A History of the CBP BMP Verification Program

August 7, 2020
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WHO OR WHAT CONTRIBUTED DIRECTLY TO THE FRAMEWORK DOCUMENT?

- The Partnership Approved Verification Principles
- The Source and Habitat Specific Workgroups (responsible for the development of source specific verification protocols)
- The BMP Verification Review Panel (Regional and national verification experts charged to review/make recommendations on each jurisdiction verification program).

Which Source Sector Workgroups were involved?
Agriculture, Forestry, Stormwater, and Wastewater.
Which Habitat Workgroups were involved?
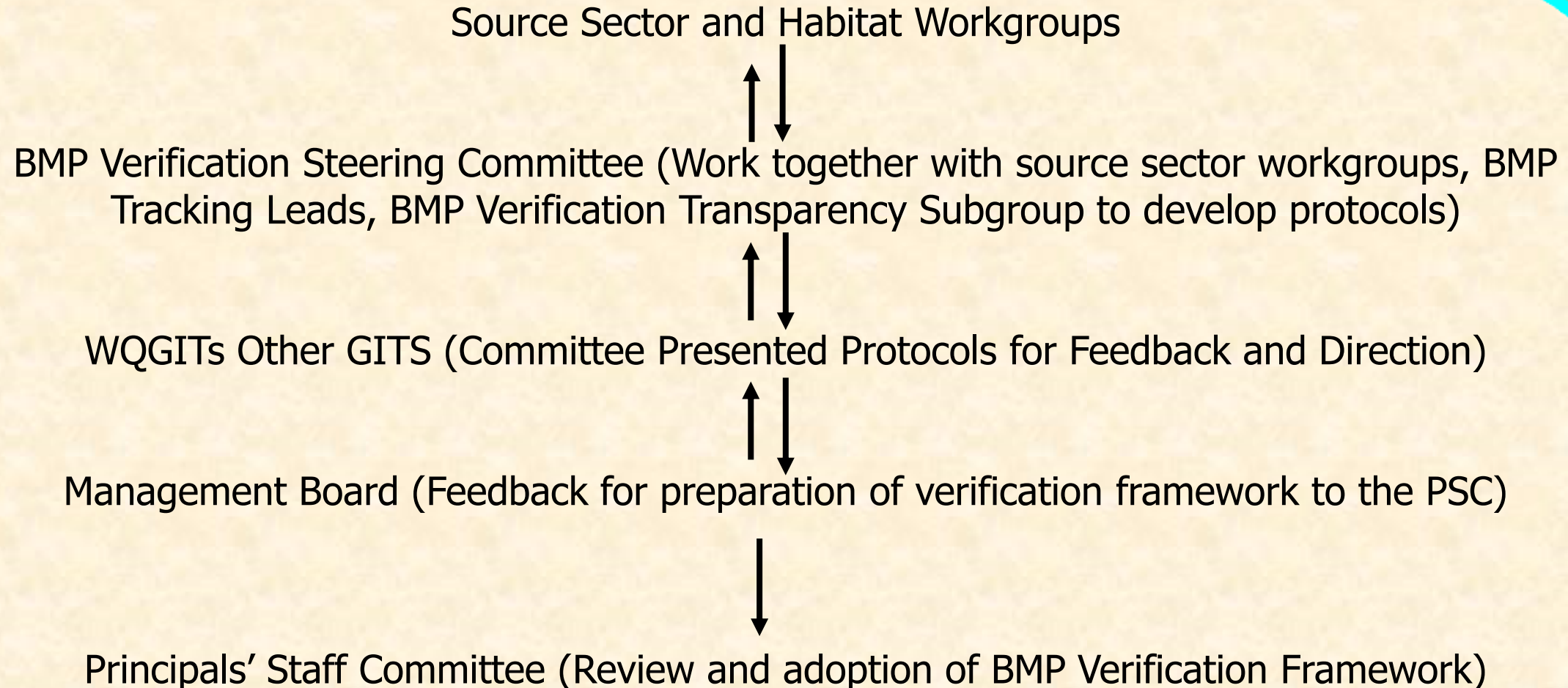Wetlands and Streams

