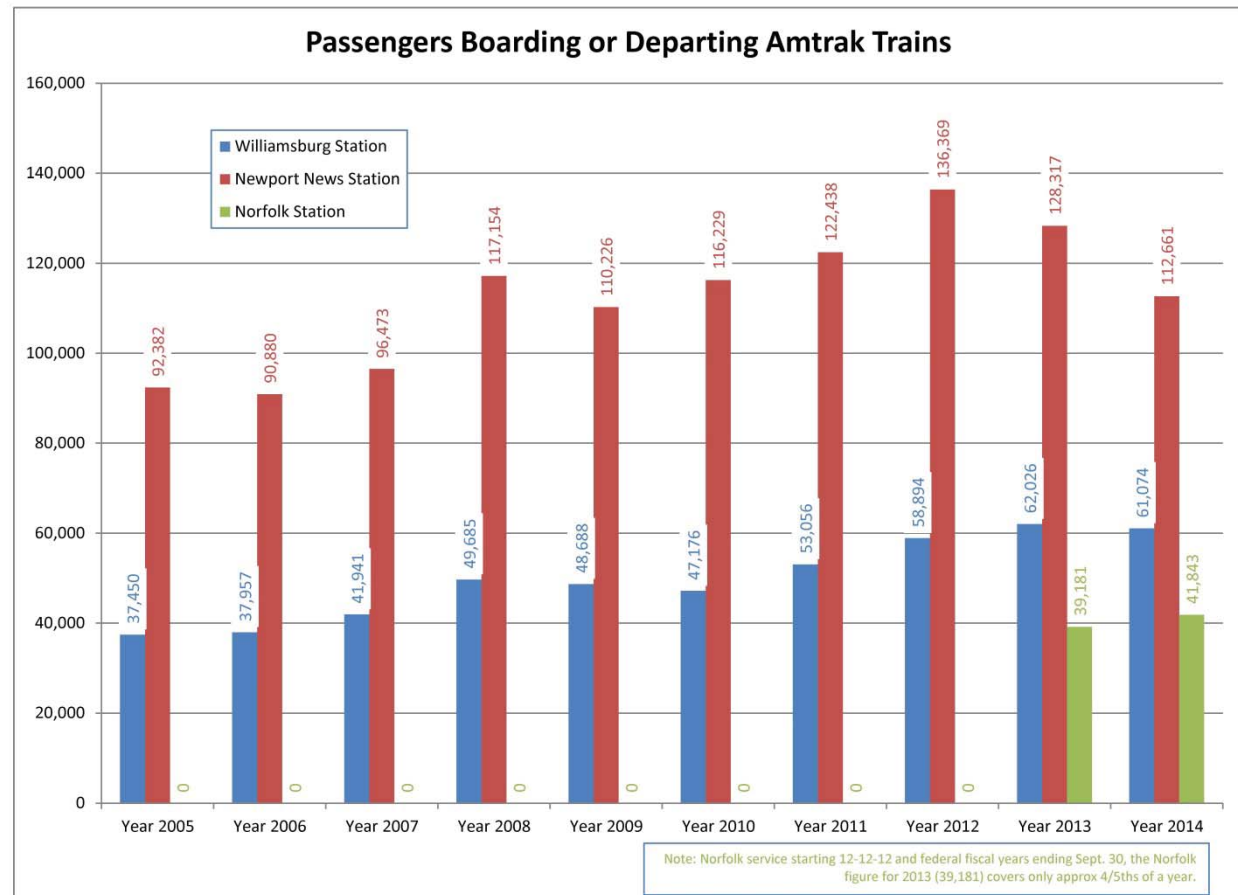


Highway-rail crossing accidents have returned to the late-2000's level.



