Maryland's Position on updating Erosion & Sediment Control Removal Rates
Watershed Technical Workgroup
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The "Recommendations of the Expert Panel to Define Removal Rates for Erosion and Sediment Control Practices" was a well thought out and thorough document. The Panel Report is very informative and contributes greatly to advancing our understanding of E&SC. Maryland appreciates the level of time and commitment the panel provided to this task given to them by the Bay Program and would like to thank them for their efforts.

Unfortunately, Maryland is not prepared to accept the full recommendations of the Panel at this time. Maryland believes that there is sufficient information in the study to support update of sediment loading and removal rates, however that there is simply not enough to support the removal of nutrient reductions from this practice. Justification for our position is provided below and we look forward to assisting in any future investigation into nutrient reduction efficiencies.

Justifications for Maryland position:

- **Inconclusive research:** the study results do not support changing removal estimates because they vary greatly and actually bound the current removal rates.
    - See Table 27, page 39 of the ESC report which presents data from three studies on the TN & TP removal rate. The data appear to be inconclusive, leading us to believe either more study is needed or there is not sufficient evidence to make a change to nutrient removal rates. The panel report notes that the results of 3 of the "very limited group of studies" that looked at the nutrient dynamics of ESC practices were inconclusive.
    - Page 36 of the report states that the CBWM load estimates fit squarely in the middle of the Panel's mass balance estimates for both nitrogen and phosphorus. However, Table 24 shows that the CBWM target load for TP of 8.8 lbs/yr is more than 50% higher than the mid-range estimate from the panel (5 lbs/year) and much closer to the high range estimate (9.5 lbs/yr).
    - Secondly, on page 38, the report cites Line and White (2007) as "the only research study that sampled enough storm events to calculate a reliable annual load associated with a construction site." The results from this paper showed phosphorus loads that were significantly lower than either the CBWM targets or even the panel's mid-range estimates from the mass balance.
- **Impact on Urban Sector loads:** Proposed change has large impact on urban sector TP which Maryland cannot support without further research justification.
    - If E&SC removal rates for TN & TP go to zero, construction loads in Maryland would increase by 165,000 lb TN and 50,000 lb TP.
- **No Incentives to Improve Controls:** The proposed methodology lacks a manner in which nutrient loads can be improved through management practices, similar to atmospheric deposition.
    - Unmanageable TN & TP loads produce no incentive to improve control methods.

- **Verification:** The impact would also lead to a nullification of compliance efforts; compliance becomes irrelevant to the model
  - Conceptually, if this approach is OK for E&SC, why couldn't it also apply to other regulatory requirements like stormwater controls on new development, agricultural nutrient management?
- **Equity:** If the changes apply to construction LU then it might as well apply to NMP, which is to say that a flat loading rate from the LU type eliminates the ability to manage the load by applying BMPs on the landscape

Summary:
From the limited available data, it appears that the current CBWM TP targets are significantly higher than can be supported by research. Furthermore, neither the existing CBWM reductions, nor the proposed 0% reductions are sufficiently supported by evidence.

We should either replace the reductions AND loading targets altogether (preferred but more research required) or continue using what is currently in the model. There is no reason to replace the flawed reduction estimates while keeping the equally flawed loading targets.

Recommendation:
Maryland recommends further analysis of nutrient removal rates from E&SC practices prior to any changes to model assumptions. Additionally, if partners are eager to update the sediment removal efficiencies Maryland will support updates to the sediment removal rate as long as TN and TP removal rates are held at current levels for current and future model versions until further research provides more conclusive results of nutrient loading from construction lands and nutrient removal from E&SC practices.