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Washington State Department of Transportation

The Fuel and Vehicle Trends Report

April 30, 2018

This report is a summary of the latest fuel prices and other oil industry key statistics. In addition, this report provides the latest trends in vehicle registrations and transportation tax collections for the state of Washington. It also summarizes articles appearing in popular, business, and technical media referring to fuel price, production and supplies as well as vehicle sales and registration trends. At the end of the report is a listing of all articles summarized, with hyperlinks to internet sources where available. Some hyperlinks may require free registration or paid subscriptions to access. The appearance of articles, products, opinions, and links in this summary does not constitute an endorsement by the Washington State Department of Transportation. Photos and other artwork included in the report are either included with permission or are in the public domain. *The Fuel and Vehicle Trends Report* (ISSN 1948-2388) is compiled by Brian L. Calkins, M.S. Agricultural Economics, Lizbeth Martin-Mahar, Ph. D., and David Ding, Ph. D., Economic Analysis Section, Budget and Financial Analysis Office of the Washington State Department of Transportation. Contact the editors by email at brian.calkins@wsdot.wa.gov or martinli@wsdot.wa.gov or DingDav@wsdot.wa.gov by telephone at (360) 705-7991 or (360) 705-7942 or (360) 705-7502.

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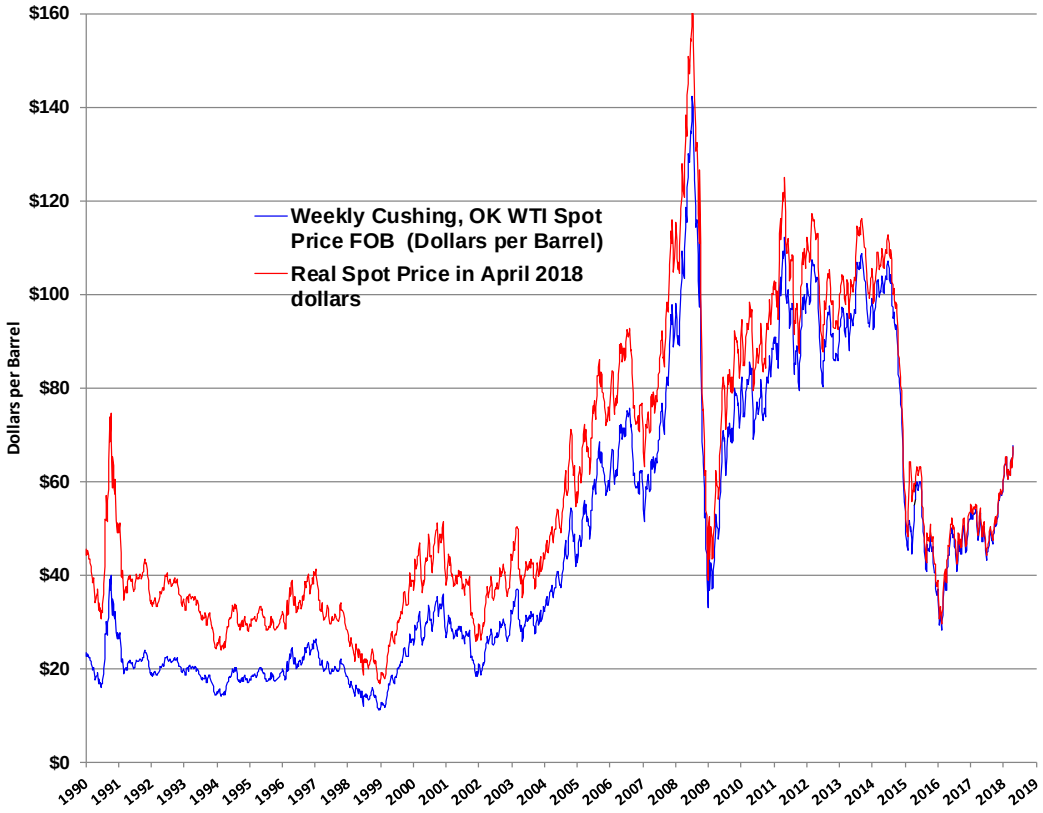
FUEL PRICE TRENDS: Crude, Gasoline and Diesel Markets

Analysis by Brian L. Calkins, M.S.

Figure 1: Weekly Cushing, Oklahoma WTI Spot Price FOB (Dollars Per Barrel), January 1990 to April 2018.



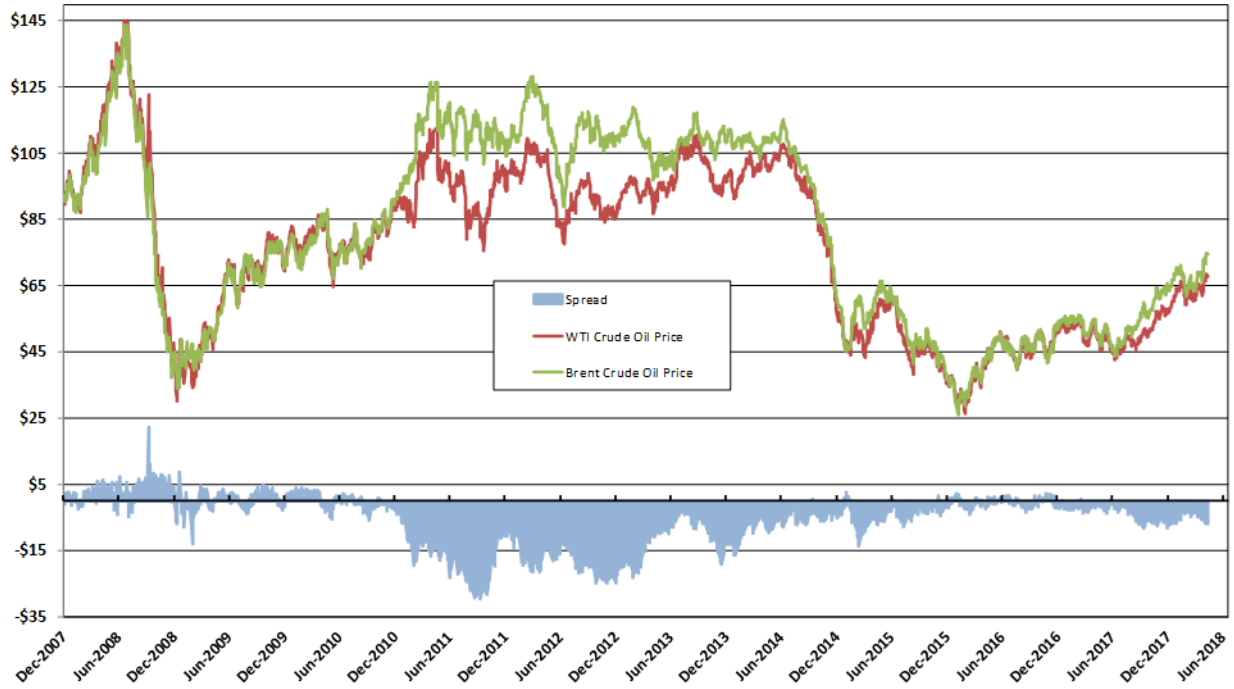
Source: Energy Information Administration (EIA), 2018a

West Texas Intermediate (WTI) spot crude prices averaged $57.88 per barrel for December 2017, the last issue published of the Fuel and Vehicle Trends Report. In January 2018, WTI crude oil prices increased sharply by $5.82 to $63.70 per barrel. Prices moderated to $62.23 per barrel in February and $62.72 per barrel in March. Recently, EIA's weekly spot crude prices average $65.55 per barrel for the first three weeks of April reported by EIA's Weekly Petroleum Status Report. A year ago in April 2017, WTI spot prices averaged $51.06 per barrel.

EIA's April 2018 Short-term Energy Outlook (STEO) shows an average WTI price of $50.79 per barrel for CY 2017 and forecasts $59.37 per barrel for CY 2018 and $58.68 per barrel for CY 2019 (EIA, 2018b). December 2017's STEO projection of $52.77 per barrel for CY 2018 was lower than April 2018's STEO by $5.91 per barrel. IHS Global Insight's April 2018 ten-year forecast projects a WTI crude oil price of $59.64 per barrel in CY 2018 and $52.51 per barrel in CY 2019. Consensus Economics, in their April 2018 report projects, WTI prices at an average of $61.87 per barrel in CY 2018 and $60.27 per barrel in CY 2019.

The top oil producers in the world are the United States, Saudi Arabia, and Russia. In early 2016, WTI crude oil was selling at $30 per barrel because the market was glutted with too much oil for the demand. Now Brent Crude is selling above $70 per barrel. What happened? About 18 months ago, Saudi Arabia and Russia forged an oil-market deal to cut production in order to increase prices. Well, it worked and we see the impact in crude prices and refined petroleum products such a gasoline and diesel fuels. The strategy worked but the pact expires at the end of 2018. What lies ahead? Apparently, Saudi Arabia and Russia may not be in agreement. The Saudis prefer a $75 per barrel crude oil price but Russia prefers a price of around $64 per barrel. Current production by the two countries appear to back-up their preferences. Saudi Arabia actually produces 130,000 barrels per day below their cap. In contrast, Russia now has increased output by 70,000 barrels a day since September 2017. As always, the market and price of oil is volatile and prices are difficult to predict. (WSJ, 2018)

Figure 2: WTI - Brent Crude Oil Spot Price Spreads from January 2008 to April 23, 2018.



