



COG staff proposals for future Chesapeake Bay Program watershed model analysis
Jan. 5, 2012

1. Agriculture - Develop a better understanding of how agricultural loads are calculated in the model and how the estimated loads compare to other loading data, for example, from USDA and NRCS
 - How much of the estimated reduction in ag loads is due to land conversion and changes in animal numbers?
 - Do data discrepancies, such as between USDA and CBP estimates of land in conservation tillage, matter for load allocations?
2. Urban Loads - Develop a better understanding of the main drivers of urban loads in the model (e.g. fertilizer application rates and atmospheric deposition)
 - How much variation among urban areas, if any, does the model exhibit based on differences in precipitation patterns or urban land use?
3. Sediment Loads – Develop a better understanding of how sediment loads are estimated in the model
 - What are the model’s sediment loading rate coefficients for urban and agricultural land?
 - How do these compare to other benchmarks?
4. Allocations – Develop a better understanding of how the E3 and No Action scenarios have impacted the allocation between agricultural and urban loads in the Bay Program’s suballocation –to-state/basin process and in Maryland’s suballocation to county-level targets
 - Would use of a different allocation methodology change the relative reduction requirements for source sectors?
5. Geography – Develop a better understanding of how geographical features affect model output
 - Produce a map of delivery ratios for the COG region
 - What are the effects of regionalization factors on base loading rates?
 - How does greater uncertainty for below-fall-line loads affect allocation of loads

Related activities (in collaboration with member and Northern Virginia Regional Commission staff):

- Potential Understanding the Watershed Model II workshop in fall 2012
- Continued participation on CBP’s Modelling Team, Watershed Technical Workgroup, Urban Stormwater Workgroup and its various expert panels
- Provide input to ongoing CBP process to upgrade model for 2017 re-evaluation