

NORTHERN VIRGINIA TRANSPORTATION AUTHORITY

MEMORANDUM

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

FROM: Michael Longhi, Chief Financial Officer

DATE: July 2, 2020

SUBJECT: Monthly Revenue Report

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 May 2020.
3. **Comments:**
 - a. **FY2020 Revenues (Attachment A)**
 - i. The Authority has received approximately \$213.1 million through the May 2020 transfers from the Commonwealth.
 - ii. Actual May 2020 sales tax revenue (nine months of sales tax receipts annualized) compared to FY2020 budgeted revenue shows a 5.5% positive variance but these receipts only represent approximately 10-15 days of economic shutdown resulting from the COVID pandemic. The FY2020 budgeted revenue includes 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 start of the significant impact of shuttered businesses and the deferral of sales tax remittances by the Governor will not be seen until the June 2020 receipts, which represent 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 projected annual base growth of approximately 2.5%.
 - v. As of May 2020, the Authority has received \$2.8 million in Heavy Truck Registration and Diesel Fuel (HB2718/SB1716; I-81) receipts. This represents 9 months of receipts. Staff expects a further decline in this revenue source as a result of COVID.
 - 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 May 2020, all Local Distribution funds have been distributed to member jurisdictions. The Local Distribution to member localities is continuing to be disbursed on a timely basis.

- 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 May 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 using the Palisade's Stat Tools. 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:

