NORTHERN VIRGINIA TRANSPORTATION AUTHORITY

M E M O R A N D U M

FOR: Chair Phyllis J. Randall and Members
Northern Virginia Transportation Authority

FROM: Michael Longhi, Chief Financial Officer

DATE: May 8, 2020

SUBJECT: Monthly Revenue Report

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1. **Purpose:** To update the Northern Virginia Transportation Authority (NVTA) on monthly revenue receipts and 30% funds distributed to member localities.

2. **Background:** The attached reports reflect funding received and distributed through April 2020.

3. **Comments:**
   a. **FY2020 Revenues (Attachment A)**
      i. The Authority has received approximately $191.5 million through the April 2020 transfers from the Commonwealth.
      ii. Actual April 2020 sales tax revenue (eight months of sales tax receipts annualized) compared to FY2020 budgeted revenue shows a 6.9% positive variance prior to the COVID pandemic. The budgeted revenue has approximately a 2.5% growth factor from the prior year.
      iii. There is a two-month lag between a sales tax transaction and the receipt of sales tax by the Authority, therefore the actual impact of shuttered businesses and the deferral of sales tax remittances by the Governor will not be seen until June 2020, with the distribution of April's sales tax.
      iv. The majority of the positive variance prior to COVID can be attributed to the newly taxed internet sales, but NVTA lacks the data to differentiate the internet sales from the annual growth experienced in the past.
      v. As of April 2020, the Authority has received $2 million in Heavy Truck Registration and Diesel Fuel (SB1716/I-81) receipts. This represents 8 months of receipts. Staff expects a further decline in this revenue source as a result of COVID.
      vi. In March 2020, the Commonwealth issued revised revenue projections for the Heavy Truck Registration and Diesel Fuel revenue. The revisions resulted in a decrease in the FY2020 to FY2025 projected revenue of approximately 34%. VDOT's CFO discovered an error in the original projections as a result of NVTA's continued questioning of the receipts. The chart below summarizes the Commonwealth's original and revised projections.

Impact of Revised I-81 Related Projections (All $ in millions, as of March 19, 2020)				
	Jun-19 Est.*	Mar 2020 Est.**	Chg in Projection $ Chg.	% Chg.
FY2020**	$ 9.4	$ 3.8	($5.60)	-60%
FY2021	13.8	5.4	($8.40)	-61%
FY2022	19.5	11.5	($8.00)	-41%
FY2023	19.7	11.9	($7.80)	-40%
FY2024	19.4	17.8	($1.60)	-8%
FY2025	19.6	17.0	($2.60)	-13%
Total FY2020-2025	$ 101.4	$ 67.4	($34.00)	-34%
FY2026	$ -	$ 17.8		
*Presentation by VDOT CFO Laura Farmer to the CTB - June 18, 2019				
**Presentation by VDOT CFO Laura Farmer to the CTB - March 17, 2020				
****No update provided by VDOT, Calculated as 60% reduction				

b. FY2020 Distribution to localities (Attachment B)

i. All jurisdictions have completed the required annual HB2313 certification to receive FY2020 Local Distribution Funds (30%).

ii. As of April 2020, all Local Distribution funds have been distributed to member jurisdictions. The Local Distribution to member localities has continued to be disbursed, for two monthly cycles while NVTA staff have been working remotely.

c. FY2015 to FY2020 Year over Year Revenue Comparison (Attachment C). This chart reflects a month-to-month comparison of sales tax revenue and a year-to-year comparison of fiscal year to date revenues received through April 2020.

d. Sales Tax Forecast Model V. Projection (Attachment D). This chart reflects tracking of current fiscal year revenue on an actual to projection basis. A statistical packet called Palisade's Stat Tools is now used to improve the accuracy of the tracking. The reports from the tool are forecasting actual revenue to exceed NVTA projections prior to the COVID pandemic. However, the tool is unable to compensate for the loss of revenue resulting from the shuttering of businesses nor segregate usual annual growth in sales tax from the newly implemented internet sales tax receipts.

