



VERIFICATION: The New Norm

Efforts to verify that BMPs are in place & functioning properly

Ann Swanson, Executive Director

Jack Frye, Virginia Director


Members: CBPO Verification Steering Committee

CBC Quarterly Meeting, January 8, 2015

1960s

The Chesapeake Bay Ecosystem Management :

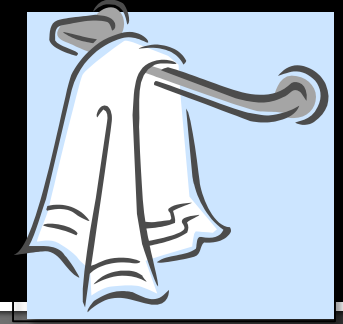
A 50-Year History with a future

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- 1960s-70s Visible decline in Bay resources
 - 1967 Chesapeake Bay Foundation established
 - 1976-1982 EPA conducts 5-year Bay study
 - 1980 Chesapeake Bay Commission established
 - 1983 **First Bay Agreement** - Bay Program created
 - 1987 **Second Bay Agreement** – WQ Goals
Clean Water Act Section 117
 - 1992 Amendments to Agreement – Tributary Strategies
 - 2000 **Third Bay Agreement** – Precursor to TMDL
 - 2008 Water Quality Impairments Acknowledged
 - 2010 Chesapeake Bay **TMDL** established
 - 2014 **Fourth Bay Agreement** – Measurable & Flexible
 - 2017 60% of TMDL implemented
 - 2025 TMDL practices fully implemented

