

NORTHERN VIRGINIA TRANSPORTATION AUTHORITY

MEMORANDUM

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

FROM: Michael Longhi, Chief Financial Officer

DATE: February 6, 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 December 2019. December receipts represent four months of FY2020 Sales Tax revenue.
3. **Comments:**
 - a. **FY2020 Revenues (Attachment A)**
 - i. The Authority has received approximately \$97.1 million through the December 2019 transfers from the Commonwealth.
 - ii. Actual revenue (four months of sales tax receipts) to estimate comparison of annual sales tax revenues through December 2019 show a 7.5% positive variance in receipts compared to the FY2020 adopted revenue projections.
 - iii. The positive variance can be greatly 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. While working with member localities on updating revenue projections, staff expects to gain a better understanding of the internet sales tax impact.
 - iv. Revenue related to Heavy Truck Registration and Diesel Fuel (SB1716) has not materialized at the level to support Commonwealth projections for FY2020. However, it is still early in the cycle for this first-time revenue source. VDOT has prepared an analysis of the receipts and shared that there has been some system and processing lag in the collection startup of this new revenue source.
 - b. **FY2020 Distribution to localities (Attachment B)**
 - i. Eight jurisdictions have completed the required annual HB2313 certification to receive FY2020 Local Distribution Funds (30%). The remaining jurisdiction has been contacted and is aware of the deadlines.
 - ii. As of December 2019, approximately \$28.1 million of the \$29.1 million of 30% local distribution funds have been distributed to member jurisdictions.

- 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 December 2019.
- 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. However, the tool is unable to 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 December 2019
- B. FY2020 30% Distribution by Jurisdiction, through December 2019
- C. Month to Month Comparison of Sales Tax Revenue and YTD Receipts for December 2015 to 2019
- 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 December 2019
 FYE June 30, 2020

Regional Sales Tax		Received	Annualized Revenue based	FY2020	Annualized - Actual	
Transaction Months	4	To Date	on YTD Receipts	Budget	To Budget	
City of Alexandria		\$ 6,158,683	\$ 18,476,049	\$ 16,379,177	\$ 2,096,872	
Arlington County		9,902,947	29,708,841	25,943,302	3,765,539	
City of Fairfax		2,514,326	7,542,978	7,506,931	36,047	
Fairfax County		40,166,888	120,500,663	114,583,396	5,917,267	
City of Falls Church		1,105,022	3,315,065	2,777,700	537,365	
Loudoun County		18,609,685	55,829,054	52,470,000	3,359,054	
City of Manassas		2,158,875	6,476,625	5,202,000	1,274,625	
City of Manassas Park		546,371	1,639,112	1,469,727	169,385	
Prince William County		14,087,482	42,262,446	39,514,160	2,748,286	
Total Sales Tax Revenue		\$ 95,250,278	\$ 285,750,833	\$ 265,846,393	\$ 19,904,440	7.5%

