

**Processes for the Technical Review of the
Chesapeake Bay Program's Monitoring
Program Objectives and Priorities
and
Design of an Integrated Monitoring Plan**

A Cautionary Tale

Albemarle-Pamlico National Estuary Program

7 May 2010



Doch weh! die Flamme faßt das Kleid.
 Die Schürze brennt; es leuchtet weit.
 Es brennt die Hand, es brennt das Haar,
 Es brennt das ganze Kind sogar.

Und Ming und Maunz, die schreien
 Gar jämmerlich zu zweien:
 „Herbei! Herbei! Wer hilft geschwind?
 In Feuer steht das ganze Kind!
 Miau! Mio! Miau! Mio!
 Zu Hilf! das Kind brennt lichterloh!“

Verbrannt ist alles ganz und gar,
 Das arme Kind mit Haut und Haar;
 Ein Häuflein Asche bleibt allein
 Und beide Schüh', so hübsch und fein.

Und Ming und Maunz, die Kleinen,
 Die sitzen da und weinen:
 „Miau! Mio! Miau! Mio!
 Wo sind die armen Eltern? Wo?“
 Und ihre Tränen fließen
 Wie's Bächlein auf den Bächen.

It's never too early to align goals and monitoring

**You can't manage what you don't
monitor**

Environmental Issues in Six Steps

- Do I have a problem?
- How big is it?
- Is it getting better or worse?
- What's causing it?
- What can I do to fix it?
- Are my management actions making a difference?



U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF INSPECTOR GENERAL

Evaluation Report

EPA Needs to Better Manage Chesapeake Bay

A Summary Report

Report No. 08-P-0199

July 14, 2008



Environmental Protection Agency
Office of Inspector General

Evaluation Report

Saving the Chesapeake Requires Better Coordination Environmental and Agricultural

EPA OIG Report No. 2007-P-00004
USDA OIG Report No. 50601-10-Hq

November 20, 2006



United States Environmental Protection Agency
Region 3
Chesapeake Bay Program Office (3CB00)
Annapolis, Maryland
in cooperation with the Chesapeake Bay Program Partners



Strengthening the Management, Coordination, and Accountability of the Chesapeake Bay Program

Report to Congress

CBP/TRS 292 08
July 2008

Main Entry: ac·count·abil·i·ty

Pronunciation: \ə-□kaʊn-tə-□bi-lə-tē\

Function: *noun*

: the quality or state of being accountable;
especially: an obligation or willingness to accept responsibility or to account for one's actions
<public officials lacking accountability>

Main Entry: ac·count·able

Pronunciation: \ə-□kaʊn-tə-bəl\

Function: *adjective*

1 : subject to giving an account : answerable
<held her accountable for the damage>

2 : capable of being accounted for : explainable

The Really Large Picture

What GAO Recommends

GAO recommends that the Administrator of EPA instruct the Chesapeake Bay Program Office to (1) complete its efforts to develop and implement an integrated assessment approach; (2) revise its reporting approach to improve the effectiveness and credibility of its reports; and (3) develop a comprehensive, coordinated implementation strategy that takes into account available resources. In commenting on this report, the signatories to the *Chesapeake 2000* agreement generally agreed with GAO's recommendations.

Proposal requests:

1. Provide an assessment of how well the current package of Bay Program funded monitoring programs support Bay Program objectives. And decision-making in the Bay watershed
2. Provide recommendations that will enable more efficient use of scarce resources and improved ecological assessments in support of Bay Program objectives. These recommendations should address
 1. opportunities to better coordinate Bay Program and non Bay Program funded monitoring programs,
 2. potential applications of specific new technologies and techniques, and
 3. possible reallocations of resources among the current monitoring programs.
3. Explain implications, pro and con, of recommended changes.
4. Prioritize recommended changes.

If you compared:



CHESAPEAKE 2000



The Chesapeake Bay is North America's largest and most biologically diverse estuary, home to more than 1,600 species of plants, fish and animals. For more than 300 years, the Bay and its sediments have sustained the region's economy and defined its traditions and culture. It is a resource of extraordinary productivity, worthy of the highest levels of protection and restoration.