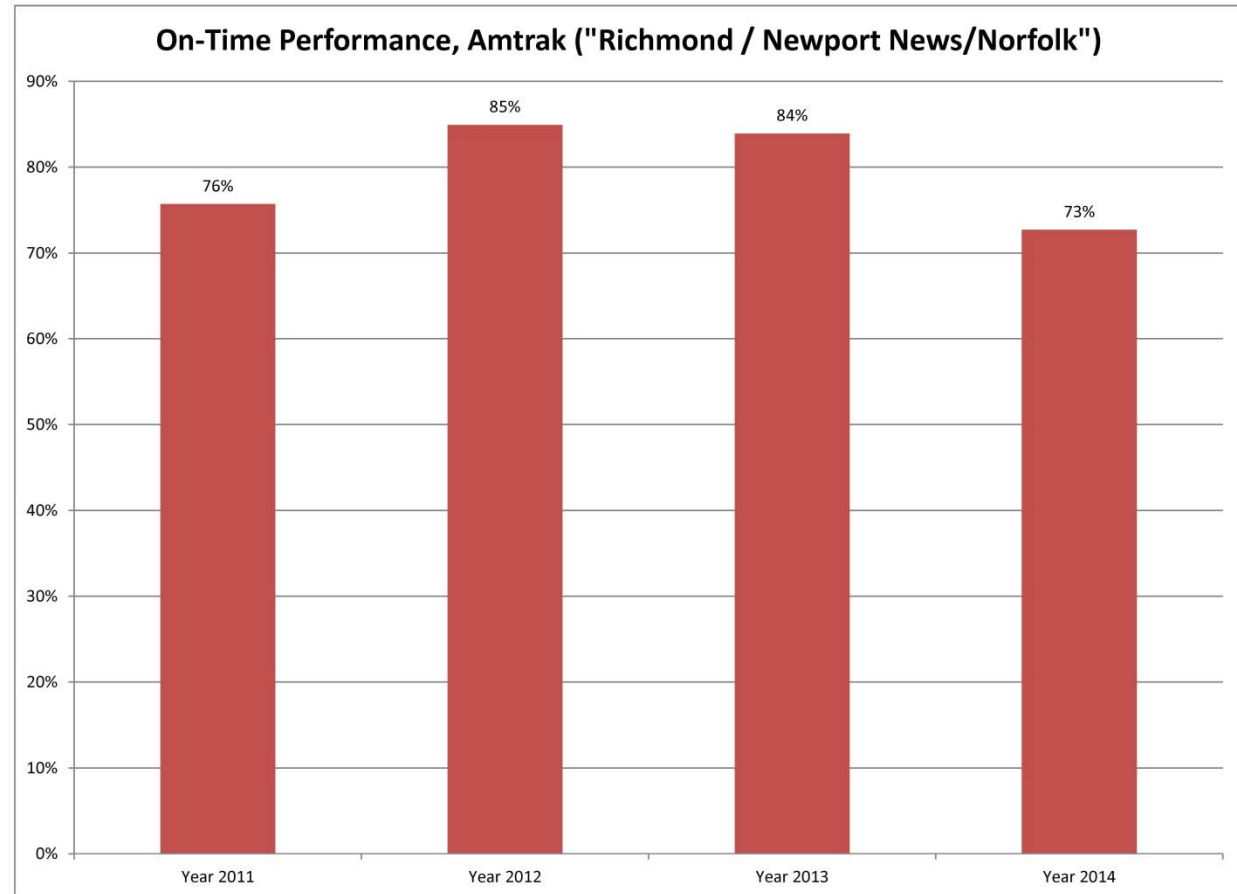


Number of passengers in Newport News declined by 12% from 2013 to 2014.



