

INVENTORIES, MVEBs, CONTINGENCY MEASURES (2015 OZONE NAAQS RR/MP)

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Inventories

Point, Quasi-Point, Nonpoint, MAR, Nonroad Model, and Onroad Source Inventories for 2022/32/38: Draft inventories are complete

Documentation development:

Point Source – Complete

Quasi-Point, Nonpoint & MAR – Partially complete

Nonroad & Onroad Model Sources – Ongoing

DRAFT Point & Quasi-Point Source Inventory (tpd)

Point							
Jurisdiction	NOx			VOC			
	2022	2032	2038	2022	2032	2038	
Distrct of Columbia	0.48	0.48	0.48	0.25	0.25	0.25	
Calvert	2.18	2.19	2.20	0.10	0.11	0.11	
Charles	9.03	10.61	10.63	0.34	0.44	0.45	
Fredrick	1.41	1.53	1.61	1.35	1.42	1.46	
Montgomery	8.38	9.56	9.63	0.29	0.31	0.32	
Prince George's	15.07	18.58	19.48	0.80	0.90	0.94	
Arlington	0.00	0.00	0.00	0.00	0.00	0.00	
Fairfax County	9.04	9.45	9.53	0.57	0.52	0.53	
Loudoun County	7.36	8.62	9.44	0.44	0.51	0.55	
Prince William County	2.94	2.56	2.57	0.45	0.33	0.34	
Fairfax City	0.02	0.02	0.03	0.34	0.29	0.29	
Falls Church City	0.00	0.00	0.00	0.00	0.00	0.00	
Manassas City	0.22	0.26	0.28	0.10	0.11	0.12	
Manassas Park City	0.00	0.00	0.00	0.00	0.00	0.00	
Alexandria City	0.81	0.81	0.81	0.00	0.00	0.00	
NAA Total	56.95	64.68	66.70	5.02	5.21	5.37	
Quasi-Point							
Jurisdiction	NOx			VOC			
	2022	2032	2038	2022	2032	2038	
Prince George's	0.82	0.82	0.82	0.40	0.40	0.40	
Arlington	2.60	2.85	2.98	0.42	0.46	0.48	
Loudoun County	3.05	3.54	3.68	0.54	0.63	0.66	
NAA Total	6.48	7.22	7.48	1.37	1.50	1.55	

Note: Quasi-Point Sources: Andrews AFB (Prince George's), National airport (Arlington), and Dulles airport (Loudoun).



DRAFT Nonpoint Source Inventory (tpd)

Jurisdiction	Nonpoint						
	NOx			VOC			
	2022	2032	2038	2022	2032	2038	
District of Columbia	1.51	1.35	1.35	12.13	12.91	13.32	
Calvert	0.21	0.21	0.21	2.04	2.10	2.10	
Charles	0.83	0.86	0.88	10.25	10.63	10.76	
Fredrick	1.26	1.34	1.38	11.88	12.53	12.86	
Montgomery	3.35	3.36	3.46	21.48	22.14	22.34	
Prince George's	3.04	3.04	3.12	26.85	27.55	28.13	
Arlington	0.88	0.94	0.97	4.33	4.61	4.79	
Fairfax County	5.17	5.43	5.54	23.00	24.02	24.50	
Loudoun County	2.15	2.14	2.17	9.21	10.23	10.51	
Prince William County	1.80	1.79	1.82	10.32	11.03	11.29	
Fairfax City	0.62	0.59	0.61	2.99	3.52	3.78	
Falls Church City	0.18	0.18	0.18	0.70	0.82	0.85	
Manassas City	0.09	0.09	0.10	0.33	0.40	0.42	
Manassas Park City	0.24	0.23	0.24	0.98	1.05	1.07	
Alexandria City	0.09	0.09	0.09	0.57	0.62	0.64	
NAA Total	21.41	21.64	22.10	137.07	144.16	147.37	



DRAFT MAR Source Inventory (tpd)