Accordingly, in 1983 and 1987, the states of Virginia, Maryland, Pennsylvania, the District of Columbia, the Chesapeake Bay Commission and the U.S. Environmental Protection Agency, representing the federal government, signed historic agreements that established the Chesapeake Bay Program partnership to protect and restore the Chesapeake Bay's ecosystem.

For almost two decades, we, the signatories to these agreements, have worked together as stewards to ensure the public's right to clean water and a healthy and productive resource. We have sought to protect the health of the public that uses the Bay and ensures its beauty. The initiatives we have pursued have been deliberate and have produced significant results in the health and productivity of the Bay's main stem, the tributaries, and the natural land and water ecosystems that compose the Chesapeake Bay watershed.

While the individual and collective accomplishments of our efforts have been significant, even greater effort will be required to address the numerous challenges that lie ahead. Increased population and development within the watershed have created ever-greater challenges for us in the Bay's restoration. These challenges are further complicated by the dynamic nature of the Bay and the ever-changing global ecosystem with which it interacts.

In order to achieve our existing goals and meet the challenges that lie ahead, we must reaffirm our partnership and commitment to fulfilling the public responsibility we undertook almost two decades ago. We must manage for the future. We must have a vision for our desired destiny and put programs into place that will secure it.

To do this, there can be no greater goal in this commitment than to engage everyone — individuals, businesses, schools and universities, communities and governments — in our effort. We must encourage all citizens of the Chesapeake Bay watershed to work toward a shared vision — a system with abundant, diverse populations of living resources, fed by healthy streams and rivers, sustaining strong local and regional economies, and our unique quality of life.

In affirming our commitment through this new Chesapeake 2000, we recognize the importance of viewing this document in its entirety with no single part taken in isolation of the others. This Agreement reflects the Bay's complexity in that such actions we take, like the slowings of the Bay itself, is committed to all the others. This Agreement responds to the problems facing this magnificent ecosystem in a comprehensive, multifaceted way.

By THIS AGREEMENT, we commit ourselves to nurture and sustain a Chesapeake Bay Watershed Partnership and to achieve the goals set forth in the subsequent sections. Without such a partnership, future challenges will not be met. With it, the restoration and protection of the Chesapeake Bay will be ensured by generations to come.



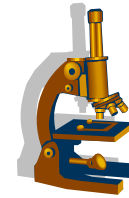
Provide an assessment of how well the current package of Bay Program funded monitoring programs support Bay Program objectives.

Process Design Criteria

- Identify the priority management endpoints in current goal attainment and decision-making
- A basis to re-examine, and if necessary re-align, the information needed to support decision-making
- Establish a process for the necessary disinvesting and reinvesting, that can be repeated at appropriate intervals.



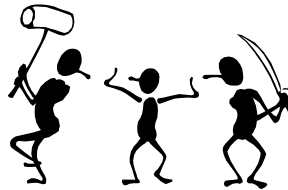
Identify existing goals



Identify existing monitoring programs



Compare goals and monitoring programs to identify gaps.



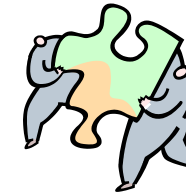
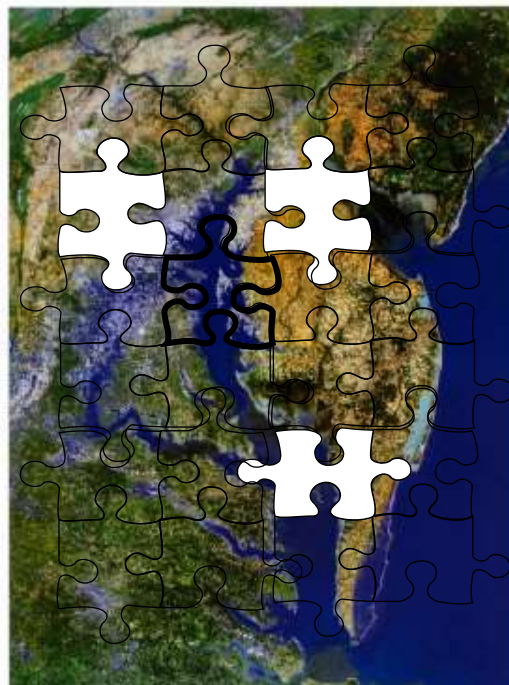
Recruit a professional facilitator



Identify & convene senior level management personnel to prioritize goals.