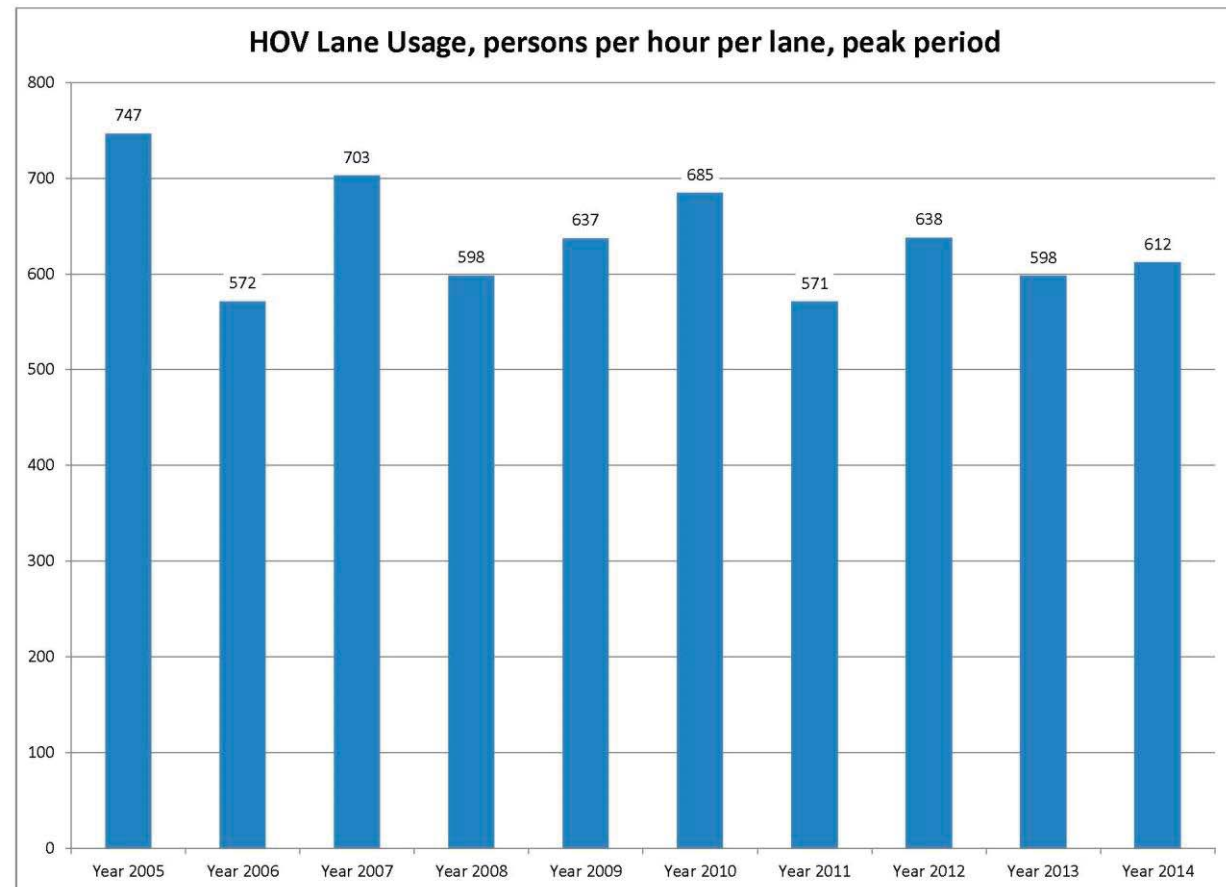


Amtrak on-time performance has declined.