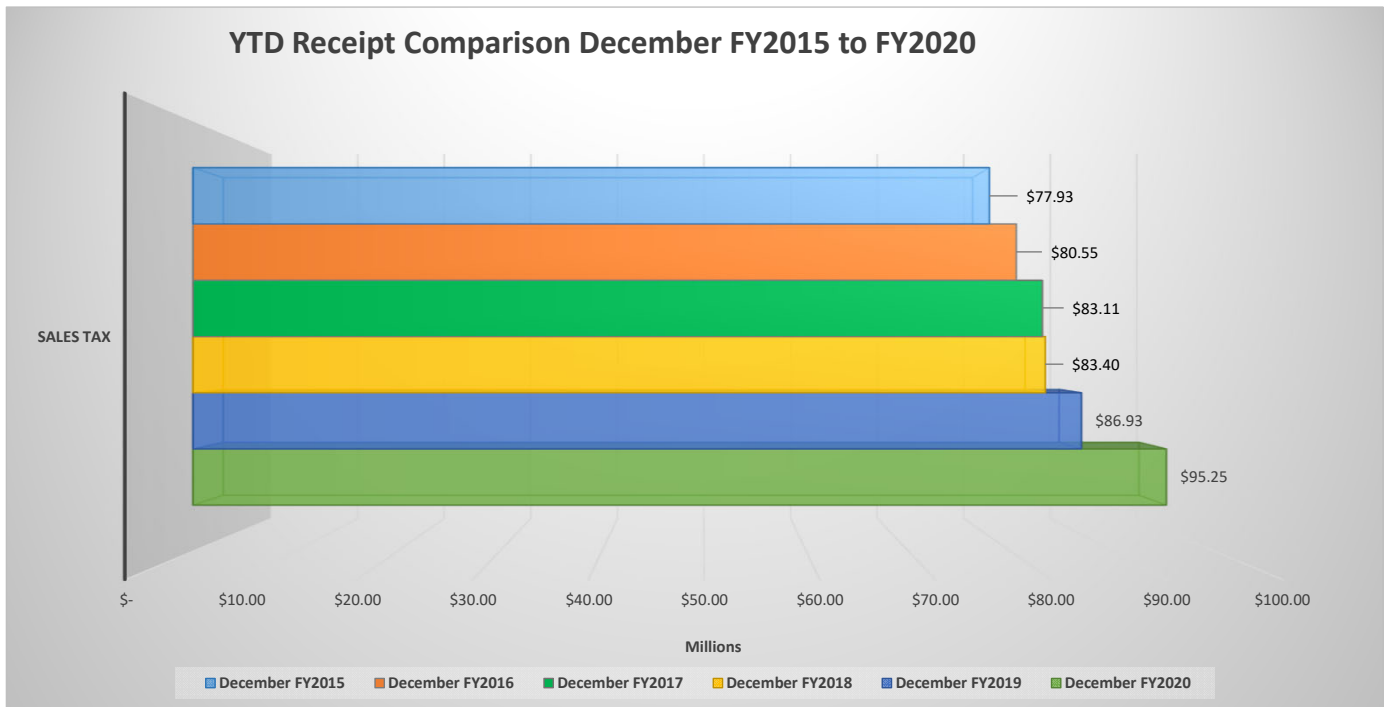
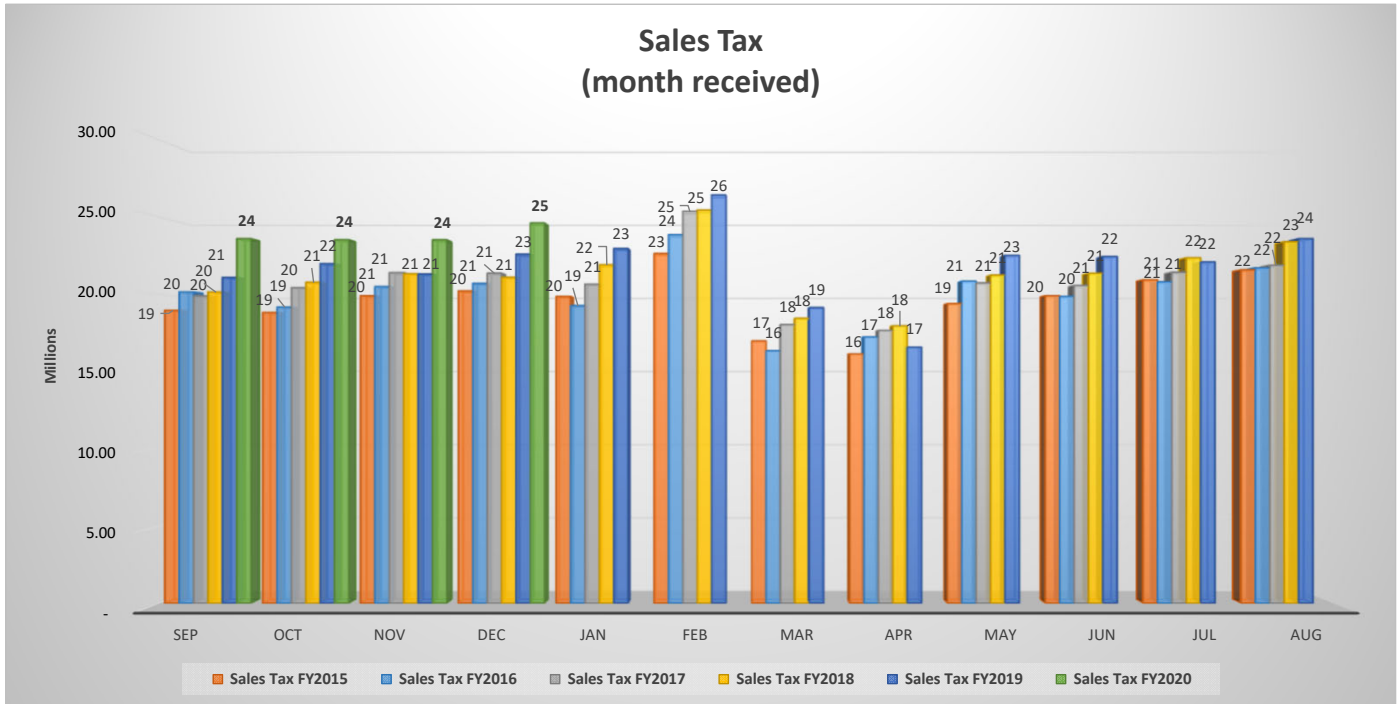
Vehicle License-Registration Fees		Received	Annualized Revenue based	FY2020	Annualized - Actual	
Transaction Months	4	To Date	on YTD Receipts	Budget	To Budget	
City of Alexandria		\$ 55,820	\$ 167,461	\$ 564,162	\$ (396,701)	
Arlington County		\$ 87,671	263,013	932,871	(669,858)	
City of Fairfax		\$ 22,165	66,496	248,699	(182,203)	
Fairfax County		\$ 351,007	1,053,021	3,850,016	(2,796,996)	
City of Falls Church		\$ 9,968	29,904	88,448	(58,545)	
Loudoun County		\$ 165,395	496,184	1,768,831	(1,272,647)	
City of Manassas		\$ 19,345	58,034	170,283	(112,248)	
City of Manassas Park		\$ 4,763	14,288	52,506	(38,219)	
Prince William County		\$ 121,402	364,205	1,324,184	(959,978)	
Total Vehicle License-Registration Fees		\$ 837,535	\$ 2,512,605	\$ 9,000,000	\$ (6,487,395)	-72.1%
Total Revenue Received		\$ 96,087,812	\$ 288,263,437	\$ 274,846,393	\$ 13,417,044	4.88%
		\$ 96,087,812				

