

**Transportation Revenue
Forecast Council
September 2016
Transportation Economic and
Revenue Forecasts
Volume III: Alternate Forecast Tables**

Transportation Revenue Forecast Council

Alternative Forecasts

September 2016

- **Alternate Ferry Forecast.....IV-3**
- **Vehicle Miles Travelled Forecast.....IV-13**

**REVENUE AND RIDERSHIP PROJECTIONS
SEPTEMBER 2016 FORECAST
FISCAL YEARS 2017-2027**

Prepared for
Washington State Ferries

for Presentation to the
**Transportation Revenue
Forecast Council**

September 22, 2016 Meeting

Prepared by
WSP | Parsons Brinckerhoff

September 16, 2016

Washington State Ferries

September 2016 Revenue and Ridership Forecasts — Fiscal Years 2017-2027

SEPTEMBER 2016 FORECAST NOTES

The fare revenue and ridership forecasts for Washington State Ferries (WSF) are completed in four stages. First, monthly ridership projections by seven fare categories are prepared for each route using time series analysis methods, with a forecast horizon from the present through fiscal year (FY) 2027.

The seven fare categories include: (1) passenger full fares, (2) passenger commuter discount fares, (3) passenger other discount fares, (4) auto full fares, (5) auto commuter discount fares, (6) other discount vehicles, and (7) oversized vehicle fares.

Stage two of the process generates system-wide ridership projections. Econometric models combine ferry fare scenarios with demographic and economic projections to produce system-wide unconstrained ridership forecasts by seven fare categories through FY 2027. Within each fare category, the individual route forecasts are then calibrated to match the system-wide forecast totals from the econometric models.

The third stage of the process consists of adjusting the calibrated passenger and vehicle ridership by route to reflect seasonal vehicle capacity constraints, changes in service hours, and/or the net impacts from adding or eliminating service.

Last, the appropriate fares and average fare realizations are applied to the calibrated, capacity-constrained ridership forecasts for each route by fare category. This yields monthly and annual revenue forecasts by route for seven fare categories.

In August 2015, the Washington State Transportation Commission adopted two separate fare increases to take place in FY 2016, effectively revising the Baseline and Alternative 1 Forecast Scenarios. The September 2016 Forecast scenarios remain unchanged as follows:

- **Baseline Forecast** – Includes two nickel-rounded fare increases in FY 2016 of 1.0% for passengers and 2.5% for vehicles on October 1, 2015 and May 1, 2016, plus removal of the overweight fare surcharge on vehicles up to 22 feet in length. With no further fare increases, real fares will decline from FY 2017 forward.
- **Alternative 1 Forecast** – Builds on the Baseline Forecast by adding consecutive 2.5% increases each October, from 2017 through 2026 (FY 2018-27), resulting in slightly increasing real fares under current inflation projections.

The FY 2017 projections have been updated to include actual revenue and ridership through August 2016.

Ridership Impacts

- The September 2016 ridership forecasts reflect the latest updated demographic and economic variable forecasts provided by the State and commercial sources.
- The forecasts for all three employment measures — trade/transportation/utilities, retail, and overall non-agricultural employment — have been revised upward over the forecast horizon, lifting the ridership demand projections.
- Upward revisions to the real personal income forecast over the forecast horizon increases the demand for passenger and vehicle/driver commuter ridership.
- Beyond FY 2017, slightly lower inflation projections result in slightly higher real fares, which tends to have a small dampening effect on the ridership forecasts.
- Following steep declines over most of the forecast horizon in June, projections for real gasoline prices have reversed course and now reflect increases ranging from about 4% in FY 2018 to 27% from FY 2023 onwards. Higher real gas price forecasts cause decreases in the vehicle/driver ridership forecasts.
- Ridership in June 2016 was 2.4% above forecast, with passengers up 4.8% but vehicles 0.7% below forecast. Overall annual growth was 1.8% over FY 2015.
- The September Baseline Forecast for total ridership in FY 2017 is 0.6% higher than projected in June. This is distributed as 1.2% higher for passengers and 0.1% lower for vehicles/drivers, and yields 1.0% annual growth over FY 2016.
- Ridership for FY 2017 is projected to be 0.6% higher than previously forecasted, 0.3% higher for FY 2018, unchanged by FY 2019 and slightly lower thereafter.
- Actual ridership for July and August of this year came in 0.5% higher and 0.5% lower, respectively, than previously forecasted. Countering recent trends, vehicles came in higher, at 0.2% and 0.3%, respectively, in both months.

Revenue Impacts

- For the 2015/17 biennium, forecasted revenues of \$369.4 M are \$0.6 M (0.2%) higher than projected in June for both the Baseline and Alternative 1 Forecasts.
- The 2015/17 biennium forecast is distributed as \$361.3 M in base fares to the operating account and \$8.1 M in fare surcharge revenue to the capital account.
- For the 2017/19 biennium, forecasted revenues of \$380.5 M under the Baseline Forecast are 0.1% lower than projected in June. For the Alternative 1 Forecast, the 2017/19 biennium projection is \$388.9 M or 0.2% lower.
- Thereafter, forecasts for biennial revenues range from 0.3% to 0.9% lower than their June projections, depending on the forecast scenario and biennium.

