2014 Watershed Agreement

Goal and Outcomes

Water Quality Goal

- Reduce pollutants to achieve water quality necessary to support the aquatic living resources of the Bay and its tributaries and protect human health.

2017 WIP Outcome

By 2017, have practices and controls in place that are expected to achieve 60 percent of the nutrient and sediment pollution load reductions necessary to achieve applicable water quality standards compared to 2009 levels.

Goal and Outcomes (continued)

2025 WIP Outcome

By 2025, have all practices and controls installed to achieve the Bay's dissolved oxygen, water clarity/submerged aquatic vegetation and chlorophyll a standards as articulated in the Chesapeake Bay TMDL document.

Water Quality Standards Attainment & Monitoring Outcome

Continually improve the capacity to monitor and assess the effects of management actions being undertaken to implement the Bay TMDL and improve water quality. Use the monitoring results to report annually to the public on progress made in attaining established Bay water quality standards and trends in reducing nutrients and sediment in the watershed.

2017 WIP, 2025 WIP and Water Quality Standards Attainment & Monitoring Outcomes

Management Strategy

2015–2025, v.1

I. Introduction

For the past 30 years, the Chesapeake Bay Program (CBP) partnership has been committed to achieving and maintaining the water quality conditions necessary to support living resources throughout the Chesapeake Bay watershed. Building off these commitments and using the best scientific information available, the CBP partnership agreed to the nutrient and sediment allocations in the 2010 Chesapeake Bay Total Maximum Daily Load (Bay TMDL)[1], a historic and comprehensive pollution reduction effort in the Chesapeake Bay watershed. The Bay TMDL identifies the necessary pollution reductions of nitrogen, phosphorus and sediment across the seven Bay watershed jurisdictions of Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia and the District of Columbia to meet applicable water quality standards in the Bay and its tidal waters. Reducing pollution is critical to restoring the Chesapeake Bay watershed because clean water is the foundation for healthy fisheries, habitats, and communities across

[1] www.chesapeakebay.net

[2] EPA's Chesapeake Bay TMDL: www2.epa.gov/chesapeake-bay-tmdl

Management Strategy

Outcome: 2017 WIP, 2025 WIP and Water Quality Standards Attainment and Monitoring Outcomes

Goal: Water Quality

Outcome: 2017 WIP, 2025 WIP and Water Quality Standards Attainment and Monitoring

Long term Target: 100% by 2025

2 year Target: 60% by 2017

Management Approach 1: Phase I WIPs, Phase II WIPs, and Two-year Milestones

At the CBP partnership discussed during the development of the 2014 Watershed Agreement, the Water Quality Management Strategy reflects the Watershed Implementation Plans, and this work plan reflects the two-year milestones. Below, please find links to each of the Chesapeake Bay jurisdictions' draft 2016/2017 two-year programmatic milestones.

Delaware:	http://www.dnrec.delaware.gov/swc/wa/Documents/ChesapeakePhaseIIWIP/Milestones/DE_DRAFT_Programmatic_Milestones_2017.pdf
District of Columbia:	http://doee.dc.gov/publication/two-year-milestones-region-iii-and-chesapeake-bay-program
Maryland:	http://www.mde.state.md.us/programs/Water/TMDL/TMDLImplementation/Pages/MD_Milestone_Goals_2016-2017.aspx
New York:	http://www.dec.ny.gov/docs/water_pdf/wipdraft17m.pdf
Pennsylvania:	http://www.dep.state.pa.us/river/wqa/chesbay/docs/2016-2017PAProgrammaticMilestonesPA3-8-16.pdf
Virginia:	http://www.epa.gov/sites/production/files/2016-03/documents/2016-2017_va_programmatic_milestone_goals.pdf
West Virginia:	http://www.wvca.us/bay/files/bay_documents/1265_WV%202016%202017%2025%20year%20milestones.pdf
Federal:	http://executiveorder.chesapeakebay.net/file.ashx?file=2016%20Federal%20Two-year%20Milestones-03-15-16-edit.pdf