Jurisdiction	MAR						
	NOx			VOC			
	2022	2032	2038	2022	2032	2038	
District of Columbia	1.03	1.13	1.17	0.05	0.06	0.06	
Calvert	0.60	0.58	0.57	0.02	0.03	0.03	
Charles	0.16	0.16	0.16	0.01	0.01	0.01	
Fredrick	0.86	0.89	0.94	0.06	0.07	0.07	
Montgomery	0.75	0.80	0.85	0.04	0.05	0.05	
Prince George's	0.62	0.68	0.72	0.03	0.04	0.04	
Arlington	0.06	0.07	0.07	0.00	0.00	0.00	
Fairfax County	0.57	0.64	0.67	0.02	0.03	0.03	
Loudoun County	0.03	0.04	0.04	0.04	0.05	0.05	
Prince William County	0.44	0.52	0.56	0.02	0.02	0.02	
Fairfax City	0.29	0.32	0.34	0.01	0.01	0.01	
Falls Church City	0.00	0.00	0.00	0.00	0.00	0.00	
Manassas City	0.00	0.00	0.00	0.00	0.00	0.00	
Manassas Park City	0.11	0.11	0.12	0.05	0.05	0.05	
Alexandria City	0.01	0.02	0.02	0.00	0.00	0.00	
NAA Total	5.53	5.95	6.24	0.38	0.42	0.43	



DRAFT Nonroad Model Source Inventory (tpd)

Nonroad Model							
Jurisdiction	NOx			VOC			
	2022	2032	2038	2022	2032	2038	
District of Columbia	1.35	1.01	1.06	1.38	1.34	1.39	
Calvert	0.45	0.37	0.37	0.75	0.59	0.58	
Charles	0.74	0.57	0.57	1.18	0.98	0.98	
Fredrick	1.26	0.99	1.01	2.32	2.41	2.49	
Montgomery	3.62	3.10	3.20	8.60	9.04	9.35	
Prince George's	2.70	2.20	2.27	4.93	5.11	5.29	
Arlington	1.42	0.80	0.76	0.88	0.78	0.78	
Fairfax County	4.72	3.52	3.51	9.28	9.08	9.03	
Loudoun County	3.16	2.00	1.91	4.54	4.36	4.31	
Prince William County	2.05	1.32	1.28	2.79	2.64	2.60	
Fairfax City	0.23	0.22	0.24	0.66	0.66	0.66	
Falls Church City	0.10	0.09	0.09	0.32	0.32	0.32	
Manassas City	0.06	0.05	0.05	0.19	0.19	0.19	
Manassas Park City	0.08	0.09	0.11	0.13	0.14	0.14	
Alexandria City	0.06	0.05	0.05	0.18	0.18	0.18	
NAA Total	22.01	16.40	16.48	38.13	37.82	38.30	

Note: MOVES5 based GSE emissions for Prince George's, Arlington, and Loudoun counties are excluded here. MOVES5 does not contain any GSE emissions for the District. EPA's EMP 2022v1 GSE emissions were used for those jurisdictions and included as part of the airport (MAR) inventories.

DRAFT Onroad Model Source Inventory (tpd)