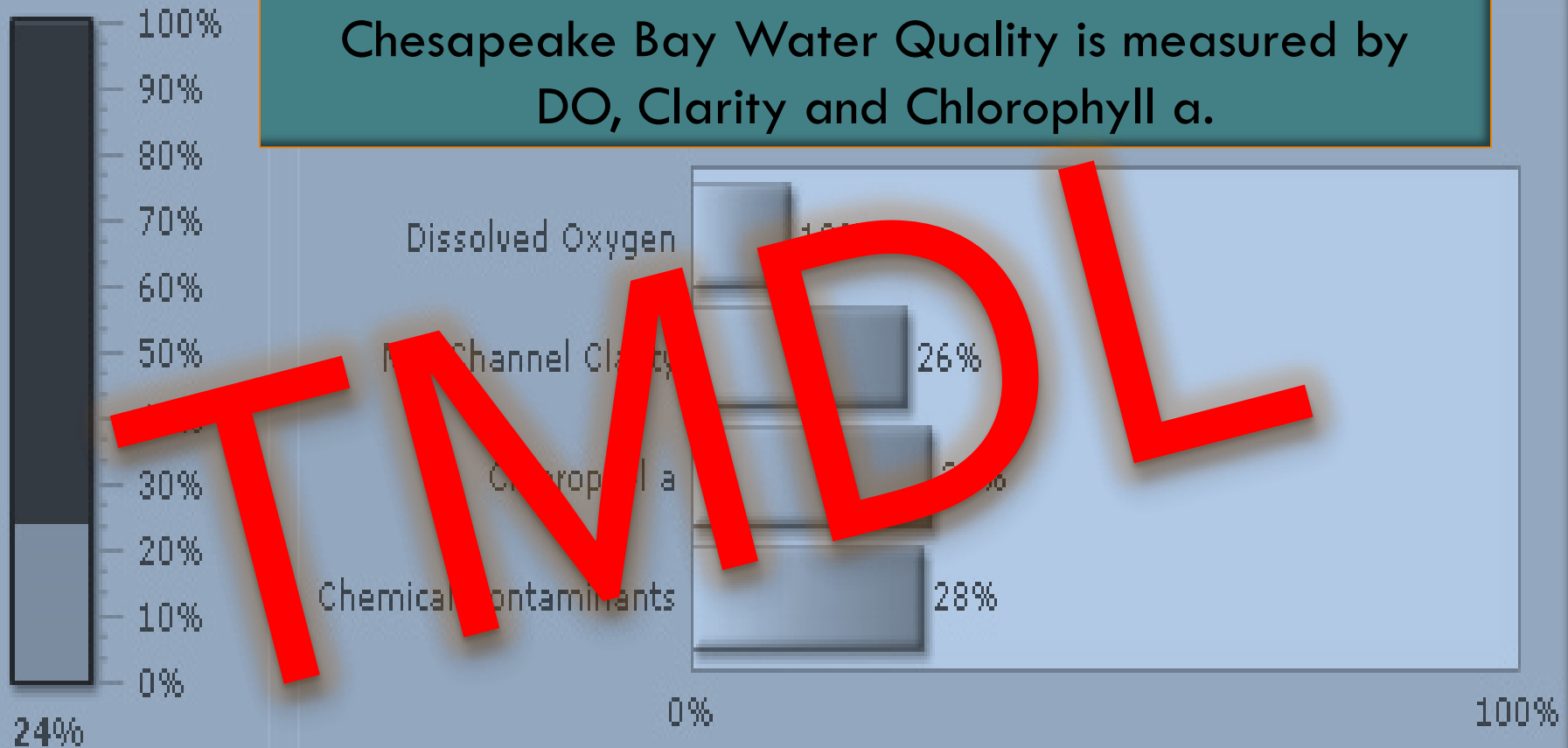
2025

2008 WATER QUALITY:

Inadequate by any measure



Chesapeake Bay Water Quality is measured by
DO, Clarity and Chlorophyll a.





2010

A **TMDL** calculates the maximum amount of a specific pollutant that a waterbody can receive and still meet water quality standards.

Clean Water Act

Reasonable Assurance

(Section 7)

Game Changer

“When the EPA establishes a TMDL that allocates pollutant loads to both point and nonpoint sources, it determines whether there is reasonable assurance that the load allocations will be achieved and water quality standards will