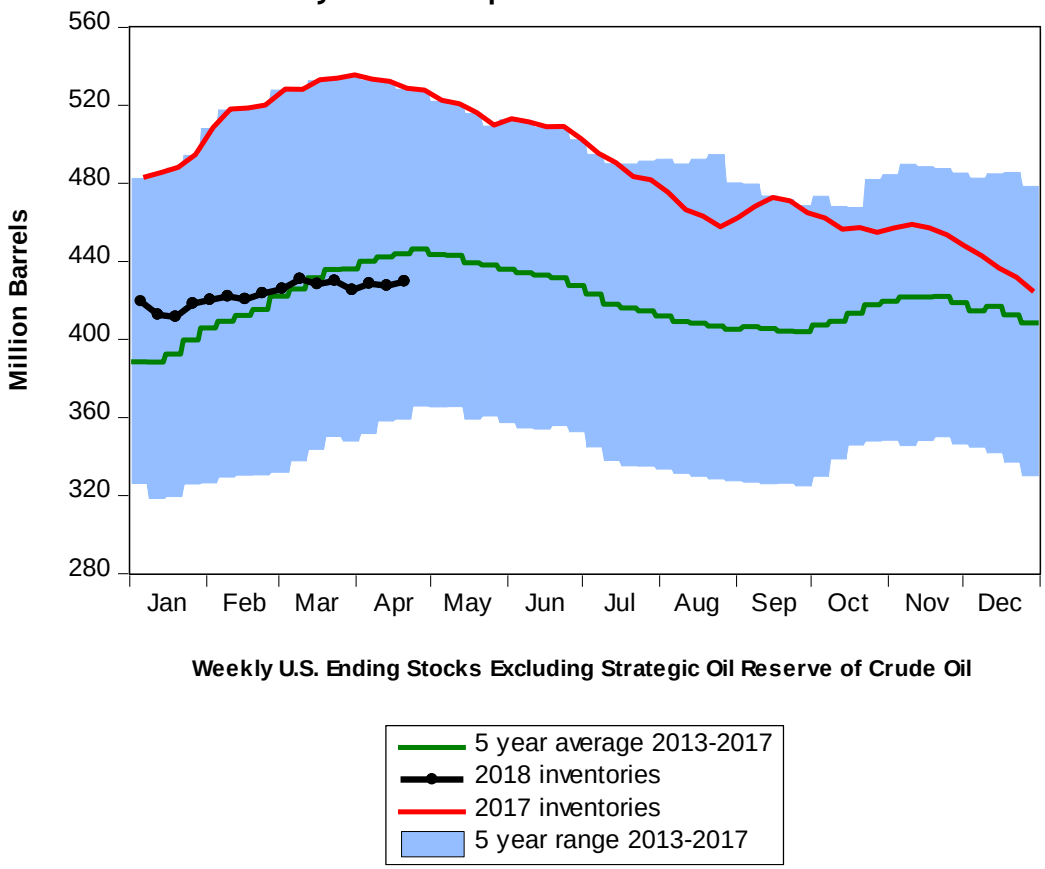
Source: EIA 2018a Daily WTI and Brent crude oil spot prices

EIA's April 2018 STEO reports a Brent crude oil price averaging $54.15 per barrel for all of CY 2017 and projects an average $63.36 per barrel in CY 2018 and $62.63 per barrel in CY 2019. The daily WTI-Brent crude oil spot price difference (spread) showed a low spread of $0.35 in CY 2016 (Figure 2). It increased to $3.36 per barrel in CY 2017. The current price spread through April 23, 2018 averages $4.20 per barrel. Notably since April 10, Brent crude's spot price has averaged $73 per barrel. EIA predicts the WTI-Brent price discount to average $3.99 per barrel in 2018 and nearly the same in 2019 at $4 per barrel.

EIA reports U.S. oil production averaged 9.7 million barrels per day in 2017. The 9.7 million barrels in 2017 surpassed the record of 9.6 million barrels per day achieved in 1970. For the first two months in 2018, the US production per day has average 10.1 million barrels. EIA forecasts 10.7 million barrels per day in 2018 and even higher in 2019 averaging 11.4 million barrels per day.

Inventories

Figure 3: Weekly U.S. Ending Inventories of Crude Oil Excluding Strategic Petroleum Reserve from January 2012 to April 2018.



April's *Trends Report* uses historical five-year averages for inventories to compare to current inventory levels. Weekly inventories for crude oil, gasoline, and distillate span five years from 2013 to 2017 (Figures 3-7). In April 2018, EIA's *Weekly Petroleum Status Report* shows U.S. crude oil inventories, excluding Strategic Petroleum Reserve (SPR) stocks, at 429.737 million barrels for the week ending April 20, 2018 (EIA 2018c). See Figure 3. This storage level is 14.238 million barrels or 3.2 percent lower than the 5-year (2013-2017) historical average of 443.975 million barrels for this week. This trend of weekly inventories falling below the 5-year average began with the week ending March 16, 2018. In general, the inventories for the first four months of 2018 have been sizably below the 2017 monthly levels.

Figure 4 shows gasoline inventories within the West Coast Petroleum Administration for Defense District (PADD5). Since the beginning of 2018, inventories averaged 33.065 million barrels above the average 31.055 million barrels of the 5-year average from 2013-2017. Notably from February 9 through April 20 inventories in 2018 exceeded the 5-year upper range by an average 4.2 percent per week or a total of 13 million barrels.

Figure 5 shows gasoline inventories within the United States. Since the beginning of 2018, inventories exceeded the 5-year average from 2013-2017 by a total of 102.827 million barrels or an average 2.7 percent per week above the 5-year average. Since early March 2018 to the 3rd week of April 2018 inventories are mirroring 2017 inventories fairly closely.

Figure 6 shows weekly distillate inventories for PADD5 (West Coast) in 2018. Inventories from early January 2018 to the week ending February exceeded the 5-year 2013-2017 average by a total of 3.55 million barrels or an average 3.1 percent per week. Inventories then accelerated downward to 12.4 million barrels for the week ending March 23. Then, inventories climbed rapidly upward to an average of 13.3 million gallon in the first weeks in April. Inventories are now near 2017's inventories and the 5-year average.

U.S inventories for distillates in 2018 started the year below the 5-year average by 17.48 million barrels, or an average 12.1 percent per week until the week ending January 6. See Figure 7. Inventories then followed a trajectory near the 5-year average from February 2 until the week ending March 2. Starting with the week ending March 9 until the week ending April 20 inventories dropped a total 38.112 million barrels or an average 4.1 percent per week. Now, the April 2018 distillates inventories are well below both the 5-year average and the 2017 inventory levels for this time of year.

Figure 4: Weekly Ending Gasoline Inventories (West Coast PADD5) from January 2012 to April 2018.

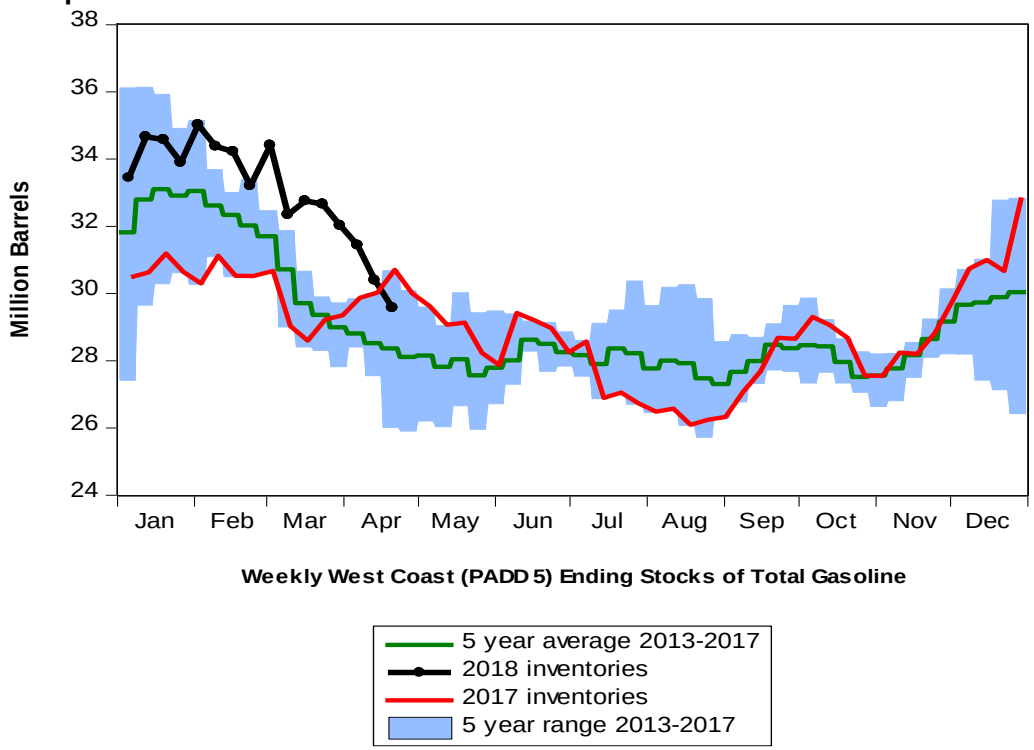


Figure 5: U.S. Weekly Ending Total Gasoline Inventories from January 2012 to April 2018.

