



Chesapeake Bay Program  
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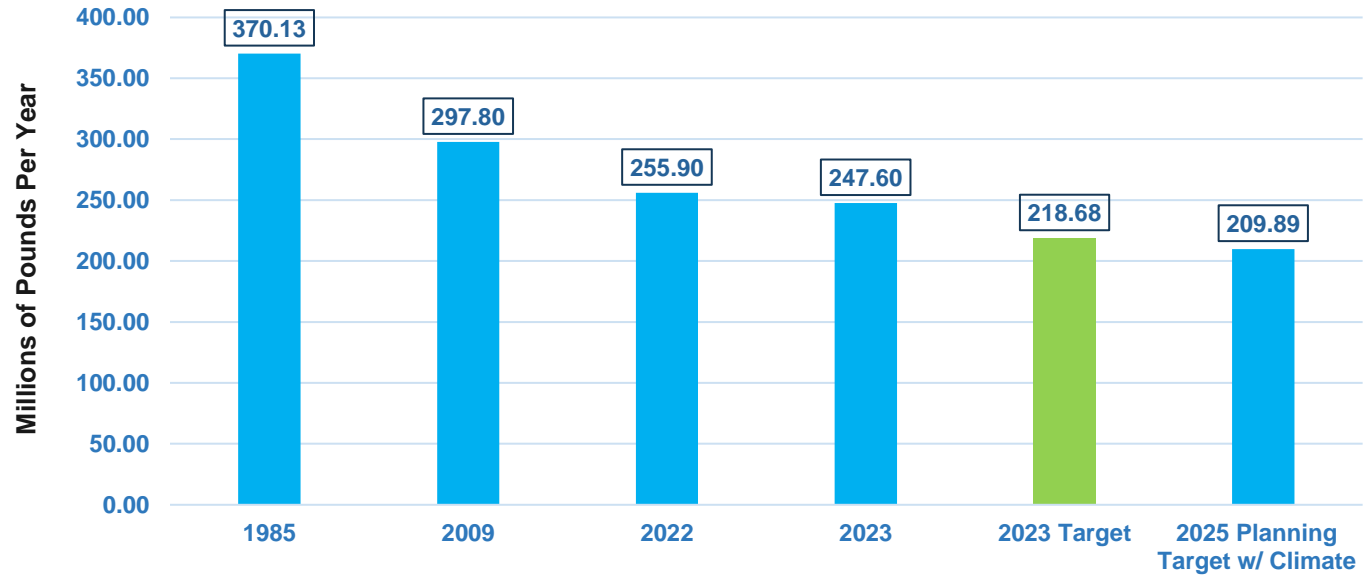
May 13, 2024

# **2023 Modeled Load Reduction Indicator (MLRI) Overview to WQGIT**

# MLRI Overview

- **Purpose:** This indicator is used to estimate annual progress towards achieving the CBP partnership's goal of having all practices and controls in place by 2025 to achieve applicable water quality standards as articulated in the Bay TMDL.
- **Method of Measurement:** This progress estimate is generated using the Chesapeake Assessment Scenario Tool-2019 (CAST-19), which is part of the Phase 6 suite of modeling tools utilizing annually reported data from jurisdictions. The 2025 Planning Targets with Climate are the reference point for this indicator.
- **\*90% of the 2025 Planning Targets w/ Climate is considered 'on track' by 2023.**
- **Reporting Period:** 07/01/2022 – 06/30/2023