Key Action** *Description of work/project. Define each major action step on its own row. Identify specific program that will be used to achieve action.*	**Performance Target(s)** *Identify incremental steps to achieve Key Action.*	**Participating Entity** *Identify responsible partner for each step.*	**Geographic Location**	**Timeline** *Identify completion date (month & year) for each step)*	**Factors Influencing and/or Gap** *Identify related factor or gap in Management Strategy*
	Approve each Bay jurisdictions' Best Management Practice verification program contained within the Clean Water Act Section 117 grant quality Assurance Project Plan	EPA	Chesapeake Bay Watershed and Jurisdictions	January-April 2016	1. Continue to sustain the capacity of the governments and the private sector to implement practices.

2-year Workplan

1.

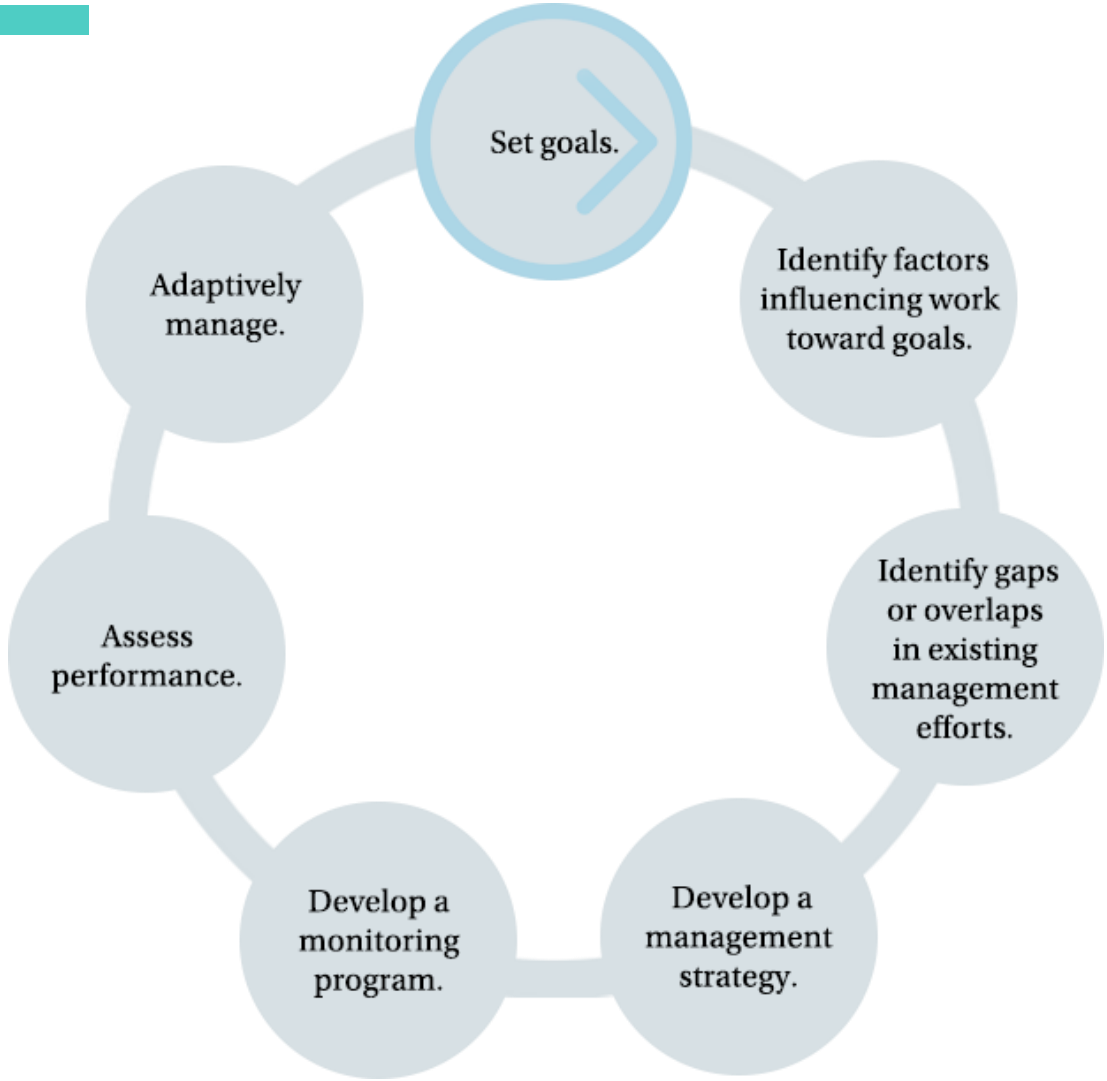
The Biennial Strategy Review System (SRS) Background