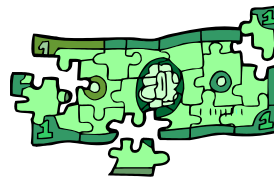


Identify & convene monitoring program representatives and identify attributes of existing programs.

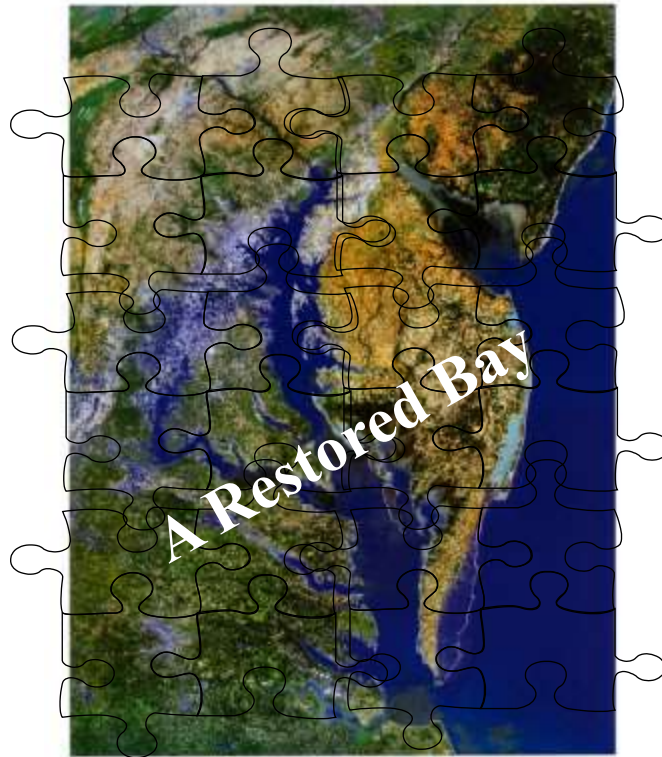


Compare senior management priorities with existing monitoring programs to identify gaps, overlaps, and efficiencies.

A Satellite View



Reconvene senior level managers to reaffirm priorities and realign monitoring programs to match priorities.



CHESAPEAKE BAY
A COASTAL WATERSHED

Implement program changes. Assess the ability of changes to address priorities. Report results.



Repeat as necessary (every 2 to 3 years)

A Shared Vision

A system with abundant, diverse populations of living resources, fed by healthy streams and rivers, sustaining strong local and regional economies, and our unique quality of life.

Goal 1: Protect and Restore Fisheries

Restore, enhance and protect the finfish, shellfish and other living resources, their habitats and ecological relationships to **sustain all fisheries and provide for a balanced ecosystem.**

Goal 2: Protect and Restore Vital Aquatic Habitats

Restore those habitats and natural areas that are **vital to the survival and diversity of the living resources** of the Bay and its rivers.

Goal 3: Protect and Restore Water Quality

Achieve and maintain the water quality necessary to **support the aquatic living resources** of the Bay and its tributaries and to **protect human health.**

Goal 4: Maintain Healthy Watersheds

Develop, promote and achieve sound land use practices which **protect watershed resources and water quality, maintain reduced pollutant loadings** for the Bay and its tributaries, and **restore and preserve aquatic living resources.**

Goal 5: Foster Chesapeake Stewardship

Promote individual stewardship and assist individuals, community-based organizations, businesses, local governments and schools to undertake initiatives to achieve **these goals and our shared vision.**