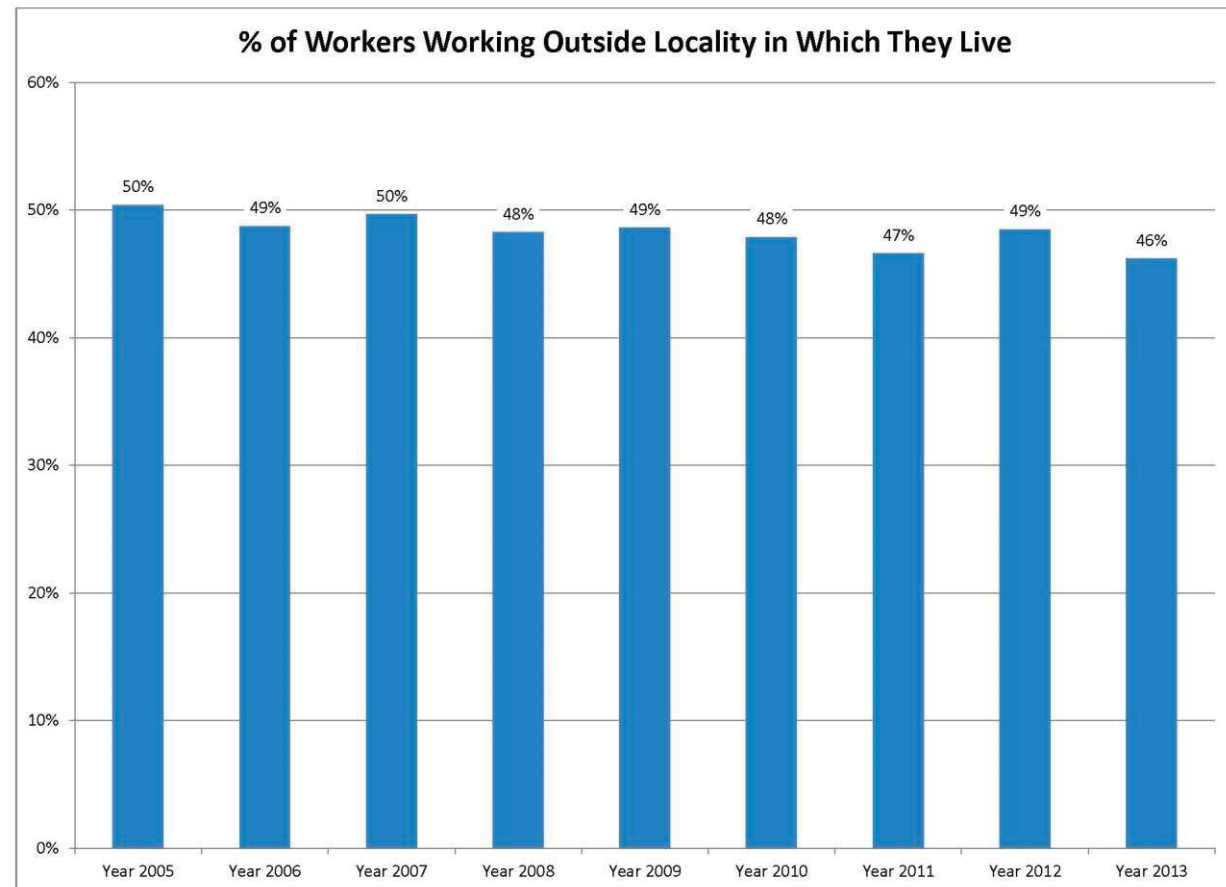
HOV usage has declined slightly over the last ten years.





