**Background for Milestone Midpoint Assessment Priorities**

**Evaluating Milestones** – What is the most effective way to develop and ultimately evaluate the two-year milestones in order to be able to track these commitments in terms of the TMDL, 2017 and 2025 targets, yet at the same time ensure that jurisdictions are accounting for Growth/change in land use/septic/animal numbers?

Background: Milestone input decks, when developed currently, are run using 2010 land use, animal and septic numbers. The decision to use 2010 land use/animal/septic numbers maintains consistency to compare "apples to apples" across the TMDL: 2009 baseline, 2-year milestones, 2017 interim target and 2025 target projections. When annual progress runs are processed they are run using a projected land use (including animals and septic) for that year. The projected land use accounts for potential growth and changes in land use, animal numbers and septics between 2010 and the progress run year. When the 2012-2013 milestones were developed and modeled they were run using 2010 land use numbers. Progress runs are used to assess interim and final loads as a result of implementation and are run on a projected land use. Therefore EPA will not be comparing "apples to apples" in our evaluation of the implementation progress compared to the milestone load commitments.

Suggested options to move forward

1. Milestones through 2017 should be planned and evaluated using 2010 Land Use (LU) in v5.3.2 of the model. This would allow for consistency with the Phase II WIPs and Planning Targets. The 60% by 2017 should be evaluated using the 2009 Progress (on 2010 LU) and the WIP II (on 2010 LU) run in V5.3.2 of the model. There could be multiple scenarios run in order to determine progress in meeting milestones based on the 2010 LU.
    - The progress BMPs should use v5.3.2 thru 2017 (v6.0 thereafter), projected LU for the year and 10yr avg hydrology (point and nonpoint).
    - If possible, a second run of the progress BMPs should be done using actual LU change and 10yr avg hydrology (point and nonpoint). This will be useful in evaluating growth control actions. This run will also be useful for assessing the accuracy of the projected LU change.
    - If possible, a third run of the progress BMPs should be done using actual LU change and actual (or representative) hydrology for the year (point and nonpoint). This will be useful for comparison with monitoring data and ecological indicators.
2. Separate from routine Annual Progress model runs; conduct a Milestone Evaluation model run that isolates loading impacts due to Milestone commitments from impacts due to population change and Land use change. Alter the methodology for evaluating the two-year milestones so that the milestones are both developed and evaluated using fixed land use/septic/animal numbers for both the initial loading estimate and the final loading evaluation of the milestone. This could be done with a "current" land use or "projected" land use.
    - Using **projected** land use/septic/animal numbers for the 2014-2015 milestones would be as follows: Estimate the 2015 Milestone load reduction in 2013 using projected 2015 land use/septic/animal numbers. Then use the same projected land use/septic/animal numbers in 2015 when the final milestone progress is evaluated. The land use/septic/animal numbers would only be changed in the final milestone evaluation as a

result of milestone implementation actions, e.g., land use BMPs, septic connections, can't think of a milestone commitment action that would change animal numbers.

- Using **current** land use/septic/animal numbers for the 2014 – 2015 milestones would be as follow: Estimate the 2015 load reduction in 2013 using most current land use/ septic /animal numbers (probably 2012). Then use the same land use/septic/animal numbers in 2015 when the final milestone progress is evaluated. The land use/septic/animal numbers would only be changed in the final milestone evaluation as a result of milestone implementation actions as above.