Goal 6: Enhance Partnering, Leadership, and Management

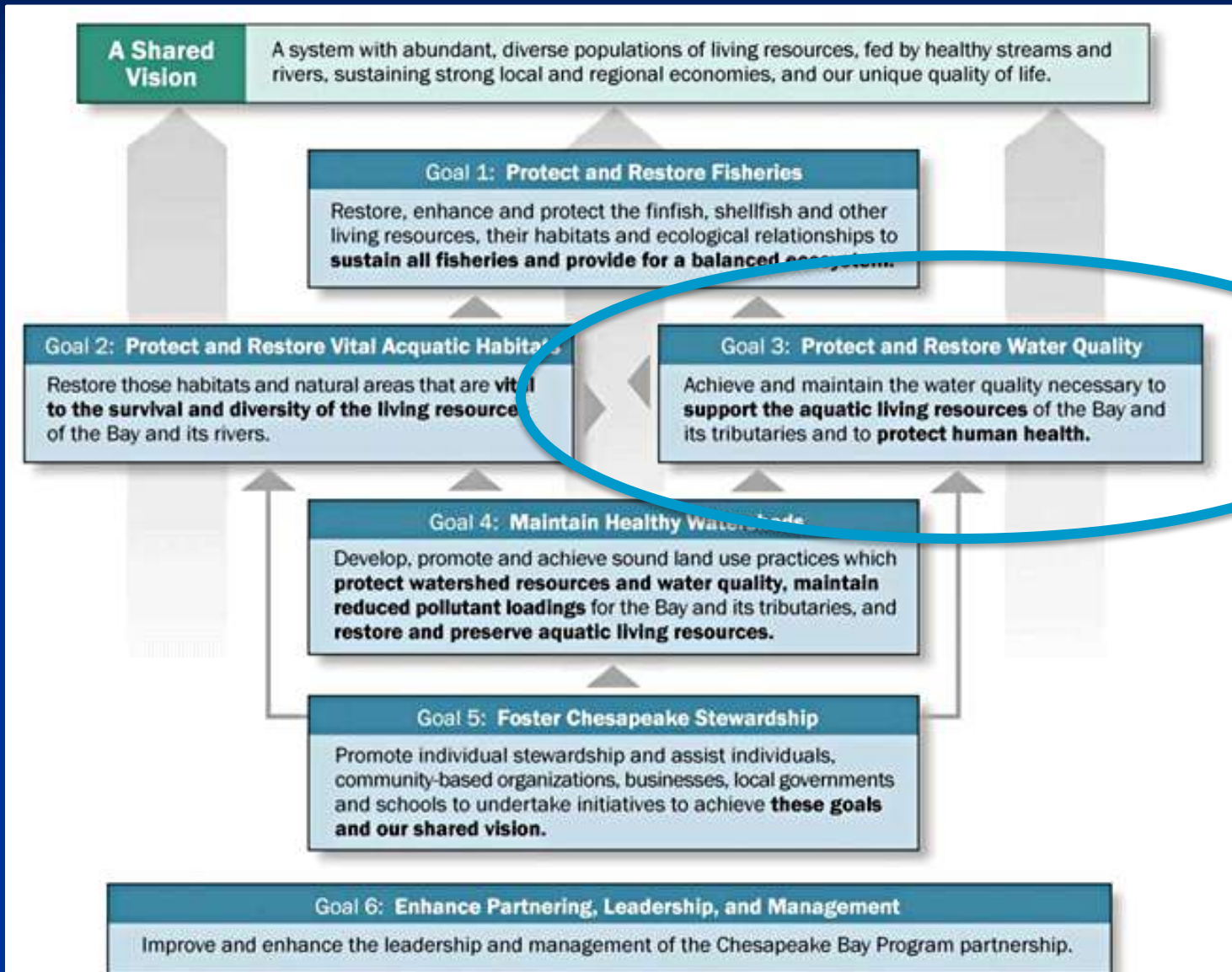
Improve and enhance the leadership and management of the Chesapeake Bay Program partnership.



Watershed Partners Senior Managers Say:

- Continuing operation of the monitoring effort in a status quo condition is unacceptable
- The delisting of the tidal segments of the Bay and determining the effectiveness of our management actions are the responsibilities of the partnership, and should be the priorities of the monitoring program

What everyone agreed to...