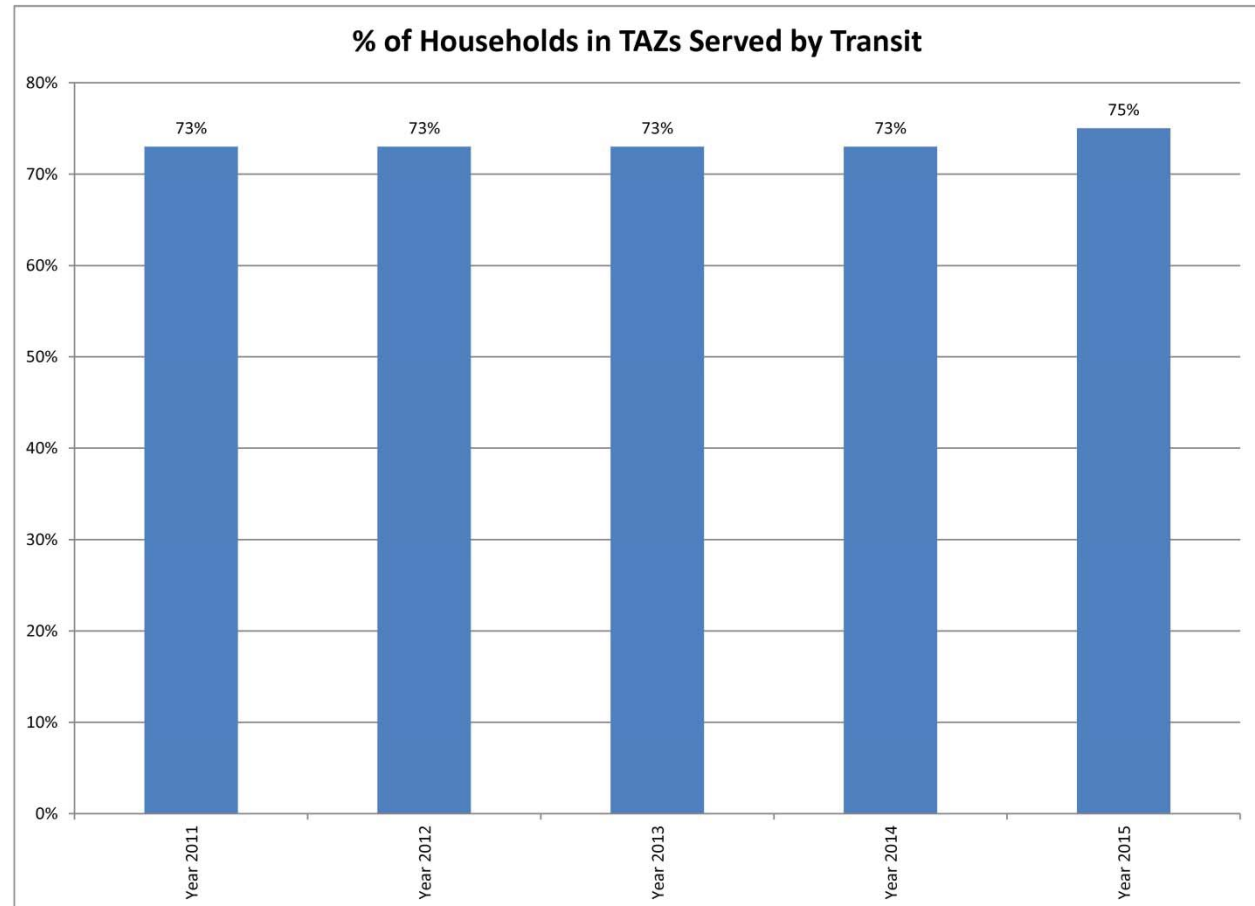


Over this nine-year period, workers have increased the tendency to work inside their home locality, perhaps a function of the suburbanization of work.