Attachments:

A. Sales Tax Revenues Received Compared to NVTA Estimates, Through April 2020
B. FY2020 30% Distribution by Jurisdiction, through April 2020
C. Month to Month Comparison of Sales Tax Revenue and YTD Receipts for April 2015 to 2020
D. Palisade's Stat Tool Analysis of FY2020 Revenue Actual to Projections

Attachment A

NORTHERN VIRGINIA TRANSPORTATION AUTHORITY
SALES TAX REVENUES RECEIVED BY JURISDICTION, COMPARED TO NVTA ESTIMATES
Based on: Revenue Data Through April 2020
FYE June 30, 2020

Regional Sales Tax Transaction Months	8	Received To Date	Annualized Revenue based on YTD Receipts	FY2020 Budget	Annualized - Actual To Budget	
City of Alexandria		$ 12,225,645	$ 18,338,468	$ 16,379,177	$ 1,959,291	
Arlington County		19,293,160	28,939,739	25,943,302	2,996,437	
City of Fairfax		5,154,006	7,731,008	7,506,931	224,077	
Fairfax County		80,443,095	120,664,642	114,583,396	6,081,246	
City of Falls Church		2,069,908	3,104,862	2,777,700	327,162	
Loudoun County		36,586,222	54,879,333	52,470,000	2,409,333	
City of Manassas		4,285,663	6,428,494	5,202,000	1,226,494	
City of Manassas Park		1,066,721	1,600,082	1,469,727	130,355	
Prince William County		28,400,429	42,600,644	39,514,160	3,086,484	
Total Sales Tax Revenue		$ 189,524,849	$ 284,287,273	$ 265,846,393	$ 18,440,880	6.9%

Vehicle License-Registration Fees Transaction Months	8	Received To Date	Annualized Revenue based on YTD Receipts	FY2020 Budget	Annualized - Actual To Budget	
City of Alexandria		$ 131,075	$ 196,612	$ 564,162	$ (367,550)	
Arlington County		$ 204,121	306,182	932,871	(626,689)	
City of Fairfax		$ 55,366	83,049	248,699	(165,650)	
Fairfax County		$ 852,450	1,278,674	3,850,016	(2,571,342)	
City of Falls Church		$ 21,778	32,666	88,448	(55,782)	
Loudoun County		$ 388,683	583,024	1,768,831	(1,185,807)	
City of Manassas		$ 46,168	69,252	170,283	(101,031)	
City of Manassas Park		$ 11,355	17,033	52,506	(35,473)	
Prince William County		$ 298,986	448,479	1,324,184	(875,705)	
Total Vehicle License-Registration Fees		$ 2,009,981	$ 3,014,971	$ 9,000,000	$ (5,985,029)	-66.5%
Total Revenue Received		$ 191,534,829	$ 287,302,244	$ 274,846,393	$ 12,455,851	4.53%
		$ 191,534,829				

Attachment B

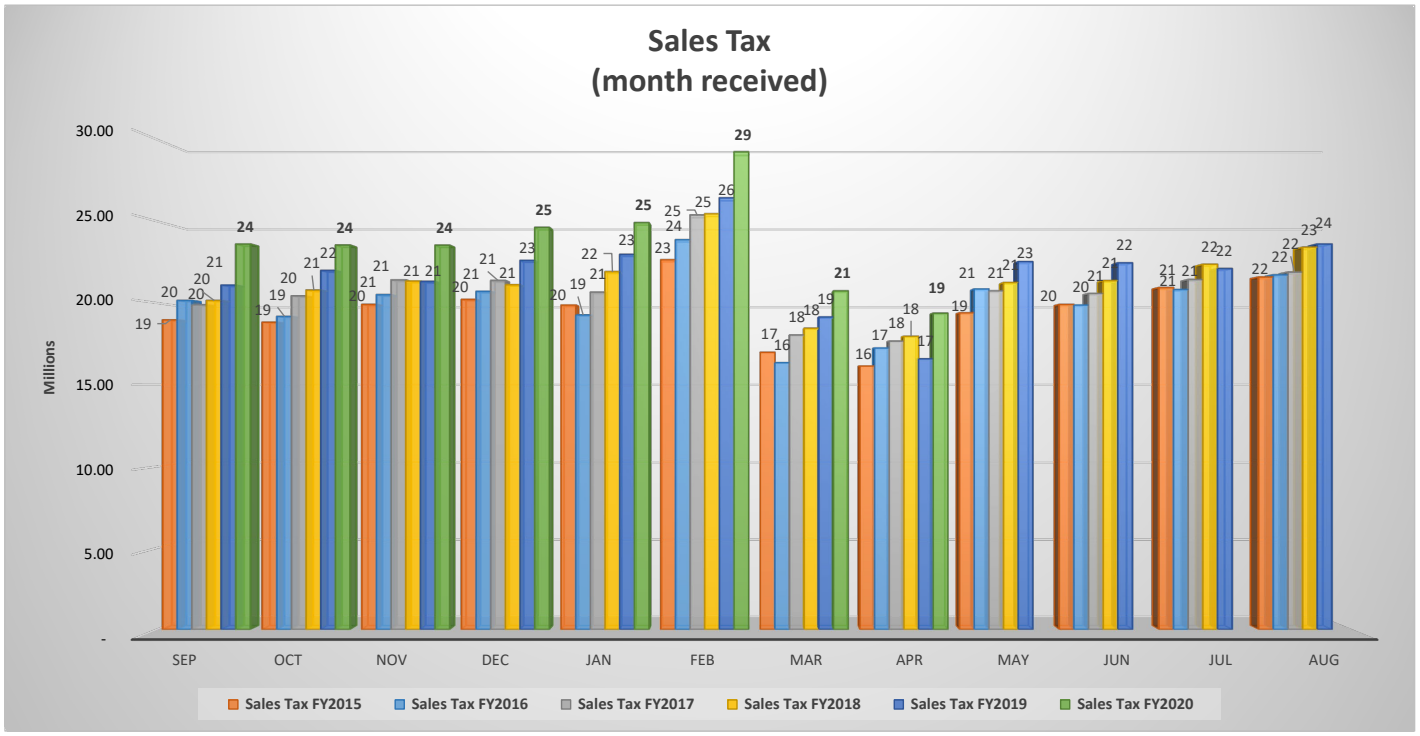
NORTHERN VIRGINIA TRANSPORTATION AUTHORITY
FY2020 30% DISTRIBUTION BY JURISDICTION

