

# Applying the CBP Decision Framework for WQGIT activities

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June 11, 2012 WQGIT Meeting



# CBP Decision Framework

- Enhance decision making and manage adaptively by reducing uncertainty
- Endorsed by PSC and EC
- Steps:
  - Articulate goals
  - Describe factors
  - Current management efforts (and gaps)
  - Development management strategy
  - Monitoring program
  - Assess performance
  - Manage adaptively
- Benefits

# WQGIT and the Decision Framework

- WQGIT activities for water-quality standards through the TMDL
- Integrated approach for assessing and communicating progress
- NAS recommendations
- Purpose for today:
  - Provide overview
  - Comments
  - Requested revisions



# Step 1: WQGIT Program Goals

- WQGIT has clear goals
- Achieve water-quality standards
  - DO, clarity/SAV, chlorophyll-a
- Bay TMDL
  - Pollutant load allocations for N, P, and S



DNR PHOTO BY  
ANGEL BOLINGER



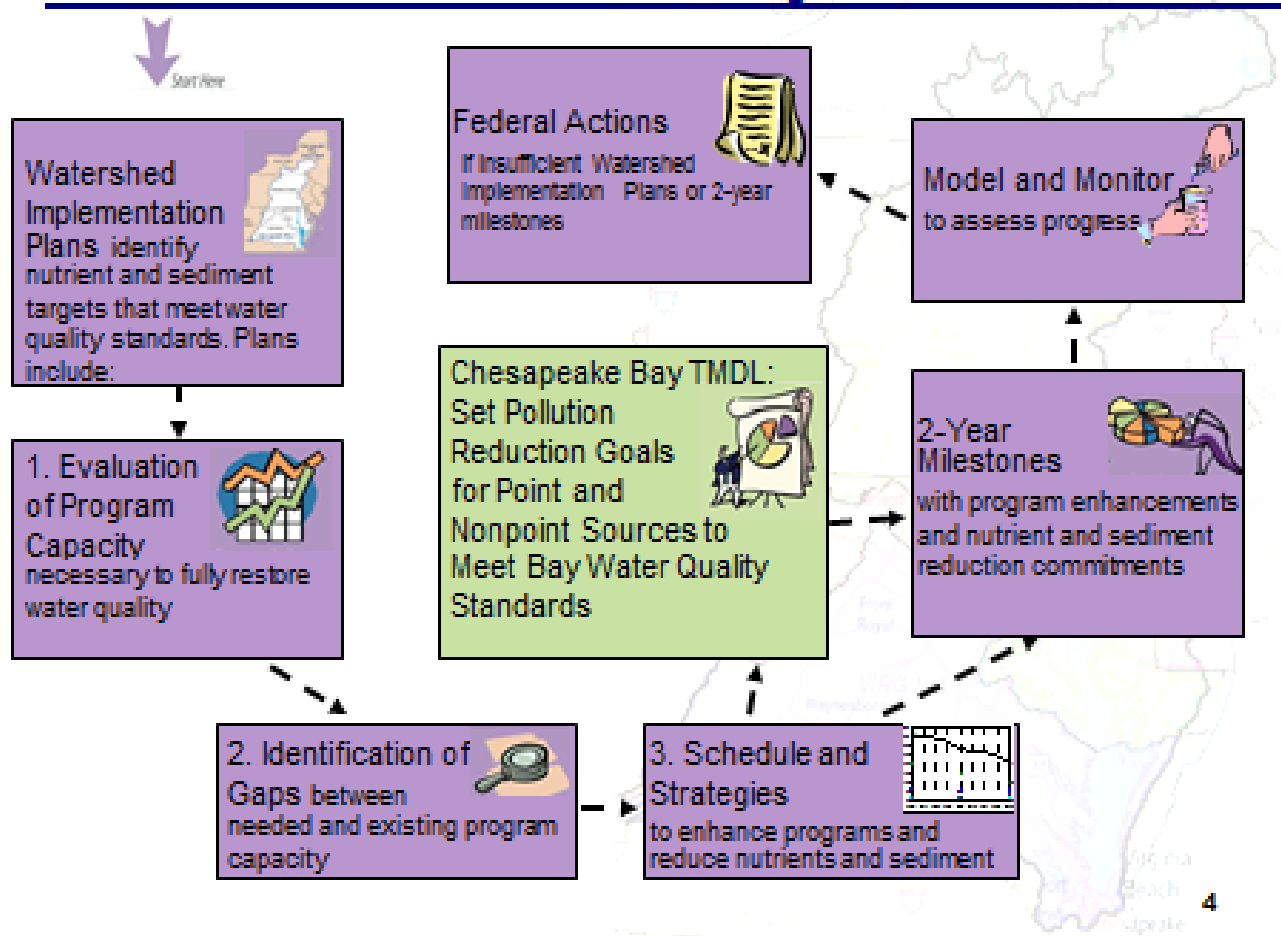
## Step 2: Factors Affecting Goals

- Understanding system response to load reductions
  - DO, clarity/SAV, chlorophyll-a
- Sources and contributions to N,P, and S loads
  - Info summarized and in CBP models
- Describing and quantifying effects of pollution reduction practices
- Capacity to implement practices

# Step 3: Current Efforts

- WQGIT and TMDL accountability framework

## Overview of Accountability Process



## Step 3: Current Efforts (and Gaps)

- Understanding system response to load reductions
  - BMP effects on water quality and lag times
- Sources and contributions to N,P, and S loads
  - Source sectors
  - Provide at more local scales
- Describing and quantifying effects of pollution reduction practices
  - Improve verification and reporting
- Capacity to implement practices
  - Funding challenges

## Step 4: Management Strategies

- Opportunities to address gaps
- Understanding system response
  - Lessons learned and trend reports, lag times workshop, living resources, STAR and STAC
- Sources and contributions to N,P, and S loads
  - Phase 2 WIPs, WQGIT workgroups, data and model enhancements (STAR support),
- Effects of pollution reduction practices
  - Improve verification and reporting, monitoring
- Capacity to implement practices
  - 2-year milestones and Phase 3 WIPs