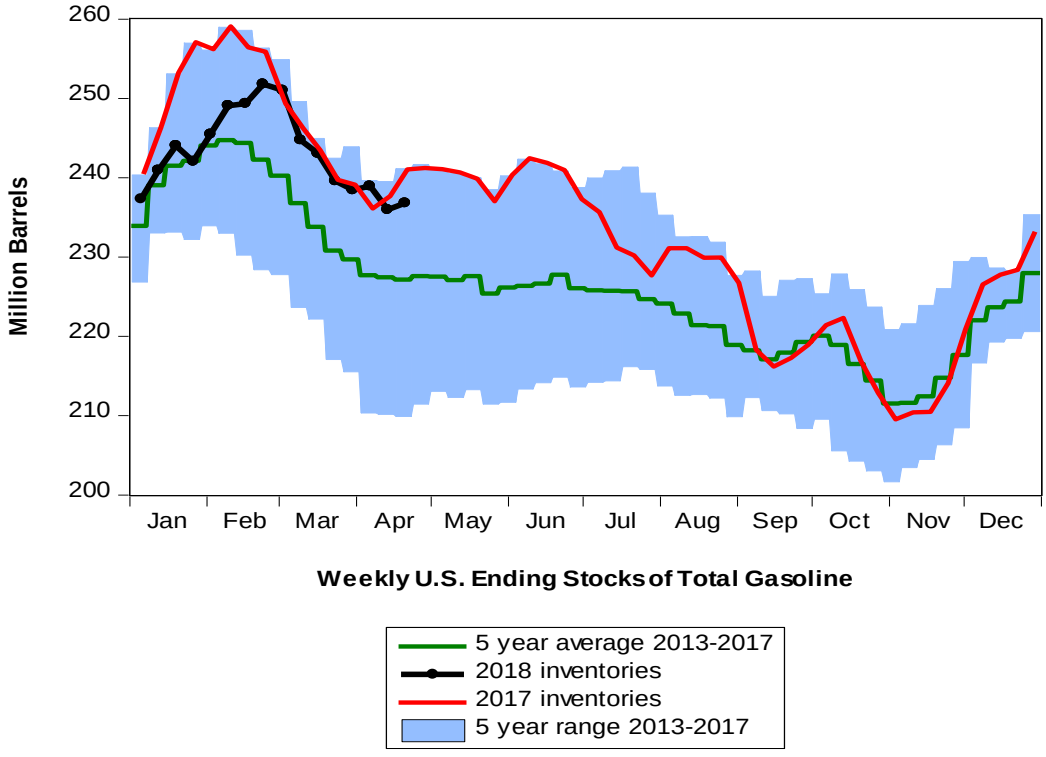


Figure 6: Weekly Ending Distillate Inventories (West Coast PADD5) from January 2012 to April 2018

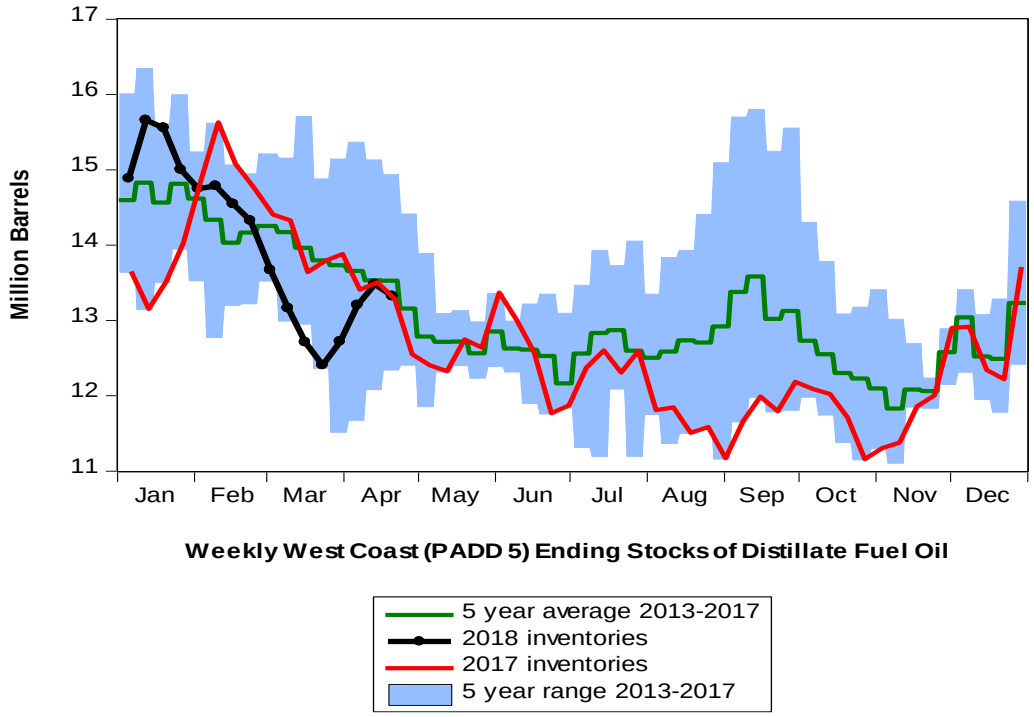
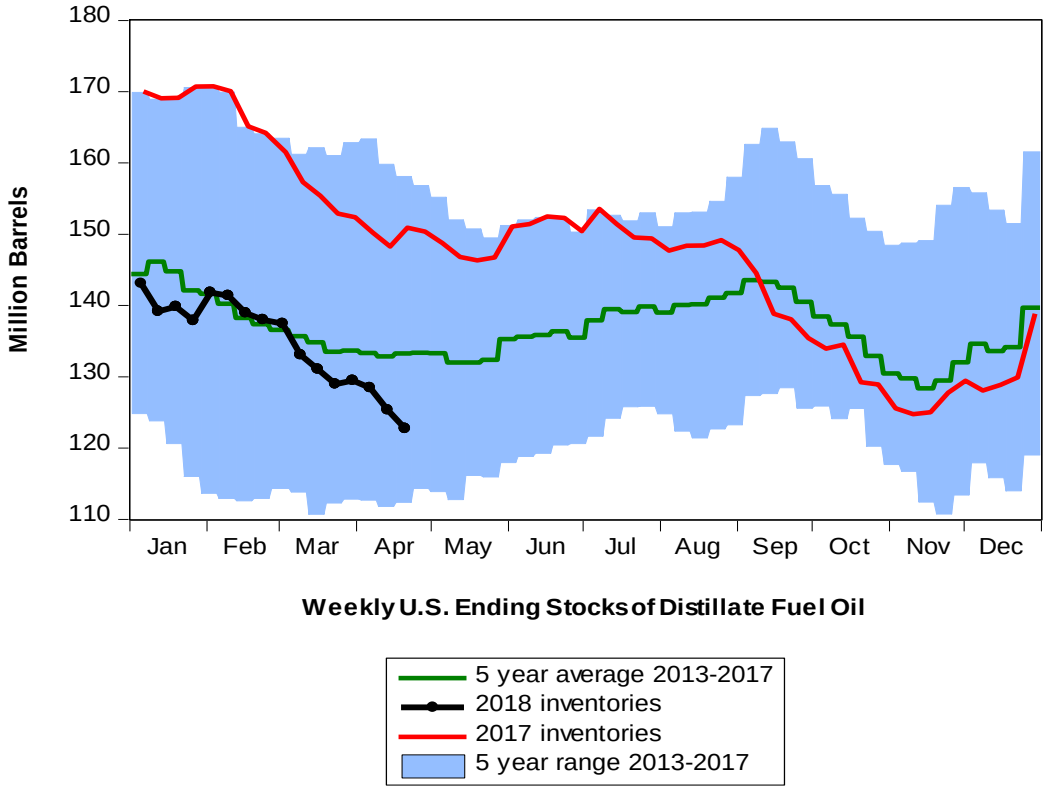


Figure 7: U.S Monthly Distillate Inventories from January 2012 to April 2018



Washington Retail Gasoline and Diesel Prices

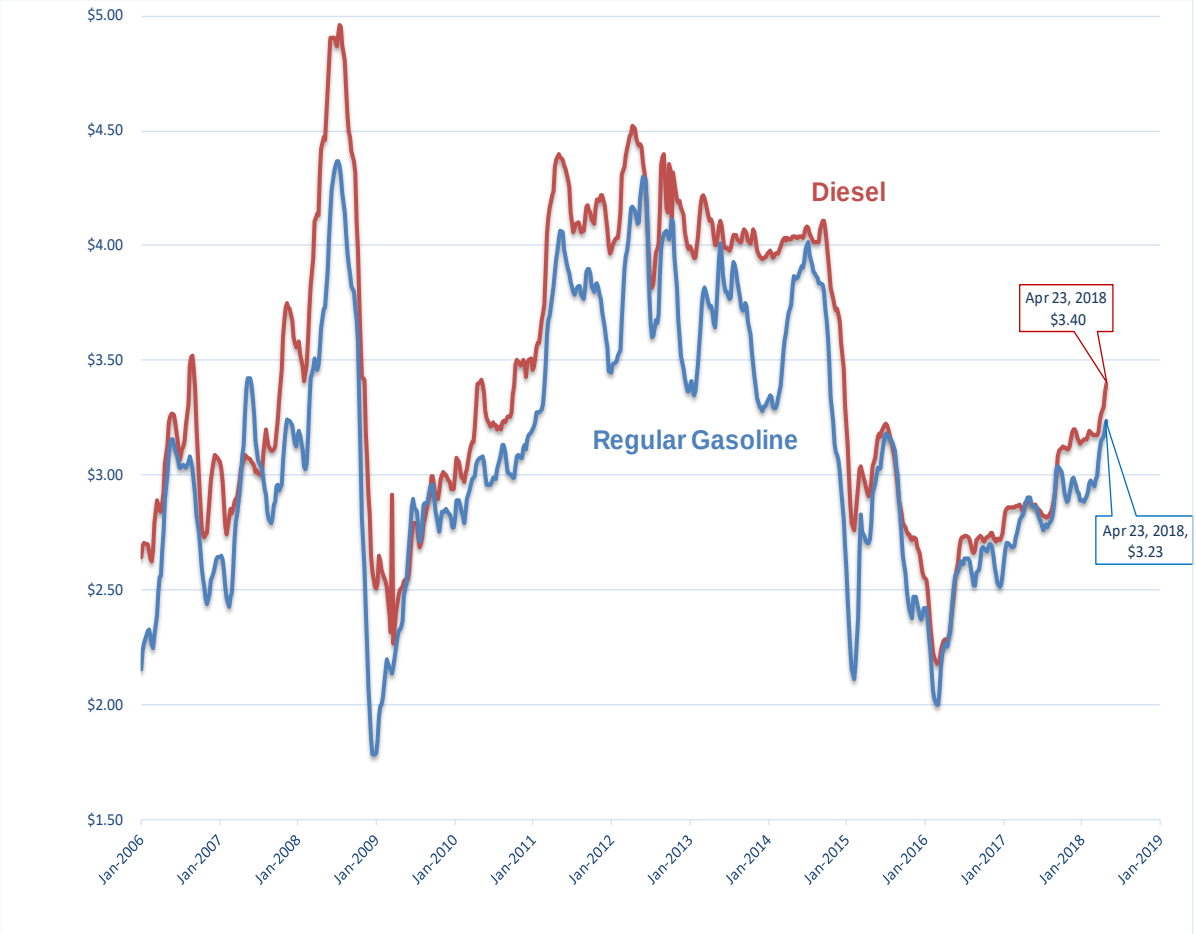
For calendar year 2017, Washington's monthly average gasoline price dipped to its lowest price in February at $2.70 per gallon, *revised from December 2017's Trends Report*, and peaked at $3.03 per gallon in September 2017. (Figure 8). (EIA, 2017d). In April 2018, Washington's gasoline price is averaging $3.19 through April 23 compared to a lower national average price of $2.74 per gallon. A year ago, Washington's regular gasoline price averaged $2.87 in April 2017. The regional price variation again showed the West Coast (PADD 5) with the highest price in April 2018 at $3.35 per gallon for regular gasoline compared to the lowest average price in Gulf Coast (PADD 3) at $2.47 per gallon. The West Coast (PADD5) less California price came in at $3.02 per gallon for April (EIA, 2018d). EIA's April 2018 STEO forecasts a national retail regular gasoline price of $2.64 per gallon in CY2018 and $2.61 in CY2019 compared to $2.42 per gallon in CY2017 (EIA, 2018b).