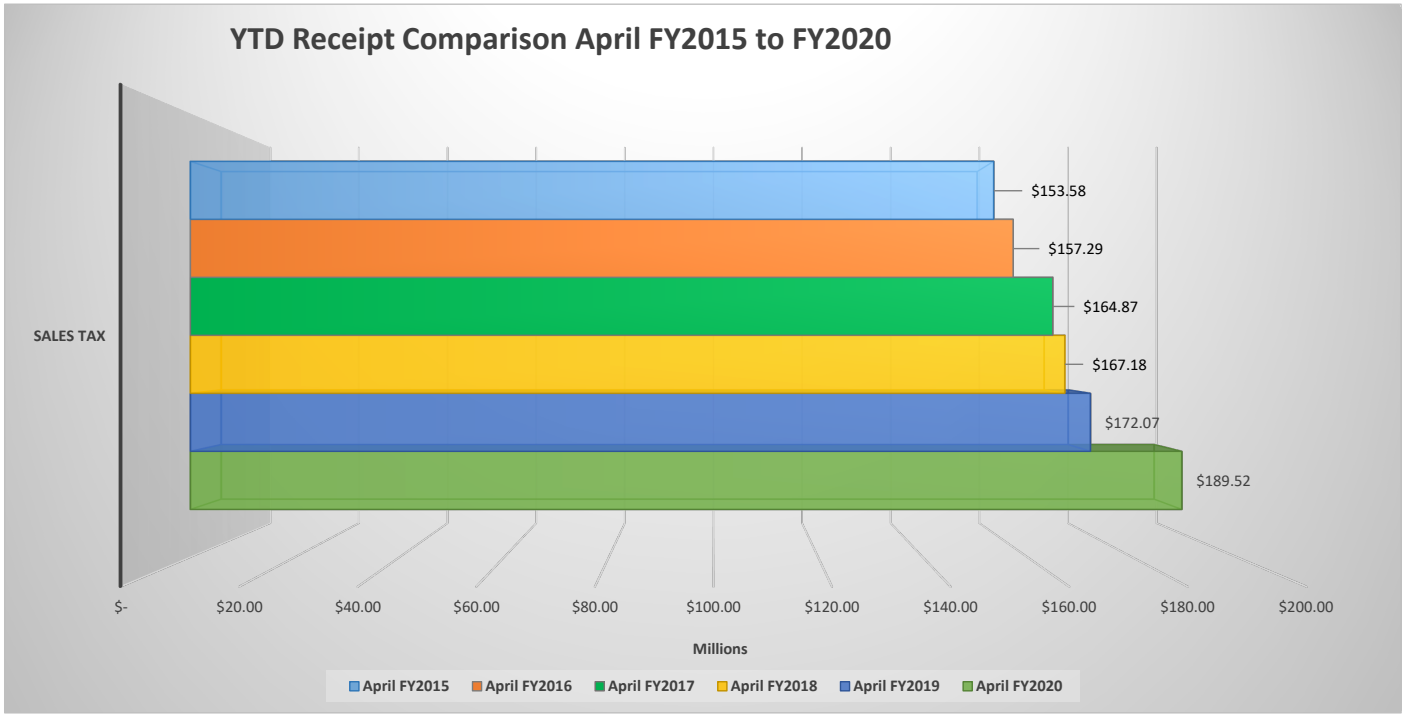
Based on: Revenue Data Through April 2020

