



**Maryland**  
Department of  
the Environment

# Maryland's Climate Plans and Progress for Restoring Chesapeake Bay and Local Waters

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*April 26, 2021*

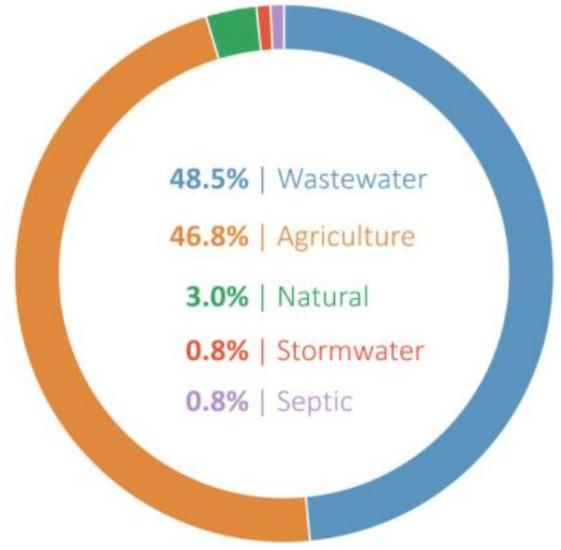
# Maryland's

## Source of Planned Nitrogen Reductions | 2017 - 2025 Phase III WIP Goal – 9.6 M lbs/yr reduction from 2017 loads

### Nitrogen Progress Towards 2025 Target | 2010 - 2019

Million Pounds per Year Entering Chesapeake Bay

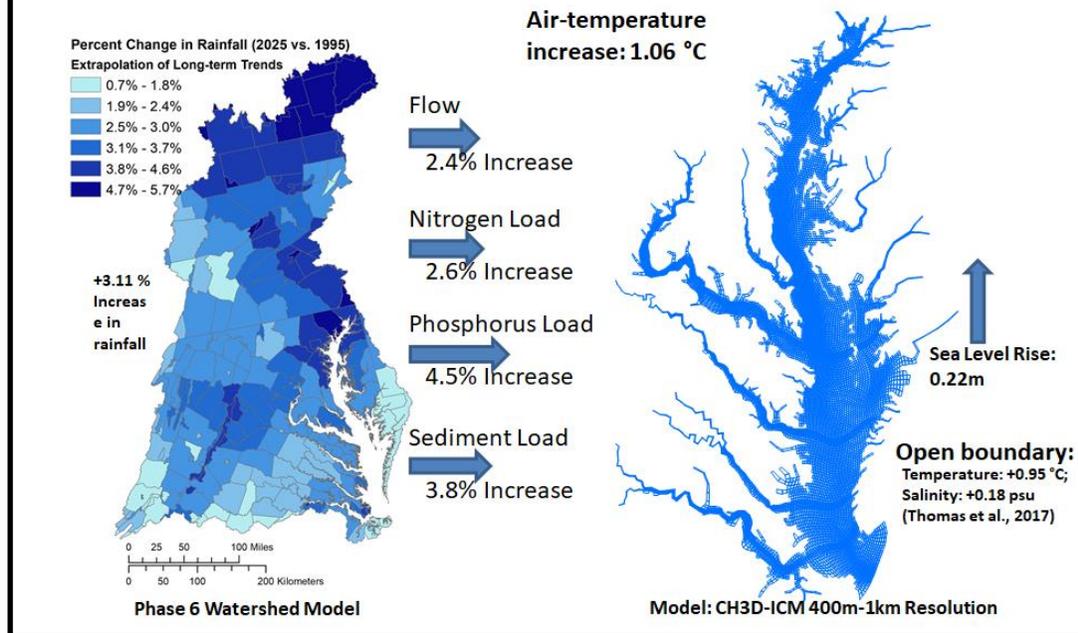
2010 | **59.2 M** lbs/yr  
Baseline Year