The price for regular gasoline in California is averaging $3.55 per gallon in April 2018 compared to a year ago price of $3.01 per gallon. California's average regular gasoline price for April 2018 is 36 cents per gallon higher than Washington's $3.19 per gallon for April.

In 2017, Washington's annual diesel price averaged $2.95 per gallon (Figure 8). Washington's retail diesel price is averaging $3.33 per gallon for April 2018 compared to $2.87 per gallon in April 2017. Nationally, April 2018's retail diesel price is averaging $3.08 per gallon, compared to $2.58 per gallon for April 2017. EIA forecasts a national on-highway diesel fuel price of $2.94 per gallon for calendar year 2018 and $2.90 per gallon for calendar year 2019 compared to $2.65 per gallon in 2017. (EIA, 2018b).

California's diesel price is averaging $3.76 per gallon in April 2018 compared to April 2017's $2.94 per gallon. California's April 2018 diesel price exceeds Washington's diesel price for the same month by the large margin of 43 cents.

Figure 8: Washington Retail *Regular* Gasoline and Diesel Prices ($ per gallon): January 2, 2006 to April 23, 2018.



Source: AAA Fuel Gauge Report for Washington Retail Diesel Prices and EIA 2018a Weekly Retail Gasoline Prices

BIODIESEL PRICE PREMIUM TRENDS

Analysis by Lizbeth Martin-Mahar, Ph.D.

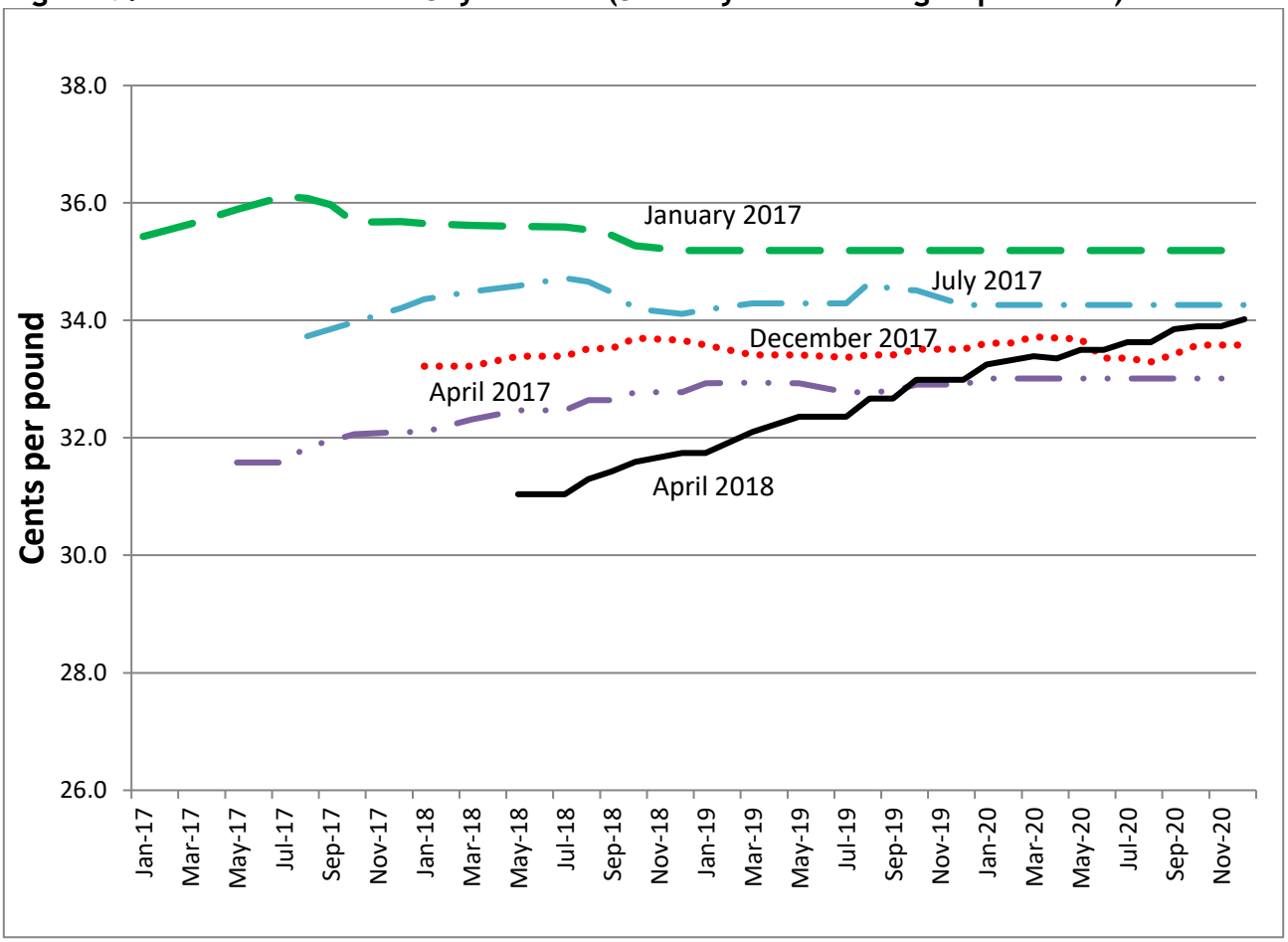
Soybean Oil Futures and Biodiesel Prices

Soybean Oil Futures

Biodiesel prices are dependent in a large part on the cost of the feedstock used in producing biodiesel. Since soybean oil is the predominant feedstock for biodiesel, an examination of the futures prices for soybean oil was completed. Figure 9 shows the latest futures for soybean oil for the past beginning in January 2017 through April 2018. Futures have ranged from 31 cents per pound in April 2017 to 36 cents per pound projected in July 2017. These latest April 2018 soybean futures are lower than anytime last year in the near term. The future increases of the current futures prices is steeper than prior forecasts. As the future prices start at 31 cents in May 2018 and grow to

34 cents per pound by December 2020. While prior future prices have not increased much and have been relatively flat throughout calendar years 2019 and 2020.

Figure 9: Futures Prices for Soybean-oil (January 2017 through April 2018)