Jurisdiction	Vehicle License-Registration Fee	Regional Sales Tax		CoVa Interest	Cumulative Total	30% Funds	3/31/2020 Accrued Interest (1) (+)	3/31/2020 Prior Distributions	**Current Month Distribution**	Total Funds Transferred
City of Alexandria	$ 131,074.70	$ 12,225,645.27	$ -	$ 17,873.64	$ 12,374,593.61	$ 3,712,378.08	$ 869.00	$3,325,107.07	$ 388,140.01	$ 3,713,247.08
Arlington County	$ 204,121.16	$ 19,293,159.59	$ -	$ 28,481.12	$ 19,525,761.87	$ 5,857,728.56	$ 1,448.34	$5,254,780.59	$ 604,396.31	$ 5,859,176.90
City of Fairfax	$ 55,366.04	$ 5,154,005.54	$ -	$ 7,384.62	$ 5,216,756.20	$ 1,565,026.86	$ 434.50	$1,388,452.17	$ 177,009.19	$ 1,565,461.36
Fairfax County	$ 852,449.62	$ 80,443,094.66	$ -	$ 116,235.50	$ 81,411,779.78	$ 24,423,533.93	$ 6,227.84	$21,977,875.17	$ 2,451,886.60	$ 24,429,761.77
City of Falls Church	$ 21,777.66	$ 2,069,908.26	$ -	$ 3,208.36	$ 2,094,894.28	$ 628,468.28	$ 144.83	$579,963.14	$ 48,649.97	$ 628,613.11
Loudoun County	$ 388,682.82	$ 36,586,221.85	$ -	$ 53,974.40	$ 37,028,879.07	$ 11,108,663.72	$ 2,751.84	$10,020,022.82	$ 1,091,392.74	$ 11,111,415.56
City of Manassas	$ 46,167.78	$ 4,285,662.85	$ -	$ 6,152.39	$ 4,337,983.02	$ 1,301,394.91	$ 289.67	$1,126,035.71	$ 175,648.87	$ 1,301,684.58
City of Manassas Park	$ 11,355.13	$ 1,066,721.37	$ -	$ 1,533.51	$ 1,079,610.01	$ 323,883.00	$ 144.83	$288,088.98	$ 35,938.85	$324,027.83
Prince William County	$ 298,985.77	$ 28,400,429.15	$ -	$ 40,984.77	$ 28,740,399.69	$ 8,622,119.91	$ 2,172.50	$7,703,659.96	$ 920,632.45	$ 8,624,292.41
Total Revenue	$ 2,009,980.68	$ 189,524,848.54	$ -	$ 275,828.31	$ 191,810,657.53	$ 57,543,197.26	$ 14,483.35	$ 51,663,985.61	$ 6,496,689.19	$ 57,557,680.60