Source: Maryland's Phase III WIP CAST Scenario

2025 | **45.8 M** lbs/yr  
Nitrogen Target

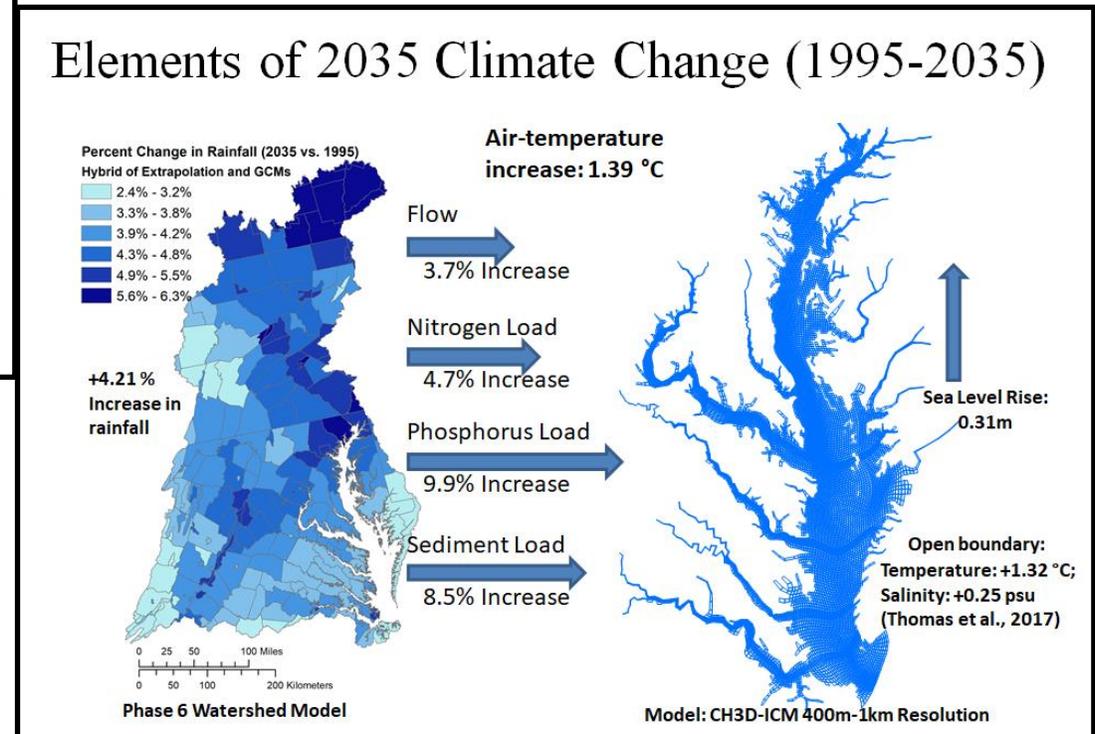
## Elements of 2025 Climate Change (1995-2025)



Continued reductions needed past 2025

2025 – An additional 1.1 million lbs reduction for nitrogen

## Elements of 2035 Climate Change (1995-2035)



Figures from US EPA Chesapeake Bay Program



# Climate Loads Then and Now

Jurisdiction	2017/18 Preliminary Estimates		2020 update	
	TN	TP	TN	TP
DC	0.006	0.001	0.007	0.001
Delaware	0.397	0.006	0.039	0.003
<b>Maryland</b>	<b>2.194</b>	<b>0.117</b>	<b>1.142</b>	<b>0.111</b>
New York	0.400	0.015	0.399	0.044
Pennsylvania	4.135	0.143	1.811	0.095
Virginia	1.722	0.187	1.589	0.337
West Virginia	0.236	0.017	0.000	0.009
<b>Total</b>	<b>9.089</b>	<b>0.485</b>	<b>4.986</b>	<b>0.599</b>



# PROGRESS AND NEXT STEPS

## 3 Pieces to Addressing Climate in the Bay TMDL

- Additional TN reductions (now 300,000 lb.) as well as a Comprehensive set of Climate strategies were built into Phase 3 WIP on page 41 [here](#).
- Continued work in MD and the Bay Partnership to Close Science Gaps.
- Account for additional pollutant loads due to 2025 climate change conditions in a Phase III WIP addendum and/or 2022-2023 Milestones (due January 15, 2022)

### Maryland's Phase III Watershed Implementation Plan to Restore Chesapeake Bay by 2025

Final Document | August 23, 2019



Cover Photo: Blackwater Wildlife Refuge in late autumn (2017), courtesy of Matthew Rowe

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# MDE-Specific Progress in Climate Integration

- Stormwater
  - Science
    - Regional collaborative to update Atlas 14 rainfall statistics with work to begin this fall (2- year study with 4 states)
    - Probable Maximum Precipitation for dam safety
    - Funding BMP studies to determine performance under a changing climate
    - Agency engagement in CBT pooled monitoring research regarding climate and BMPs
  - Permits
    - Draft industrial SW permit
      - requires climate change consideration in SWPPP
    - MS4
      - Complete update to MS4 accounting
      - incentives for Green Infrastructure, capturing additional runoff storage and treatment volume
      - Revised and expanded list of Alternative BMPs (converting land to forest, shoreline management – living shorelines, street sweeping, etc.)
      - Smart pond pilot
      - Currently reviewing comments
- Living Shorelines – VIMS project for better targeting, coordination with ACOE
- Dam Safety – Annual EAPs, PMP scoping

# Progress – cont.

- Funding Programs
  - Revised the Bay Restoration Fund and State Revolving Funds integrated project priority system to further incorporate climate resiliency and flood protection
  - More points awarded for projects that
    - Provide flood control and assists in mitigating repeated flooding events that threaten public safety
    - Protect public health against safety hazards posed by water quality problems, flooding, and climate change.
    - Demonstrate consistency with the [National Flood Insurance Program’s Community Rating System](#):
    - Reduces risk of flood or coastal hazards in “at risk” communities identified in the [State Hazard Mitigation Plan](#):
  - Certain State or local capital project must be compliance with the Coast Smart siting and design criteria and the recently developed mapping layer referred to as the Coast Smart Climate Ready Action Boundary (CS-CRAB)
  - Renewed funding for MDE’s Comprehensive Flood Management Grant Program