Watershed Partners Senior Managers Decision Rules

- Identify portions of the monitoring picture that are “sacred” (base commitment),
- Identify which portions are flexible (potential dis-investing),
- Identify priorities for addition (re-investing).

Phase I



- Identified partnership priorities in a consensus framework
 - Who we asked
 - Freedom of resource allocation concerns
- Re-prioritization = Re-allocation



Providing Recommendations

CBP proposed options for
Management Board consideration

January 2009

Management Board Response

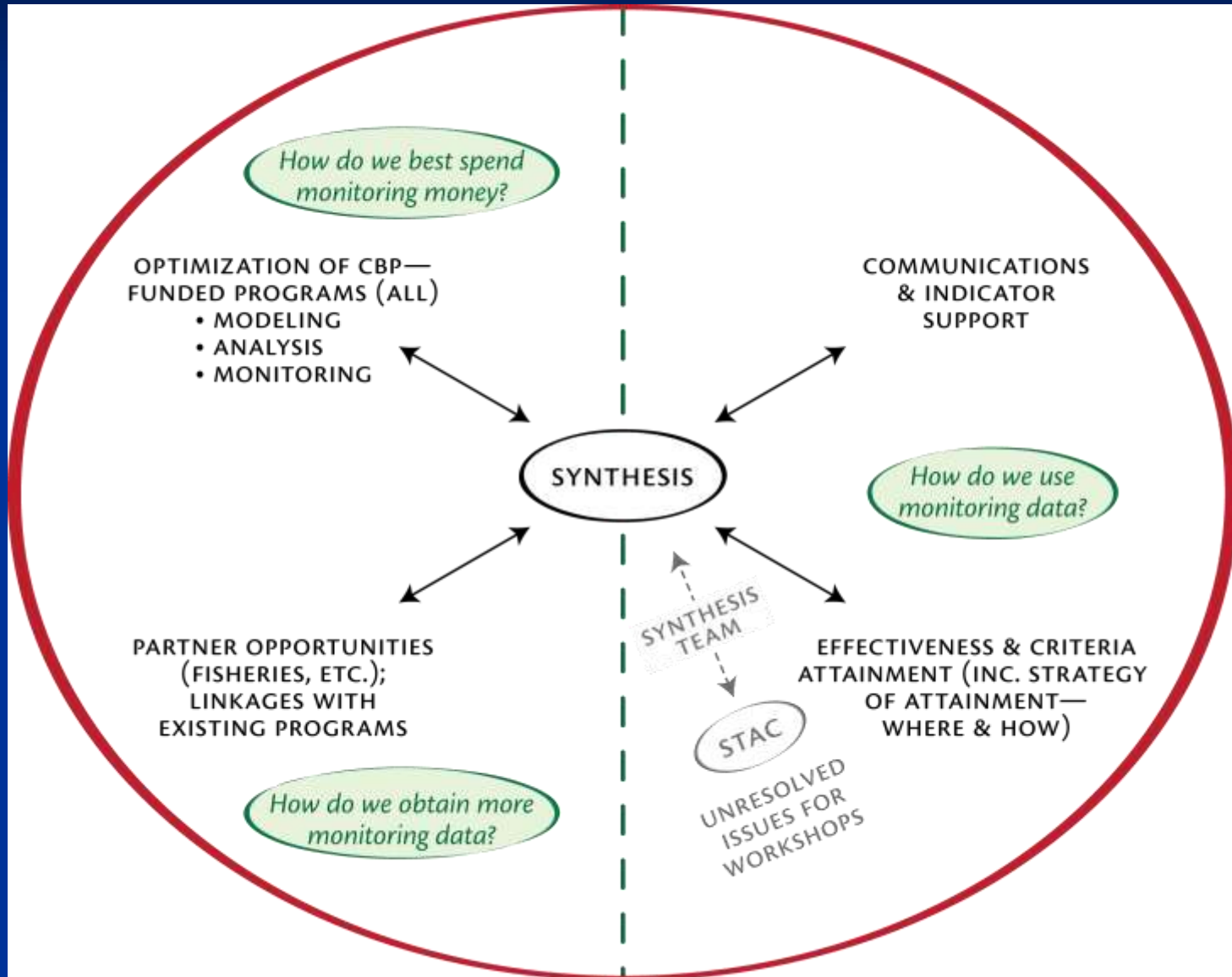
13 March 2009

- The Management Board clearly recognized the need for significant rebalancing of the monitoring program, and reiterated their desire to make a decision regarding such. However, they requested the following information prior to an option being selected:

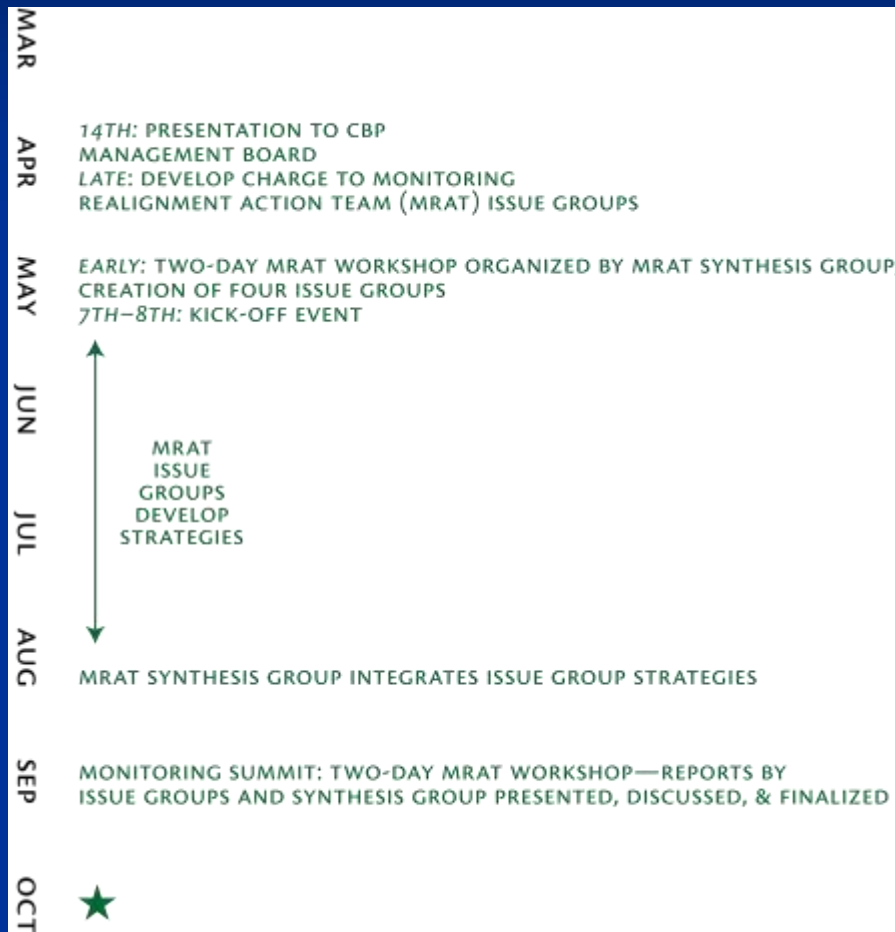
Management Board Information Requests 13 March 2009

- The ability of partners to backfill portions of the monitoring program that were designated as “flexible”
- Impacts on linkages between the core monitoring program being considered and other monitoring/investigative efforts
- Impacts of the options on the ability to make management decisions
- The available flexibility in the EPA Grant Programs
- The ability of individual states to meet the match requirements implied in the various options
- Implications of the options on long term and/or critical scientific understanding of the Bay ecosystem (the remaining portions of ‘what is sacred’)

Monitoring Realignment Action Team



Monitoring Realignment Timeline



- Rich Batiuk
- Bill Dennison
- Katie Foreman
- Kirk Havens
- Jackie Johnson
- Jeni Keisman
- Travis Loope
- Scott Philips
- Peter Tango

Synthesis Team Duties, as approved

- Delivery of an Integrated Monitoring Plan to the Management Board in October 2009, which explicitly identifies the component monitoring programs, their configuration, and their expected resource allocation, and meets the criteria for rebalancing as specified
- An accompanying narrative regarding both important short and long-term implications
- Submission to STAC for comment before presentation to the Management Board