Interest 3/31/2020

FY2020 April 2020 **Attachment C**





ATTACHMENT D

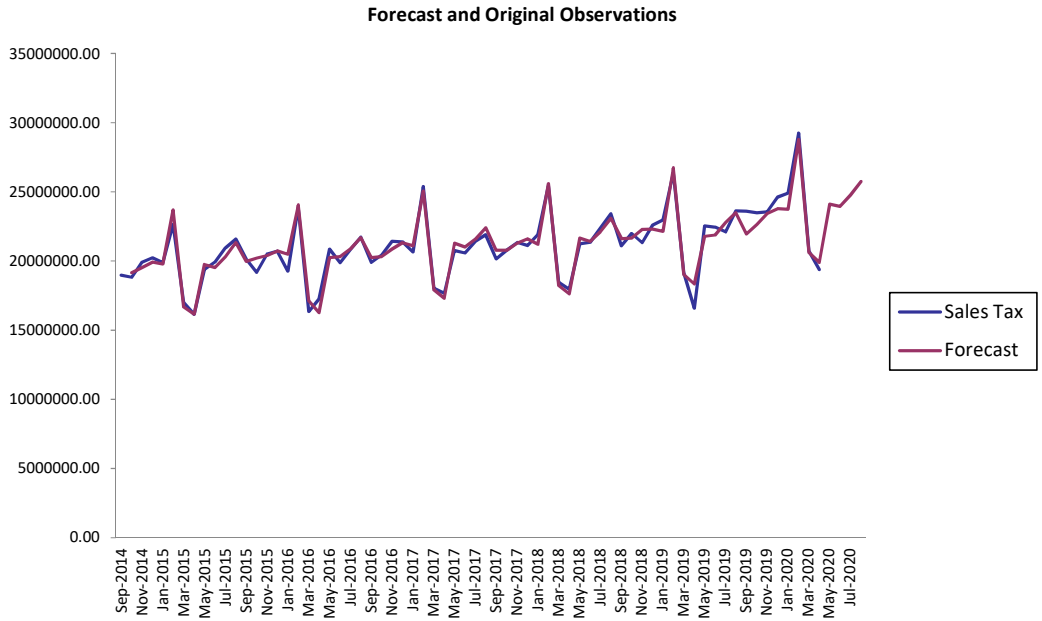
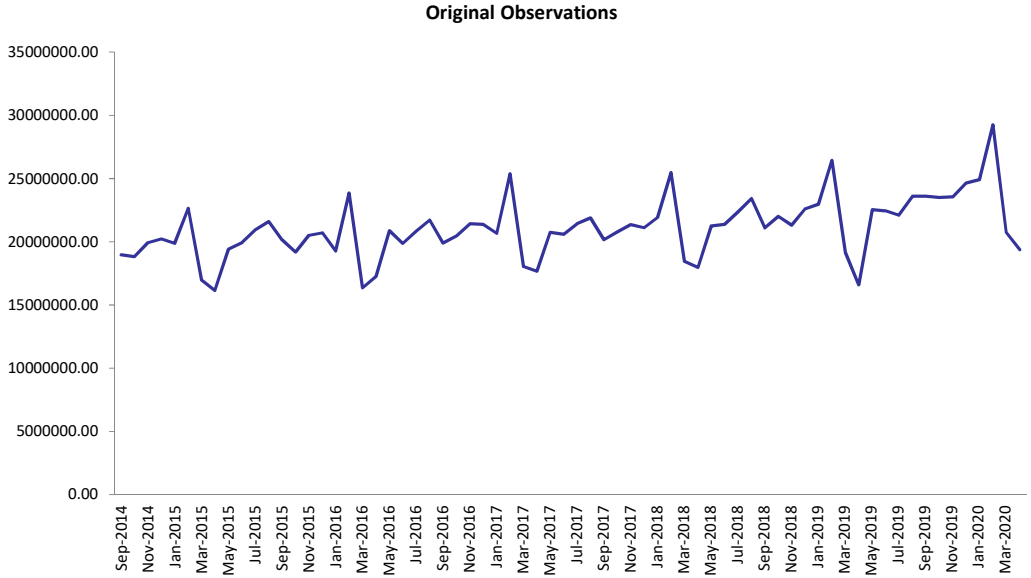
NVTA Sales Tax Revenue Forecast: Model vs Actual vs Projection										
			Model Factors			Monthly		End of Year		
FY	*Forecasting Data*	Monthly Actual	Level	Trend	Season	Model Forecast	Statistical Variance	Model Forecast	NVTA Projected	Actual YTD
	Sep-2017	$20,154,895.20	20,838,319.09	63,803	0.99	$20,758,237	-$603341.50			$20,154,895
	Oct-2017	$20,786,302.49	20,906,784.17	63,803	0.99	$20,770,538	$15764.69			$40,941,198
	Nov-2017	$21,343,035.02	20,988,250.63	63,803	1.01	$21,282,031	$61004.30			$62,284,233
	Dec-2017	$21,115,954.89	20,912,958.05	63,803	1.03	$21,601,693	-$485738.41			$83,400,188
	Jan-2018	$21,915,158.59	21,180,257.85	63,803	1.01	$21,214,752	$700406.69			$105,315,346
	Feb-2018	$25,453,242.98	21,208,346.05	63,803	1.21	$25,599,712	-$146469.07			$130,768,589
	Mar-2018	$18,454,177.89	21,350,022.26	63,803	0.86	$18,227,094	$227083.53			$149,222,767
	Apr-2018	$17,961,787.93	21,535,990.82	63,803	0.82	$17,619,694	$342093.94			$167,184,555
	May-2018	$21,248,451.07	21,482,138.58	63,803	1.00	$21,649,790	-$401339.05			$188,433,006
	Jun-2018	$21,365,953.89	21,534,162.40	63,803	0.99	$21,405,782	-$39828.43			$209,798,960
	Jul-2018	$22,367,630.32	21,670,283.13	63,803	1.02	$22,115,618	$252012.61			$232,166,590
FY18	Aug-2018	$23,408,268.73	21,825,303.27	63,803	1.06	$23,078,631	$329637.80	$255,323,572	$255,571,902	**$255,574,859**
	Sep-2018	$21,094,228.16	21,733,051.98	63,803	0.99	$21,618,763	-$524534.58			$21,094,228
	Oct-2018	$21,988,380.92	21,894,064.07	63,803	0.99	$21,659,638	$328742.82			$43,082,609
	Nov-2018	$21,319,898.61	21,678,732.83	63,803	1.01	$22,283,973	-$964074.53			$64,402,508
	Dec-2018	$22,602,475.35	21,826,231.45	63,803	1.03	$22,310,203	$292272.34			$87,004,983
	Jan-2019	$22,970,788.81	22,131,881.19	63,803	1.01	$22,138,387	$832402.04			$109,975,772
	Feb-2019	$26,427,800.56	22,117,985.63	63,803	1.21	$26,746,446	-$318645.32			$136,403,572