Washington State Ferries

REVENUE PROJECTIONS ~ BASELINE FORECAST

Adopted Fares through May 1, 2016 | No Changes in Fares after May 2016¹

September 2016 Forecast – Fiscal Years 2017-2027

Fiscal Year	September 2016 Capacity-Constrained Revenue Forecast	Fiscal Year Annual Growth Rate	September Biennium Total	September vs. June Forecast			June 2016 Baseline	
				% Change by Fiscal Year	\$ Change and % Change by Biennium		Capacity-Constrained Revenue Forecast	Biennium Total
2008	\$148,379,626	1.1%						
2009	\$144,540,455	(2.6%)	\$292,920,081					
2010	\$147,009,545	1.7%						
2011	\$147,447,850	0.3%	\$294,457,395					
2012	\$155,085,373	5.2%						
2013	\$162,047,033	4.5%	\$317,132,406					
2014	\$167,441,867	3.3%						
2015	\$175,965,750	5.1%	\$343,407,617					
2016	\$181,444,863	3.1%		0.1%			\$181,307,000	
2017 ²	\$187,930,000	3.6%	\$369,374,863	0.2%	\$561,863	0.2%	\$187,506,000	\$368,813,000
2018	\$189,400,000	0.8%		(0.0%)			\$189,418,000	
2019	\$191,053,000	0.9%	\$380,453,000	(0.2%)	(\$435,000)	(0.1%)	\$191,470,000	\$380,888,000
2020	\$192,563,000	0.8%		(0.5%)			\$193,538,000	
2021	\$193,809,000	0.6%	\$386,372,000	(0.5%)	(\$1,994,000)	(0.5%)	\$194,828,000	\$388,366,000
2022	\$195,234,000	0.7%		(0.6%)			\$196,336,000	
2023	\$196,855,000	0.8%	\$392,089,000	(0.5%)	(\$2,136,000)	(0.5%)	\$197,889,000	\$394,225,000
2024	\$198,251,000	0.7%		(0.5%)			\$199,261,000	
2025	\$199,912,000	0.8%	\$398,163,000	(0.4%)	(\$1,845,000)	(0.5%)	\$200,747,000	\$400,008,000
2026	\$201,657,000	0.9%		(0.3%)			\$202,279,000	
2027	\$203,318,000	0.8%	\$404,975,000	(0.3%)	(\$1,304,000)	(0.3%)	\$204,000,000	\$406,279,000

¹ The Baseline Forecast Forecast includes 1.0% passenger and 2.5% vehicle fare increases on October 1, 2015 and May 1, 2016, plus the 25¢ surcharge per fare sold for funding capital expenditures. However, the Baseline Forecast excludes any further changes to the nominal fares after May 2016, resulting in declining real fares over the forecast horizon. The Baseline Forecast also reflects the current programmed level of service subject to capacity constraints.

² FY 2017 includes actual revenue data through August 2016.

Washington State Ferries

REVENUE PROJECTIONS ~ BASELINE FORECAST

Adopted Fares through May 1, 2016 | No Changes in Fares after May 2016¹

September 2016 Forecast – Fiscal Years 2017-2027

Fiscal Year	September 2016 Capacity-Constrained Revenue Forecast	Fiscal Year Annual Growth Rate	September Biennium Total	Distribution of Revenue to Operating and Capital Programs			
				25¢ Surcharge Revenue for Capital Program	Capital Biennium Total	Base Fare Revenue for Operating Program	Operating Biennium Total
2008	\$148,379,626	1.1%				\$148,379,626	
2009	\$144,540,455	(2.6%)	\$292,920,081			\$144,540,455	\$292,920,081
2010	\$147,009,545	1.7%				\$147,009,545	
2011	\$147,447,850	0.3%	\$294,457,395			\$147,447,850	\$294,457,395
2012	\$155,085,373	5.2%		\$2,544,970		\$152,540,403	
2013	\$162,047,033	4.5%	\$317,132,406	\$3,626,191	\$6,171,161	\$158,420,842	\$310,961,245
2014	\$167,441,867	3.3%		\$3,662,690		\$163,779,177	
2015	\$175,965,750	5.1%	\$343,407,617	\$3,894,088	\$7,556,778	\$172,071,662	\$335,850,839
2016	\$181,444,863	3.1%		\$4,007,848		\$177,437,015	
2017 ²	\$187,930,000	3.6%	\$369,374,863	\$4,065,000	\$8,072,848	\$183,865,000	\$361,302,015
2018	\$189,400,000	0.8%		\$4,088,000		\$185,312,000	
2019	\$191,053,000	0.9%	\$380,453,000	\$4,125,000	\$8,213,000	\$186,928,000	\$372,240,000
2020	\$192,563,000	0.8%		\$4,166,000		\$188,397,000	
2021	\$193,809,000	0.6%	\$386,372,000	\$4,204,000	\$8,370,000	\$189,605,000	\$378,002,000
2022	\$195,234,000	0.7%		\$4,244,000		\$190,990,000	
2023	\$196,855,000	0.8%	\$392,089,000	\$4,288,000	\$8,532,000	\$192,567,000	\$383,557,000
2024	\$198,251,000	0.7%		\$4,328,000		\$193,923,000	
2025	\$199,912,000	0.8%	\$398,163,000	\$4,374,000	\$8,702,000	\$195,538,000	\$389,461,000
2026	\$201,657,000	0.9%		\$4,422,000		\$197,235,000	
2027	\$203,318,000	0.8%	\$404,975,000	\$4,468,000	\$8,890,000	\$198,850,000	\$396,085,000

¹ The Baseline Forecast Forecast includes 1.0% passenger and 2.5% vehicle fare increases on October 1, 2015 and May 1, 2016, plus the 25¢ surcharge per fare sold for funding capital expenditures. However, the Baseline Forecast excludes any further changes to the nominal fares after May 2016, resulting in declining real fares over the forecast horizon. The Baseline Forecast also reflects the current programmed level of service subject to capacity constraints.

² FY 2017 includes actual revenue data through August 2016.

