

### Interpreting These Charts

The figures to the right reflect model estimates for the amount of nitrogen and phosphorus entering the Chesapeake Bay from major tributaries. (For large areas or tributaries—Susquehanna, Potomac and the Eastern Shore—the numbers are also subdivided by state.) The tables at the bottom show total nutrient and phosphorus figures by jurisdiction.

The figures show the amount of nitrogen and phosphorus that would have reached the Bay in 1985 and 2009 under average hydrological conditions, based on watershed population, land use and the number of nutrient control actions implemented in those years. The target is the proposed allocation for each tributary and state to attain Bay water quality standards.

Sharp-eyed readers will note that the figures are significantly different from estimates presented last November. Several factors contributed to that change. First, the Bay Program has updated the Watershed Model, which is used to generate the figures. Of more significance is how information is fed into the model. The Bay Program is using a new tool, called Scenario Builder, which allows better, and more realistic, information about local land uses, crops, manure and other variables be incorporated, along with greater detail about how those factors affect nitrogen and phosphorus processing.

Numbers from the model may continue to change for a while. Model information about urban land use and agricultural nutrient management are under review. Also, numbers could change a bit as states write Watershed Implementation Plans or as a result of public comments. But any changes would still have to ensure that Bay water quality standards would be met.

Changes will come to an end next year, though, when the EPA has said it will “lock down” model numbers. No further changes would occur until nutrient goals are reviewed in 2017, most likely with a model that incorporates further improvements.

Air figures are the amount of nitrogen deposition landing directly on the Bay and its tidal tributaries. These figures had not been included in previous nutrient goals. (Phosphorus is not airborne.)

Some columns may not add up because numbers were rounded off.

— Figures are from the EPA’s Chesapeake Bay Program

### NITROGEN LOADS TO THE BAY BY RIVER

(Annually, in millions of pounds)

River	1985	2009	Target
<b>Eastern Shore</b>			
-- Delaware	4.59	4.15	2.95
-- Maryland	16.57	12.43	9.71
-- Pennsylvania	0.57	0.44	0.28
-- Virginia	2.15	1.91	1.21
<b>Total Eastern Shore</b>	<b>23.88</b>	<b>18.93</b>	<b>14.15</b>
<b>Total James</b>	<b>42.58</b>	<b>30.39</b>	<b>23.48</b>
<b>Total Patuxent</b>	<b>4.16</b>	<b>3.09</b>	<b>2.85</b>
<b>Potomac</b>			
-- District of Columbia	6.21	3.14	2.32
-- Maryland	29.57	18.77	15.70
-- Pennsylvania	7.25	6.20	4.72
-- Virginia	30.15	20.12	17.46
-- West Virginia	8.09	5.90	4.67
<b>Total Potomac</b>	<b>81.27</b>	<b>54.15</b>	<b>44.88</b>
<b>Total Rappahannock</b>	<b>8.92</b>	<b>6.99</b>	<b>5.84</b>
<b>Susquehanna</b>			
-- Maryland	2.29	1.55	1.08
-- New York	16.77	10.94	8.23
-- Pennsylvania	127.31	101.59	71.74
<b>Total Susquehanna</b>	<b>146.37</b>	<b>114.08</b>	<b>81.06</b>
<b>Total Western Shore</b>	<b>27.00</b>	<b>16.90</b>	<b>9.76</b>
<b>Total York</b>	<b>7.60</b>	<b>6.36</b>	<b>5.41</b>
<b>Subtotal (without air)</b>	<b>341.84</b>	<b>250.93</b>	<b>187.44</b>
<b>Air</b>	<b>26.10</b>	<b>17.40</b>	<b>15.70</b>
<b>Total All Rivers</b>	<b>367.94</b>	<b>268.33</b>	<b>203.14</b>

### PHOSPHORUS LOADS TO THE BAY BY RIVER

(Annually, in millions of pounds)

River	1985	2009	Target
<b>Eastern Shore</b>			
-- Delaware	0.37	0.32	0.26
-- Maryland	1.70	1.17	1.09
-- Pennsylvania	0.02	0.02	0.01
-- Virginia	0.26	0.19	0.16
<b>Total Eastern Shore</b>	<b>2.36</b>	<b>1.70</b>	<b>1.53</b>
<b>Total James</b>	<b>6.49</b>	<b>3.30</b>	<b>2.34</b>
<b>Total Patuxent</b>	<b>0.48</b>	<b>0.29</b>	<b>0.21</b>
<b>Potomac</b>			
-- District of Columbia	0.10	0.14	0.12
-- Maryland	1.49	1.00	0.90
-- Pennsylvania	0.57	0.53	0.42
-- Virginia	2.20	1.94	1.47
-- West Virginia	0.85	0.90	0.74
<b>Total Potomac</b>	<b>5.21</b>	<b>4.50</b>	<b>3.66</b>
<b>Total Rappahannock</b>	<b>1.30</b>	<b>1.09</b>	<b>0.90</b>
<b>Susquehanna</b>			
-- Maryland	0.90	0.62	0.05
-- New York	1.07	0.80	0.52
-- Pennsylvania	4.48	3.41	2.31
<b>Total Susquehanna</b>	<b>5.64</b>	<b>4.27</b>	<b>2.88</b>
<b>Total Western Shore</b>	<b>1.62</b>	<b>0.83</b>	<b>0.46</b>
<b>Total York</b>	<b>1.03</b>	<b>0.63</b>	<b>0.54</b>
<b>Subtotal (without air)</b>	<b>24.14</b>	<b>16.62</b>	<b>12.52</b>
<b>Air</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
<b>Total All Rivers</b>	<b>24.14</b>	<b>16.62</b>	<b>12.52</b>

### NITROGEN LOADS TO THE BAY BY STATE

(in millions of pounds)

State	1985	2009	Target
<b>Delaware</b>	4.59	4.15	2.95
<b>District of Columbia</b>	6.21	3.14	2.32
<b>Maryland</b>	79.59	52.74	39.09
<b>New York</b>	16.77	10.94	8.23
<b>Pennsylvania</b>	135.17	108.26	76.77
<b>Virginia</b>	91.40	65.77	53.40
<b>West Virginia</b>	8.11	5.93	4.68
<b>Subtotal (without air)</b>	<b>341.84</b>	<b>250.93</b>	<b>187.44</b>
<b>Air</b>	<b>26.10</b>	<b>17.40</b>	<b>15.70</b>
<b>Total</b>	<b>367.94</b>	<b>268.33</b>	<b>203.14</b>

### PHOSPHORUS LOADS TO THE BAY BY STATE

(in millions of pounds)

State	1985	2009	Target
<b>Delaware</b>	0.37	0.32	0.26
<b>District of Columbia</b>	0.10	0.14	0.12
<b>Maryland</b>	5.38	3.35	2.72
<b>New York</b>	1.07	0.80	0.52
<b>Pennsylvania</b>	5.08	3.96	2.74
<b>Virginia</b>	11.27	7.14	5.41
<b>West Virginia</b>	0.87	0.91	0.75
<b>Subtotal (without air)</b>	<b>24.14</b>	<b>16.62</b>	<b>12.52</b>
<b>Air</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
<b>Total</b>	<b>24.14</b>	<b>16.62</b>	<b>12.52</b>