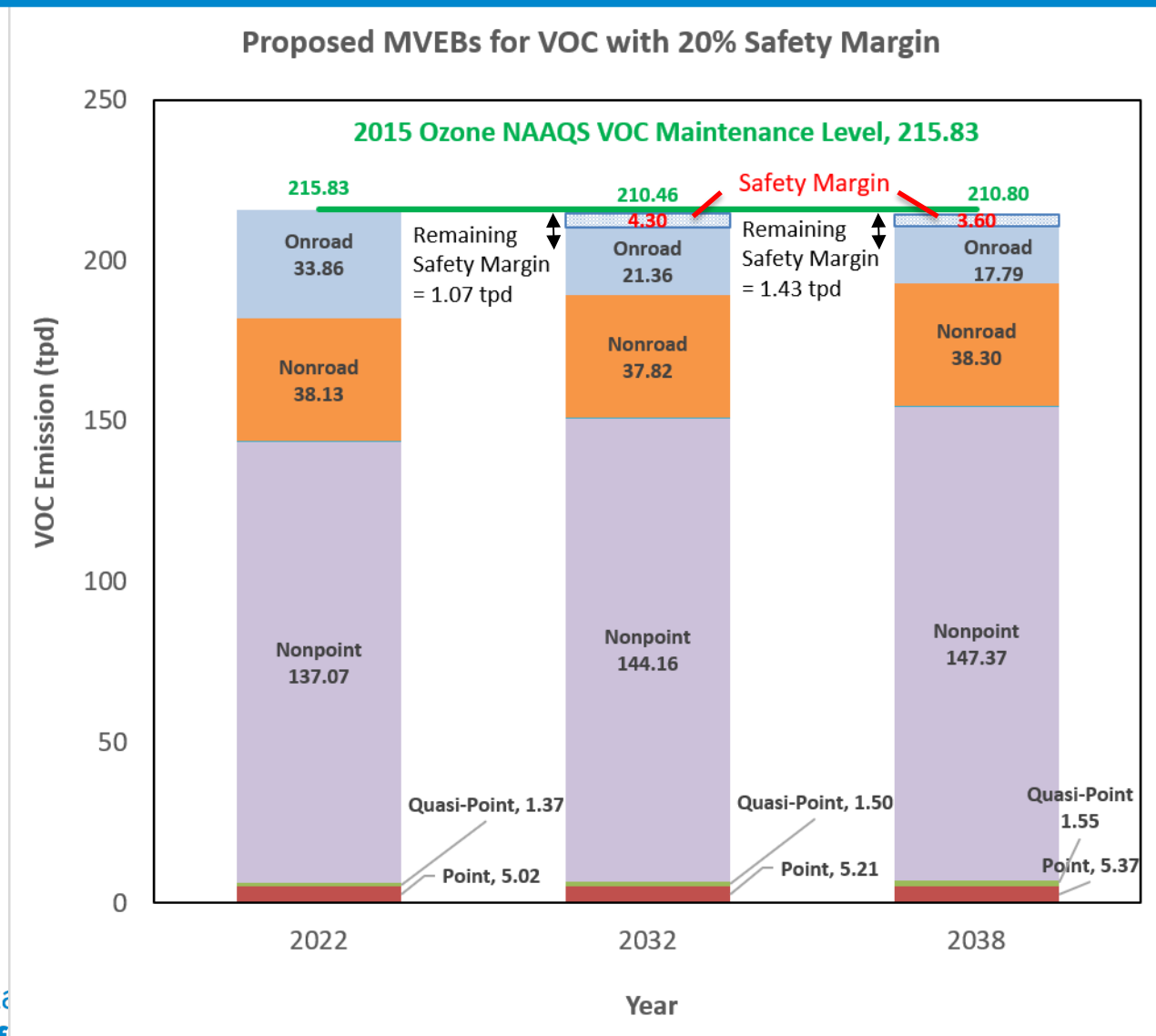
Onroad Model							
Jurisdiction	NOx			VOC			
	2022	2032	2038	2022	2032	2038	
District of Columbia	3.72	1.47	0.96	2.74	1.75	1.44	
Calvert	1.04	0.41	0.26	0.73	0.45	0.36	
Charles	2.08	0.91	0.62	1.23	0.86	0.70	
Fredrick	5.84	2.42	1.64	2.42	1.57	1.30	
Montgomery	9.17	3.53	2.42	5.61	3.53	2.97	
Prince George's	10.77	3.86	2.57	6.01	3.78	3.17	
Arlington	1.27	0.42	0.27	1.08	0.66	0.56	
Fairfax County	14.42	5.56	3.69	7.31	4.37	3.63	
Loudoun County	4.74	2.00	1.37	2.46	1.60	1.35	
Prince William County	6.58	2.58	1.76	3.51	2.22	1.83	
Fairfax City							
Falls Church City							
Manassas City							
Manassas Park City							
Alexandria City	0.89	0.42	0.29	0.76	0.57	0.49	
NAA Total	60.52	23.56	15.86	33.86	21.36	17.79	
Note: Onroad emissions for Northern Virginia cities are included in their respective counties.							

DRAFT All Sources Inventory (tpd)