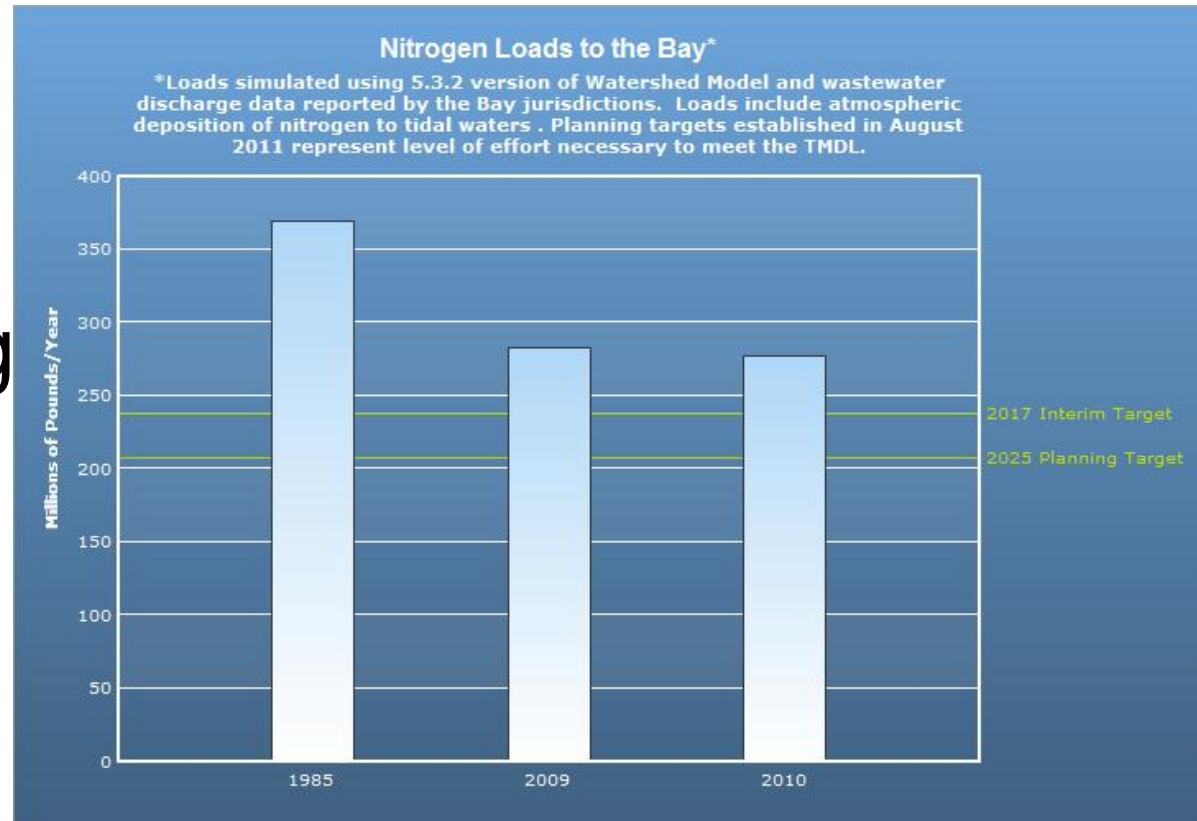
# Step 5: Monitoring Program

- How are practices being implemented for the TMDL improving water quality?
- Integrated approach:
  - Practices implemented (TMDL)
  - Nutrients/sediment in watershed
  - Attainment of standards
- Reports to explain change
- WQ GIT-STAR interactions
- MB and PSC



# TMDL-Reporting of BMPs

- BMPs implemented
- Projected load reductions (progress runs)
- Annual reporting and 2-year milestones
- Improved BMP reporting and verification



# CBP Nontidal Monitoring

- Nutrients and sediment monitoring network
