E3 Proposal for FWG Discussion

June 3rd, 2027

The FWG was asked by the Clean Water Goal Team to define E3-- Everything, Everywhere, Everyone—for forestry practices to inform the development of planning targets for Phase 7.

The E3 Scenario estimates the fullest possible extent of management practice implementation

- A "what-if" scenario with theoretical maximum levels of managed controls
- It is used with the No-Action scenario to define controllable loads, i.e., taking the difference between No-Action and E3loads.
- There are no cost/capacity limitations to implementing BMPs for E3, but physical limitations can be considered.
- For most nonpoint source BMPs, in Phase 6 it was assumed that the load from every available acre land was being controlled by a suite of existing or innovative practices.
- The current proposal is built on a base year of 2021/2022 to align with the most recent Land Use/Land Cover data
- Riparian land use was evaluated using the 1:24K hydrography for the watershed

Urban Sector Forestry BMPs

- E3 Forest conservation and urban growth reduction: All projected loss of forest from development is retained or planted in forest

- E3 Urban Riparian Forest Buffers BMPs- 30% of turf grass acres (MS4, CSS, Non-Regulated) within the 35 ft riparian area are buffered as forest for each modeled hydrologic segment in the Chesapeake Bay watershed
    - There was 53,948 acres of turf in the 35 ft buffer zone for 21/22, so 30% would represent a conversion of 16,184 acres to forest
    - Only 30% of the 35 ft buffer is being converted due to physical infrastructure constraints present in the urban landscape

- E3 Tree Canopy Expansion and Forest Planting BMPs: 20% of turf grass acres (MS4, CSS, Non-Regulated) will be converted to Tree Canopy over Turfgrass (TCTG) using the Urban Tree Canopy Expansion BMP, and an additional 20% of turf grass acres will be converted to Forest using the Urban Forest Planting BMP.
    - There was ~1.7 million acres of turf grass in 21/22, so under this E3, 347,908 acres of turf would go to TCTG and 347,908 acres would go to Forest for a total conversion of nearly 695,815 acres.
    - To put this in context, the 2025 Watershed Agreement set a target to restore 45,000 acres of community tree canopy from a 2014 baseline (36,238 acres from 2022), so E3 represents a 19-fold increase in effort from the Watershed Agreement targets
    - Only 40% of turf is being converted to allow space for implementation of other BMPs and to allow for physical and site/soil suitability constraints in the urban landscape

Agricultural Sector Forestry BMPs

- E3 Agricultural Riparian Forest Buffer: All unbuffered cropland within 100 ft of streams/rivers will be converted to forest using the Forest Buffer BMP and all unbuffered pastureland within 100 ft of streams/rivers will be converted to forest using the Forest Buffer with Stream Exclusion Fencing BMP.
    - The 100 ft buffer was used to represent the average reported buffer width in the watershed and the recommended width to ensure water quality benefits (reducing risk of concentrated flow pathways bypassing the buffer).
    - Within the 100 ft buffer, there was 226,726 acres of cropland and 290,607 acres of pasture as of 21/22, for a combined total of 517,333 acres proposed to be converted to an ag forest buffer, and 533,518 total buffer acres (including urban buffers).
    - To put this in context, the 2025 Watershed Agreement set a target of 7500 acres a year for a total of 135,00 additional acres between 2040 and 2022, so E3 represents a nearly four-fold increase over the Watershed Agreement target.

- E3 for Agricultural Tree Planting= 5% of crop and 5% of pastureland will be converted to forest using the Agricultural Tree Planting BMP
    - There were about 3.9 million acres of crop and 3.9 million acres of pastureland as of 21/22. 5% of these acres would yield a total of 393,433 acres to be converted to forest.
    - Only 5% of these land uses are being converted to provide space for additional agricultural BMPs and to account for physical limitations to converting land to forest
    - To put this in context, the 2025 Watershed Agreement set a target of establishing 202,000 acres of new forest from a 2014 baseline. This requires an additional 166,487 acres over the 35,513 acres planted as of 2022 so E3 represents a 2.4-fold increase over the Watershed Agreement target
- *Alternative E3* for Agricultural Tree planting + Agroforestry- 3% of crop and pastureland with tree planting, and 10% of of crop and pastureland having agroforestry practices applied (Alley Cropping BMP applied to crop, Silvopasture BMP applied to pasture)
    - 3% of crop and 3% of pasture would amount to 236,060 acres of agricultural tree planting
    - 10% of crop and 10% of pasture would amount to 786,867 acres of agroforestry practice implementation. However, only 25% of the total land footprint for the agroforestry practices converts to forest (with the remaining acres staying in agricultural production), which would amount to 196,717 acres converting to forest.
    - Between agricultural tree planting and agroforestry, 432,777 acres would be converted to forest representing a 2.6-fold increase over the Watershed Agreement target
- *Alternative 2 E3* for Agricultural Tree planting + Agroforestry- 5% of crop and pastureland with tree planting, and 10% of crop and pastureland with agroforestry
    - 393,433 acres converted to forest through tree planting
    - 196,717 acres converted to forest through agroforestry
    - 590,150 acres total converted to forest, representing a 3.5-fold increase over the Watershed Agreement target

Natural Sector Forestry BMPs

No net loss of forest

100% Timber harvest BMP implementation on harvested forest lands