MORE KEY PLAYERS IN THE DEVELOPMENT OF THE FRAMEWORK DOCUMENT

- **The BMP Verification Steering Committee**
- USGS and NCRS (Previous development of BMPs)
- EPA CBPO (Provided a historical BMP database)
- BMP Tracking and Reporting Leads – One point and one nonpoint rep from each jurisdiction: https://www.chesapeakebay.net/channel_files/18597/point__nonpt_source_contact_leads_oct_2016_2.pdf
- BMP Verification Transparency Subgroup
- All THREE Advisory Committees – Citizens, Local Government, Scientific & Technical
- All SIX GITs – Water Quality, Sustainable Fisheries, Habitat, Water Quality, Maintain Healthy Watersheds, Fostering Chesapeake Stewardship, Enhance Partnering, Leadership and Management
- The Management Board – Provision of feedback on protocols, Provision of direction following review, Final review of BMP protocols for potential adoption
- The Principal's Staff Committee – Review and adoption of BMP protocols

THE CHAIN OF APPROVAL AND COLLABORATION INVOLVING BMP PROTOCOLS

Source Sector and Habitat Workgroups

↑↓

BMP Verification Steering Committee (Work together with source sector workgroups, BMP Tracking Leads, BMP Verification Transparency Subgroup to develop protocols)

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WQGITs Other GITS (Committee Presented Protocols for Feedback and Direction)

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Management Board (Feedback for preparation of verification framework to the PSC)

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Principals' Staff Committee (Review and adoption of BMP Verification Framework)

THE MOMENT YOU HAVE BEEN WAITING FOR: A Brief History on How We Got Here

2004 to 2007 – Setting the Scene

July 2004 – **Washington Post publishes "Bay Pollution Progress Overstated: Government Program's Computer Model Proved Too Optimistic"** *that was picked up on the Associated Press National Wire.*

➢ The article claimed that progress was inflated. While the program reported steady reductions in pollution, the "dead" zone of the Bay continued to grow with prized species populations dropping.
➢ The article pointed out that the goals set for 2000 for nitrogen and phosphorus (under the *Chesapeake 2000 Agreement*) were not met.

In response: The Bay program submitted a letter to the Editor; but it was never posted.

October 2005 – **GAO Audit**
"Improved Strategies are needed to better assess, report, and manage restoration progress"

July 2007 – EPA Letter to Senator Mikulski
➢ Assurance to the Senator that the GAO recommendations from the 2005 Audit are being taken seriously and the recommendation from the GAO of managing/coordinating restoration efforts is underway.

ACCOUNTABILITY AT THE FOREFRONT

2008–2009 A busy few years in the Bay

July 2008 – *EPA OIG Audit of the Chesapeake Bay Program*
- Bay partners need to address: uncontrolled land development, limited implementation of agricultural conservation practices, and limited control over air emissions affecting Bay water quality

November 2008 -- *At the Executive Council meeting, The Governors, the Mayor, and the Administrator and the CBC Chair requested to increase accountability and "that the Chesapeake Bay Partnership be evaluated by a nationally recognized independent science organization."*

➢ The partnership under the leadership of the PSC, convened an Independent Evaluator Action Team whom constructed study questions and the EPA managed a contact with the National Academy of Sciences.

2009 – *Under the direction of the Chesapeake Executive Council (EC),* **the National Research Council of the National Academy of Sciences (NAS) established the Committee on the Evaluation of Chesapeake Bay Program Implementation for Nutrient Reduction to Improve Water Quality**

A two year endeavor
- Assessed the framework used to track nutrient and sediment control practices in the watershed.
- Assessed adaptive management strategies and recommend improvements to meet nutrient and sediment reduction goals.
- Identified possible strategies and focused on approaches that are not being implemented to their full potential.