Biodiesel Prices: Comparison of Historical and Recent Prices

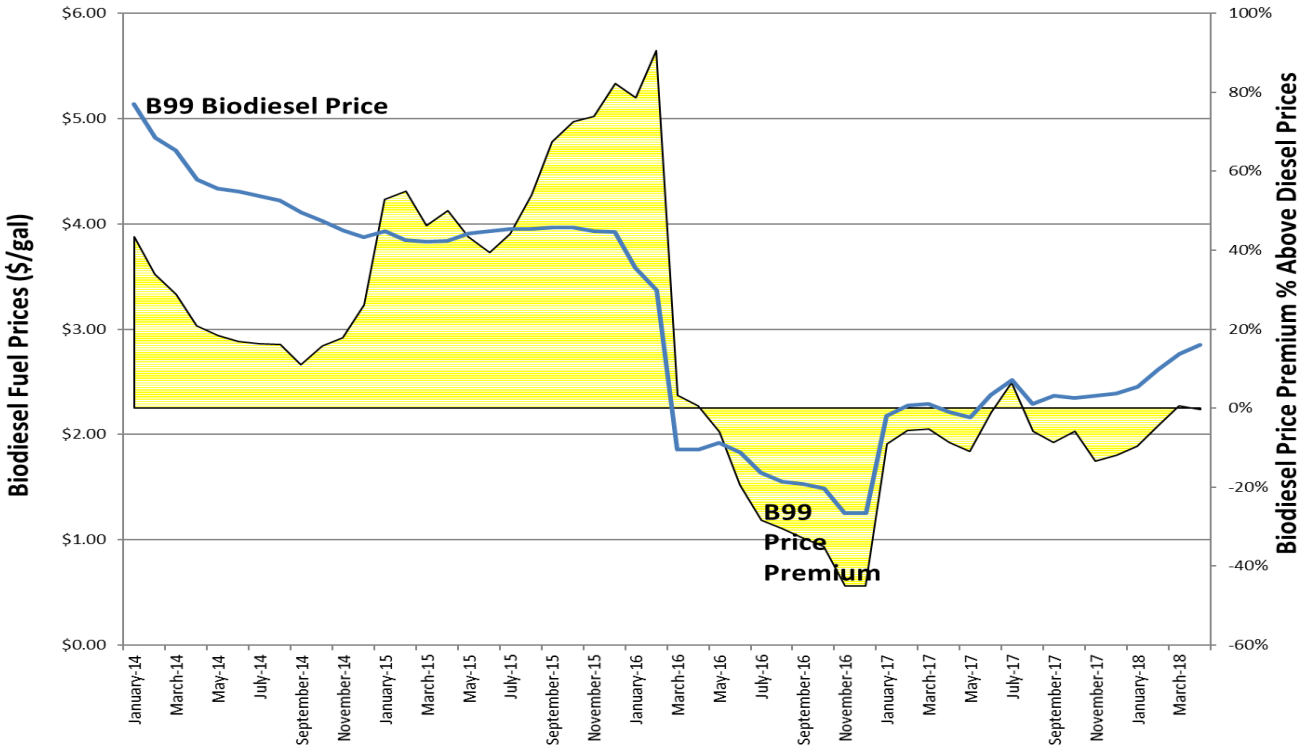
Recent Trends: Washington B99 Biodiesel Prices

Since January 2017, the average monthly B99 biodiesel price has been stable at around $2.30 per gallon each month throughout calendar year 2017. In the first four months of calendar year 2018, B99 prices have increased from an average $2.31 per gallon in CY 2017 to $2.85 per gallon in April 2018. In January 2018, the B99 average monthly price increased to $2.45 per gallon and this was a 2.4 percent month over month increase in B99 prices. Since January, the B99 biodiesel price has steadily increased each month through April. Figure 10 shows the B99 price and the price premium since January 2014. This chart reveals a negative trend through calendar year 2016. During calendar year 2017, B99 biodiesel prices have risen a little and stabilized.

As we reported in the prior editions of the *Fuel and Vehicle Trends Report*, the recent decline in B99 biodiesel prices has fallen so far that it has been below regular retail diesel prices

without taxes. As a result, the B99 price premium is no longer a premium but a discount like B5 biodiesel price discount. In January 2018, the B99 price discount was more than 9 percent below retail diesel prices. In February, B99 prices were 4.3 percent below retail diesel prices that month. In March, B99 prices were actually nearly the same as retail diesel prices at 0.6 percent above. Finally, in April, the B99 price discount was nearly nothing at 0.3 percent lower than retail diesel prices. The B99 price discount has been shrinking to nearly nothing over the last two months.

Figure 10: Monthly B99 Biodiesel Prices Since September 2011



Source: B99, Seattle biodiesel price data - OPIS Fuel Price Survey.

Figure 11: Washington Seattle OPIS B99 Biodiesel Prices and Discount/Premium

	B99 Prices	
Monthly Average Price	**Price ($/gal)**	**% Change from State Avg Diesel Price**
January 2017	2.18	-9.1%
January 2018	2.45	-9.6%
February 2017	2.28	-5.7%
February 2018	2.62	-4.3%
March 2017	2.29	-5.3%
March 2018	2.76	0.6%
April 2017	2.21	-8.7%
April 2018	2.85	-0.3%

Recent Trends: Washington B5 Biodiesel Prices

B5 biodiesel prices in Seattle averaged $2.06 per gallon at the start of calendar year 2018, which was 15 percent higher than January a year ago. The B5 biodiesel price went down a little month to month in February 2018 at $2.01 per gallon and then in March and April, the B5 price rose on average $2.11 per gallon and then $2.33 per gallon respectively. The Seattle B5 biodiesel price is competitive so when we review the OPIS daily prices, there are several companies reporting their B5 prices to OPIS. The Seattle B5 prices are not that different from the Portland B5 prices. See Figure 12, which reveals that in recent months the Portland B5 prices are within in cents to the Seattle B5 biodiesel price. In January, the Seattle B5 price was $2.06 per gallon while the Portland B5 price was $2.14 per gallon. In February, the Seattle and Portland B5 prices dropped to $2.01 and $2.06 per gallon respectively. Then a month later, the B5 price rebounded back in Seattle to $2.11 per gallon and the Portland B5 biodiesel price increased to $2.13 per gallon. Now most recently in April, the Seattle B5 price has risen again to $2.33 per gallon while the Portland B5 prices is $2.35 per gallon. The B5 price discounts in Seattle and Portland were between 18 and 26 percent during the past four months.

Recent Trends: Washington B10 Biodiesel Prices

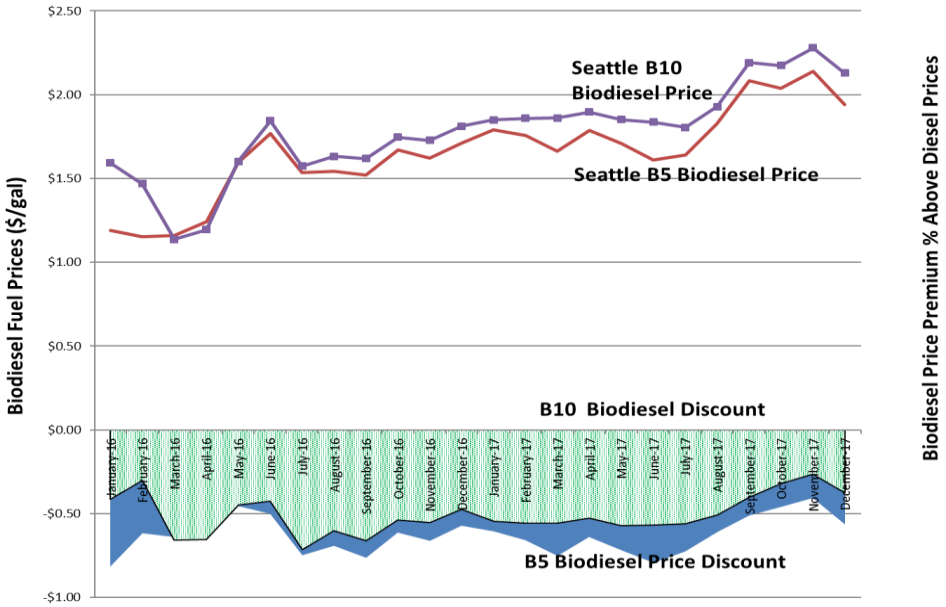
Washington State Ferries (WSF) has finished their pilot period using B10 biodiesel in their vessels. That is why we have been tracking the trends in the B10 biodiesel prices. Unfortunately, the OPIS prices reported in Seattle for B10 do not represent a competitive price. There is only one company reporting to OPIS on B10 Seattle prices. The price information on B10 do not truly represent the prices that a competitive biodiesel market would produce and this is apparent when you prices which do not change from month to month. For example, the B10 Seattle price for January and February 2018 was $2.13 per gallon both months. In March, the B5 price increased 7 cents to $2.20 per gallon and another 28 cents to $2.48 per gallon in April.

As Figure 12 reveals, the non-competitive B10 biodiesel prices in Seattle are about 11 cents higher than the B5 Seattle and Portland prices on average each month from January through April 2018. Since the beginning of calendar year 2018, B10 monthly average prices have been higher than in 2017. In January through April 2018, Seattle B10 biodiesel prices were $2.13 per gallon and by April, the B10 monthly average price increased to $2.48 per gallon. During those same four months a year ago, the non-competitive B10 prices in Seattle ranged from a high of $1.85 per gallon in January 2017 to $1.90 per gallon in April 2017.

Figure 12: Washington OPIS B5 and B10 Biodiesel Prices in Seattle and Portland

	B5 Seattle Prices		B5 Portland Prices	
Monthly Average Price	**Price ($/gal)**	**% Change from State Avg Diesel Price**	**Price ($/gal)**	**% Change from State Avg Diesel Price**
January 2017	1.79	-25.3%	1.78	-25.5%
January 2018	2.06	-24.2%	2.14	-21.1%
February 2017	1.76	-27.3%	1.77	-26.7%
February 2018	2.01	-26.5%	2.05	-25.1%
March 2017	1.66	-31.1%	1.67	-31.0%
March 2018	2.11	-23.1%	2.13	-22.5%
April 2017	1.79	-26.3%	1.77	-26.9%
April 2018	2.33	-18.5%	2.35	-17.9%

	B10 Seattle Prices	
Monthly Average Price	**Price ($/gal)**	**% Change from State Avg Diesel Price**
January 2017	1.85	-22.8%
January 2018	2.13	-21.4%
February 2017	1.86	-23.1%
February 2018	2.13	-22.2%
March 2017	1.86	-23.0%
March 2018	2.20	-19.9%
April 2017	1.90	-21.8%
April 2018	2.48	-13.3%



Source: B10 and B5, Seattle biodiesel price data - OPIS Fuel Price Survey.

FUEL PRICES AND CRUDE OIL PRICE TRENDS COMPARED TO RECENT FORECASTS: US crude oil prices, Washington retail prices of gasoline and diesel

Analysis by Lizbeth Martin-Mahar, Ph.D.