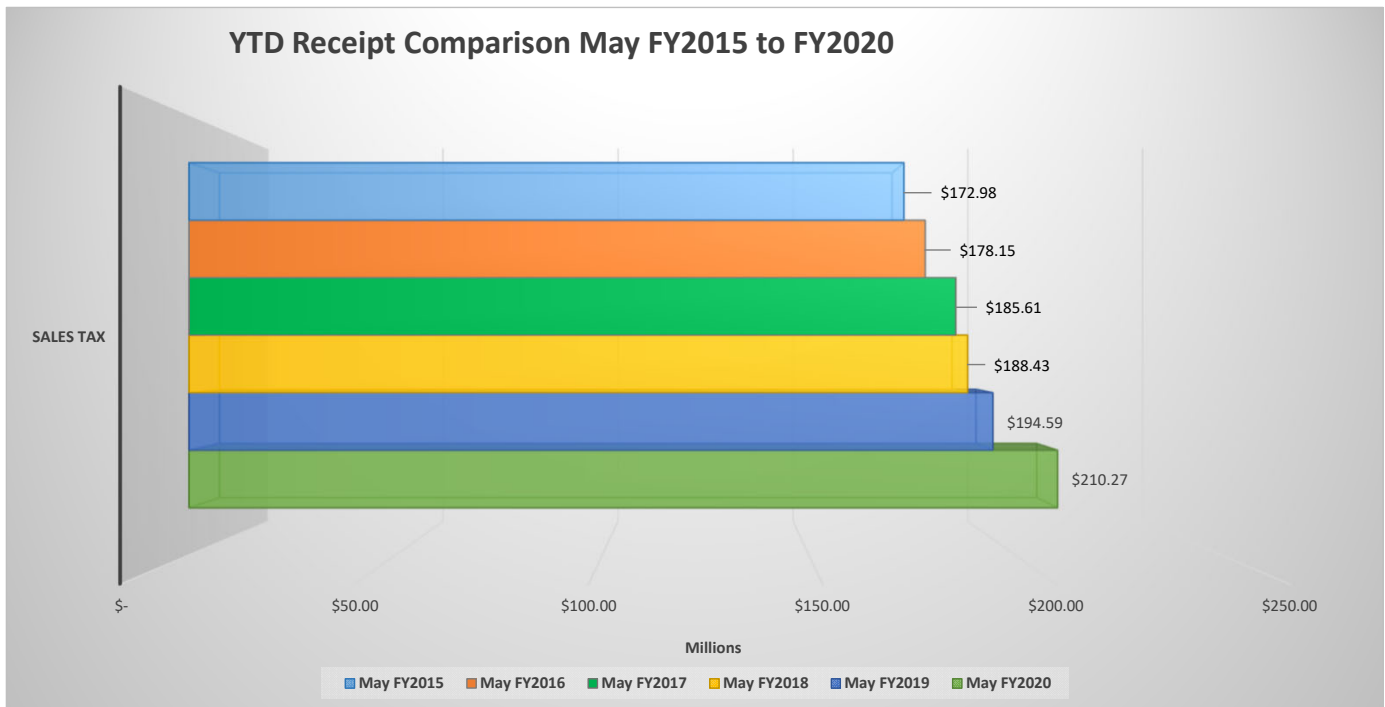
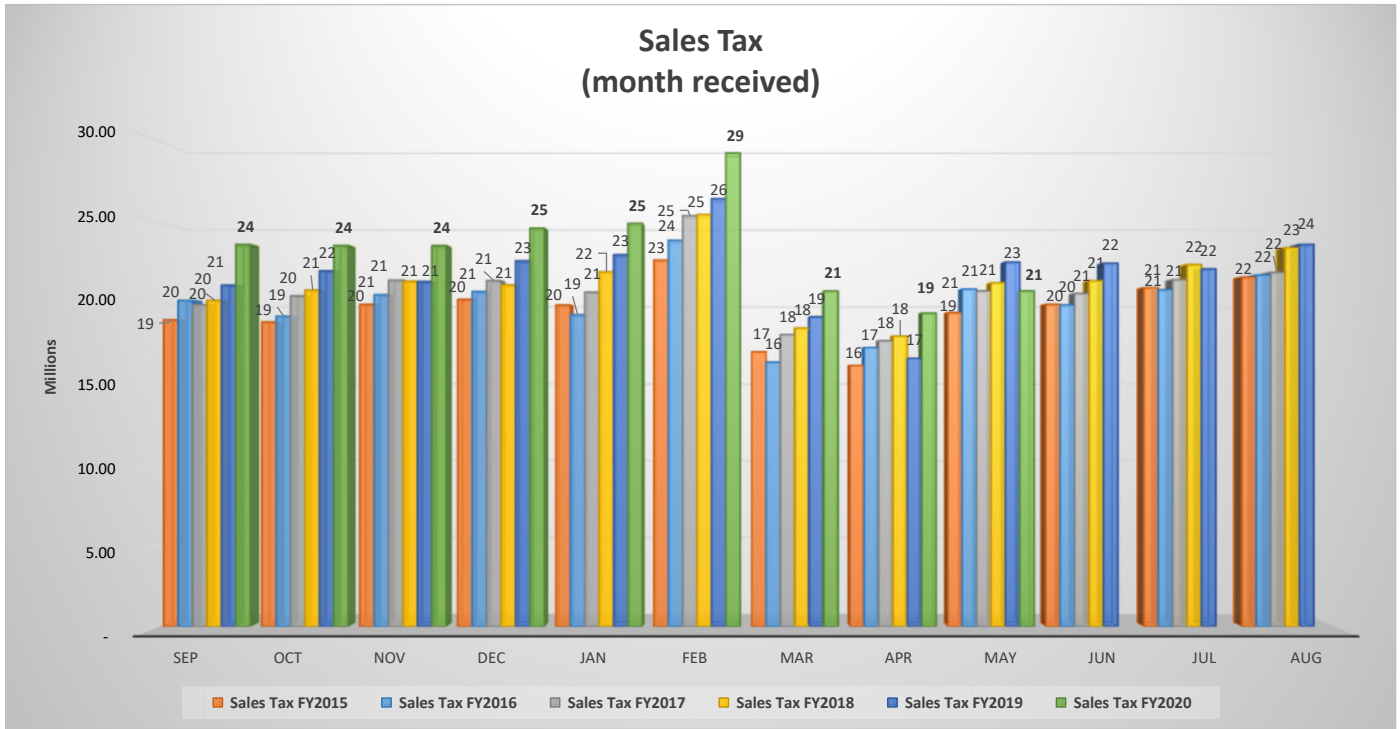
- A. Sales Tax Revenues Received Compared to NVTA Estimates, Through May 2020
- B. FY2020 30% Distribution by Jurisdiction, through May 2020
- C. Month to Month Comparison of Sales Tax Revenue and YTD Receipts for May 2015 to 2020
- D. Palisade's Stat Tool Analysis of FY2020 Revenue Actual to Projections

Attachment A

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

Regional Sales Tax		Received	Annualized Revenue based	FY2020	Annualized - Actual	
Transaction Months	9	To Date	on YTD Receipts	Budget	To Budget	
City of Alexandria		\$ 13,573,796	\$ 18,098,394	\$ 16,379,177	\$ 1,719,217	
Arlington County		21,097,645	28,130,193	25,943,302	2,186,891	
City of Fairfax		5,750,821	7,667,761	7,506,931	160,830	
Fairfax County		89,042,858	118,723,811	114,583,396	4,140,415	
City of Falls Church		2,325,782	3,101,043	2,777,700	323,343	
Loudoun County		40,738,279	54,317,706	52,470,000	1,847,706	
City of Manassas		4,814,062	6,418,749	5,202,000	1,216,749	
City of Manassas Park		1,208,537	1,611,382	1,469,727	141,655	
Prince William County		31,723,067	42,297,423	39,514,160	2,783,263	
Total Sales Tax Revenue		\$ 210,274,846	\$ 280,366,462	\$ 265,846,393	\$ 14,520,069	5.5%