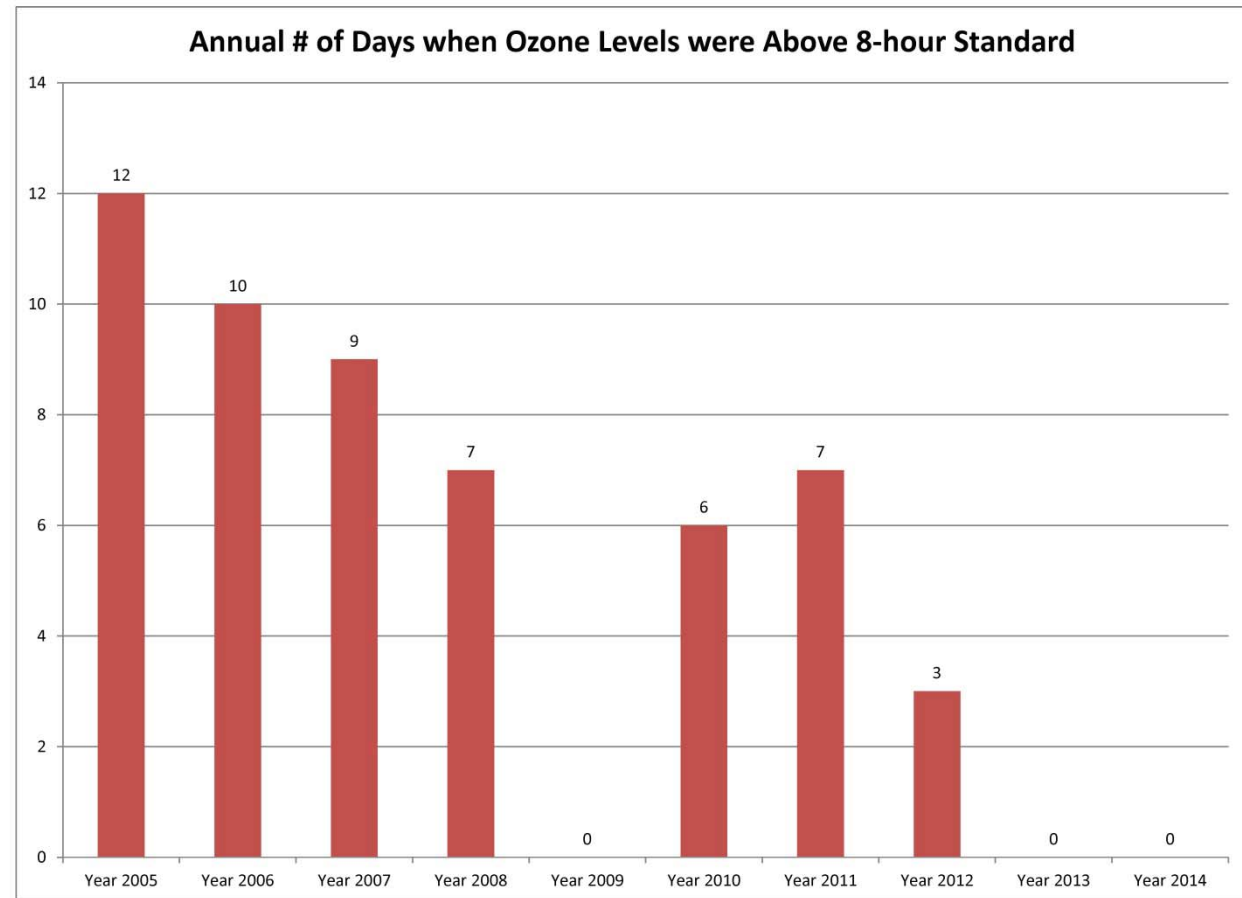


With new routes in Suffolk (west of downtown and in Northern Suffolk), portion of households served by transit has increased to  $\frac{3}{4}$ ths.