In this edition of the *Fuel and Vehicle Trends Report*, we have seen WTI crude oil prices rise well above our last projections in February 2018. In January 2018, WTI crude oil price averaged $63.4 per barrel and the price stayed at around $63 per barrel for the next two months. Then in April, WTI crude oil prices rose another $1 per barrel to $64.5 per barrel. This recent increase of higher crude oil price was not anticipated in the last projections for 2018 quarter one or two, which had a WTI crude oil price projection of $54 per barrel both first quarters of calendar year 2018. When comparing to the February 2018 forecast in recent months, the WTI crude oil prices have come in between 15-20 percent higher than the last projections in February. In January, the actual WTI monthly average was $63.4 per barrel or 17.4 percent above the first quarter of 2018 projection. In February, the actual WTI price was $62.6 per barrel or 16 percent above the first quarter projected average price of $54 per barrel. In March the same trend continued, WTI average price came in at $62.8 per barrel, which was again 16 percent above the first quarter average. Finally, in April, WTI crude oil price was a little up to $64.6 per barrel and 19.5 percent above the second quarter 2018 projection. See Figure 13 for more detail.

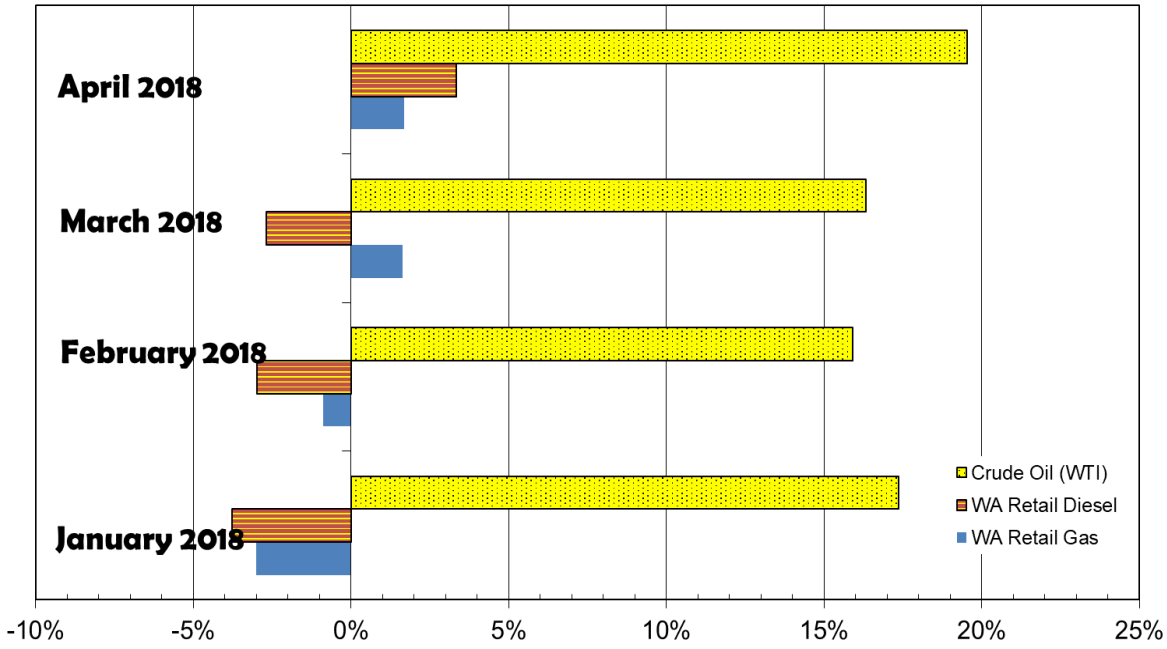
Consistent with the recent trend in WTI crude oil prices being above the latest forecast, Washington retail gasoline prices also have come in above the first and second quarter projections but not as dramatically and for only March and April. Gasoline price projections in the February forecast were $2.99 and $3.12 per gallon for the first and second quarters of 2018. In the month of January, retail gas prices averaged $2.90 per gallon, which was 3 percent below the February's first quarter 2018 projection. In February 2018, retail gas prices came in below the forecast by 0.9 percent at $2.96 per gallon. In March, retail gas prices came in on average at $3.04 per gallon, which was slightly above the forecast by 1.6 percent and the same trend continued in April when the retail gas price averaged $3.17 per gallon, which was 1.7 percent above the second quarter of 2018 price forecast. In general, retail gasoline prices have come in pretty close to the latest forecast.

The recent trends for retail diesel prices were similar to retail gas price trends but there was slower growth in retail prices. Diesel prices have not changed much for the first 3 months of calendar year 2018 and then the price had a slight uptick in April. Diesel prices were $3.16 per gallon in January and they rose a little month over month, to $3.18 per gallon in February and then a little higher to $3.19 per gallon in March and then the average retail diesel price increased 12 cents to $3.31 per gallon in April. For the months of January through March, retail gas prices came in below the February forecast by about 3% per month. Then in April, the increase in retail diesel price exceeded the projections for the second quarter of 2018. In April, retail diesel prices were 3.3 percent higher than forecasted in February.

In the last four months (January through April), we have seen the difference between retail gas and diesel prices remain fairly low and fall from $0.26 per gallon in January to the lowest level of $0.13 per gallon in April. This trend is the result of gasoline and diesel recent price trends being

quite similar but gasoline prices having a quicker increase than diesel prices over the four month period so the gap between retail gas and diesel prices narrowed.

Figure 13: Percent Change in January through April 2017 Average Fuel Prices Compared to the February 2018 Price Forecast



Source: Washington Transportation Revenue Forecast Council February 2018 Forecast, EIA and AAA weekly fuel prices

WA MOTOR VEHICLE FUEL TAX COLLECTION TRENDS COMPARED TO RECENT FORECASTS: Gasoline and Diesel Tax Collections

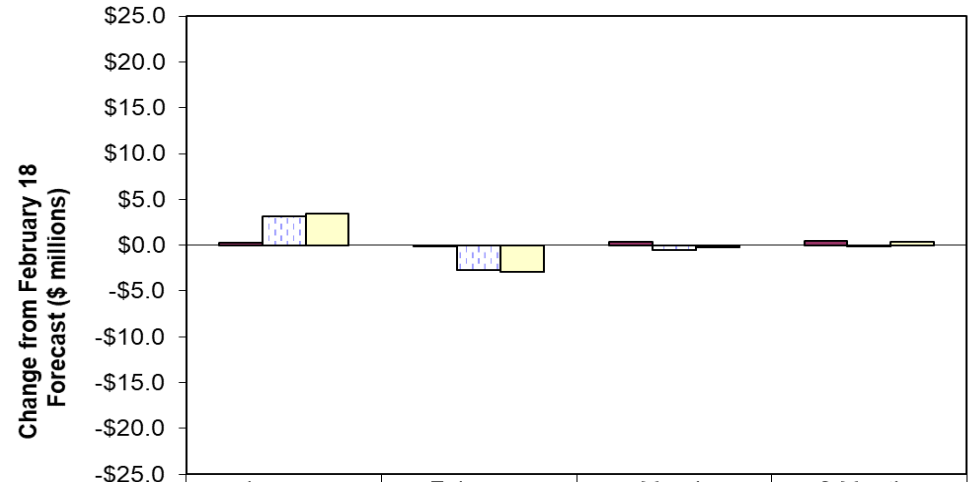
Analysis by Lizbeth Martin-Mahar, Ph.D.

Since the adoption of the February 2018 forecast, three months of fuel tax collections have been reported. We nearly nailed the last forecast for both motor vehicle fuel tax and diesel tax collections in the latest month of March. We came within 0.1% of the February forecast for that month. For gasoline, the actual tax revenue for March was $105.28 million, which was only $0.34 million above the February forecast of $104.9 million. Diesel also came in at $24.93 million, which was only $0.52 million below the February forecast.

For January 2018, both gasoline and diesel tax collections came in higher than anticipated for a total of $3.4 million above the February forecast. In converse, February gasoline and diesel tax collections both came in slightly below forecast by a total of $2.88 million. Now for all three months, (January – March), gasoline tax collections came in close to the forecast by $0.43 million or 0.13 percent. Diesel tax collections came in slightly lower than the last forecast by -$0.08 million

or 0.1%. Combined, both gas and diesel tax collections came in nearly spot on with the forecast at $0.36 million or within 0.1% of the February forecast. This is pretty unusual to have actual tax revenue over multiple months come in so close to our latest forecast.

Figure 14: Motor Vehicle Fuel Tax Collections in January - March 2018 Compared to the February 2018 Revenue Forecast



	January	February	March	3 Months	Percent Change
Gasoline	$0.23	$(0.14)	$0.34	$0.43	0.1%
Diesel	$3.19	$(2.74)	$(0.52)	$(0.08)	-0.1%
All Motor Fuel	$3.42	$(2.88)	$(0.19)	$0.36	0.1%

Source: Washington Transportation Revenue Forecast Council February 2018 Forecast and State Treasurer's Office monthly fuel reports

VEHICLE TRENDS

Analysis by David Ding, Ph.D.