Washington State Ferries

REVENUE PROJECTIONS ~ ALTERNATIVE 1 FORECAST

Adopted Fares through May 1, 2016 | 2.5% Annual Fare Increases FY 2018-27¹

September 2016 Forecast – Fiscal Years 2017-2027

Fiscal Year	September 2016 Capacity-Constrained Revenue Forecast	Fiscal Year Annual Growth Rate	September Biennium Total	September vs. June Forecast			June 2016 Alternative 1	
				% Change by Fiscal Year	\$ Change and % Change by Biennium	Capacity-Constrained Revenue Forecast	Biennium Total	
2008	\$148,379,626	1.1%						
2009	\$144,540,455	(2.6%)	\$292,920,081					
2010	\$147,009,545	1.7%						
2011	\$147,447,850	0.3%	\$294,457,395					
2012	\$155,085,373	5.2%						
2013	\$162,047,033	4.5%	\$317,132,406					
2014	\$167,441,867	3.3%						
2015	\$175,965,750	5.1%	\$343,407,617					
2016	\$181,444,863	3.1%		0.1%		\$181,307,000		
2017 ²	\$187,930,000	3.6%	\$369,374,863	0.2%	\$561,863	0.2%	\$187,506,000	\$368,813,000
2018	\$191,908,000	2.1%		(0.0%)			\$191,954,000	
2019	\$197,025,000	2.7%	\$388,933,000	(0.3%)	(\$598,000)	(0.2%)	\$197,577,000	\$389,531,000
2020	\$202,174,000	2.6%		(0.7%)			\$203,526,000	
2021	\$207,303,000	2.5%	\$409,477,000	(0.8%)	(\$2,983,000)	(0.7%)	\$208,934,000	\$412,460,000
2022	\$212,789,000	2.6%		(0.8%)			\$214,587,000	
2023	\$218,397,000	2.6%	\$431,186,000	(0.9%)	(\$3,723,000)	(0.9%)	\$220,322,000	\$434,909,000
2024	\$224,108,000	2.6%		(0.9%)			\$226,195,000	
2025	\$230,577,000	2.9%	\$454,685,000	(0.9%)	(\$4,085,000)	(0.9%)	\$232,575,000	\$458,770,000
2026	\$237,410,000	3.0%		(0.8%)			\$239,325,000	
2027	\$244,126,000	2.8%	\$481,536,000	(0.9%)	(\$4,105,000)	(0.8%)	\$246,316,000	\$485,641,000

¹ The Alternative 1 Forecast includes includes 1.0% passenger and 2.5% vehicle fare increases on October 1, 2015 and May 1, 2016, followed by annual 2.5% fare increases starting October 2017 (FY 2018), plus the 25¢ surcharge per fare sold for funding capital expenditures. Projected annual inflation is less than the 2.5%, leading to slightly increasing real fares over the forecast horizon. The Alternative 1 Forecast also reflects the current programmed level of service subject to capacity constraints.

² FY 2017 includes actual revenue data through August 2016.

Washington State Ferries

REVENUE PROJECTIONS ~ ALTERNATIVE 1 FORECAST

Adopted Fares through May 1, 2016 | 2.5% Annual Fare Increases FY 2018-27¹

September 2016 Forecast – Fiscal Years 2017-2027

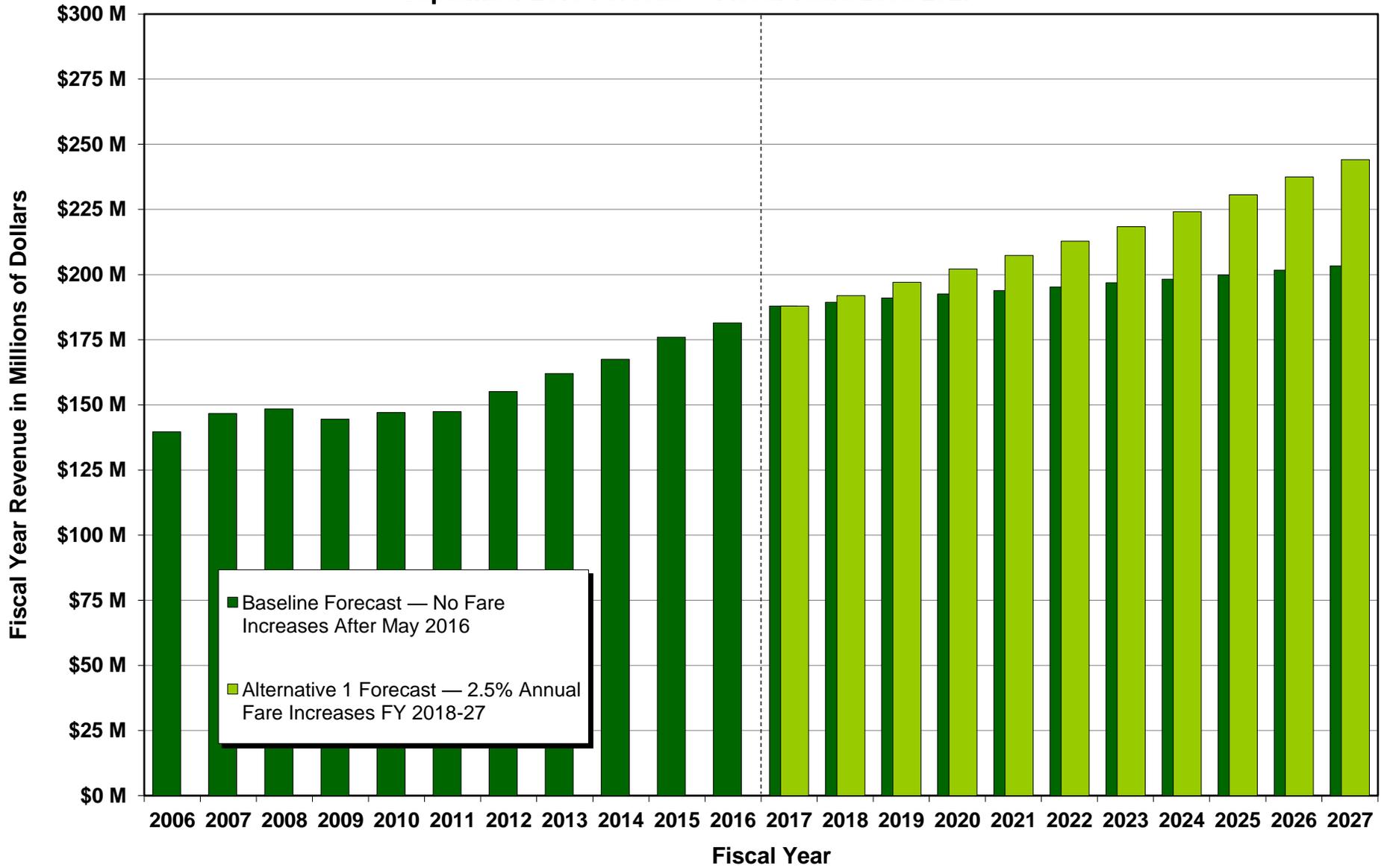
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				25¢ Surcharge Revenue for Capital Program	Capital Biennium Total	Base Fare Revenue for Operating Program	Operating Biennium Total
2008	\$148,379,626	1.1%				\$148,379,626	
2009	\$144,540,455	(2.6%)	\$292,920,081			\$144,540,455	\$292,920,081
2010	\$147,009,545	1.7%				\$147,009,545	
2011	\$147,447,850	0.3%	\$294,457,395			\$147,447,850	\$294,457,395
2012	\$155,085,373	5.2%		\$2,544,970		\$152,540,403	
2013	\$162,047,033	4.5%	\$317,132,406	\$3,626,191	\$6,171,161	\$158,420,842	\$310,961,245
2014	\$167,441,867	3.3%		\$3,662,690		\$163,779,177	
2015	\$175,965,750	5.1%	\$343,407,617	\$3,894,088	\$7,556,778	\$172,071,662	\$335,850,839
2016	\$181,444,863	3.1%		\$4,008,000		\$177,436,863	
2017 ²	\$187,930,000	3.6%	\$369,374,863	\$4,065,000	\$8,073,000	\$183,865,000	\$361,301,863
2018	\$191,908,000	2.1%		\$4,074,000		\$187,834,000	
2019	\$197,025,000	2.7%	\$388,933,000	\$4,083,000	\$8,157,000	\$192,942,000	\$380,776,000
2020	\$202,174,000	2.6%		\$4,095,000		\$198,079,000	
2021	\$207,303,000	2.5%	\$409,477,000	\$4,106,000	\$8,201,000	\$203,197,000	\$401,276,000
2022	\$212,789,000	2.6%		\$4,119,000		\$208,670,000	
2023	\$218,397,000	2.6%	\$431,186,000	\$4,136,000	\$8,255,000	\$214,261,000	\$422,931,000
2024	\$224,108,000	2.6%		\$4,151,000		\$219,957,000	
2025	\$230,577,000	2.9%	\$454,685,000	\$4,171,000	\$8,322,000	\$226,406,000	\$446,363,000
2026	\$237,410,000	3.0%		\$4,193,000		\$233,217,000	
2027	\$244,126,000	2.8%	\$481,536,000	\$4,216,000	\$8,409,000	\$239,910,000	\$473,127,000

