

Appendix D

Technical Requirements for Tracking and Reporting Urban Nutrient Management BMPs in CAST

Approved by the WTWG: November 6, 2025

Background: The Water Quality Goal Implementation Team's approved *Protocols for the Development, Review and Approval of Loading and Effectiveness Estimates for Nutrient and Sediment Controls in the Chesapeake Bay Watershed Model* (2021) establishes that in an effort for the CBP partnership to more efficiently approve the technical requirements for NEIEN and CAST that are required by each Expert Panel report, the CBP Modeling Team will work with the Expert Panel members and the WTWG to develop a technical appendix that describes changes that will be made to the modeling and reporting tools to accommodate the BMP(s).

Q1. What are the CAST definitions for the Urban Nutrient Management BMPs:

A.1. UNM with a Soil Test: Turfgrass managed according to an urban nutrient management plan written by a trained professional, that is based on a soil test and follows a series of core turfgrass fertilizer management practices for N and P, related to the Rate, Timing, and Placement of fertilizer, in addition to several clipping management practices.

- Note: NEIEN will include a UNM with a Soil Test (3-year) and UNM with a Soil Test (1-year) practice. This is to ease reporting and communication in states that aggregate UNM plan acres annually but still require soil testing. Both the 3-year and 1-year BMP will map to the same practice (UNM with a Soil Test) in CAST.

UNM without a Soil Test: Turfgrass managed according to best fertilization practices for N and P, related to the Rate, Timing, and Placement of fertilizer, in addition to several Clipping Management practices, but which lack soil test data or a written plan developed by a trained expert. This BMP includes signed homeowner pledges that establish a commitment to adhere to the defined best practices.

Non-Fertilized Turfgrass: Managed turfgrass that effectively maintains healthy turf coverage without the application of fertilizer and through proper clipping management.

Q2. What are the pollutant removal efficiencies a jurisdiction can claim for qualifying acres under each BMP?

A2.

	TN Reduction	TP Reduction
UNM w/ a Soil Test 3-year	6 %	4.5 %
UNM w/ a Soil Test 1-year	6%	4.5%
UNM without a Soil Test	6 %	4.5 %
Non-Fertilized Turfgrass	7 %	9 %

Q3. What is the credit duration for each UNM BMP?

A3.

	Credit Duration
UNM w/ a Soil Test 3-year	3 years
UNM w/ a Soil Test 1-year	Annual
UNM without a Soil Test	Annual
Non-Fertilized Turfgrass	Annual

Q4. What does a jurisdiction need to report to receive credit for UNM Plans?

A4.

BMP Name: UNM w/ Soil Test, UNM without Soil Test, Non-Fertilized Turf

Acres: number of acres of qualifying UNM plans or pledges within geographic reporting unit

Location: Approved NEIEN geographies: Latitude/Longitude of approximate centerpoint of acres; County, Hydrologic Unit Code (HUC12, HUC10, HUC8, HUC6, HUC4), State

Date of Implementation: Date the plan was written, pledge was signed, etc.

Land Use: Eligible land uses include Turfgrass, Tree Canopy Over Turfgrass, Construction, Solar Pervious (MS4, CSS, and Non-Regulated)

Q5. Does a jurisdiction need to report acreage of UNM plans every year to receive credit in the model for existing plans?

A5. Only for the two annual BMPs (UNM without a Soil Test, and Non-Fertilized Turfgrass). Jurisdictions should report the number of acres under these two BMPs to the Chesapeake Bay Program each year to receive credit in the model. UNM With a Soil Test is good for 3 years, and can be renewed with a new soil test and passed inspection.

Q6. Can a jurisdiction report other stormwater BMPs on the same acre covered by an urban nutrient management plan BMP?

A6. Yes. The UNM BMP will be credited in CAST along with other urban BMPs on the same acre. While multiple urban BMPs can be placed on the same acre, the realized edge-of-stream nutrient reductions are adjusted by CAST to address the diminishing returns that occur when two or more BMPs treat the same acre. Most stormwater BMPs are designed based on the runoff generated from impervious areas in their drainage area, and not the runoff from pervious areas.

Q7. Can multiple UNM BMPs be combined on the same acre?

A7. No. Each UNM BMP represents mutually exclusive management conditions. Only 1 BMP can be reported on an acre in a given year.

Q8. Are jurisdictions eligible for state-wide nutrient reduction credit if it has passed urban nutrient management legislation?

A8. No additional state-wide BMP reductions are provided for states with fertilizer or UNM legislation. Reductions in fertilizer application rates driven by legislation are captured by AAPFCO/state-reported fertilizer sales data submitted to the Chesapeake Bay Program Office.

Q9. Are homeowner pledges eligible for credit under one of the UNM BMPs?

A9. Yes, signed homeowner pledges will be eligible for credit under the UNM without a Soil Test BMP, as well as the Non-Fertilized Turfgrass BMP. Beyond meeting the qualifying criteria outlined in Section 6, states have the flexibility to determine if they will collect homeowner pledges and the format those pledges could take. New pledges must be re-submitted every year to maintain their credit.

Q10. When do these recommendations take effect, and can I still report the Phase 6 UNM BMPs?

A10. These recommendations take effect in Phase 7 Model. Phase 6 UNM BMPs are still available for reporting until the Phase 6 Model is sunset. The new BMPs will also be made available as a “planning BMP” in Phase 6 CAST and included as draft in the appendix for use in planning scenarios.

Q11. Following the transition to Phase 7, will states be required to go back and report the P7 UNM for their entire history?

A11. No. In NEIEN, for annual progress reporting, the Phase 6 UNM BMPs (Low, Medium and High Risk) will map directly to the UNM Plan w/o a Soil Test Practice. Once the Phase 7 model is officially adopted, states will no longer be able to report the Phase 6 practices.

Q12. How are the eligible land uses simulated in P7 to ensure the Non-fertilized turfgrass BMP represents a change in management compared to the Pre-BMP condition?

A12. Every acre of the eligible land use categories for the UNM BMPs (turfgrass, tree canopy over turfgrass, construction and solar pervious) is assumed to receive fertilizer. The updated non-farm fertilizer application methodology takes the state-wide fertilizer nutrient mass and divides it by the state-wide turfgrass acres, plus solar pervious acres and construction acres, to determine the non-farm fertilizer application rate for each state.