- Trends
  - Long term and 10 year
- Loads
  - To the Bay
  - Yields in watershed
- Reports to explain change

## Nontidal Water Quality Monitoring Network

Chesapeake Bay Watershed



### Monitoring Locations

- Primary
- Secondary
- River Input

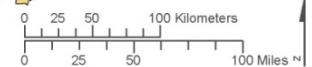
### Major Drainage Basins

- Eastern Shore MD
- Eastern Shore VA
- Patuxent River
- Potomac River
- Rappahannock River
- Susquehanna River
- Western Shore MD
- York River
- James River

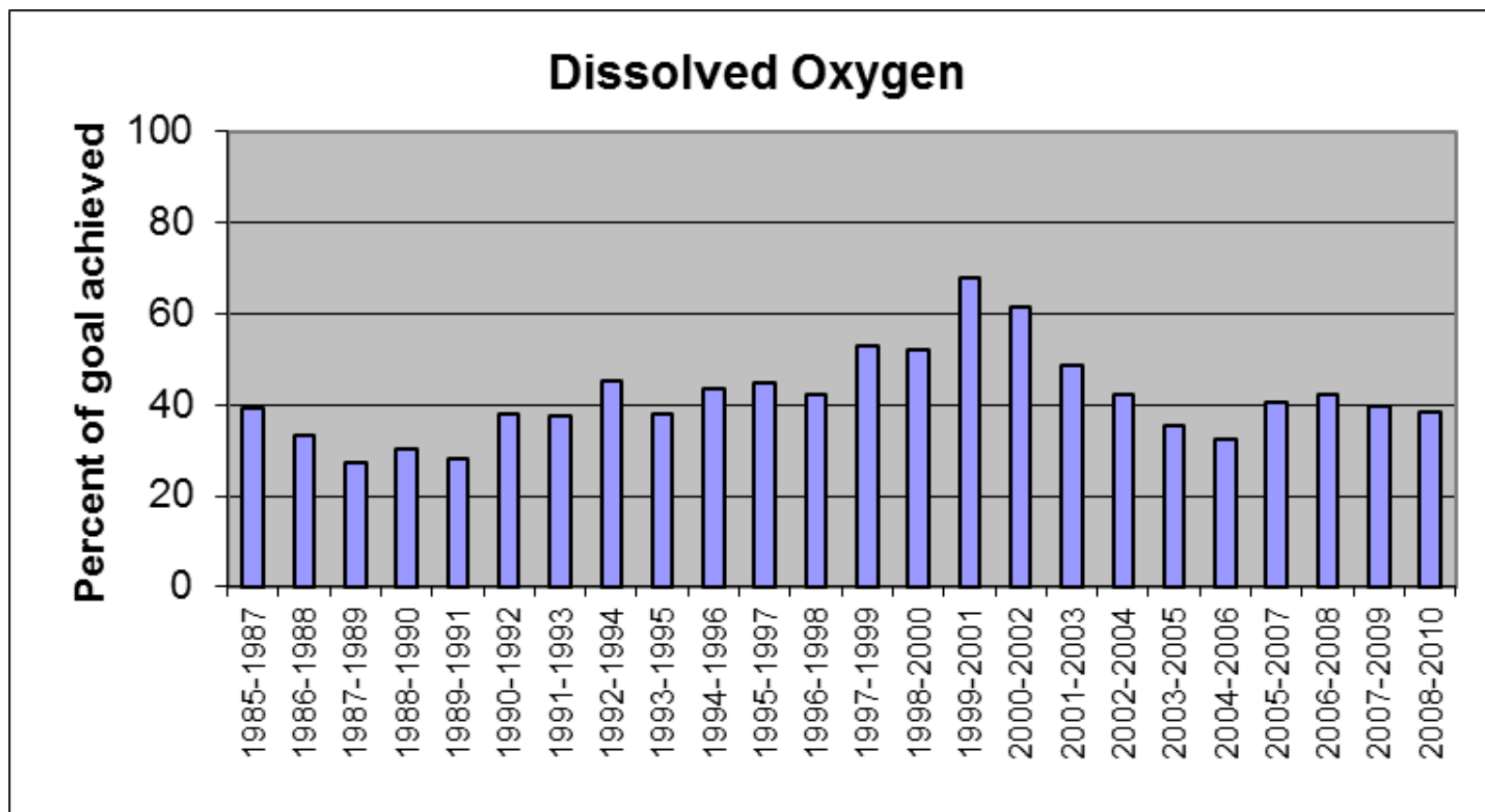
- Major Rivers / Streams
- State Boundary
- Chesapeake Bay