¹ The Alternative 1 Forecast includes includes 1.0% passenger and 2.5% vehicle fare increases on October 1, 2015 and May 1, 2016, followed by annual 2.5% fare increases starting October 2017 (FY 2018), plus the 25¢ surcharge per fare sold for funding capital expenditures. Projected annual inflation is less than the 2.5%, leading to slightly increasing real fares over the forecast horizon. The Alternative 1 Forecast also reflects the current programmed level of service subject to capacity constraints.

² FY 2017 includes actual revenue data through August 2016.

Washington State Ferries — Revenue History and Forecast Trends

September 2016 Forecast – Fiscal Years 2006-2027



Washington State Ferries

RIDERSHIP PROJECTIONS ~ BASELINE FORECAST

Adopted Fares through May 1, 2016 | No Changes in Fares after May 2016¹

September 2016 Forecast – Fiscal Years 2017-2027

Fiscal Year	September 2016 Unconstrained Demand Forecast*	September 2016 Capacity Constrained Projections			June 2016 Projections		
		Passenger Ridership	Vehicle/Driver Ridership	Total Ridership	Annual Rate of Growth	Total Ridership	Sep. % Chg from Jun.
2008		12,926,006	10,441,798	23,367,804	(2.8%)		
2009		12,580,511	9,917,249	22,497,760	(3.7%)		
2010		12,453,226	10,134,311	22,587,537	0.4%		
2011		12,242,320	9,968,973	22,211,293	(1.7%)		
2012		12,236,081	9,983,059	22,219,140	0.0%		
2013		12,350,126	10,045,043	22,395,169	0.8%		
2014		12,696,936	10,154,905	22,851,841	2.0%		
2015		13,270,874	10,387,368	23,658,242	3.5%		
2016		13,523,385	10,559,240	24,082,625	1.8%	24,030,000	0.2%
2017 ²	24,416,000	13,589,000	10,731,000	24,320,000	1.0%	24,178,000	0.6%
2018	24,471,000	13,636,000	10,835,000	24,471,000	0.6%	24,391,000	0.3%
2019	24,710,000	13,777,000	10,925,000	24,702,000	0.9%	24,700,000	0.0%
2020	24,995,000	13,981,000	10,995,000	24,976,000	1.1%	25,032,000	(0.2%)
2021	25,285,000	14,206,000	11,042,000	25,248,000	1.1%	25,317,000	(0.3%)
2022	25,587,000	14,430,000	11,098,000	25,528,000	1.1%	25,610,000	(0.3%)
2023	25,912,000	14,656,000	11,171,000	25,827,000	1.2%	25,909,000	(0.3%)
2024	26,236,000	14,896,000	11,221,000	26,117,000	1.1%	26,201,000	(0.3%)
2025	26,601,000	15,142,000	11,293,000	26,435,000	1.2%	26,511,000	(0.3%)
2026	26,998,000	15,400,000	11,373,000	26,773,000	1.3%	26,838,000	(0.2%)
2027	27,404,000	15,666,000	11,445,000	27,111,000	1.3%	27,186,000	(0.3%)

¹ The Baseline Forecast includes 1.0% passenger and 2.5% vehicle fare increases on October 1, 2015 and May 1, 2016, plus the 25¢ surcharge per fare sold for funding capital expenditures. However, the Baseline Forecast excludes any further changes to the nominal fares after May 2016, resulting in declining real fares over the forecast horizon. The Baseline Forecast also reflects the current programmed level of service subject to capacity constraints.

² FY 2017 includes actual revenue data through August 2016.

* Excludes demand adjustments for potential vessel capacity constraints and impacts due to the 25¢ per fare capital surcharge.