A process to adaptively manage achievement of our 2014 Watershed Agreement Outcomes.

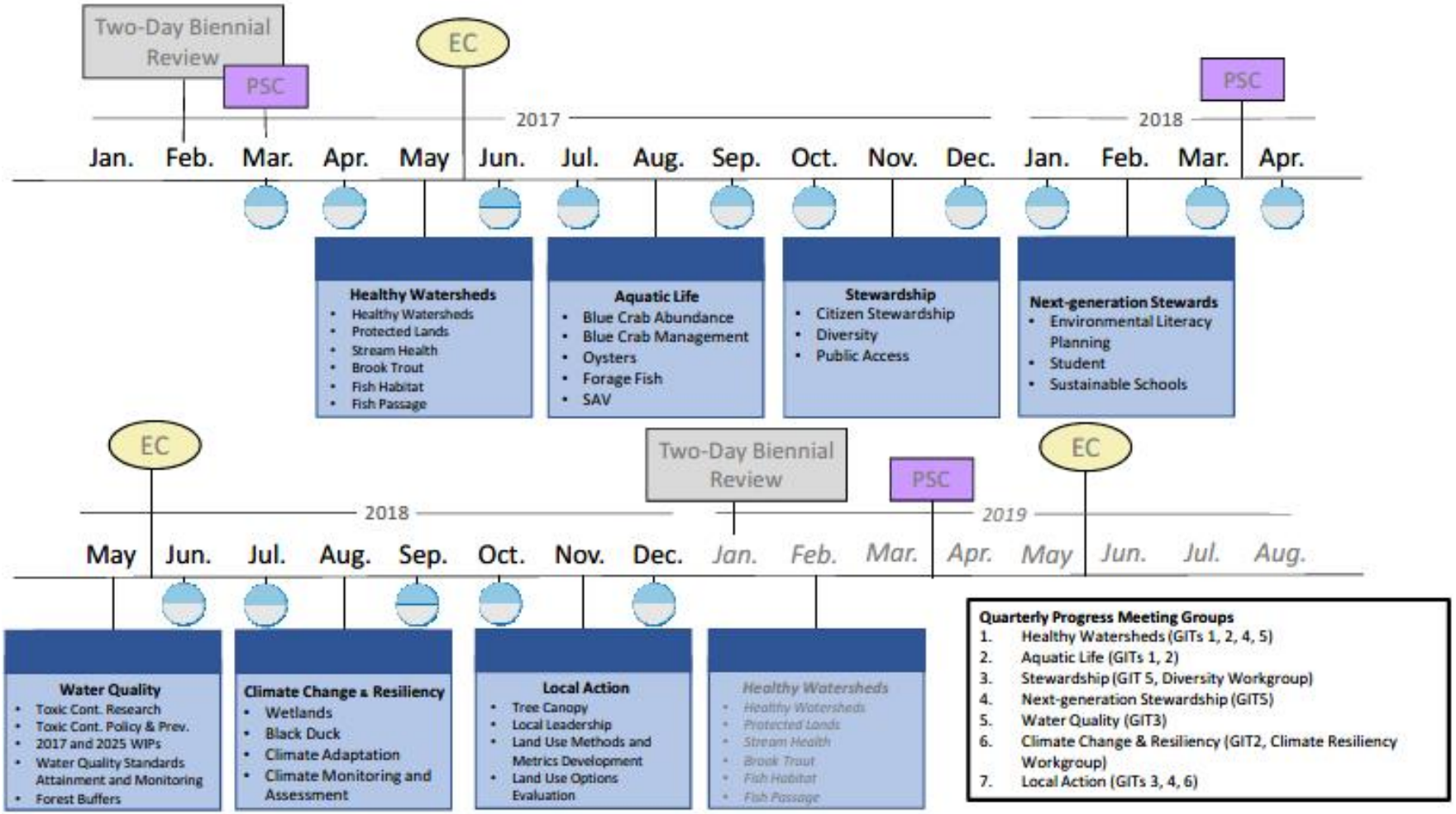
What is the Biennial Strategy Review System (SRS)?