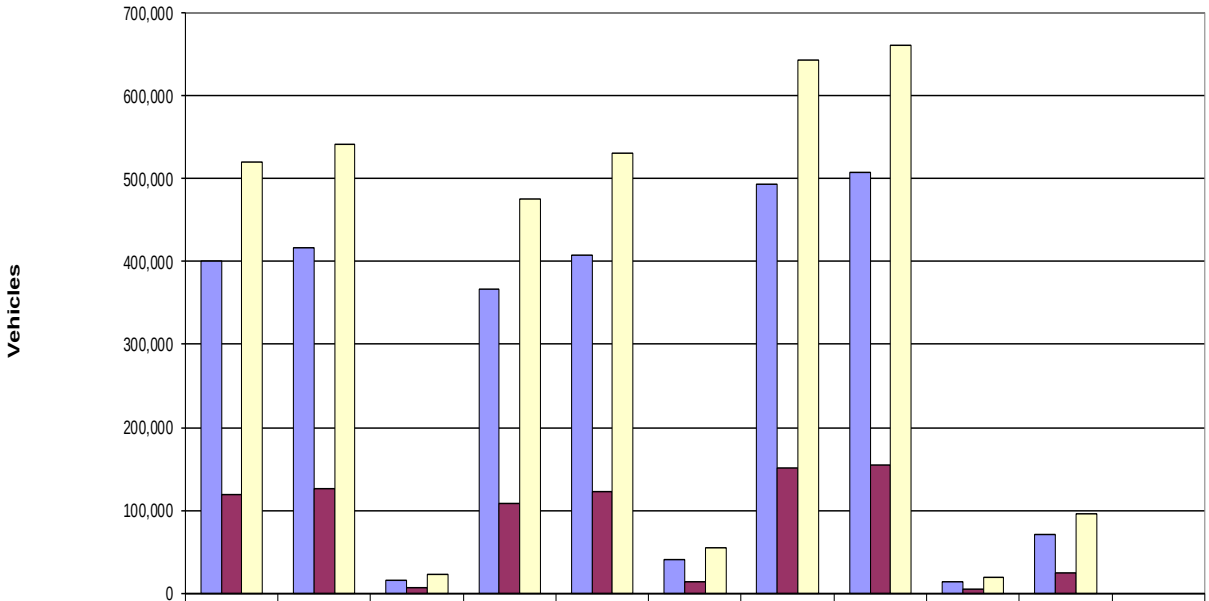
Vehicle Registrations and Revenue

For the three months of licensing registrations and revenue data we have received since the February forecast, vehicle registrations were up for all months, see Figure 15. Passenger car registrations came in at 416,633, 408,043 and 507,113 for January, February and March respectively. These actuals were 3.9 percent, 11.2 percent and 2.8 percent respectively higher than projected in February for those months. The higher actual registrations in February of 11.2 percent registration growth above the last forecast looks odd. It may be due to collecting some late registrations in January or picking up early registrations in March but both those months were also above the last forecast but not by as much. For all three months combined, passenger car registrations were up 5.6 percent over the February forecast, which showed the continued strong growth in car registrations.

Truck registrations had a similar pattern to passenger cars. The truck registrations were reported as 125,173, 122,153 and 154,636 vehicle for January through March respectively. These latest actual registrations were above the last forecast by 5.4 percent, 12.5 percent and 2.7 percent for January, February and March repectively. Just like for car registrations, the February truck registration actual being 12.5 percent above the February projections may be due to collecting late registrations in January or picking up early registrations in March as well but again the other monthly actuals for January and March are still above the last forecast. For all three months combined, truck registrations were up 6.4 percent over the February forecast. This echoes with the growing Washington employment for February and March from the newly released Economic & Revenue update of ERFC.

For both passenger cars and trucks combined for all three month, vehicle registrations came in 94,797 vehicle above the February forecast. This was 5.8 percent above the forecast.

Figure 15: Vehicle registrations, January through March 2018, Forecast vs. Actual.



	January Forecast	January Actual	January Difference	February Forecast	February Actual	February Difference	March Forecast	March Actual	March Difference	Total Difference	Total Percent Change
Passenger Cars	400,894	416,633	15,739	366,907	408,043	41,136	493,223	507,113	13,890	70,765	5.61%
Trucks	118,801	125,173	6,372	108,604	122,153	13,549	150,526	154,636	4,110	24,031	6.36%
Total	519,695	541,806	22,111	475,511	530,196	54,685	643,749	661,749	18,000	94,797	5.78%

Source: Washington Transportation Revenue Forecast Council February 2018 Forecast and Department of Licensing Reports 13, January – March 2018.

We also have three months of revenue to discuss in this report (Figure 16). January license fee revenue is higher than the forecasted in February for all revenue streams shown. For $30 basic license fees, the revenue came in at $13.13 million, $0.17 million more than the $12.96 million forecasted. In February, the $30 license fee revenue came in lower than the February forecast by $0.44 million or -3.5%. In March, the revenue collections were above the forecast by $0.63 million

or 3.9 percent. For all the three months combined, the passenger vehicles' $30 fee revenue came in very close to forecast at $0.36 million or 0.9% difference from the last forecast. The percentage increase of combined revenue for all three months was much lower than the registrations percentage increase for that same period. This is a trend we are seeing over nine months of actuals in FY 2018 so we are working with DOL to find some explainations for these registrations versus revenue differences and receive additional revenue reports.

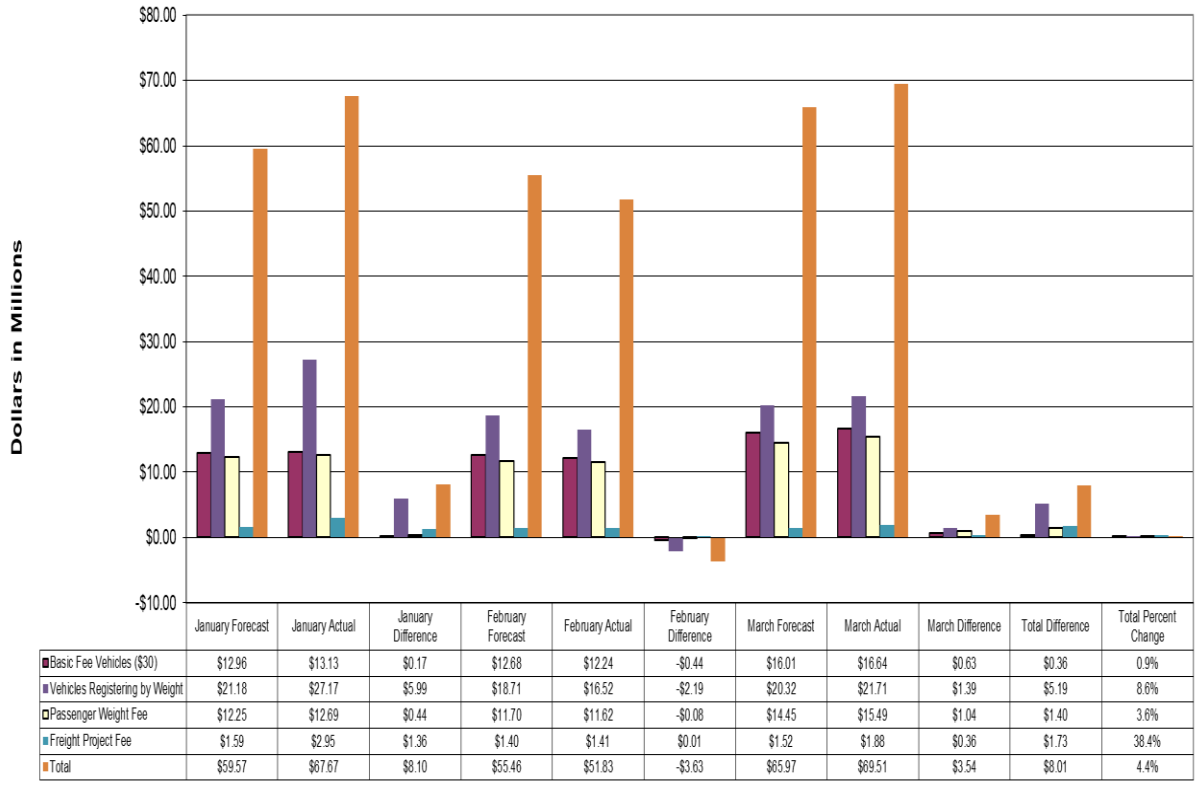
Revenue for truck weight fees were also higher than expected for January by $5.99 million, which was 28.3 percent more than the last forecast. After further examination of the revenue data, it was discovered that the International Registration Plan (IRP) registration payments in January were high at more than $7 million for that month where in the last January IRP collection data had no IRP payments so the February forecast did not project this high amount of IRP payments. In February, the truck revenue collection of $16.52 million was $2.19 million or 11.7 percent less than the forecasted revenue of $18.71 million. After further examination of the IRP truck registration revenue data, it was revealed that these payments were unusually low in February. Some of the IRP revenue that typically would have been paid in February was probably paid early in January instead. This change in the IRP payments may be the primary reason for the inconsistent trend in February for the truck revenue to be down so much during the same month as the February truck registrations being more than 12 percent above the last forecast. In March, the truck weight fee revenue came in at $21.71 million which was $1.39 million above the last forecast of $20.32 million. For all three months combined, the truck weight fees came in at $5.19 million or 8.6 percent above the last projections. The 8.6 percent percentage increase in truck license fee revenue is consistent with the 6.4 percent growth in truck registrations. Revenues coming in slightly higher than truck registrations could be the result of heavier trucks registering that month than projected for January 2018 and the IRP payments in January being higher than projected during that month.

Figure 16 also reveals that the revenue from the passenger weight fee as well as the freight project fee came in above forecast for those three months. The passenger weight fee in January came in at $12.69 million which was $0.44 million above the forecast. In February, the passenger weight fee came in at $11.62 million, which was just $0.08 million shy than the forecast. In March, the revenue went above the forecast by 1.04 million. The trend in the passenger weight fee is consistent with the basic $30 license fee revenue changes compared to the last forecast. For all the months combined, the passenger weight fee is $1.4 million or 3.6% above the forecast. The freight project fee in January came in at $2.95 million which was $1.36 million or 85.5% above the forecast. In February, the actual freight project fee revenue was almost right on target with projections. In March, the freight project fee revenue came in $1.88 million, $0.36 million or 23.7% higher than the projection. Altogether, the freight project fee is $1.73 million or 38.4% more than the last forecast for those months. Given the fact that the freight project fee is 15 percent of the combined license fee revenue, it is unclear why the change in the combined license fee truck weight fees came in 8.6 percent above forecast yet the freight project fee came in 4 times as high at 38.4 percent higher than projected for that revenue source. We will be discussing further with DOL on possible explanations for this unusual result.