Vehicle License-Registration Fees		Received	Annualized Revenue based	FY2020	Annualized - Actual	
Transaction Months	9	To Date	on YTD Receipts	Budget	To Budget	
City of Alexandria		\$ 183,987	\$ 245,316	\$ 564,162	\$ (318,846)	
Arlington County		\$ 274,941	366,589	932,871	(566,282)	
City of Fairfax		\$ 78,790	105,053	248,699	(143,645)	
Fairfax County		\$ 1,191,753	1,589,004	3,850,016	(2,261,013)	
City of Falls Church		\$ 31,810	42,414	88,448	(46,035)	
Loudoun County		\$ 552,433	736,578	1,768,831	(1,032,253)	
City of Manassas		\$ 66,904	89,206	170,283	(81,077)	
City of Manassas Park		\$ 16,921	22,562	52,506	(29,945)	
Prince William County		\$ 429,354	572,471	1,324,184	(751,712)	
Total Vehicle License-Registration Fees		\$ 2,826,893	\$ 3,769,191	\$ 9,000,000	\$ (5,230,809)	-58.1%
Total Revenue Received		\$ 213,101,739	\$ 284,135,653	\$ 274,846,393	\$ 9,289,260	3.38%
		\$ 213,101,739				



ATTACHMENT D

NVTAs Sales Tax Revenue Forecast: Model vs Actual vs Projection												
FY	Forecasting Data	Monthly Actual	Model Factors			Monthly Model Forecast	Statistical Variance	End of Year		NVTAs Projected	Actual YTD	
			Level	Trend	Season			Model Forecast	NVTAs Projected			
	Sep-2017	\$20154895.20	\$20,864,352.71	35,416	0.99	\$20,722,798	-567902.73				\$20,154,895	
	Oct-2017	\$20786302.49	\$20,903,227.34	35,512	0.99	\$20,769,329	16973.18				\$40,941,198	
	Nov-2017	\$21343035.02	\$20,959,891.57	36,097	1.01	\$21,237,090	105944.82				\$62,284,233	
	Dec-2017	\$21115954.89	\$20,911,253.71	33,751	1.03	\$21,545,348	-429393.28				\$83,400,188	
	Jan-2018	\$21915158.59	\$21,091,436.21	37,806	1.01	\$21,183,799	731359.69				\$105,315,346	
	Feb-2018	\$25453242.98	\$21,127,644.32	37,761	1.21	\$25,462,750	-9507.34				\$130,768,589	
	Mar-2018	\$18454177.89	\$21,240,448.64	39,839	0.86	\$18,136,627	317550.70				\$149,222,767	
	Apr-2018	\$17961787.93	\$21,391,277.89	42,912	0.82	\$17,510,779	451009.24				\$167,184,555	
	May-2018	\$21248451.07	\$21,386,405.66	41,589	1.00	\$21,484,983	-236532.22				\$188,433,006	
	Jun-2018	\$21365953.89	\$21,443,521.99	42,019	0.99	\$21,289,772	76181.62				\$209,798,960	
	Jul-2018	\$22367630.32	\$21,557,902.47	44,023	1.02	\$22,001,707	365922.93				\$232,166,590	
FY18	Aug-2018	\$23408268.73	\$21,691,305.71	46,498	1.06	\$22,939,554	468714.66	\$254,284,538	\$255,571,902		\$255,574,859	
	Sep-2018	\$21094228.16	\$21,660,657.95	44,362	0.99	\$21,470,508	-376279.56				\$21,094,228	
	Oct-2018	\$21988380.92	\$21,790,364.81	46,725	0.99	\$21,569,554	418826.45				\$43,082,609	
	Nov-2018	\$21319898.61	\$21,671,706.22	42,145	1.01	\$22,148,241	-828342.41				\$64,402,508	
	Dec-2018	\$22602475.35	\$21,777,094.66	43,897	1.03	\$22,281,994	320481.62				\$87,004,983	
	Jan-2019	\$22970788.81	\$22,001,390.85	48,892	1.01	\$22,069,772	901016.46				\$109,975,772	
	Feb-2019	\$26427800.56	\$22,025,935.34	48,217	1.21	\$26,572,692	-144891.40				\$136,403,572	
	Mar-2019	\$19145453.91	\$22,128,534.65	49,723	0.86	\$18,915,332	230121.79				\$155,549,026	
	Apr-2019	\$16589175.00	\$21,769,618.75	38,409	0.82	\$18,249,686	-1660510.65				\$172,138,201	
	May-2019	\$22525822.45	\$21,942,597.36	42,135	1.00	\$21,859,706	666116.28				\$194,664,024	
	Jun-2019	\$22453420.16	\$22,109,161.67	45,580	0.99	\$21,842,918	610502.19				\$217,117,444	
	Jul-2019	\$22103784.06	\$22,039,413.78	42,387	1.02	\$22,686,984	-583200.43				\$239,221,228	
FY19	Aug-2019	\$23605506.73	\$22,111,617.66	43,212	1.06	\$23,449,144	156362.84	\$263,116,532	\$258,926,224*		\$262,826,735	
	Sep-2019	\$23603917.67	\$22,507,776.88	52,985	0.99	\$21,882,406	1721511.32				\$23,603,918	
	Oct-2019	\$23492820.82	\$22,779,381.94	59,038	0.99	\$22,419,956	1072865.04				\$47,096,738	
	Nov-2019	\$23534125.70	\$22,912,349.87	61,085	1.01	\$23,163,839	370286.41				\$70,630,864	
	Dec-2019	\$24619413.33	\$23,179,628.61	66,794	1.03	\$23,574,534	1044879.36				\$95,250,278	
	Jan-2020	\$24912972.81	\$23,527,031.79	74,564	1.01	\$23,511,455	1401517.42				\$120,163,250.33	
	Feb-2020	\$29246546.40	\$23,736,760.36	78,307	1.21	\$28,442,172	804374.01				\$149,409,796.73	
	Mar-2020	\$20741063.97	\$23,893,983.60	80,492	0.86	\$20,407,121	333943.32				\$170,150,860.70	
	Apr-2020	\$19373987.00	\$23,887,422.24	78,081	0.82	\$19,727,728	-353740.88				\$189,524,847.70	
	May-2020	\$20749997.78	\$23,304,428.03	59,777	1.00	\$24,022,295	-3272297.15				\$210,274,845.48	
	Jun-2020					\$23,213,493						
	Jul-2020					\$23,986,717						
FY20	Aug-2020	*Current Fiscal Year Projection					\$24,937,914		\$279,289,630	\$265,846,393*		