## Bay-Wide Nitrogen Load



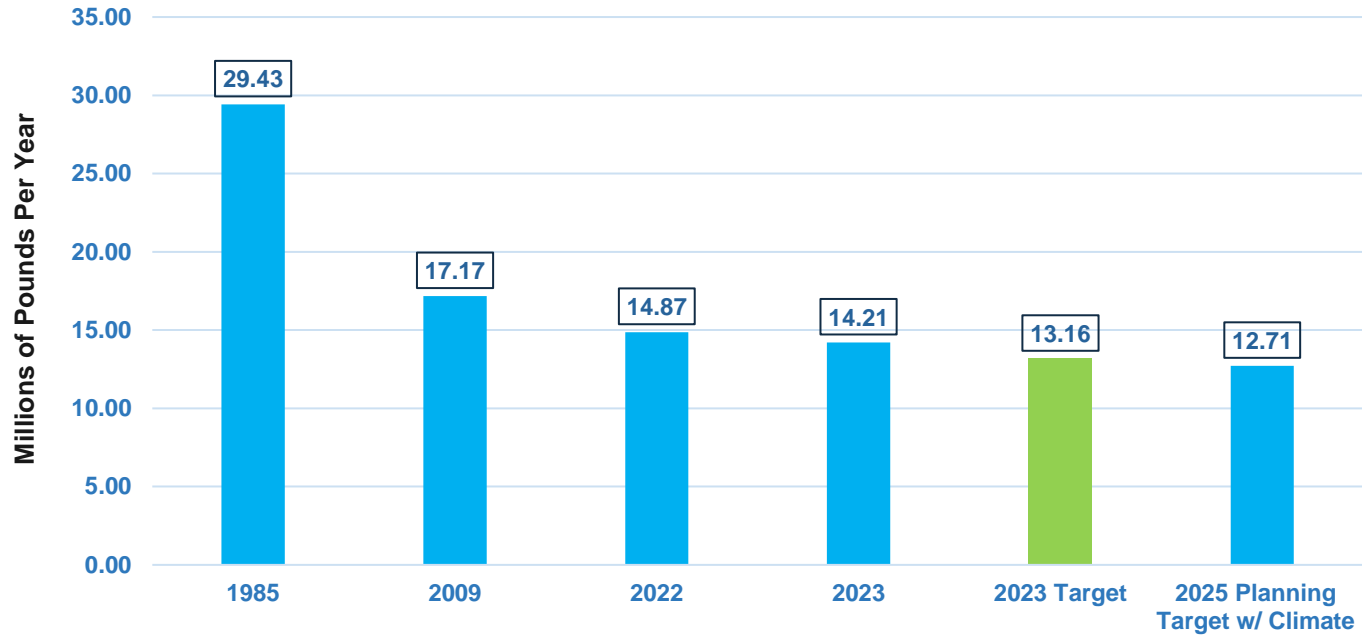
# Nitrogen by Jurisdiction

## Outlook: Off Course

<i>By Jurisdiction</i>	1985	2009	2022	2023	2023 Target	2025 Planning Target w/ Climate	% Completion of 2025 Planning Targets w/ Climate
New York	18.64	14.42	12.83	12.47	11.70	11.40	65%
Pennsylvania	122.23	113.23	104.69	101.07	75.83	71.68	29%
Maryland	85.33	57.61	50.60	46.91	45.98	44.69	83%
Virginia	84.34	67.91	55.36	54.70	53.02	51.37	80%
West Virginia	8.70	8.04	7.89	7.93	8.21	8.23	100%
Delaware	7.00	6.85	6.18	6.64	4.75	4.51	9%
District of Columbia	6.48	2.76	1.64	1.56	2.45	2.42	100%
EPA: Atmospheric Deposition to Watershed (to be reduced under Clean Air Act)	15.90	7.18	0.66	0.41	0.72	0.00	94%
EPA: Atmospheric Deposition to Tidal Water (to be reduced to 15.6 million lbs/yr under Clean Air Act)	21.52	19.80	16.04	15.90	16.02	15.60	93%
<b>Total Simulated N Load to Bay</b>	<b>370.13</b>	<b>297.80</b>	<b>255.90</b>	<b>247.60</b>	<b>218.68</b>	<b>209.89</b>	<b>57%</b>

\* All units are millions of pounds per year.

