

Chesapeake Bay Program Partnership's Basinwide BMP Verification Framework

**CBP Partnership's Principals' Staff Committee
September 22, 2014**



Chesapeake Bay Program
A Watershed Partnership

Verification Definition

“Verification: the process through which agency partners ensure practices, treatments, and technologies resulting in reductions of nitrogen, phosphorus, and sediment pollutant loads are implemented and operating correctly.”

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 metrics collected

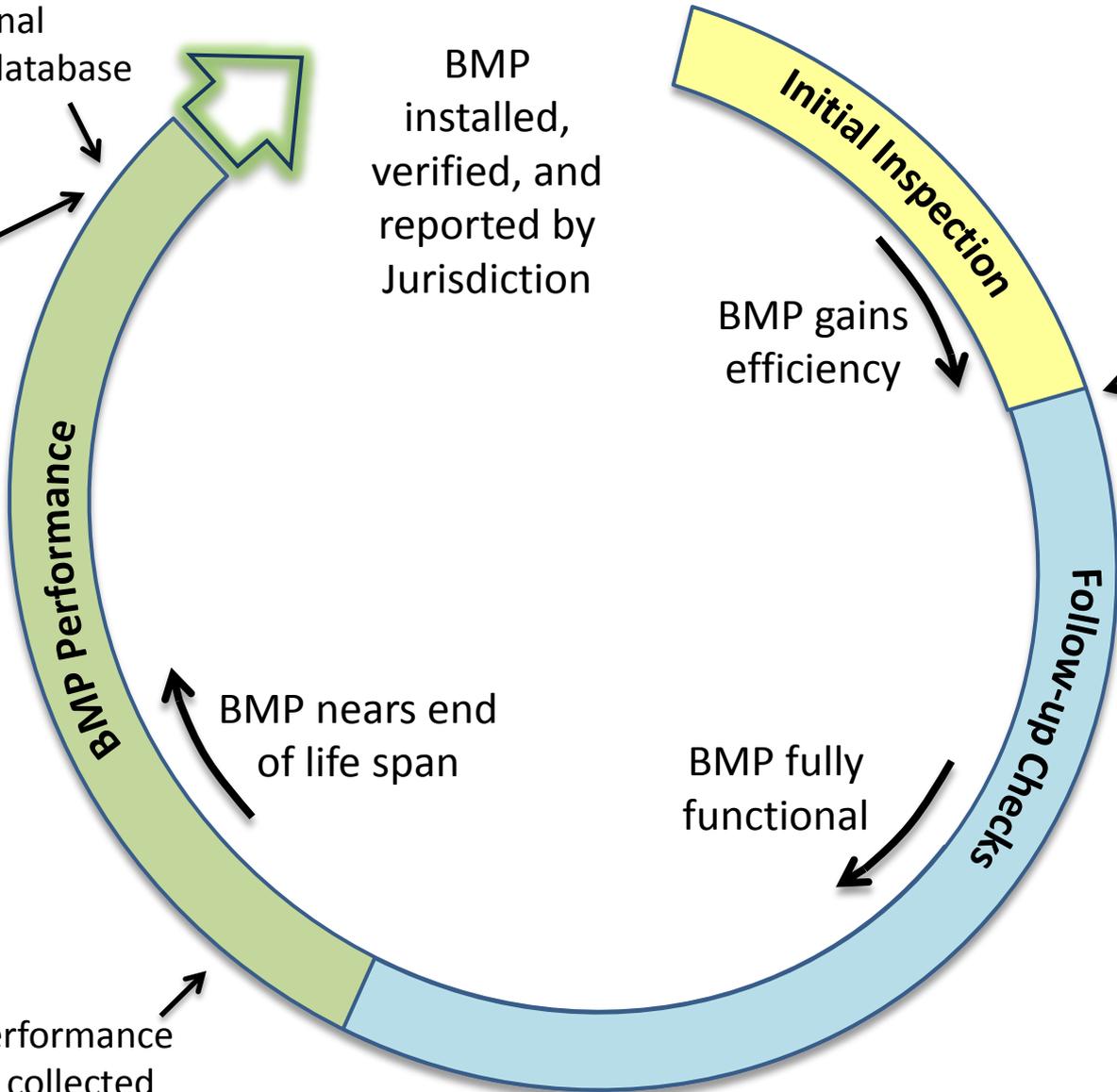
BMP installed, verified, and reported by Jurisdiction

BMP nears end of life span

BMP gains efficiency

BMP fully functional

Data quality assurance/ validation



Verification Framework Accomplishments

- ✓ BMP verification principles adopted
- ✓ BMP Verification Review Panel convened
- ✓ Source sector verification guidance drafted
 - Agriculture
 - Forestry
 - Stormwater
 - Wastewater/septic systems
 - Wetlands
 - Streams

Verification Framework Accomplishments

- ✓ Developed 12 framework elements
- ✓ Circulated 3 drafts of framework document
- ✓ Engaged the Partnership at all levels
 - Source Sector and Habitat Workgroups
 - Goal Implementation Teams (WQ, Habitat, Fisheries, Healthy Watersheds)
 - Advisory Committees (STAC, CAC, LGAC)
 - Management Board, Principals' Staff Committee

12 Framework Elements

- 1) BMP verification principles
- 2) BMP Verification Review Panel
- 3) Source sector and habitat specific BMP verification guidance
- 4) Practice life spans
- 5) Ensuring full access to federal cost-shared agricultural conservation practice data
- 6) Enhance data collection and reporting of federally cost shared practices