- Regular, transparent and open review
- Opportunity to look at Outcome progress, scientific developments, policy changes, and finance issues
- Identification of obstacles and opportunities
- Workplan and Management Strategy modification as warranted

Rooted in the Decision Framework



SRS Biennial Schedule



2.

Water Quality Quarterly Progress Meeting with Management Board

May 10

Dates to help you prepare (2018)

March 14

Kickoff SRS Meeting

April 26

STAR Presentation

April 30

Final Materials sent to MB

May 10

Quarterly Progress Meeting!

May 15

Debrief w. SRS Team

May 31

Requested info sent to MB

June 14

Follow-up Meeting!

Sept. 13

Updated Workplan and Management Strategies Due

3.

SRS Materials

Quarterly Progress Guide

Step 1. Summarize your Outcome, the progress made thus far, and whether we are on track to achieve this Outcome.

Step 2. Explain the logic behind your work toward an Outcome, indicate the status of your management actions, and denote which actions have or will play the biggest role in making progress.

Step 3. Craft a compelling narrative that outlines your management approach, the challenges you face, the adaptations you recommend, and the direct asks of the Management Board.

Outcomes are dependent on **factors** identified in the watershed's natural and human systems. **Gaps** in current efforts to address factors lead to actions.

Actions should directly address a gap in current efforts where the Chesapeake Bay Program can uniquely provide some service or benefit.