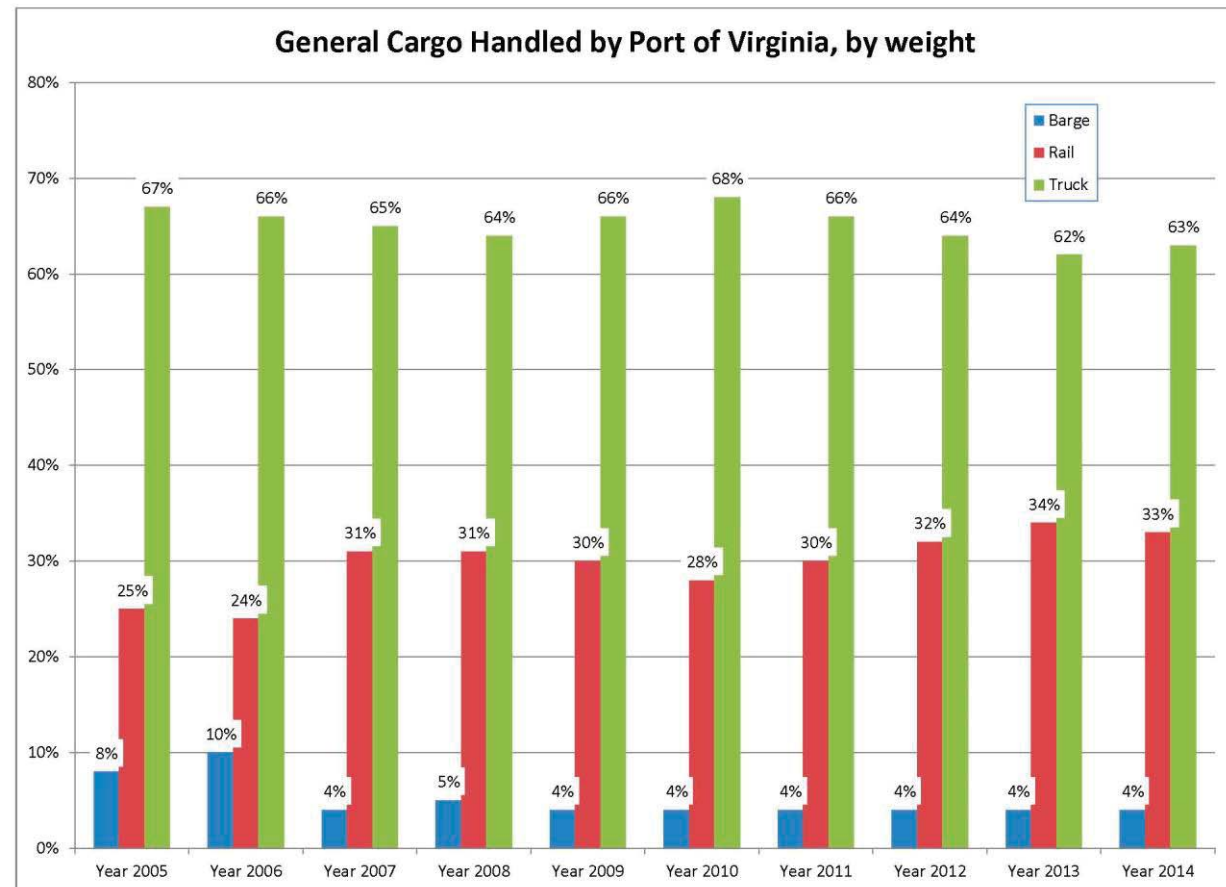


With no violations in the last two years, air quality has improved dramatically.



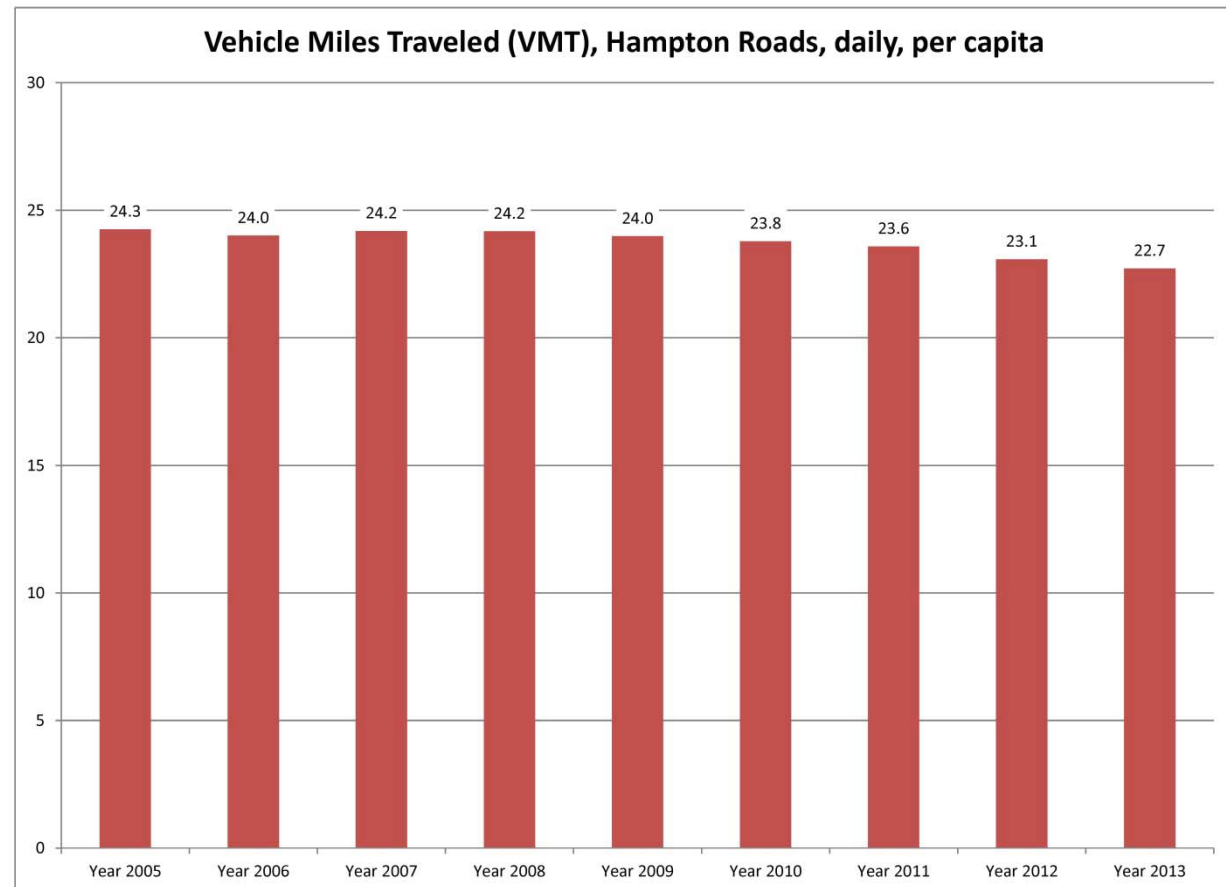


Although barge traffic share has been fairly constant in recent years, there has been a slight decline in truck share—with a commensurate increase in rail share—over the last five years.