Attachment B

NORTHERN VIRGINIA TRANSPORTATION AUTHORITY FY2020 30% DISTRIBUTION BY JURISDICTION

Based on: Revenue Data Through December 2019

Jurisdiction	Vehicle License- Registration Fee	Regional Sales Tax		NVTA Fund Interest	Cumulative Total	30% Funds	11/30/2019 Accrued Interest (1) (+)	11/30/2019 Prior Distributions	Current Month Distribution	Total Funds Transferred
City of Alexandria	\$ 55,820.39	\$ 6,158,682.91	\$ -	\$ 9,938.97	\$ 6,224,442.27	\$ 1,867,332.68	\$ 520.10	\$1,385,560.04	\$ 482,292.74	\$ 1,867,852.78
Arlington County	\$ 87,670.85	\$ 9,902,947.07	\$ -	\$ 15,625.68	\$10,006,243.60	\$ 3,001,873.08	\$ 866.83	\$2,199,924.57	\$ 802,815.34	\$ 3,002,739.91
City of Fairfax	\$ 22,165.22	\$ 2,514,325.92	\$ -	\$ 4,238.02	\$ 2,540,729.16	\$ 762,218.75	\$ 260.05		\$ 762,478.80	
Fairfax County	\$ 351,006.85	\$40,166,887.50	\$ -	\$ 64,416.67	\$40,582,311.02	\$12,174,693.31	\$ 3,640.68	\$9,079,196.95	\$ 3,099,137.04	\$ 12,178,333.99
City of Falls Church	\$ 9,967.90	\$ 1,105,021.83	\$ -	\$ 1,812.67	\$ 1,116,802.40	\$ 335,040.72	\$ 86.68	\$254,823.53	\$ 80,303.87	\$ 335,127.40
Loudoun County	\$ 165,394.66	\$18,609,684.72	\$ -	\$ 30,409.47	\$18,805,488.85	\$ 5,641,646.66	\$ 1,733.66	\$4,144,570.25	\$ 1,498,810.07	\$ 5,643,380.32
City of Manassas	\$ 19,344.78	\$ 2,158,875.04	\$ -	\$ 3,516.27	\$ 2,181,736.09	\$ 654,520.83	\$ 173.37	\$486,209.83	\$ 168,484.37	\$ 654,694.20
City of Manassas Park	\$ 4,762.52	\$ 546,370.69	\$ -	\$ 876.25	\$ 552,009.46	\$ 165,602.84	\$ 86.68	\$114,926.91	\$ 50,762.61	\$165,689.52
Prince William County	\$ 121,401.79	\$14,087,481.84	\$ -	\$ 22,679.83	\$14,231,563.46	\$ 4,269,469.04	\$ 1,300.25	\$3,202,499.34	\$ 1,068,269.95	\$ 4,270,769.29
Total Revenue	\$ 837,534.96	\$95,250,277.52	\$ -	\$153,513.83	\$97,078,861.27	\$29,123,658.38	\$ 8,668.30	\$20,867,711.42	\$ 8,264,615.28	\$ 28,118,587.41
	Interest 11/30/2019									



