

What is it used for and what is the significance?

Scenario Base Year – This timeframe is used to set the landscape upon which the partnership will determine the controllable load for purposes of developing new planning targets. The controllable load is the difference between the nutrient loads of the “no action” and “Everything by Everyone, Everywhere (E3)” scenarios. The No action scenario is a modeled condition where no BMPs are implemented and nutrient removal technologies stay at baseline levels, and the E3 scenario signifies a theoretical maximum that could be reached if point source loads are reduced to max extent practicable, and non-point source BMPs were everywhere possible. **The controllable load is an important calculation, as it brackets the level of reductions to be achieved, however, it is the only calculation that base year is used for.** Partnership planning targets for each major state river basin should fall somewhere between the no action and E3 scenarios.

There are two issues to be considered in the selection of the base year: how growth since 2010 is accounted for and accurately representing the controllable load calculation.

Accounting for growth – The 2010 TMDL states that jurisdictions are responsible for growth (new or increased loads from changes in land use) that occurs in their respective boundaries. This includes conversion of land from low loading land use to a higher loading land use (for example, from forest to developed), increases in animal populations (manure), increases in crop production, increased nutrient application, increase in population.

- In 2017 in the mid-point assessment and release of phase 6 of the model it was determined that keeping 2010 as the base year was appropriate
 - When the TMDL was completed in 2010, the base year was brought to the present and all growth considerations from colonial time to present were reset at 2010-this is what the Partnership agreed to.
- Land use change will have a greater impact on loads in basins that are more effective in terms of nutrient reductions, having a greater impact on the deep water/deep channel areas of the bay.
 - Example: land use change in the Potomac drainage has a greater impact than land use change in the James, because nutrient loads from the Potomac have a greater impact on DW/DC dissolved oxygen.

Accuracy for E3 – An accurate representation of the landscape provides greater certainty when determining the controllable load. The 2022 high-resolution land use data is the most up-to-date land use available. Regardless of the base year chosen, the high-resolution land use dataset will be used to calculate controllable load, as the 2010 landscape would be back-casted from 2022.

Land use Change model

- Selection of the base year does not impact the land use change model. No matter what year is chosen for the base year, future projections of land use will be anchored from our most recent dataset of land use imagery, which is 2022.

Criteria	2010	2022a	2022b
Data Confidence	Lower	Higher*	Higher
Growth after 2010 is the responsibility of the jurisdiction where it took place	Yes	Yes	Partially
Level of Risk for E3 Not Meeting WQ Standards	Higher	Higher	Moderate
Simplification of communication to partners	Straightforward	Potential Confusion	Potential Confusion

Base Year information:

Selection of 2010

- The 2010 landscape is back casted based on 2022 information
- Using 2010 ensures that growth appears and is assigned to the places it has happened and is accounted for up front.
- The 2010 landscape is where the “no action” and “E3” scenarios are generated to determine controllable load

Selection of 2022

- If growth is to be accounted for, it will have to be done after the fact
 - 2022A – take all back to 2010, which is the same as starting with 2010
 - 2022B – NY/WV held constant – others divide added responsibility
- If growth is not accounted for, the landscape is simply reset at 2022