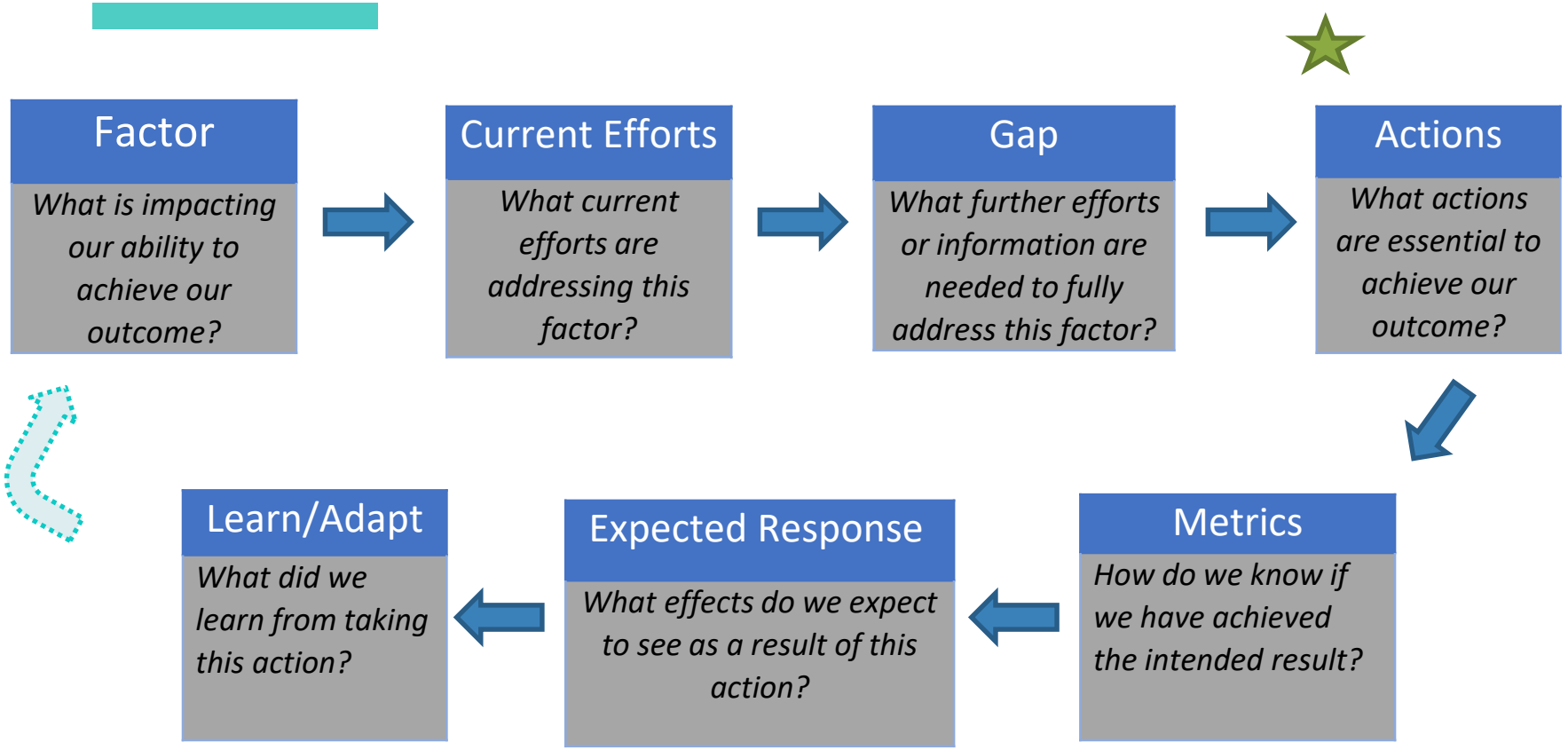
Tracking actions provides **diagnostic information** and linking **expectations** describe how actions will help achieve an Outcome.

*What de we **learn** from taking this action? How will this lesson impact our work?*

Taking these steps will allow us to learn where our understanding is correct and identify any need to **adapt.**

Decision Framework in context of work towards the *Watershed Agreement*

Logic Table and Workplan



Management Approach					
Action #	Description	Performance Target	Responsible Party	Geographic Location	Expected Timeline

2017 WIP, 2025 WIP and Water Quality Standards Attainment & Monitoring Outcomes

Management Strategy

2015–2025, v.1

I. Introduction

For the past 30 years, the Chesapeake Bay Program (CBP) partnership has been committed to achieving and maintaining the water quality conditions necessary to support living resources throughout the Chesapeake Bay watershed. Building off these commitments and using the best scientific information available, the CBP partnership agreed to the nutrient and sediment allocations in the 2010 Chesapeake Bay Total Maximum Daily Load (Bay TMDL)[1], a historic and comprehensive pollution reduction effort in the Chesapeake Bay watershed. The Bay TMDL identifies the necessary pollution reductions of nitrogen, phosphorus and sediment across the seven Bay watershed jurisdictions of Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia and the District of Columbia to meet applicable water quality standards in the Bay and its tidal waters. Reducing pollution is critical to restoring the Chesapeake Bay watershed because clean water is the foundation for healthy fisheries, habitats, and communities across

[1] www.chesapeakebay.net

[2] EPA's Chesapeake Bay TMDL: www2.epa.gov/chesapeake-bay-tmdl

Management Strategy

Factors

Implementation of Practices

1. Continuing to sustain the capacity of governments and the private sector to implement practices
2. Delivering the necessary financial capacity to implement practices and programs