Washington State Ferries

RIDERSHIP PROJECTIONS ~ ALTERNATIVE 1 FORECAST

Adopted Fares through May 1, 2016 | 2.5% Annual Fare Increases FY 2018-27¹

September 2016 Forecast – Fiscal Years 2017-2027

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2012		12,236,081	9,983,059	22,219,140	0.0%		
2013		12,350,126	10,045,043	22,395,169	0.8%		
2014		12,696,936	10,154,905	22,851,841	2.0%		
2015		13,270,874	10,387,368	23,658,242	3.5%		
2016		13,523,385	10,559,240	24,082,625	1.8%	24,030,000	0.2%
2017 ²	24,416,000	13,589,000	10,731,000	24,320,000	1.0%	24,178,000	0.6%
2018	24,384,000	13,578,000	10,806,000	24,384,000	0.3%	24,307,000	0.3%
2019	24,439,000	13,612,000	10,823,000	24,435,000	0.2%	24,442,000	(0.0%)
2020	24,541,000	13,712,000	10,818,000	24,530,000	0.4%	24,607,000	(0.3%)
2021	24,648,000	13,834,000	10,796,000	24,630,000	0.4%	24,733,000	(0.4%)
2022	24,763,000	13,952,000	10,787,000	24,739,000	0.4%	24,859,000	(0.5%)
2023	24,905,000	14,073,000	10,793,000	24,866,000	0.5%	24,998,000	(0.5%)
2024	25,038,000	14,197,000	10,788,000	24,985,000	0.5%	25,128,000	(0.6%)
2025	25,193,000	14,314,000	10,808,000	25,122,000	0.5%	25,263,000	(0.6%)
2026	25,374,000	14,442,000	10,839,000	25,281,000	0.6%	25,420,000	(0.5%)
2027	25,565,000	14,579,000	10,865,000	25,444,000	0.6%	25,601,000	(0.6%)

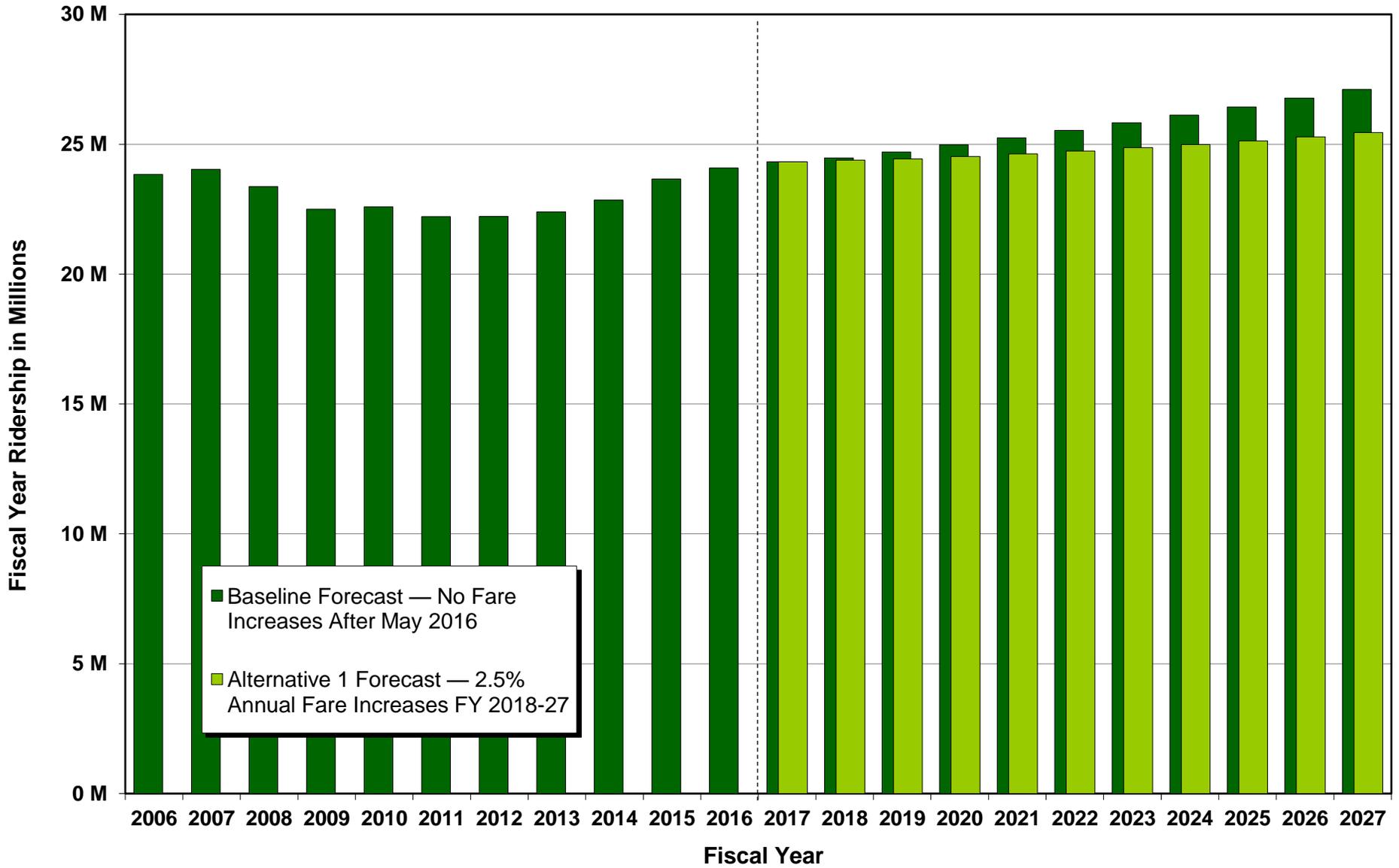
¹ The Alternative 1 Forecast includes includes 1.0% passenger and 2.5% vehicle fare increases on October 1, 2015 and May 1, 2016, followed by annual 2.5% fare increases starting October 2017 (FY 2018), plus the 25¢ surcharge per fare sold for funding capital expenditures. Projected annual inflation is less than the 2.5%, leading to slightly increasing real fares over the forecast horizon. The Alternative 1 Forecast also reflects the current programmed level of service subject to capacity constraints.

² FY 2017 includes actual revenue data through August 2016.

* Excludes demand adjustments for potential vessel capacity constraints and impacts due to the 25¢ per fare capital surcharge.