PRESIDENTIAL INVOLVEMENT IN THE RESTORATION OF THE BAY

2010 – EO 13508

May 2010 – *Executive Order 13508 Chesapeake Bay Protection and Restoration Section 203 Final Coordinated Implementation and Strategy*

➢ The purpose of this strategy is to describe federal actions to protect and restore the health, heritage, natural resources, and social and economic value of the nation's largest estuarine ecosystem and the natural sustainability of its watershed. The EO requires that the final strategy be published within one year of the date of the EO.

EO 13508 led to Data Sharing Agreements that were not already in place with the USDA, NCRS, and FSA that were to be utilized eventually by the BMP Verification Subcommittee in the development of the BMP Protocol Framework and BMP Verification Programs.

June 2010 (-2012) –

MD, NY, VA and WV as well as the U.S. Geological Survey (USGS) signed 1619 data sharing agreements with U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) and Farm Services Agency (FSA). *(As part of the collaborative work on larger BMP Verification Framework, the jurisdictional partners are working closely with NRCS and FSA to ensure all six states have consistent, comprehensive data sharing agreements in place.)*

THE NRC NAS PRESENTS ITS FINDINGS

2011 – News At Last

May 2011 – NRC Report *"Achieving Nutrient and Sediment Reduction Goals in the Chesapeake Bay: An Evaluation of Program Strategies and Implementation"*
KEY FINDINGS

➢ Accurate tracking of BMPs is of paramount importance because the Bay Program relies upon the resulting data to estimate current and future nutrient and sediment loads to the Bay.

➢ The current accounting of BMPs is not consistent across the Bay jurisdictions. Additionally, given that some source-sector BMPs are not tracked in all jurisdictions, the current accounting cannot on the whole be viewed as accurate.

➢ The committee was unable to determine the reliability and accuracy of the BMP data reported by the Bay jurisdictions.

➢ The committee was not able to quantify the magnitude or the likely direction of the error introduced by BMP reporting issues.

❑ The Chesapeake Bay Program Executive Council (EC) and FLC through the PSC Alignment Decision state that the goals, outcomes, and actions of the Chesapeake Bay Program (CBP) will align with the goals, outcomes and actions described in the Executive Order Strategy

CBP RESPONSE TO THE NRC REPORT

2011 – Eyes on the CBP

September 2011 – *U.S. Government Accountability Office (GAO) Performance Audit*
- To achieve the measurable goals outlined to achieve water quality standards by 2025, federal agencies, states, and other entities need to collaborate; as "Not all Stakeholders are working toward achieving Federal Goals."

Recommendations: EPA work with federal and state stakeholders to develop common goals and clarify plans for assessing progress.
Response: EPA agreed with recommendations.

November 2011 – In ***response to the NRC document*** Independent Evaluators compile Key Challenges for the partnership with a highlighted focus on Tracking and Accountability. The evaluators recommended next steps under the guidance of the MB (charged by the PSC).
- The NRC determined that accounting of BMPs was not consistent across jurisdictions.

❑ The MB recommended BMP effectiveness/monitoring and accountability recommendations to the Chair of the PSC.

THE FORMATION OF THE BMP VERIFICATION COMMITTEE

2012 – At Last, BMP Verification Comes Along

February 2012 – *The PSC approved the development of a partnership wide approach to BMP verification and agrees to the formation of a BMP Verification Steering committee at the WQGIT's request.*

March 2012 – First BMP Verification Committee Meeting

~25 members

Represented DE MD Agribusiness Associated, VA Office of Natural Resources, PA DEP, USDA, US Navy, CBC, HOPE Impacts, NCRS, VA Environmental Quality, CBF, WV DoA, DC DOEE, MDA, Upper Susquehanna Coalition, University of DE, Resource Dynamics, UMD, USFWS, EPA,CSN, VA Tech

- Synthesize the various source sector workgroups and accounting workgroups/teams recommended verification protocols, feedback on the principles, etc. into an initial BMP verification framework for presentation to the WQGIT and then the other GITs for feedback and direction.
- Take the individual and collective feedback from the six GITs and the three advisory committees and revise the BMP verification framework prior to presentation to the Management Board.
- Face to Face Meetings were scheduled with source sector workgroups.
- Conference calls scheduled with bay program staff and PA DEP, MDA, MDE, DC DOE, VA DCR, WV DoA, WV DEP reps to review BMP tracking and reporting systems.