## Bay-Wide Phosphorus Load



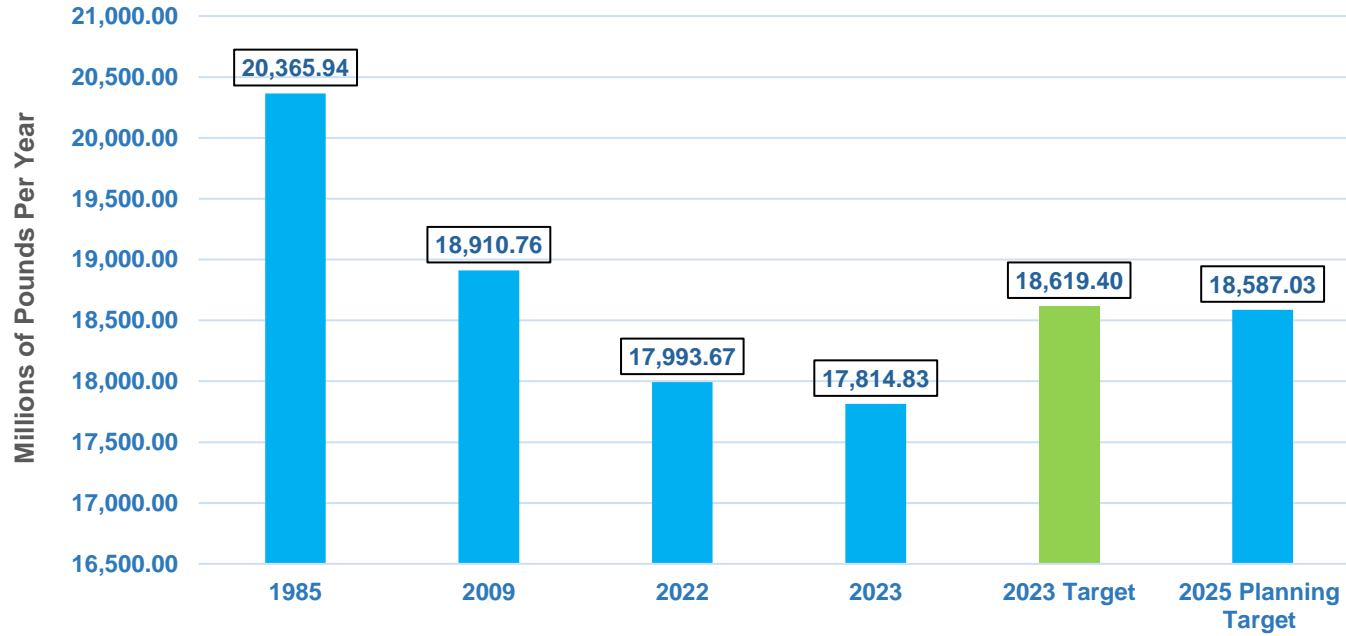
# Phosphorus by Jurisdiction

## Outlook: Off Course

<i>By Jurisdiction</i>	1985	2009	2022	2023	2023 Target	2025 Planning Target w/ Climate	% Completion of 2025 Planning Targets w/ Climate
New York	1.19	0.74	0.55	0.54	0.46	0.43	66%
Pennsylvania	6.02	4.46	3.71	3.63	2.97	2.81	50%
Maryland	7.62	4.15	3.97	3.50	3.63	3.57	100%
Virginia	13.55	6.98	6.00	5.90	5.42	5.25	62%
West Virginia	0.76	0.63	0.44	0.44	0.44	0.42	91%
Delaware	0.22	0.13	0.12	0.12	0.11	0.11	39%
District of Columbia	0.09	0.07	0.07	0.07	0.12	0.13	100%
<b>Total Simulated P Load to the Bay</b>	<b>29.43</b>	<b>17.17</b>	<b>14.87</b>	<b>14.21</b>	<b>13.16</b>	<b>12.71</b>	<b>67%</b>

\* All units are millions of pounds per year.

## Bay-Wide Sediment Load



# Sediment by Jurisdiction Outlook: Completed

<i>By Jurisdiction</i>	1985	2009	2022	2023	2023 Target	2025 Planning Target	% Completion of 2025 Planning Targets
New York	798.31	699.10	662.94	656.17	549.38	532.74	26%
Pennsylvania	3,638.86	3,299.53	2,745.30	2,642.87	2,275.29	2,161.48	58%
Maryland	8,327.38	7,663.05	7,570.76	7,553.63	8,274.88	8,342.86	100%
Virginia	6,761.79	6,556.93	6,397.52	6,341.86	6,840.85	6,872.39	100%
West Virginia	733.45	597.87	548.65	548.89	607.79	608.89	100%
Delaware	62.91	50.32	33.14	35.21	29.07	26.71	64%
District of Columbia	43.23	43.96	35.36	36.22	42.14	41.94	100%
<b>Total Simulated S Load to Bay</b>	<b>20,365.94</b>	<b>18,910.76</b>	<b>17,993.67</b>	<b>17,814.83</b>	<b>18,619.40</b>	<b>18,587.03</b>	<b>100%</b>

**\* All units are millions of pounds per year.**





# Thank you!

Any questions?

You can contact me at [smith.auston@epa.gov](mailto:smith.auston@epa.gov)



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