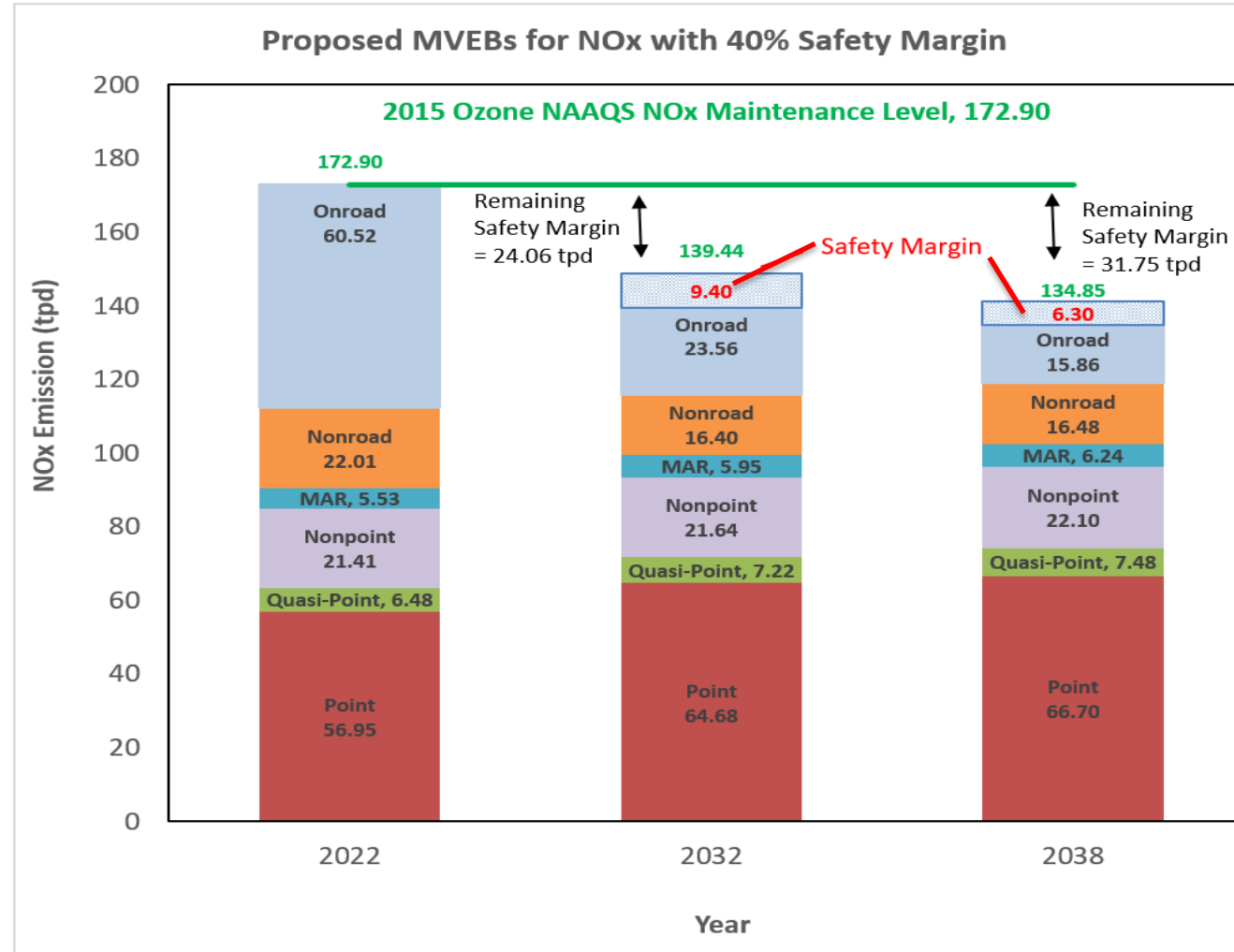
Jurisdiction	Total					
	NOx			VOC		
	2022	2032	2038	2022	2032	2038
District of Columbia	8.09	5.44	5.02	16.56	16.31	16.46
Calvert	4.49	3.76	3.62	3.65	3.27	3.17
Charles	12.85	13.11	12.87	13.01	12.92	12.90
Fredrick	10.63	7.17	6.59	18.04	18.00	18.19
Montgomery	25.27	20.35	19.56	36.03	35.07	35.03
Prince George's	33.01	29.18	28.98	39.02	37.78	37.96
Arlington	6.23	5.06	5.06	6.71	6.52	6.61
Fairfax County	33.92	24.60	22.94	40.18	38.01	37.72
Loudoun County	20.50	18.34	18.60	17.23	17.39	17.43
Prince William County	13.81	8.78	7.98	17.09	16.24	16.09
Fairfax City	1.16	1.16	1.21	4.00	4.48	4.75
Falls Church City	0.28	0.27	0.27	1.02	1.14	1.17
Manassas City	0.37	0.40	0.43	0.62	0.70	0.74
Manassas Park City	0.43	0.44	0.46	1.16	1.24	1.27
Alexandria City	1.86	1.38	1.26	1.51	1.37	1.31
NAA Total	172.90	139.44	134.85	215.83	210.46	210.80

Note: Total emissions for Northern Virginia cities do not include onroad emissions as those emissions are included in their respective counties.

Motor Vehicle Emission Budgets – VOC (tpd)



Motor Vehicle Emission Budgets – NOx (tpd)



Contingency Measures

Contingency measures need to be listed for implementation in the event the Washington region exceeds NAAQS.

Could also be implemented if the region's 4th high 8-hour daily max ozone concentration exceeds 70 ppb (optional).

Possible Contingency Measures for Consideration

Tier 4 Consumer Products Rule

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Solvent Degreasing Rule

Low Permeation Nozzle

Ultra Low NOx for Small Boilers

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