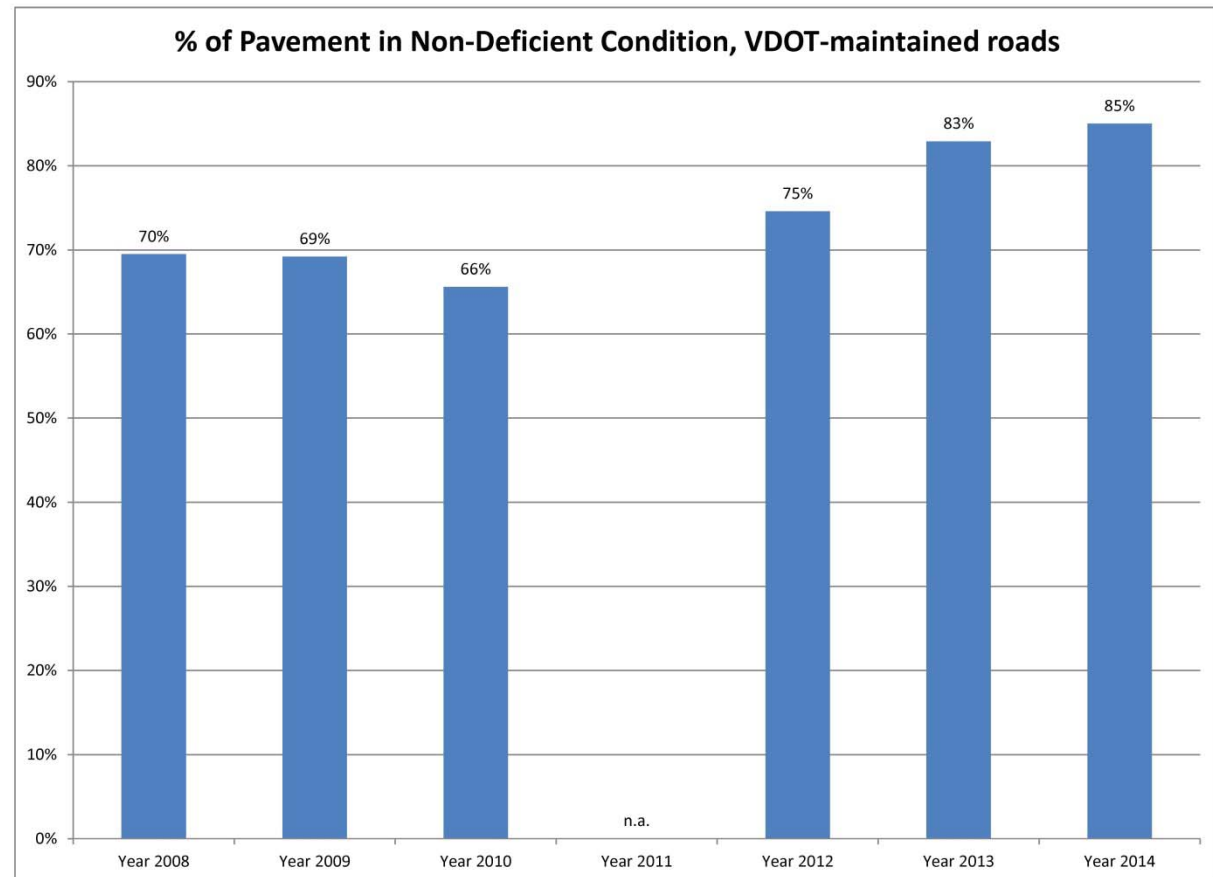


VMT per capita continues to decline since start of recession in 2008.





Pavement condition  
has improved  
significantly over  
last three years.





Allocations to Hampton Roads now exceed those of Northern Virginia.