Met for three years; 2012 to 2015.

THE FORMATION OF THE BMP REVIEW PANEL

September 2012 – BMP Verification Review Panel Approved by MB
Met for **three (+)** years, leading up to the submission of a final report to the PSC on Jurisdiction Specific BMP Verification Program Plans.
15 members were formally invited to participate
- Independent panel representing Green Earth Connection, Chesapeake Stormwater Network, US Department of Agriculture Research Service, Sustainable Northwest, Ag Resource Strategies, US Geological Survey, University of Arkansas, Ecofor, DC DOEE, Villanova University, Green Earth Connection, Warwick Township (Lancaster, PA), Community and Environmental Defense Services

➢ The Verification Panel will provide advice, feedback, and recommendations to the CBP partnership as it develops its verification program – provide recommendations for changes to the draft BMP principles.

➢ Individual panel members worked with source sector workgroups, providing advice, feedback, and recommendations during the respective WKGP's development of verification protocols specific to their sector.

➢ BMP Verification Principles used as criteria to assess strengths and vulnerabilities in state verification programs, providing recommendations to CBP MB on each jurisdiction's program.

➢ BMP Verification Panel evaluated for a consistent level of verification rigor across source sectors and jurisdictions.

THE APPROVAL OF THE BMP VERIFICATION PRINCIPLES

The Guiding Verification Principles

December 2012 - CBP BMP Verification Principles

- The BMP Verification Committee developed the five verification principles, with review and input provided by the BMP Verification Review Panel, Water Quality Goal Implementation Team, and Management Board, and approval by the Principals' Staff Committee.

1) Practice Reporting
2) Scientific Rigor
3) Public Confidence
4) Adaptive Management
5) Sector Equity

THE BMP VERFICATION SUBGROUP AND REVIEW PANEL REPORT

2013 – A Focus on Agriculture

February 2013 – *BMP Verification Transparency Subgroup*

10 members: UMD, VA Tech, DE MD Agribusiness Association, DE Department of Agriculture, CBC, HOPE Impacts, WV DoA, USGS

➤ The BMP Verification Transparency Subgroup was convened by the BMP Verification Committee at its February 21, 2013 meeting in response to a request from the CBP Partnership's Agriculture Workgroup. The Transparency Subgroup was charged by the BMP Verification Committee with developing recommendations for how to address the issue of ensuring transparency in the context of the agricultural verification protocols and reporting back to the Agricultural Workgroup its recommendations for addressing transparency.

November 19, 2013 – BMP Verification Review Panel provides formal guidance and recommendations to the source sector workgroups, the BMP Verification Committee, and the Jurisdictions

December 2013 – *USGS Publishes Report to Integrate Federal and State data Records*

"Integrating Federal and State Data Records to Report Progress in Establishing Agricultural Conservation Practices on Chesapeake Bay Farms"