ATTACHMENT D

NVTA Sales Tax Revenue Forecast: Model vs Actual vs Projection											
FY	Forecasting Data	Monthly Actual	Model Factors			Monthly Model Forecast	Statistical Variance	End of Year		Actual YTD	
			Level	Trend	Season			Model Forecast	NVTA Projected		
	Sep-2017	\$20,154,895.20	20,986,894.60	72,017	0.98	\$20,618,625	-463,730			\$20,154,895	
	Oct-2017	\$20,786,302.49	21,051,585.23	72,017	0.99	\$20,822,133	-35,831			\$40,941,198	
	Nov-2017	\$21,343,035.02	21,106,845.69	72,017	1.01	\$21,427,109	-84,074			\$62,284,233	
	Dec-2017	\$21,115,954.89	21,059,504.51	72,017	1.03	\$21,721,464	-605,509			\$83,400,188	
	Jan-2018	\$21,915,158.59	21,242,334.02	72,017	1.01	\$21,361,090	554,068			\$105,315,346	
	Feb-2018	\$25,453,242.98	21,277,601.60	72,017	1.20	\$25,672,182	-218,939			\$130,768,589	
	Mar-2018	\$18,454,177.89	21,389,610.53	72,017	0.86	\$18,284,762	169,416			\$149,222,767	
	Apr-2018	\$17,961,787.93	21,538,120.30	72,017	0.82	\$17,650,617	311,171			\$167,184,555	
	May-2018	\$21,248,451.07	21,529,136.61	72,017	1.00	\$21,649,842	-401,391			\$188,433,006	
	Jun-2018	\$21,365,953.89	21,583,958.08	72,017	0.99	\$21,450,415	-84,461			\$209,798,960	
	Jul-2018	\$22,367,630.32	21,644,449.32	72,017	1.04	\$22,426,669	-59,039			\$232,166,590	
FY18	Aug-2018	\$23,408,268.73	21,754,559.35	72,017	1.07	\$23,206,917	201,352	\$256,291,825	\$255,574,859	\$255,574,859	
	Sep-2018	\$21,094,228.16	21,774,515.37	72,017	0.98	\$21,346,069	-251,841			\$21,094,228	
	Oct-2018	\$21,988,380.92	21,925,760.74	72,017	0.99	\$21,600,899	387,482			\$43,082,609	
	Nov-2018	\$21,319,898.61	21,799,677.29	72,017	1.01	\$22,313,845	-993,946			\$64,402,508	
	Dec-2018	\$22,602,475.35	21,905,289.49	72,017	1.03	\$22,432,045	170,430			\$87,004,983	
	Jan-2019	\$22,970,788.81	22,128,249.94	72,017	1.01	\$22,216,064	754,725			\$109,975,772	
	Feb-2019	\$26,427,800.56	22,147,993.11	72,017	1.20	\$26,739,228	-311,427			\$136,403,572	
	Mar-2019	\$19,145,453.91	22,247,215.72	72,017	0.86	\$19,030,204	115,250			\$155,549,026	
	Apr-2019	\$16,589,175.00	21,884,924.25	72,017	0.82	\$18,355,934	-1,766,759			\$172,138,201	
	May-2019	\$22,525,822.45	22,063,600.40	72,017	1.00	\$21,997,283	528,539			\$194,664,024	
	Jun-2019	\$22,453,420.16	22,231,767.75	72,017	0.99	\$21,981,149	472,271			\$217,117,444	
	Jul-2019	\$22,103,784.06	22,109,781.98	72,017	1.04	\$23,097,533	-993,749			\$239,221,228	
FY19	Aug-2019	\$23,605,506.73	22,163,130.14	72,017	1.07	\$23,704,186	-98,679	\$264,814,439	\$258,926,224*	\$262,826,735	
	Sep-2019	\$23,603,917.67	22,619,292.19	72,017	0.98	\$21,745,645	1,858,272			\$23,603,918	
	Oct-2019	\$23,492,820.82	22,907,360.77	72,017	0.99	\$22,436,177	1,056,644			\$47,096,738	
	Nov-2019	\$23,534,125.70	23,024,137.56	72016.97	1.01	\$23,309,548	224,577			\$70,630,864	
	Dec-2019	\$24,619,413.33	23,279,779.56	72016.97	1.03	\$23,687,876	931,537			\$95,250,278	
	Jan-2020					\$23,605,486					
	Feb-2020					\$28,212,935					
	Mar-2020					\$20,122,873					
	Apr-2020					\$19,382,828					
	May-2020					\$23,683,298					
	Jun-2020					\$23,546,413					
	Jul-2020					\$24,630,321					
FY20	Aug-2020	*Current Fiscal Year Projection					\$25,493,201		\$279,856,603	\$265,846,393*	