Factors

Improved Technical Information

1. Improving the identification of sources and their contributions to nitrogen, phosphorus and sediment pollutant loads
2. Quantifying the reductions from pollution control practices and verifying their continued performance
3. Enhancing the next generation of decision support tools (Phase 6)
4. Revisiting watershed model calibration methods with the goal of improving local watershed results
5. Reviewing and updating historical implementation data that has been submitted by the jurisdictions to the CBP partnership

Factors

Response of Water Quality Conditions to Management Practices

1. Understanding the factors affecting the ecosystem response to pollutant load reductions to focus management efforts and strategies
2. Factoring in effects from continued climate change
3. Assessing the implementation potential of filter feeders for nutrient and sediment
4. Examining the impact the lower Susquehanna dams have on the pollutant loads to the Bay, including changes over time
5. Conducting a detailed multi-year assessment of chlorophyll in the tidal James River using augmented monitoring and modeling approaches

Management Approaches

1. Phase I WIPs, Phase II WIPs and Two-Year Milestones
2. Chesapeake Bay TMDL Accountability Framework
3. Enhancing Monitoring
4. Bay TMDL's 2017 Midpoint Assessment
5. Approaches Targeted to Local Participation
6. Cross-Outcome Collaboration and Multiple Benefits

Outcome: 2017 WIP, 2025 WIP and Water Quality Standards Attainment and Monitoring Outcomes

Goal: Water Quality

Outcome: 2017 WIP, 2025 WIP and Water Quality Standards Attainment and Monitoring

Long term Target: 100% by 2025

2 year Target: 60% by 2017

Management Approach 1: Phase I WIPs, Phase II WIPs, and Two-year Milestones

At the CBP partnership discussed during the development of the 2014 Watershed Agreement, the Water Quality Management Strategy reflects the Watershed Implementation Plans, and this work plan reflects the two-year milestones. Below, please find links to each of the Chesapeake Bay jurisdictions' draft 2016/2017 two-year programmatic milestones.

Delaware:	http://www.dnrec.delaware.gov/swc/wa/Documents/ChesapeakePhaseIIWIP/Milestones/DE_DRAFT_Programmatic_Milestones_2017.pdf
District of Columbia:	http://doee.dc.gov/publication/two-year-milestones-region-iii-and-chesapeake-bay-program
Maryland:	http://www.mde.state.md.us/programs/Water/TMDL/TMDLImplementation/Pages/MD_Milestone_Goals_2016-2017.aspx
New York:	http://www.dec.ny.gov/docs/water_pdf/wipdraft17m.pdf
Pennsylvania:	http://www.dep.state.pa.us/river/wqa/chesbay/docs/2016-2017PAProgrammaticMilestonesPA3-8-16.pdf
Virginia:	http://www.epa.gov/sites/production/files/2016-03/documents/2016-2017_va_programmatic_milestone_goals.pdf
West Virginia:	http://www.wvca.us/bay/files/bay_documents/1265_WV%202016%202017%2025%20year%20milestones.pdf
Federal:	http://executiveorder.chesapeakebay.net/file.ashx?file=2016%20Federal%20Two-year%20Milestones-03-15-16-edit.pdf

Key Action** *Description of work/project. Define each major action step on its own row. Identify specific program that will be used to achieve action.*	**Performance Target(s)** *Identify incremental steps to achieve Key Action.*	**Participating Entity** *Identify responsible partner for each step.*	**Geographic Location**	**Timeline** *Identify completion date (month & year) for each step)*	**Factors Influencing and/or Gap** *Identify related factor or gap in Management Strategy*
	Approve each Bay jurisdictions' Best Management Practice verification program contained within the Clean Water Act Section 117 grant quality Assurance Project Plan	EPA	Chesapeake Bay Watershed and Jurisdictions	January-April 2016	1. Continue to sustain the capacity of the governments and the private sector to implement practices.

