



USWG

E3 and No-Action Scenario Overview

Auston Smith
Chesapeake Bay Program Office; EPA

2/17/26



Chesapeake Bay Program
Science. Restoration. Partnership.

E3 and No-Action: TMDL Appendix J

This appendix to the [Chesapeake Bay TMDL](#) offers definitions for the different modeling scenarios initially used for the development of controllable loads and partner allocations.

Examples of scenarios used in the past to help produce planning targets:

- 1985 No-Action
- 2010 No-Action
- All Forests
- Tributary Strategy
- E3
- Etc.



American avocets can be found living in open areas with little vegetation and shallow waters. (Photo by Marielle Scott/Chesapeake Bay Program)



Chesapeake Bay Program
Science. Restoration. Partnership.

E3 and No-Action: Controllable Loads

Chesapeake Bay TMDL Section 6: Establishing the Allocations For The Basin-Jurisdictions

Section 6.3.2: Determining Controllable Loads

Two theoretical scenarios are created to determine the appropriate context for controllable loads (the difference between these two scenarios' loads).

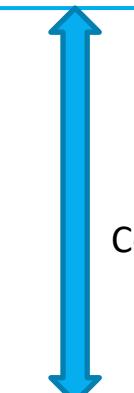
1. **The No-Action scenario** is indicative of a theoretical worst case loading situation in which no controls exist to mitigate nitrogen, phosphorus, and sediment loads from any sources.
2. **The E3 scenario** represents everything by everyone everywhere—represents a theoretical best-case possible situation, where a certain set of possible BMPs and available control technologies are applied to land, given the human and animal populations, and wastewater treatment facilities are represented at highest technologically achievable levels of treatment regardless of costs.

No Action



E3

Controllable Load





Chesapeake Bay Program
Science. Restoration. Partnership.

E3 Overview

The E3 Scenario is an estimate of the application of management actions ... with the theoretical maximum practicable levels of managed controls on all pollutant load sources. Generally, E3 scenario implementation levels and their associated reductions in nutrients and sediment could not be achieved for many practices, programs and control technologies.

Used alongside the No-Action scenario, this calculation of controllable loads will address all three rules for determining Planning Targets:

- Planning Targets must meet water quality standards
- Those that pollute more should do more.
- Actions already taken count toward the goals.



Eastern brook trout swim at the Virginia Living Museum in Newport News, Va., on Dec. 30, 2018. (Photo by Will Parson/Chesapeake Bay Program)



Chesapeake Bay Program
Science. Restoration. Partnership.

Overarching Points to Consider

Planning targets are within the range of loads between the No-Action and E3 are for all sources in an area. They do not determine the amount needed from each sector to reach the planning targets.

Using the same methodology does not mean no changes were made, as relative effectiveness of basins and current land use assumptions did change based on current science and other updates planned for the model.



Scarlet oak during fall. ([Photo courtesy of Ashley M Bradford/iNaturalist CC BY-NC, cropped](#))



WQGIT and Sector Workgroup Decisions:

- Scenario (E3) Inputs- where can practices go, at what % of that land use, and how does that conflict (if at all) with other proposed inputs?
- Scenario Base Year –what base year should be utilized for the scenarios. 2010 was used in the past in both 2010 and 2017.
- Phase III WIP – review these planning efforts and does anything else need to be done to achieve WQS?



Chesapeake Bay Program
Science. Restoration. Partnership.

No-Action and E3 Discussions Timeline for Review and Completion

Initial Input Overview and Discussions:

- **WQGIT/AgWG/FWG** already had overview discussion
- **Urban Stormwater WG:** 2/17/26 (Today!)
- **Wastewater Treatment WG:** 2/26/26

Timeline:

- 6-8 month review window (similar to Phase 6 review timeline) to complete scenario and inputs before 2027.
- March/April for next discussion



Thank you!

Questions?