be attained. EPA does that to be sure that the sector allocations are not based on overly generous assumptions regarding the amount of nonpoint source pollutant reductions that will occur.”

2011: Congressional Review of Chesapeake Bay Program

CONCLUSION: Verification ensures that the
implementation is real.



**National Academy of
Sciences**

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

2011

**Verification =
Implementation**





How Is Verification Defined?

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

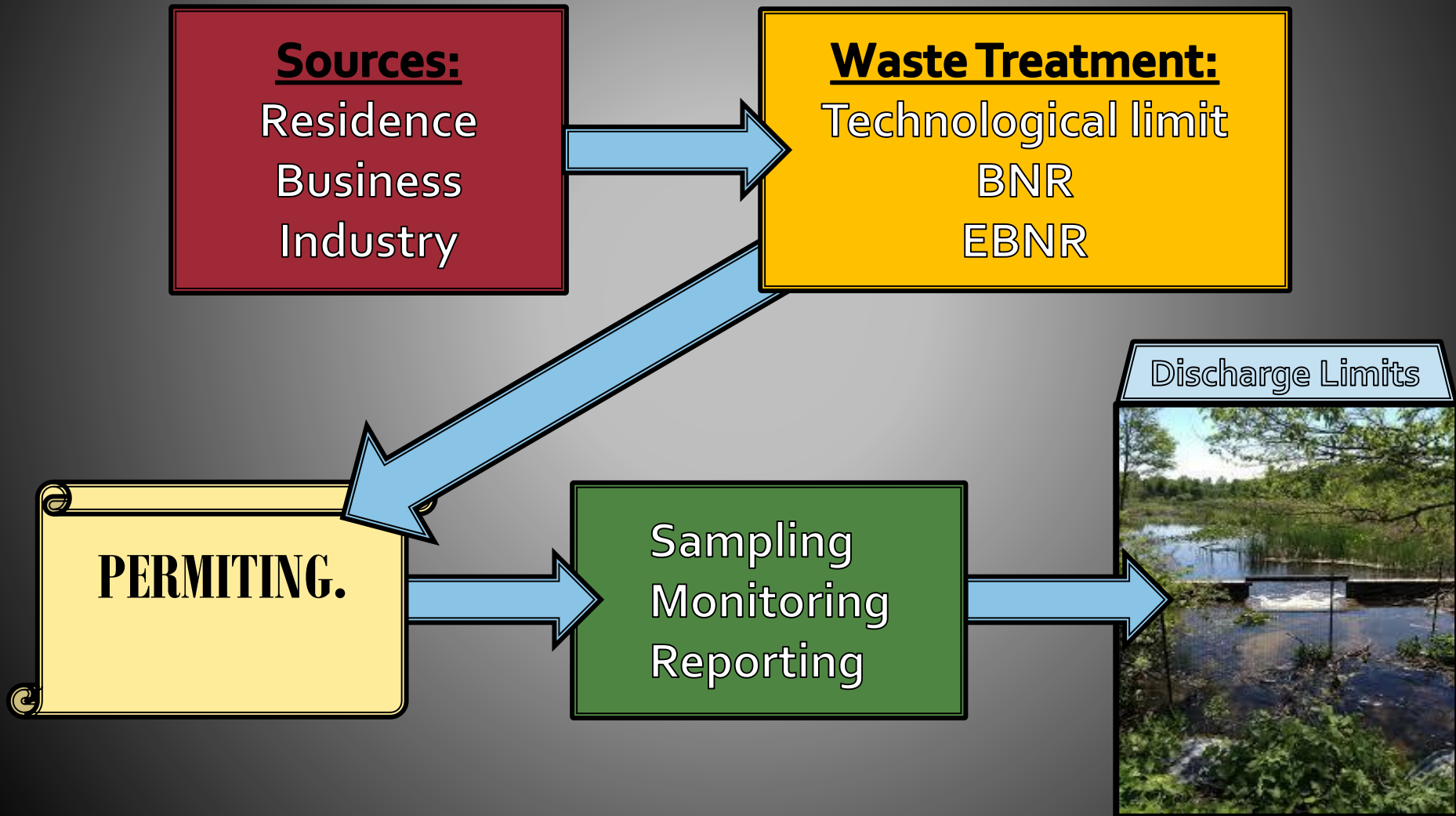
What Can Verification Accomplish?