FINALIZATION OF THE FRAMEWORK DOCUMENT

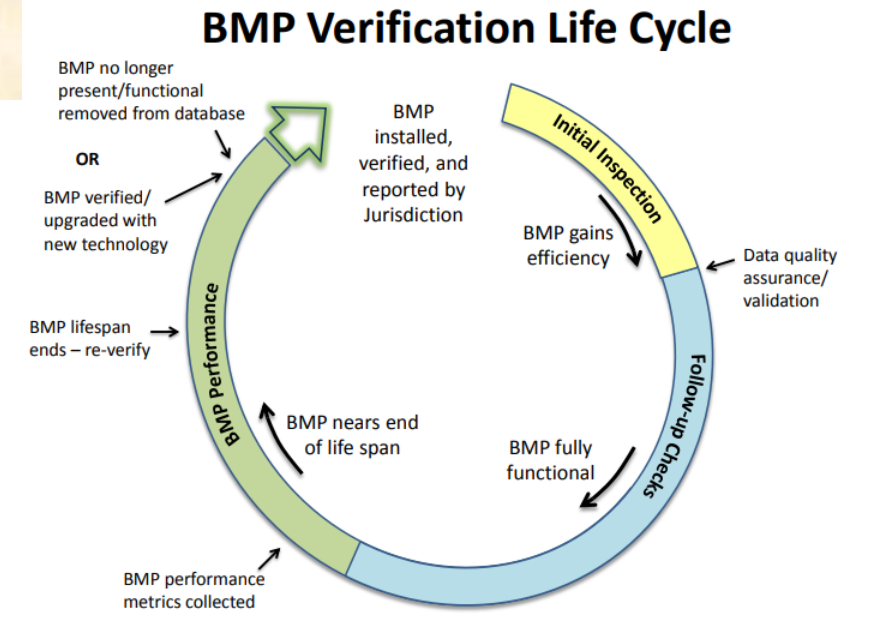**2014 – Five Years of Focus comes to Fruition**

August 2014 – *Final Draft of Basinwide Framework made available to Management Board From WQGIT and BMP Verification Committee*

September 2014 – *MB and the PSC approved and adopted the Chesapeake Bay Basinwide BMP Verification Framework*

Strengthening Verification of Best Management Practices Implemented in the Chesapeake Bay Watershed: A Basinwide Framework

Report and Documentation from the Chesapeake Bay Program Water Quality Goal Implementation Team's BMP Verification Committee
October 2014

BMP Verification Life Cycle

BMP no longer present/functional removed from database

OR

BMP verified/upgraded with new technology

BMP lifespan ends – re-verify

BMP Performance

BMP nears end of life span

BMP performance metrics collected

BMP installed, verified, and reported by Jurisdiction

Initial Inspection

BMP gains efficiency

Data quality assurance/validation

Follow-up Checks

BMP fully functional

The BMP VERIFICATION PANEL'S FINAL FEEDBACK ON VERIFICATION PROGRAM DRAFTS

2015 – 2018 Working Towards Complete Implementation

June 2015 – *Jurisdictions submit draft BMP verification program plans to the BMP Verification Review Panel*

July 2015 – *BMP Verification Review Panel Two Day Meeting to review Jurisdiction Draft BMP Verification Plans*

August 27-28 – *BMP Verification Review Panel provides final feedback on seven jurisdictions' draft BMP Verification Programs*

October 2015 – *BMP Expert Panel Provides Final Written Feedback and Recommendation on each jurisdiction verification program to the CBP's BMP Verification Committee, WQGIT, MB, and PSC.*

October 2015 – January 2016 – *Continuous development of jurisdiction verification program (with oversight from the BMP Verification Review Panel, EPA, MB, and PSC)*

January 2016 to December 2018 – *Path to Full Verification Implementation effective for the 2018 Progress Run.*

➤ Framework Implementation Timeline (From CBC September 2014 Presentation)

FINAL THOUGHTS ON BMP HISTORY

➢ *The Development of the BMP Verification Protocols and Programs was a Bay-wide, and even Nation-wide effort to accomplish.*

➢ *The development of this program spans back to (officially) 2009.*
  - *That is 9 years of on-going development!*

➢ It took three years to develop our current protocols and six years to reach full implementation of the verification program.
  - A lot of expertise, time, and resources were put into the program that we currently have.

Final <u>final</u> thoughts: We have a lot to be proud of as a partnership.