Two-Year Milestone Development Guidance for
Maryland's Local WIP Teams

Background and Introduction

2-Year Milestones are near-term implementation commitments for improving the health of the Chesapeake Bay and our local streams. There are two broad categories of milestones: 1) *Implementation actions* that result in pollution reduction, and 2) Near-term *Program Enhancement actions* intended to help accelerate implementation in the future. Two-Year Milestones are part of the federal Chesapeake Bay restoration accountability framework. They are also are tracked closely by Maryland's BayStat accountability system established by Governor O'Malley.

Maryland first established 2-year milestones for the period of 2009 to 2011. The next set of milestones, which are the subject of this guidance, cover the period July 1, 2011 – June 30, 2013[1]. The 2013 Milestone period institutes a change from calendar years to state fiscal years. This change to fiscal years results in a truncated milestone period since some of the period has already passed. This simply implies that the 2013 Milestones need to account for anything that has been done already plus the commitments to be made through June 30, 2013.

Due to time constraints, the State has been compelled to begin developing statewide 2013 Milestones for each of the major pollution source sectors. The milestones developed by local WIP teams will inform the milestones under development by the State, which are due to EPA January 2, 2012. However, the State does not expect local teams to complete the development of their 2013 Milestones by January 2012. Therefore, the 2013 Milestone commitments provided by the local teams are not expected to be identical to the statewide commitments that will be made by the State to EPA.

For additional recommended background see Part G of the "I. Background and Introduction to Phase II WIP" in Maryland's Phase II online WIP Guidance Binder: http://tinyurl.com/2YrMstoneBkgnd

Also see the first audio/visual presentation of the May 16, 2011 Webinar: http://tinyurl.com/May-MS-Webinar or a PDF version: http://tinyurl.com/Milestones-PDF

General Guidance and Examples

Implementation Action Milestones: Implementation actions are expressed as the amount of various types of restoration activities. The amount can be described by various units, like acres, linear feet, or numbers of systems and include an associated nutrient and sediment load reduction estimate.

---

[1] Setting the milestone period according to state fiscal year is a change from how milestone periods were defined in the past. This change was motivated by wanting to synchronize the 2-year milestone period with the long-standing annual BMP reporting, by state fiscal year, which supports the yearly implementation progress evaluations.

The general approach to developing implementation action milestones for any source sector is conceptually simple:

1. Current Capacity: Evaluate the current pace of annual implementation; this is a reflection of the current capacity to affect pollutant load reductions.

2. Projecting Future Implementation with Current Resources and Knowledge about the Future: Estimate the anticipated implementation in 2012 and 2013 based the current pace of implementation (in some cases, this will be zero). Local knowledge about the future, which will influence the future pace of implementation, should also be considered. This can include near-term budgets, knowledge about pending projects, and other considerations.

3. Increasing Implementation: Consider possible ways of increasing implementation during 2012 and 2013 beyond what can be done with current capacity. This can include enhancing current actions without additional resources, re-prioritizing existing resources, and securing new resources[2].

   Over the coming years, it will be necessary to accelerate implementation. To *accelerate* implementation, the annual increase in implementation must itself become larger each year. That is, we need to "increase the yearly increase" of implementation until we reach an annual pace of implementation that ensures we can achieve the final target on time. Figure 1 contrasts constant load reductions with the acceleration of reductions.

4. Estimation of Implementation Milestone: Based on 2) & 3) develop an estimate of the implementation anticipated in 2012 and 2013. Initially this can be expressed in terms of levels of BMP implementation. Using the Maryland Assessment and Scenario Tool (MAST), the load reductions associated with the implementation can be estimated. Ultimately, the EPA Bay watershed model is used to estimate the reduction levels for the implementation milestones.

Examples of implementation milestones by June 30, 2013:

- XXXX acres of impervious cover treated with stormwater retrofits (broad metric)
- XXXX feet of stream with forest buffering
- Purchase of 2 street sweepers that will sweep, on average, XXXX miles of street per year
- XXXX septic systems in the critical area upgraded to best available technology
- XXXX septic systems connected to an advanced waste water treatment plant
- XXXXXX municipal treatment plant ENR upgrade construction completed