- Confirm that voluntary practices are planned and installed correctly.
- Eliminate double counting.
- Assure that voluntary BMPs are maintained and functioning over time.
- Identify when corrective actions needed.
- Help in understanding the impacts of the actions taken.
- Modeling Bay clean-up progress requires accurate data input.

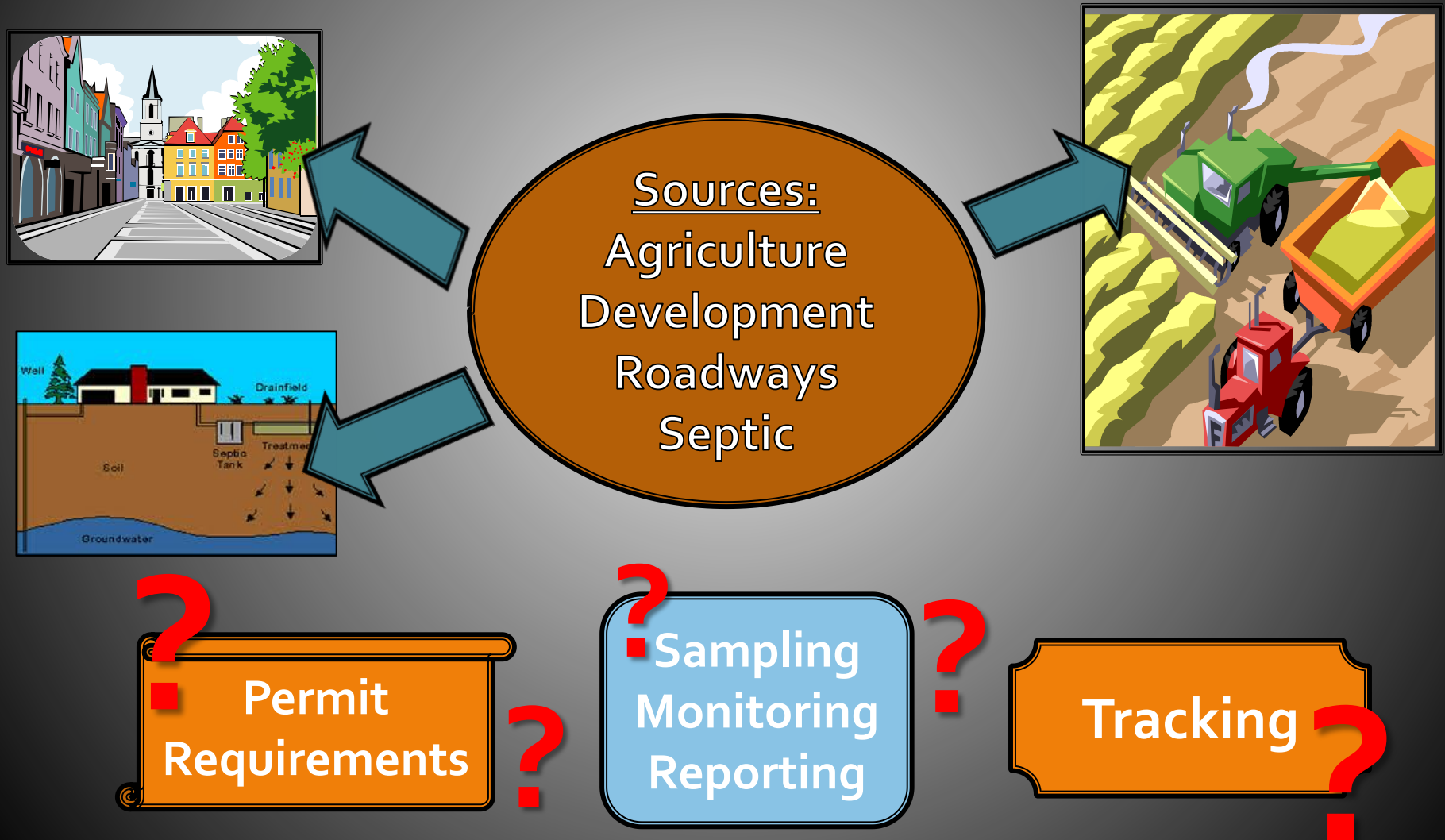
Garbage in,
Garbage out



POINT SOURCE VERIFICATION: The “Gold Standard”



NONPOINT SOURCE VERIFICATION: A Work in Progress



Who Verifies & How Often?



Should all BMPs be treated equal?

Table 1. Most Common Agricultural BMP Phase II WIP Acres Watershed-Wide

BMP	Acres
Conservation Plans	6,811,304
Enhanced Nutrient Application Management	2,082,419
Other Conservation-Till	2,002,283
Decision Agriculture	1,143,587
Cover Crop	1,136,034
Nutrient Application Management on Pasture	1,033,992
Nutrient Application Management on Crop	995,989
Prescribed Grazing	948,389
Land Retirement	609,407
Liquid & Poultry Injection	371,823
Continuous NoTill	321,901
Commodity Cover Crop	307,143
Precision Intensive Rotational Grazing	286,210
Forest Buffers	277,913
Crop Irrigation Management	251,767

Table 2. Most Common Urban BMP Phase II WIP Acres Watershed-Wide

BMP	Acres
Filtering Practices	848,488
Infiltration Practices	655,730
Wet Ponds & Wetlands	411,753
Extended Dry Ponds	225,756
Dry Ponds	174,664
Forest Harvesting BMPs	164,821
Extractive Erosion and Sediment Control	149,635
Forest Conservation	113,977
SWM by Era (1985-2002)	98,803
Street Sweeping	89,474
Erosion and Sediment Control	83,551
Retrofit Stormwater Management	69,208
SWM by Era (2002-2010)	65,668
Impervious Surface & Urban Growth Reduction	61,956
Abandoned Mine Reclamation	61,285

Who has Confidentiality?



“Farm Bill”

Food Conservation and Energy Act of 2008, section 1619

SEC. 1619. INFORMATION GATHERING

(2) PROHIBITION.—Except as provided in paragraphs (3) and (4), the Secretary, any officer or employee of the Department of Agriculture, or any contractor or cooperator of the Department, shall not disclose—

(A) information provided by an agricultural producer or owner of agricultural land concerning the agricultural operation, farming or conservation practices, or the land itself, in order to participate in programs of the Department; or

(B) geospatial information otherwise maintained by the Secretary about agricultural land or operations for which information described in subparagraph (A) is provided.

What's the Timeline?

Sept. 2014

Framework Adoption by the Partnership



Oct. 2014-July
1, 2015

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



July -
September
2015

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



Oct. – Dec.
2015

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



2016-2017

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



2018

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



**WORK
IN
PROGRESS**

UNDER CONSTRUCTION

UNDER CONSTRUCTION

UNDER CONSTRUCTION

CONSTRUCTION

CONSTRUCTION

CONSTRUCTION

UNDER CONSTRUCTION