NVTA Sales Tax Revenue Forecast 2014-2020: Model Observations

Winters' Exponential Smoothing Forecast

Forecasting Constants (Optimized)

Level (Alpha)	0.202
Trend (Beta)	0.000
Season (Gamma)	0.000

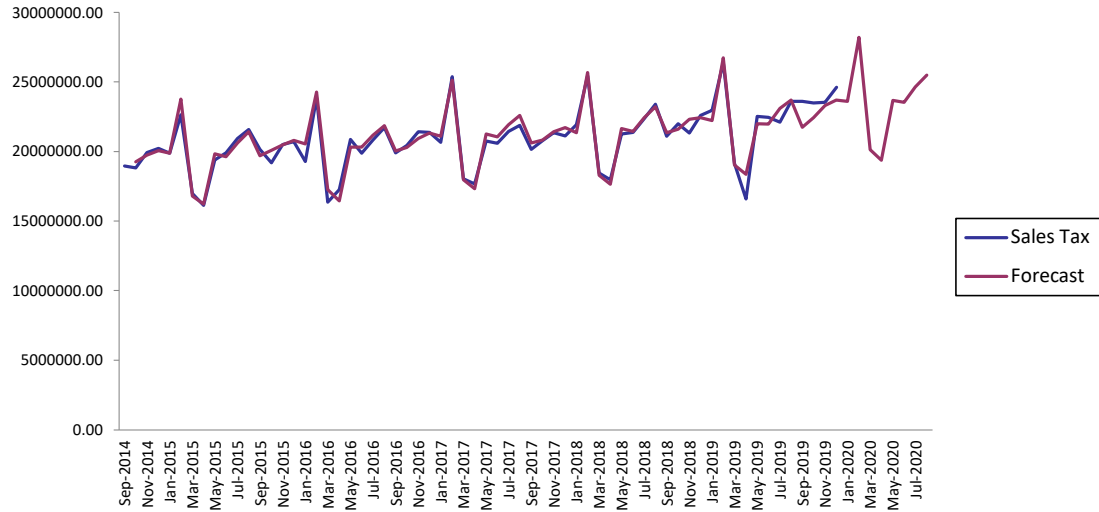
Winters' Exponential

Mean Abs Err	\$442,436.67
Root Mean Sq Err	\$591,409.13
Mean Abs Per% Err	2.14%

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

