



AgWG

E3 and No-Action Scenario Overview

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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)



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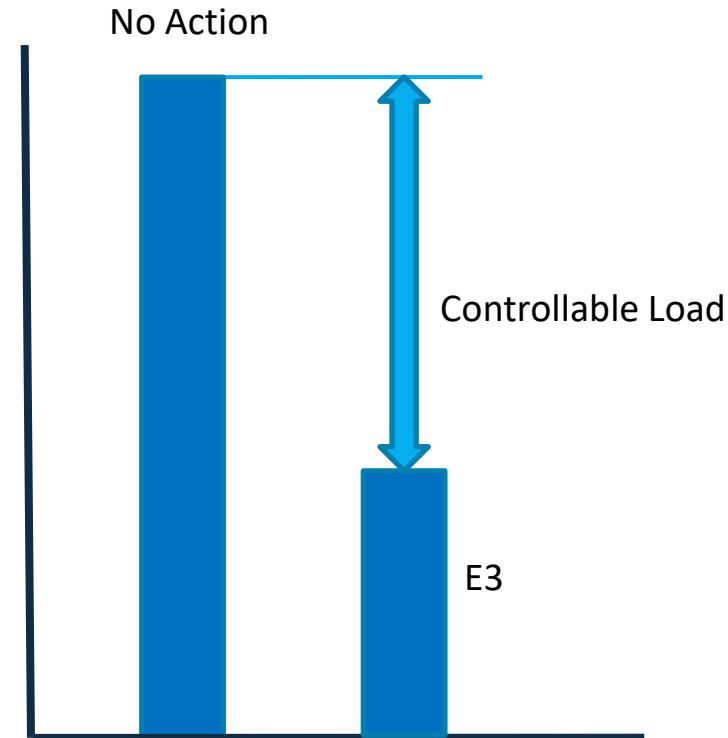
E3 and No-Action: Controllable Loads

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 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.





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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)



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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 and No-Action) 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?



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Phase 6 E3 Agricultural Practices Examples:

NOT EXHAUSTIVE

- E3 Conservation tillage
 - All row crops (high-till and low-till) are conservation-tilled
- E3 Enhanced nutrient management applications
 - All agricultural land is under enhanced nutrient management – the hybrid of reduced application rate and decision agriculture
 - Long-term, adaptive management approach with continuous improvement.
- E3 Riparian forest buffers on agriculture
 - All riparian areas without natural vegetation (forests and wetlands) associated with agricultural lands are buffered as forest.
 - The area and location of un-buffered riparian land is determined using the best available data 1) 1:24K National Hydrography Dataset, and 2) 2001 land cover.
 - Current implementation of riparian grass buffers is considered converted to riparian forest buffers.



No-Action and E3 Discussions

Date/times:

Initial Input Overview and Discussions:

- **WQGIT:** 1/26/26
- **Agriculture WG:** 1/29/26 (Today!)
- **Forestry WG:** 2/4/26
- **Urban Stormwater WG:** 2/17/26
- **Wastewater Treatment WG:** 2/26/26

Roundtable hours:

- TBD; How often should these be held at the GIT with sector workgroups to attend as needed/useful to present input discussions?



Thank you!

Questions?