Note: This monitoring network was developed in 2004, funded by Federal and regional partners and coordinated between VADEQ, MDDNR, USGS, WVDEP, PADEP, SRBC, NYSDEC, and DNREC. Monitoring is conducted using standardized protocols; frequency depends on monitoring site type.

Data Source: Chesapeake Bay Program.  
For more information, visit [www.chesapeakebay.net](http://www.chesapeakebay.net)  
Disclaimer: [www.chesapeakebay.net/termsfuse.htm](http://www.chesapeakebay.net/termsfuse.htm)



# Water-Quality Standards

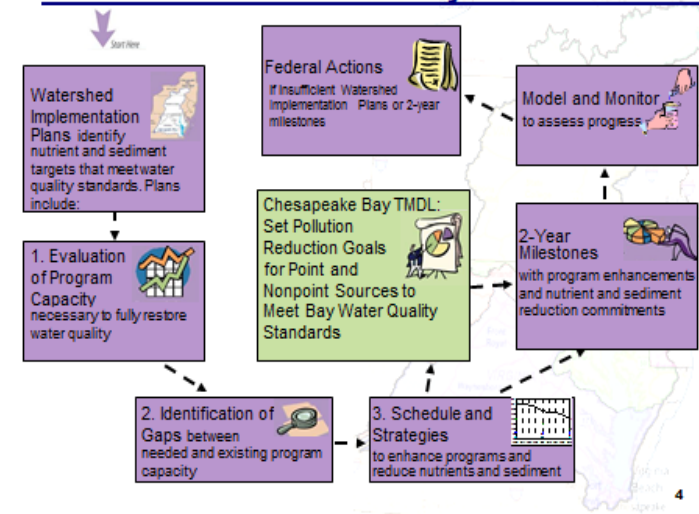


- DO, clarity, chl-a in progress toward standards
- DO: 38%, Clarity: 18%, Chl-a: 22%
- Enhanced assessments

# Step 6: Assess Performance

- Use TMDL accountability framework
- Phase 2 WIPs
- 2-year milestones
- 2017 Mid-point assessment
  - Model enhancements
  - Progress toward attainment
  - Explaining change and BMPs
  - Phase 3 WIPs

## Overview of Accountability Process





## Step 7: Management Adaptively

- TMDL accountability framework
- What progress had been made in implementing practices for the Bay TMDL?
- What are the changes in water quality and progress toward water-quality standards?
- What are we learning about the factors affecting water-quality changes to better implement practices?
- What improvements are needed in modeling, monitoring, and science?
- How do we best consider the combined impacts on land and climate change on nutrient and sediment loading and implications for the TMDL?

# Discussion and Next Steps

- Initial reactions to Decision Framework application
- What other pieces of information would you like considered?
- Written comments by June 29
  - Further revisions and discussion
- Use by the WQGIT
  - Use to manage activities
  - Workgroups develop decision frameworks
  - Interaction with other GITs and MB