12 Framework Elements

- 7) Accounting for non-cost shared practices
- 8) Preventing double counting
- 9) Clean-up of historic BMP databases
- 10) Development and documentation of jurisdictional BMP verification programs
- 11) Partnership processes for evaluation and oversight
- 12) Communications and outreach

Panel's Recommendations

- Use the Panel's Products
 - Verification program design matrix
 - 14 verification program development decision steps
 - State protocol components checklist
- Address certification/training of verifiers
- Aim high or explain why
- Prioritize verification towards priority practices
- Robust upfront verification yields less intensive follow up reviews
- Build in time for continuous improvement early

Panel's Verification Tools

Chesapeake Bay Program Best Management Practice Verification Program Design Matrix

A. Program Component	B. Program Elements	C. Program Element Options
j. BMP Verification	1. What was the driver for BMP Installation?	Regulation, Cost-share, Non-cost-share
	2. How many BMPs will be inspected?	All, percentage, subsample, those targeted
	3. How is the frequency and location of inspection?	Statistics, targeting, low-visibility funding
	4. How often BMPs inspected?	
	5. What is the...	
	6. Who will inspect and certify/train...	

Jurisdictional BMP Verification Program Development Decision Steps for Implementation

Below are the 14 steps for each Chesapeake Bay watershed jurisdiction to consider when developing their jurisdiction's BMP verification program. Under each step are questions for consideration which will prompt decisions that may be needed to develop jurisdiction's verification protocols.

1) Determine what BMP's to collect:

- a) Do you want to collect all BMPs that were listed to in your jurisdiction's Phase II WIP? Additional/or some of...
- b) Do the listed BMPs meet the Chesapeake Bay Program (CBP) definition?
- c) Do you want to report BMPs that do not meet NRCS standards for sediment pollutant load?
- d) When collecting the data, do you want to include...
- e) For reported BMPs, are you going to do a determination (example: date, fertilization if an...

State Protocol Components Checklist

State Protocol Components Checklist				
	State:			
	Sector:			
	BMP Verification	Present	N/A	Comments
1	BMP's Collected			
	Type (Structural, Management, Functional Equivalent, Etc)			
	BMP Funding/Cost shared (Federal, State, NGO, Non-cost shared)			
	Distinct State Standards/Specifications			
	Matching CBP Definition/Efficiencies			
2	Method/ System of Verification/Assessment			
	Description of Methods/Systems To Be Used			
	Documentation of procedures used to Verify BMP's			
	Instruction Manual for system users			

Chesapeake Bay Program Partnership Groups Told Us:
State Verifications Protocols Must Have (6 R's):
RIGHT Amount of **RIGOR** to **RELIABLY REPORT** BMP's
within the **REALITY** of **RESOURCES**



Illustration of Diversity of Verification Approaches Tailored to Reflect Practices

Sector	Inspected	Frequency	Timing	Method	Inspector	Data Recorded	Scale
Stormwater	All	Statistics	<1 year	Monitoring	Independent	Water quality data	Site
	Percentage	Targeting	1-3 yrs	Visual	Regulator	Meets Specs	Subwatershed
	Subsample	Law	3-5 yrs	Aerial	Non-Regulator	Visual functioning	County
	Targeted	Funding	>5 yrs	Phone Survey	Self	Location	State
Agriculture	All	Statistics	<1 year	Monitoring	Independent	Water quality data	Site
	Percentage	Targeting	1-3 yrs	Visual	Regulator	Meets Specs	Subwatershed
	Subsample	Law	3-5 yrs	Aerial	Non-Regulator	Visual functioning	County
	Targeted	Funding	>5 yrs	Phone Survey	Self	Location	State
Forestry	All	Statistics	<1 year	Monitoring	Independent	Water quality data	Site
	Percentage	Targeting	1-3 yrs	Visual	Regulator	Meets Specs	Subwatershed
	Subsample	Law	3-5 yrs	Aerial	Non-Regulator	Visual functioning	County
	Targeted	Funding	>5 yrs	Phone Survey	Self	Location	State

Framework Implementation

Decision Making Roles with the CBP

- CBP BMP Verification Review Panel
- CBP Principals' Staff Committee
- CBP Advisory Committees
- CBP Technical Workgroups
- Jurisdictions
- Federal Agencies and Federal Facilities
- U.S. EPA

Framework Implementation

Evaluation and Oversight

- Amend Partnership BMP protocol to address verification
- Amend CBP Grant Guidance
- Annual reviews of progress data submissions
- Annual EPA reviews of changes to jurisdictions' quality assurance plans
- Periodic EPA audits of jurisdictions' BMP verification programs

Framework Implementation Timeline

September
2014

Framework Adoption by the Principals



October 2014-
July 1, 2015

**Jurisdictions/Federal Agencies
Development of Their Verification Programs**



July -
September
2015

**External Panel Review of the Jurisdictions/
Federal Agencies' Verification Programs**



October -
December
2015

**EPA Review and Approval of the
Jurisdictions' Verification Programs**



2016-2017

**Jurisdictions Ramp-up Their
Verification Program Implementation**



2018

**Full Implementation of the Jurisdictions'
Verification Programs**

Questions and Discussion

Request for Decision

Decision Requested: Principals' Staff Committee adoption of the basinwide BMP verification framework on behalf of the larger partnership, recognizing this is a framework filled with guidance and we will continue to adapt our BMP verification efforts over time to new information and experiences.

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