---

[2] A distinction should be made between "annual practices" that must be repeated each year to achieve reductions, like street sweeping or planting cover crops at the end of a farming season, and "cumulative practices" that are permanent and accumulate reductions over time, like stormwater management ponds and forested stream buffers. To simply *increase* implementation using annual practices, the amount of the practice, e.g., miles of street sweeping, must increase each year.
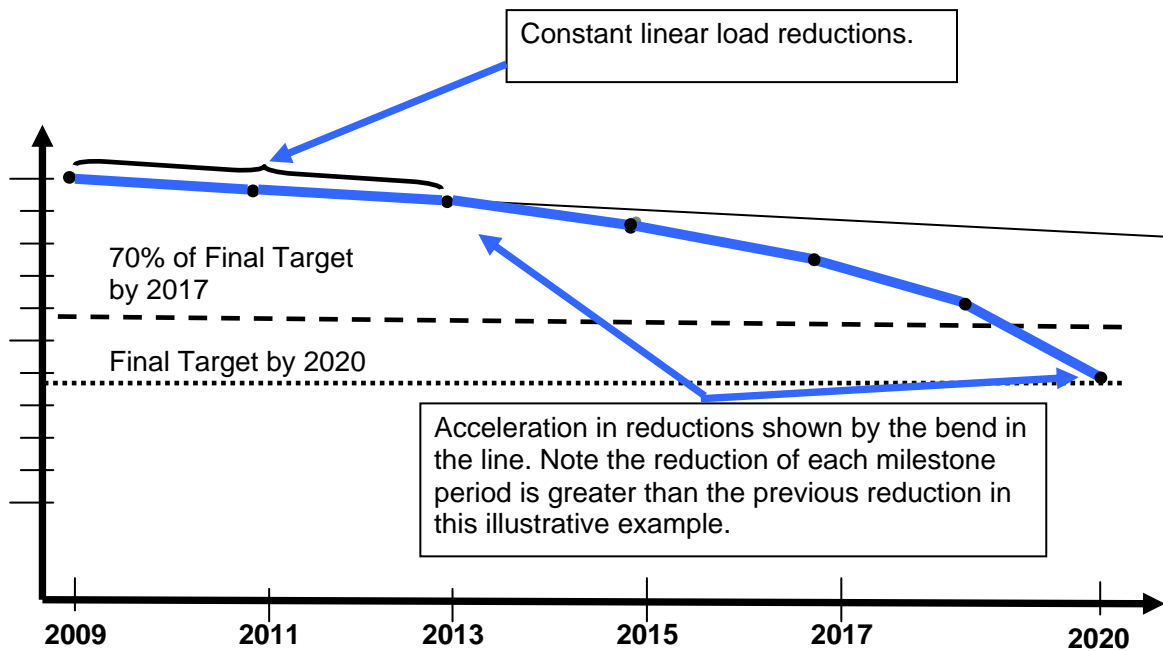
Constant linear load reductions.

70% of Final Target
by 2017

Final Target by 2020

Acceleration in reductions shown by the bend in
the line. Note the reduction of each milestone
period is greater than the previous reduction in
this illustrative example.

2009   2011   2013   2015   2017   2020

Figure 1 - Constant linear reductions in loads versus an acceleration in load reductions.

Enhancement Milestones: To support the acceleration of implementation, existing programs
will likely need to be enhanced and new programs might need to be developed. Programmatic
milestones are commitments representing the key steps needed to increase the capacity to
accelerate implementation. This capacity can take the form of new sources of revenue, increases
in existing sources of revenue, new or modified ordinances, staffing increases, program design
and development and other things not directly related to implementation actions. The program
enhancement milestones are the key steps needed to establish these enhanced capacities.

Examples of program enhancement milestones:

- Our locality is expecting that a new, more stringent permit will be issued by 20XX, and
  we are taking BLANK BLANK steps to be prepared to implement it.
- We expect to increase staff capacity by X FTEs by 2013 to accommodate the work
  required for increased implementation. (Try to be specific)
- We will develop and assess options for increasing revenues for our stormwater program
  in 2012.
- In 2012, we will identify revenues for consulting services to assist with the development
  of a funding system for implementation of our strategy.
- In 2013, we will select an option for increasing revenues for our BLANK program and
  begin conducting rate studies and a public involvement process.
- In the 2014-2015 time period we will attempt adoption of a funding system for our
  stormwater program. (Technically, this would be part of your WIP strategy, because the
  dates fall outside of the 2013 milestone period; however, it foreshadows likely 2015
  programmatic milestones).

- Over the 2013 milestone period, our locality will focus on project development, requests for bids and engineering studies, so that we are ready for implementation when anticipated additional funding becomes available in 20XX.
- For 2012, our implementation is built into our CIP and our 2013 CIP will recognize the need to accelerate progress to meet the 2020 goal. These plans reflect the quantitative allocations provided by the State.

Some of the WIP strategy elements will very likely coincide with program enhancement milestones. The table below provides an example of how some of the key WIP strategy scheduled steps could coincide with the program enhancement milestones.

Example of the Coincidence of some WIP Strategy Commitments and Milestone Commitments

Example Strategy for a larger Phase II MS4 Jurisdiction[1]: *Retrofit 20% of land developed without sufficient stormwater controls by 2017.*	
WIP Strategy Schedule	2013 Program Enhancement Milestones
2012 Consider long term Funding Options*	2012 Consider long term Funding Options*
2012 Assess and identify near term retrofit project sites.	
2012 Plan and budget for near term projects.	2012 Plan and budget for near term projects.
2013 Select long term funding method(s) and begin planning and budgeting for implementing the long term funding method.	2013 Select long term funding method(s) and begin planning and budgeting for implementing the long term funding method.
2013 Initiate designs for a near term retrofit projects.	
2014 Begin implementation of long term funding system.	(This is a programmatic enhancement; however, it falls within the 2015 Milestone period)
2014 Complete initial project designs and begin the next project designs.	
2015 Bid the initial project(s) construction and start the work.	
2015 Complete the design of next project(s).	

1. Smaller jurisdictions might not need major funding systems if only a few stormwater projects are sufficient to meet their targets. Funding could be accomplished with a series of grants and loans.
* This could include joining in the adoption of a statewide system of fees.

Additional Background and Information:

Maryland BayStat 2-Year Milestone Webpage:
http://www.baystat.maryland.gov/milestones.html

EPA Chesapeake Bay Program Summary of 2011 2-Year Milestones, watershed-wide and by state (large PDF file):
http://archive.chesapeakebay.net/pressrelease/EC_2009_allmilestones.pdf