NVTA Sales Tax Revenue Forecast 2014-2020: Model Observations

Winters' Exponential Smoothing Forecast

Forecasting Constants (Optimized)

Level (Alpha)	0.203
Trend (Beta)	0.028
Season (Gamma)	0.000

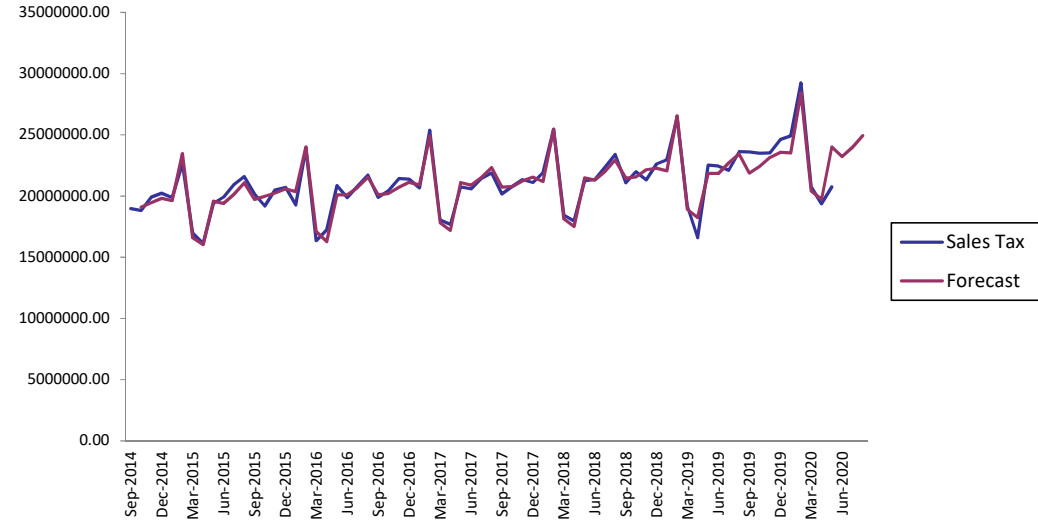
Winters' Exponential

Mean Abs Err	\$523,608.43
Root Mean Sq Err	\$718,021.40
Mean Abs Per% Err	2.51%

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.

Forecast and Original Observations



Original Observations