Washington State Ferries — Ridership History and Forecast Trends

September 2016 Forecast – Fiscal Years 2006-2027



**Vehicle Miles Travelled Forecast
September 2016**

WSDOT VEHICLE MILES TRAVELLED FORECAST FOR SEPTEMBER 2016

- WSDOT has produced a statewide VMT forecast for more than twenty years
- WSDOT convened a multiagency work group in 2009 and 2010 to select a better statewide VMT forecast model
- While all independent variables have been updated from the latest data, WSDOT Statewide Travel & Collision Data Office (STCDO) provides estimated “actual” Vehicle Miles Travelled data for calendar year 2014.
- “Actual” Vehicle Miles Travelled for FY 2015 was 58.8 billion, 2.1 % higher than 2014.
- The current forecast is slightly higher than the previous forecast for 2016 to 2043. This is due primarily to:
 - Higher employment projections since Sept 2015
 - Higher projected vehicle registrations since Sept 2015
 - Lower projected fuel costs
 - Higher start point, with 2015 actuals coming in above previous forecast
- The September 2016 forecast for VMT is about 1.7% higher than the September 2015 forecast
- Current forecast calls for low year-over-year VMT short-term growth for 2016-2021
 - Average annual growth rate is 0.86%
- Current forecast calls for year-over-year long-term decline in VMT for 2022-2042
 - Average annual growth rate is -0.98%

STATEWIDE VMT FORECAST METHODOLOGY

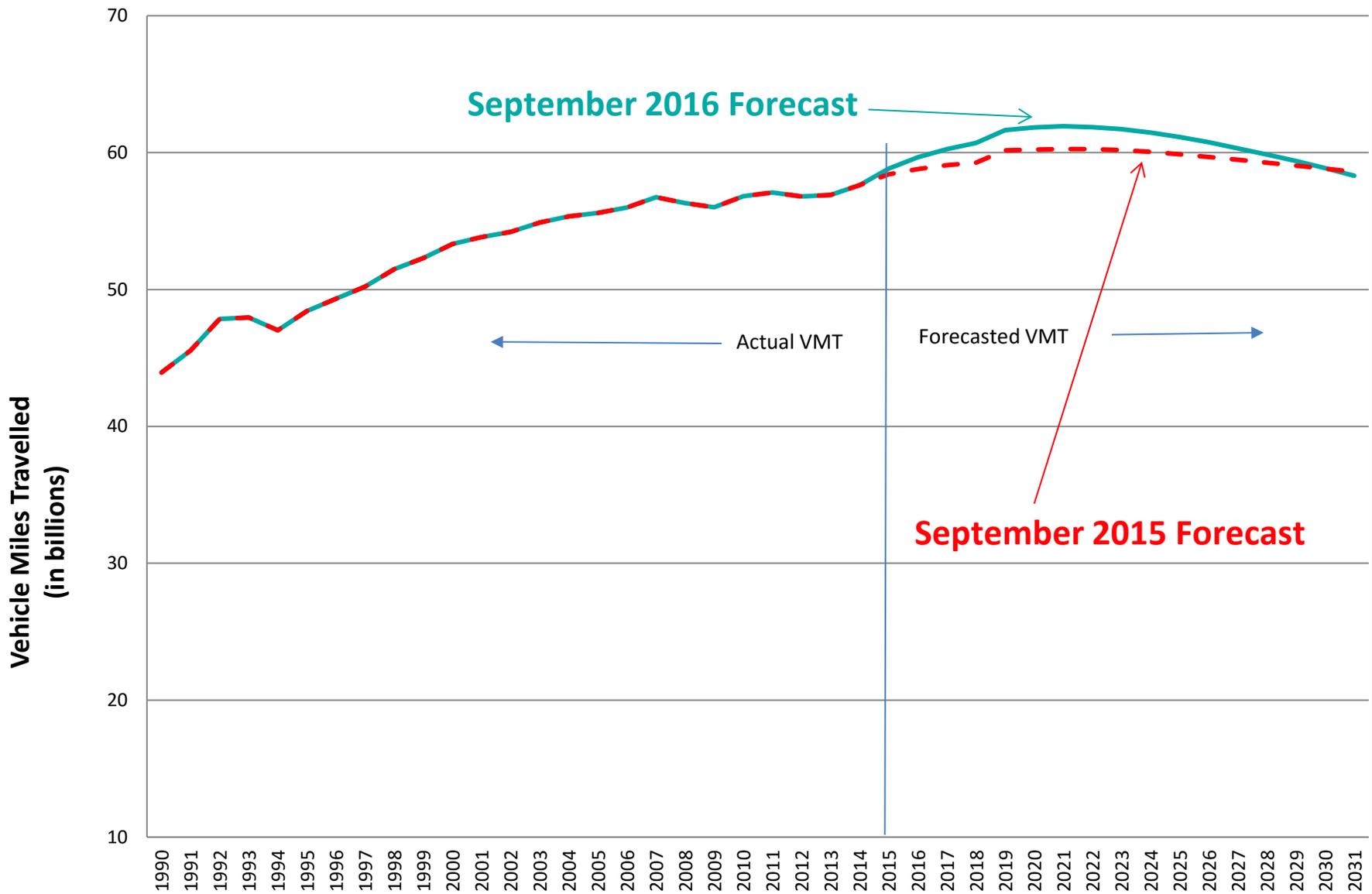
- The Statewide VMT model is first differenced log-log functional form which includes the log of the following independent variables:
 - Washington employment
 - Washington motor vehicle registrations
 - Washington gas prices
- The forecast model considers three separate types of impacts on VMT: economic activity, vehicles registered, and gas prices
- Analysis of the data showed that independent variables demonstrated significant unit root issues.
 - Augmented Dickey-Fuller test recommended use of 1st difference
 - This adds stability to forecasts
- Analysis of VMT history led to decision to truncate history used in formulation
 - VMT growth rates in recent years do not match past aggressive rates
 - VMT history from 1966 through 1990 shows growth averaging 4.5% per year.
 - VMT history from 1991 through 2001 shows growth averaging 2% per year.

- VMT history from 2002 to 2014 shows growth averaging 0.5% per year .
- Using history from 1966 through 1990 produced forecasts that have proven to be too aggressive
- Forecast now agrees with current trends in history, national trends, or research literature showing flattening of VMT
- Historical VMT forecasts were consistently higher than WSDOT fuel consumption forecast. These changes bring VMT forecast in line with fuel forecast

SOURCE OF INDEPENDENT FORECASTED VARIABLES

- Washington employment – Economic and Revenue Forecast Council September 2016 forecast in the near-term and from OFM’s long-term non-farm employment projections for Washington.
- Washington motorized vehicle registrations –WSDOT-Economic Analysis section for the Transportation Revenue Council September 2016 forecast
- Washington gasoline prices –WSDOT forecast for the Transportation Revenue Council September 2016 forecast

Vehicle Miles Travel Forecast Comparison



September 2016 Forecast of Vehicle Miles Travelled (History and Forecast), VMT per capita, and Independent Variables.