Finally, total License, Permit, and Fee (LPF) revenues were 4.4 percent or $8 million ahead of the forecast for all the three months combined. We forecasted $59.57 million for the month of

January, but received $67.67 million instead with the truck registration fees being the revenue source with the largest increase in actuals beyond February's projections. For February, total LPF revenue was forecasted at $55.46 million, while collections came in at $51.83 million, down $3.63 million from February's projections. In March, total LPF revenue projections were $65.97 million, but actual collections were higher at $69.51 million.

Figure 16: Vehicle revenue, January through March 2018, Forecast vs. Actual.



	January Forecast	January Actual	January Difference	February Forecast	February Actual	February Difference	March Forecast	March Actual	March Difference	Total Difference	Total Percent Change
Basic Fee Vehicles ($30)	$12.96	$13.13	$0.17	$12.68	$12.24	-$0.44	$16.01	$16.64	$0.63	$0.36	0.9%
Vehicles Registering by Weight	$21.18	$27.17	$5.99	$18.71	$16.52	-$2.19	$20.32	$21.71	$1.39	$5.19	8.6%
Passenger Weight Fee	$12.25	$12.69	$0.44	$11.70	$11.62	-$0.08	$14.45	$15.49	$1.04	$1.40	3.6%
Freight Project Fee	$1.59	$2.95	$1.36	$1.40	$1.41	$0.01	$1.52	$1.88	$0.36	$1.73	38.4%
Total	$59.57	$67.67	$8.10	$55.46	$51.83	-$3.63	$65.97	$69.51	$3.54	$8.01	4.4%

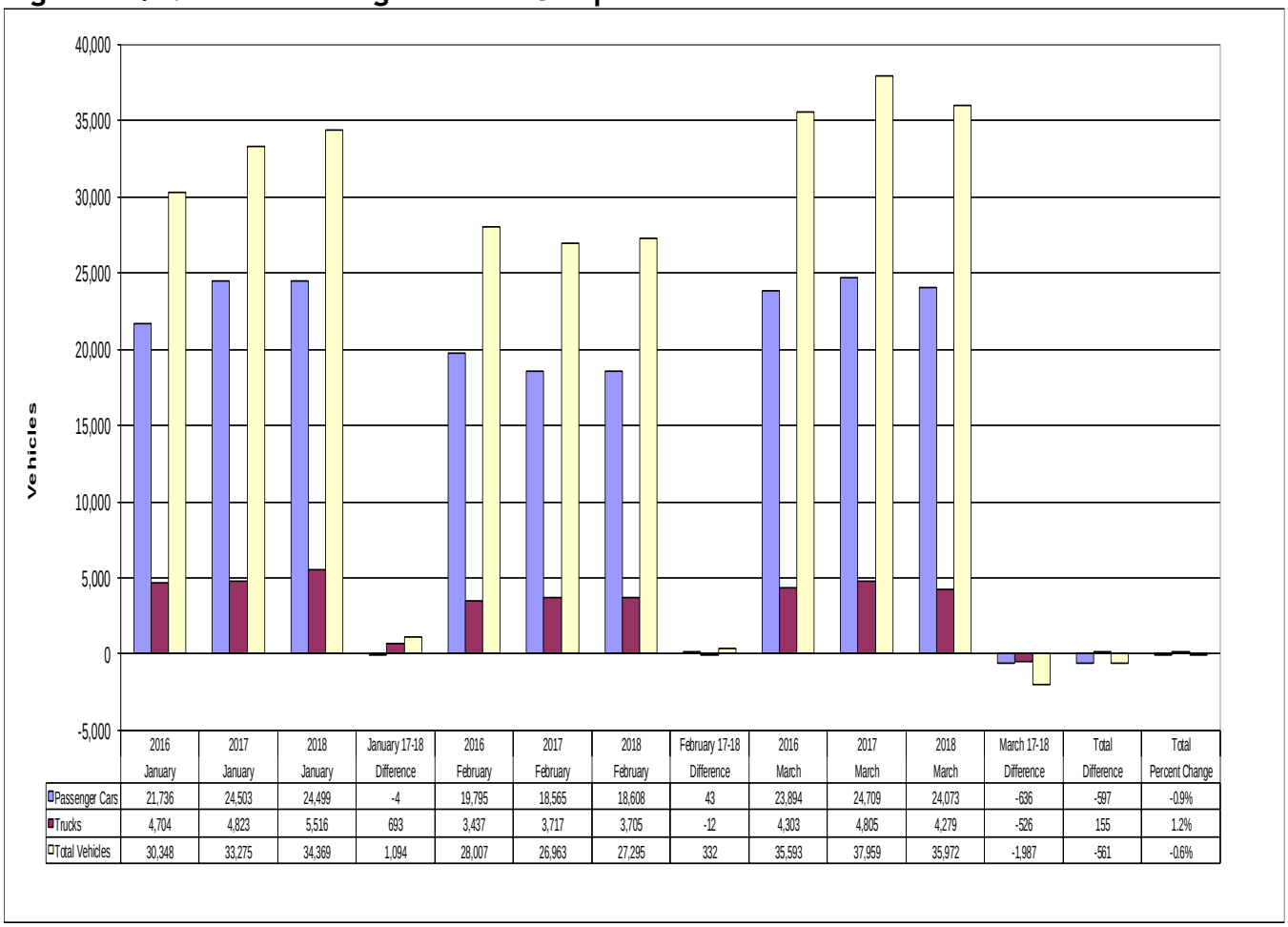
Source: Washington Transportation Revenue Forecast Council February 2018 Forecast and Department of Licensing Balance Forward Reports, January – March 2018.

New Car and Truck Registrations from Sales

In this report, which covers new car registrations for January, February and March of 2018, we see a year over year decrease and overall slight decline for all new vehicles, see Figure 17. In January 2018, new car registrations were almost the same as the registrations in the same period a year ago. In February, 2018, new car registrations were 43 vehicles above registrations of a year ago. In March, new car registration went down by 636 vehicles compared with March 2017. For three months together, total car registrations were down by 597 vehicles, which was -0.9 percent over the previous year.

New truck registrations in Washington state showed strong growth during the month of January 2018. The registrations exceeded the previous year monthly total by 693 trucks, which represents a 14.4 percent growth over last year. In February, the new truck registrations decreased by 12 trucks from projections in February 2017. The decreasing trend in new truck registrations continued in March and the new truck registrations dropped by 526 vehicles that month compared with a year ago. For the three months combined, the new truck registrations increased by 155 vehicles, which is 1.2 percent increase from the previous year. This result indicates that the new truck registrations are still growing year over year and may reflect the strong demand Washington residents still have for new trucks, as gas prices remain in the $3 per gallon range. Overall, total new vehicle registrations decreased by 561 vehicles or 0.6 percent, year over year, which was driven by lower passenger car vehicle sales over the same months last year.

Figure 17: New vehicle registrations Comparisons



	2016 January	2017 January	2018 January	January 17-18 Difference	2016 February	2017 February	2018 February	February 17-18 Difference	2016 March	2017 March	2018 March	March 17-18 Difference	Total Difference	Total Percent Change
Passenger Cars	21,736	24,503	24,499	-4	19,795	18,565	18,608	43	23,894	24,709	24,073	-636	-597	-0.9%
Trucks	4,704	4,823	5,516	693	3,437	3,717	3,705	-12	4,303	4,805	4,279	-526	155	1.2%
Total Vehicles	30,348	33,275	34,369	1,094	28,007	26,963	27,295	332	35,593	37,959	35,972	-1,987	-561	-0.6%

Source: Department of Licensing Report 14 for various months and years.

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ARTICLES REFERENCED

Transportation Revenue Forecast Council. February 2018 Transportation and Revenue Forecasts.

Fuel Trends:

AAA. http://fuelgaugereport.opisnet.com/WAavg.asp

CME Group. April 23, 2018. Soybean Oil Futures Prices. http://www.cmegroup.com/trading/agricultural/grain-and-oilseed/soybean-oil_quotes_settlements_futures.html

Consensus Economics Inc. April 16, 2018. *Energy & Metals Consensus Forecasts*.

Energy Information Administration. 2018a. April 2018. *Spot Prices for Crude Oil and Petroleum Products.* http://www.eia.gov/dnav/pet/pet_pri_spt_s1_d.htm

Energy Information Administration. 2018b. April 10, 2018. *Short-Term Energy Outlook.* http://www.eia.doe.gov/emeu/steo/pub/contents.html

Energy Information Administration. 2018c. April 25, 2018. *Weekly Petroleum Status Report.* http://www.eia.gov/petroleum/supply/weekly/

Energy Information Administration. 2018a. April 23, 2018. *Weekly Retail Gasoline and Diesel Prices* http://www.eia.gov/dnav/pet/pet_pri_gnd_dcus_nus_w.htm

IHS Global Insight. April 2018. U.S. Economy – Models and Databanks

The Wall Street Journal. April 19, 2017. Summer Said and Benoit Faucon Cutting Oil Output, but Will Saudi Arabia, Russia Do It Again? https://www.wsj.com/articles/an-oil-deal-between-saudi-and-russia-worked-now-what-1524130200

Vehicle trends:

Washington State Economic and Revenue Forecast Council. Economic and Revenue Update. April, 2018.

Washington State Department of Licensing. January through March 2018. State of Washington Vehicle Registration Reports 7, 13 and 14.

Washington State Department of Licensing. January through March 2018. Revenue Consolidated Balance Forward Reports.