	Mar-2019	$19,145,453.91	22,229,432.65	63,803	0.86	$19,006,521	$138932.61			$155,549,026
	Apr-2019	$16,589,175.00	21,666,824.94	63,803	0.82	$18,343,289	-$1754114.21			$172,138,201
	May-2019	$22,525,822.45	21,949,000.44	63,803	1.00	$21,780,927	$744895.37			$194,664,024
	Jun-2019	$22,453,420.16	22,185,472.74	63,803	0.99	$21,869,607	$583813.00			$217,117,444
	Jul-2019	$22,103,784.06	22,054,501.71	63,803	1.02	$22,782,538	-$678754.34			$239,221,228
FY19	Aug-2019	$23,605,506.73	22,151,203.67	63,803	1.06	$23,486,619	$118888.15	$264,026,911	$258,926,224*	**$262,826,735**
	Sep-2019	$23,603,917.67	22,709,851.05	63,803	0.99	$21,940,638	$1663279.59			$23,603,918
	Oct-2019	$23,492,820.82	23,028,703.80	63,803	0.99	$22,630,288	$862532.88			$47,096,738
	Nov-2019	$23,534,125.70	23,121,073.49	63,803	1.01	$23,435,464	$98661.82			$70,630,864
	Dec-2019	$24,619,413.33	23,422,330.23	63,803	1.03	$23,790,201	$829212.20			$95,250,278
	Jan-2020	$24,912,972.81	23,823,270.42	63,803	1.01	$23,752,594	$1160378.84			$120,163,250.33
	Feb-2020	$29,246,546.40	23,999,711.11	63,803	1.21	$28,784,619	$461927.29			$149,409,796.73
	Mar-2020	$20,741,063.97	24,105,413.75	63,803	0.86	$20,618,882	$122181.51			$170,150,860.70
	Apr-2020	$19,372,596.91	23,985,561.28	63,803	0.82	$19,886,881	-$514284.43			$189,523,457.61
	May-2020					$24,105,030				
	Jun-2020					$23,956,308				
	Jul-2020					$24,756,436				
FY20	Aug-2020	*Current Fiscal Year Projection				$25,740,392		$283,397,735	$265,846,393*	

NVTA Sales Tax Revenue Forecast 2014-2020: Model Observations

Winters' Exponential Smoothing Forecast

Forecasting Constants (Optimized)	
Level (Alpha)	0.294
Trend (Beta)	0.000
Season (Gamma)	0.000

Winters' Exponential	
Mean Abs Err	$450,553.38
Root Mean Sq Err	$585,092.63
Mean Abs Per% Err	2.17%

Description:

The Holt-Winters models three aspects of a time series: a typical value (average), a slope (trend) over time, and a cyclical repeating pattern (seasonality). Holt Winters uses exponential smoothing to encode values from the past and use them to predict "typical" values for the present and future.