YEAR	Total VMT (Billion Miles)	Percent Change	VMT Per Capita	Percent Change	VMT Per Driver Pop	Percent Change	Independent Variables					
							Washington Employment ¹ (in Thousands)	Percent Change	Vehicles Registered ² (in Thousands)	Percent Change	Gas Prices ³	Percent Change
1965	14.803						869		1,525		0.19	
1966	15.645	5.69%					940	8.12%	1,619	6.16%	0.19	0.00%
1967	17.067	9.09%					1,021	8.63%	1,727	6.67%	0.20	5.26%
1968	18.347	7.50%					1,075	5.27%	1,834	6.20%	0.20	0.00%
1969	19.211	4.71%					1,116	3.82%	1,971	7.47%	0.21	5.00%
1970	20.371	6.04%	5,936		9,048		1,109	-0.65%	1,971	0.00%	0.21	0.00%
1971	20.844	2.32%	6,073	2.30%	9,143	1.05%	1,062	-4.16%	1,998	1.37%	0.22	4.76%
1972	21.835	4.75%	6,337	4.35%	9,495	3.85%	1,079	1.60%	2,078	4.00%	0.22	0.00%
1973	22.977	5.23%	6,564	3.59%	9,845	3.68%	1,127	4.41%	2,200	5.87%	0.23	4.55%
1974	22.317	-2.87%	6,267	-4.53%	9,307	-5.46%	1,172	3.96%	2,288	4.00%	0.36	56.52%
1975	23.106	3.54%	6,370	1.64%	9,370	0.67%	1,217	3.86%	2,358	3.06%	0.40	11.11%
1976	24.685	6.83%	6,657	4.51%	9,723	3.77%	1,249	2.62%	2,483	5.30%	0.41	2.50%
1977	26.485	7.29%	6,929	4.07%	10,109	3.96%	1,322	5.88%	2,649	6.69%	0.43	4.88%
1978	28.605	8.00%	7,220	4.20%	10,495	3.82%	1,427	7.94%	2,743	3.55%	0.44	2.33%
1979	29.511	3.17%	7,181	-0.54%	10,362	-1.26%	1,534	7.48%	2,969	8.24%	0.69	56.82%
1980	28.765	-2.53%	6,826	-4.94%	9,673	-6.65%	1,607	4.75%	3,092	4.14%	1.25	81.16%
1981	29.487	2.51%	6,906	1.18%	9,620	-0.55%	1,615	0.49%	3,219	4.11%	1.40	12.00%
1982	30.744	4.26%	7,142	3.42%	9,854	2.43%	1,590	-1.53%	3,214	-0.16%	1.29	-7.86%
1983	31.965	3.97%	7,350	2.90%	10,126	2.76%	1,564	-1.61%	3,256	1.31%	1.23	-4.65%
1984	33.459	4.67%	7,592	3.30%	10,465	3.36%	1,623	3.77%	3,328	2.21%	1.21	-1.54%
1985	34.308	2.54%	7,697	1.38%	10,575	1.05%	1,685	3.82%	3,422	2.82%	1.26	3.72%
1986	35.152	2.46%	7,776	1.03%	10,700	1.18%	1,741	3.30%	3,569	4.30%	1.17	-7.09%
1987	37.207	5.85%	8,076	3.86%	11,148	4.18%	1,805	3.66%	3,768	5.58%	0.91	-22.28%
1988	40.101	7.78%	8,503	5.29%	11,766	5.55%	1,897	5.12%	3,876	2.85%	0.94	3.97%
1989	42.494	5.97%	8,761	3.03%	12,164	3.38%	1,992	4.99%	4,007	3.39%	0.95	1.17%
1990	43.934	3.39%	8,787	0.30%	12,246	0.67%	2,106	5.73%	4,219	5.29%	1.02	7.02%
1991	45.536	3.65%	8,882	1.09%	12,344	0.81%	2,165	2.80%	4,293	1.75%	1.24	21.25%
1992	47.858	5.10%	9,118	2.66%	12,686	2.77%	2,206	1.90%	4,448	3.61%	1.12	-9.29%
1993	47.965	0.22%	8,961	-1.72%	12,444	-1.91%	2,243	1.70%	4,480	0.73%	1.18	4.90%
1994	47.025	-1.96%	8,618	-3.83%	11,975	-3.76%	2,291	2.13%	4,512	0.70%	1.14	-2.97%
1995	48.430	2.99%	8,718	1.15%	12,101	1.05%	2,345	2.37%	4,581	1.54%	1.22	6.82%
1996	49.323	1.84%	8,728	0.12%	12,097	-0.03%	2,385	1.67%	4,587	0.12%	1.27	3.77%
1997	50.206	1.79%	8,748	0.23%	12,091	-0.05%	2,483	4.15%	4,701	2.49%	1.31	3.08%
1998	51.482	2.54%	8,846	1.12%	12,177	0.71%	2,582	3.99%	4,847	3.11%	1.20	-8.42%
1999	52.303	1.59%	8,884	0.43%	12,157	-0.16%	2,650	2.63%	4,930	1.71%	1.12	-6.02%
2000	53.319	1.94%	8,943	0.66%	12,196	0.32%	2,717	2.51%	5,195	5.37%	1.43	27.58%
2001	53.829	0.96%	8,902	-0.47%	12,115	-0.67%	2,754	1.36%	5,256	1.17%	1.57	9.62%
2002	54.201	0.69%	8,857	-0.50%	11,987	-1.05%	2,704	-1.80%	5,422	3.17%	1.36	-13.30%
2003	54.890	1.27%	8,855	-0.03%	11,953	-0.28%	2,697	-0.26%	5,473	0.94%	1.49	9.02%
2004	55.331	0.80%	8,797	-0.65%	11,855	-0.83%	2,715	0.66%	5,652	3.27%	1.78	19.85%
2005	55.585	0.46%	8,680	-1.34%	11,704	-1.28%	2,774	2.17%	5,720	1.21%	2.08	16.96%