2-year Workplan

Key Actions

1. BMP Verification
   - 1 EPA, 1 VA, 4 WV, 2 DC steps
2. Provide support for continued reporting on agricultural lands
   - 5 USDA, 2 EPA, 2 MD, 2 NY, 2 VA, 1 WV steps
3. Provide support for continued BMP implementation, tracking and reporting in the urban stormwater sector
   - 5 EPA, 1 MD, 2 VA, 1 DoD, 8 DC, 1 WV steps
4. Guide development of jurisdictions' trading and offset programs
   - 5 EPA, 2 MD, 2 WV, 1 VA steps

Key Actions

5. **Continue with Wastewater Treatment Plant & Septic upgrades and enhancements**
   - **1 EPA, 2 MD, 2 VA, 3 DC, 1 WV, 1 DoD steps**
6. **Provide permit and enforcement oversight across all sectors**
   - **1 NY, 1 VA, 2 DC steps**
7. **Provide guidance and tools to support continued BMP implementation, tracking and reporting across all source sectors.**
   - **8 EPA, 4 DoD, 2 USACE, 1 CBC, 1 All Jurisdictions steps**
8. **Continue work to improve temporal and regional patterns in water quality criteria attainment in tidal and non-tidal waters.**
   - **3 CBP Monitoring Team, 1 EPA/MD/VA steps**

Key Actions

9. Conduct Lower Susquehanna River Integrated Sediment and Nutrient Monitoring Program
   - 3 MD/UMCES/USGS steps
10. Coordinate the CBP non-tidal water-quality network
    - 1 USGS, 2 Partnership steps
11. Addressing gaps in monitoring programs
    - 3 CBP Monitoring Team steps
12. Develop and apply new approaches for quantifying and explaining water-quality trends in tidal waters.
    - 1 CBP Monitoring Team steps
13. Explain the drivers of water quality trends in the watershed.
    - 6 USGS/JHU/CBP Modeling Team steps

Key Actions

14. **Provide information to enhance the CBP watershed models. Results of these studies will be used to prepare and calibrate the Phase 6 model in 2016.**
    - **3 USGS steps**
15. **Release beta and final version of the Phase 6 Watershed Model**
    - **3 Partnership steps**
16. **Develop Phase III WIP Expectations**
    - **3 Partnership steps**
17. **Collection of Local Land Use Data**
    - **5 Partnership steps**

Step 1
SRS Logic Table

WORK PLAN ACTIONS					
Green - action has been completed or is moving forward as planned Yellow - action has encountered minor obstacles Red - action has not been taken or has encountered a serious barrier					
Action #	**Description**	**Performance Target(s)**	**Responsible Party (or Parties)**	**Geographic Location**	**Expected Timeline**
Management Approach 1:					
1.1					
1.2					
Management Approach 2:					

Step 2
SRS Logic Table

Factor	Current Efforts	Gap	Actions **(critical in bold)**	Metrics	Expected Response and Application	Learn/Adapt
What is impacting our ability to achieve our outcome?	*What current efforts are addressing this factor?*	*What further efforts or information are needed to fully address this factor?*	*What actions are essential to achieve our outcome?*	*Optional: Do we have a measure of progress? How do we know if we have achieved the intended result?*	*Optional: What effects do we expect to see as a result of this action, when, and what is the anticipated application of these changes?*	*Optional: What did we learn from taking this action? How will this lesson impact our work?*
Example:						
Partner Coordination: Development of shared stream restoration monitoring protocols and technical guidelines	4.4 (Example purposes only)	*Lack of common watershed, stressor, and stream assessment and restoration guidelines*	2.1			
Scientific and Technical Understanding of Credit-oriented Protocols: BMP implementation effect on potential lift and/or improvement in stream function	Various groups are implementing BMPs in streams. See Management Strategy for details.	*Robust stream restoration monitoring*	1.4			

Step 3
SRS Presentation to the Management Board

Identify the requested actions the Management Board up front! Use a picture to illustrate your point.

Last but not Least…
Updates to Management Strategy and Workplan