2006	55.989	0.73%	8,600	-0.92%	11,547	-1.34%	2,856	2.95%	5,832	1.95%	2.61	25.06%
2007	56.739	1.34%	8,601	0.02%	11,482	-0.56%	2,931	2.65%	5,912	1.38%	2.84	9.17%
2008	56.309	-0.76%	8,450	-1.75%	11,216	-2.32%	2,995	2.15%	6,161	4.21%	3.30	16.07%
2009	56.013	-0.53%	8,338	-1.33%	11,014	-1.80%	2,936	-1.94%	6,030	-2.13%	2.78	-15.72%
2010	56.812	1.43%	8,401	0.74%	11,059	0.41%	2,832	-3.55%	5,950	-1.32%	2.89	3.92%
2011	57.083	0.48%	8,379	-0.25%	11,004	-0.49%	2,852	0.69%	6,153	3.42%	3.38	16.95%
2012	56.793	-0.51%	8,260	-1.42%	10,840	-1.49%	2,893	1.43%	6,104	-0.80%	3.85	13.72%
2013	56.897	0.18%	8,177	-1.00%	10,738	-0.94%	2,952	2.04%	6,211	1.74%	3.73	-2.96%
2014	57.619	1.27%	8,173	-0.05%	10,728	-0.09%	3,021	2.36%	6,336	2.01%	3.61	-3.19%
2015	58.825	2.09%	8,235	0.75%	10,796	0.63%	3,103	2.70%	6,553	3.43%	3.08	-14.67%
2016	59.667	1.43%	8,246	0.14%	10,793	-0.03%	3,194	2.94%	6,806	3.86%	2.51	-18.59%
2017	60.256	0.99%	8,228	-0.22%	10,748	-0.42%	3,264	2.19%	6,929	1.80%	2.53	0.88%
2018	60.709	0.75%	8,196	-0.39%	10,686	-0.58%	3,311	1.42%	7,050	1.75%	2.86	13.00%
2019	61.631	1.52%	8,230	0.42%	10,714	0.26%	3,358	1.42%	7,173	1.74%	3.21	12.17%
2020	61.845	0.35%	8,173	-0.70%	10,626	-0.81%	3,399	1.24%	7,289	1.63%	3.54	10.22%
2021	61.926	0.13%	8,099	-0.90%	10,522	-0.98%	3,437	1.10%	7,399	1.50%	3.88	9.62%
2022	61.861	-0.10%	8,007	-1.13%	10,395	-1.21%	3,474	1.10%	7,480	1.10%	4.16	7.30%
2023	61.706	-0.25%	7,906	-1.26%	10,253	-1.36%	3,507	0.93%	7,564	1.13%	4.42	6.32%
2024	61.457	-0.40%	7,796	-1.40%	10,099	-1.51%	3,538	0.90%	7,650	1.14%	4.70	6.33%
2025	61.130	-0.53%	7,678	-1.51%	9,932	-1.65%	3,568	0.85%	7,740	1.17%	4.95	5.25%
2026	60.759	-0.61%	7,558	-1.57%	9,760	-1.72%	3,597	0.81%	7,833	1.20%	5.09	2.87%
2027	60.315	-0.73%	7,431	-1.67%	9,584	-1.81%	3,628	0.84%	7,926	1.18%	5.32	4.40%
2028	59.864	-0.75%	7,307	-1.67%	9,412	-1.79%	3,657	0.82%	8,018	1.17%	5.34	0.43%
2029	59.380	-0.81%	7,182	-1.71%	9,242	-1.81%	3,688	0.84%	8,111	1.15%	5.45	2.02%
2030	58.862	-0.87%	7,056	-1.76%	9,069	-1.86%	3,721	0.90%	8,202	1.13%	5.56	2.07%
2031	58.310	-0.94%	6,929	-1.80%	8,896	-1.91%	3,752	0.84%	8,294	1.12%	5.68	2.10%
2032	57.722	-1.01%	6,801	-1.85%	8,724	-1.94%	3,785	0.87%	8,385	1.09%	5.80	2.13%
2033	57.164	-0.97%	6,680	-1.78%	8,560	-1.87%	3,818	0.88%	8,524	1.66%	5.92	2.10%
2034	56.523	-1.12%	6,552	-1.92%	8,389	-2.00%	3,851	0.86%	8,627	1.21%	6.05	2.13%
2035	55.848	-1.19%	6,422	-1.97%	8,216	-2.06%	3,883	0.85%	8,730	1.19%	6.17	2.13%
2036	55.138	-1.27%	6,292	-2.03%	8,042	-2.12%	3,916	0.84%	8,832	1.18%	6.30	2.11%
2037	54.398	-1.34%	6,160	-2.09%	7,867	-2.17%	3,949	0.84%	8,935	1.16%	6.44	2.11%
2038	53.626	-1.42%	6,028	-2.15%	7,692	-2.23%	3,983	0.86%	9,038	1.15%	6.57	2.13%
2039	52.824	-1.50%	5,779	-4.12%	7,515	-2.29%	4,017	0.86%	9,141	1.14%	6.71	2.13%
2040	51.991	-1.58%	5,636	-2.47%	7,337	-2.37%	4,054	0.90%	9,243	1.12%	6.86	2.14%
2041	51.233	-1.46%	5,504	-2.35%	7,034	-4.13%	4,252	4.89%	9,346	1.11%	7.01	2.14%
2042	50.343	-1.74%	5,360	-2.62%	6,845	-2.69%	4,296	1.03%	9,449	1.10%	7.16	2.21%
2043	57.223	13.67%	6,038	12.66%	7,705	12.57%	4,339	1.02%	9,552	1.09%	6.30	-12.00%

¹Forecast 2016-2021 from Economic and Revenue Forecast Council's September 2016 Forecast
Forecast 2021-2041 extended based on OFM forecast growth rate Sept 2015
Forecast 2041-2043 extended using trend

²Forecast 2016-2031 from Transportation Revenue Forecast Council's September 2016 Forecast

³Forecast 2016-2031 from Transportation Revenue Forecast Council's September 2016 Forecast