Principles for Rebalancing

- A significant increase over current investment is needed
- Support for tidal delisting decisions and critical information for public communication should be preserved, but all other monitoring and analysis investments are “negotiable”.
- Integration of tidal and non-tidal information to improve ability to relate tidal water quality response to management efforts in the watershed

MRAT Kick-off

- Two-day event in May 2009
- First day: presentation of history and Senior Managers Priorities
- Second day; initial meetings of Issue Teams and development of charges
- >80 attendees
- Preparation of reports, synthesis, send back out for comment, forward all to MB

Synthesis (n=12)

Synthesis Team											
		MRAT Mtg	Team CC	Team CC	Team CC	Team CC	Team CC	Team CC	Synth CC	Team CC	Synth Mtg
Membership		5/21/09	6/5/09	6/12/09	6/19/09	6/26/09	7/10/09	7/17/09	7/24/09	7/31/2009 (?)	8/24/09
Batiuk	Rich	X		X	no notes	no notes		no notes			no notes
Dennison	Bill	X	X								
Foreman	Katie	X		X			X		X		
Goodwin	Jake	X	X				X		X		
Havens	Kirk	X	X	X							
Haywood	Carlton	X					X		X		
Johnson	Jackie	X	X	X			X		X		
Keisman	Jeni	X		X			X		X		
Loope	Travis	X									
Phillips	Scott	X		X			X		X		
Tango	Peter	X	X	X			X		X		
Wardrop	Denice	X	X	X			X		X		

Optimization/Effectiveness (n=47)

Optimization and Effectiveness Issue Teams			MRAT Mtg	Team CC	Team CC	Team CC	Team CC	Team CC	Team CC	Team CC	Synth CC	Team CC
Membership			5/21/09	5/29/09	6/5/09	6/12/09	6/19/09	6/26/09	7/10/09	7/17/09	7/24/09	7/31/09
Anderson	Iris	VIMS			X		no notes	no notes				
Anderson	Jon	MSU	X			X						
Bergstrom	Peter	NOAA		X	X				X		X	
Blomquist	Joel	USGS	X	X	X					X	X	X
Boynton	Walt	VIMS			X						X	
Breitburg	Denise	SERC				X						
Brush	Mark	VIMS			X	X						
Buchanan	Claire	ICPRB	X	X	X					X		
Chambers	Doug	USG WV				X						
Dennison	Bill	UCMES	X	X		X			X	X	X	X
Doughnout	Jon	ODU				X						
Doughton	Suzan	ODU				X						
Foreman	Katie	UMCES	X						X	X	X	X
Garrison	Sherm	MDDNR				X			X	X		X
Goodwin	Jake	CRC	X	X	X	X			X	X	X	
Havens	Kirk	VIMS	X			X						
Haywood	Carlton	ICPRB	X			X			X	X	X	
Heicher	Dave	SRBC							X	X		X
Hirsch	Bob	USGS	X								X	X
Hoffman	Rick	VADEQ		X	X	X				X	X	X
Johnson	Cindy	VADEQ	X	X	X				X			X
Johnson	Jackie	ICPRB	X						X	X	X	X
Karrh	Renee		X								X	X
Keisman	Jeni	UMCES	X						X	X	X	
Lane	Mike	ODU	X	X	X	X					X	X
Ley	Mary Ellen	USGS			X				X			
Llanso	Roberto	Versar				X						
Michael	Bruce	MDDNR		X	X	X			X	X	X	X
Mirjadsan	Hassan	DE				X						
Moore	Ken	VIMS										
Omer	Derick	NOAA		X								
Orth	Bob	VIMS	X	X	X				X	X		X
Parham	Tom	UMD		X	X				X		X	X
Perry	Elgin	Consultant		X	X	X						
Phillips	Scott	USGS	X									X
Richardson	Bill	EPA R3								X		
Romano	Bill	MDDNR	X	X	X					X		X
Shaw	Tony	PADEP							X			X
Shertzler	Rich	PADEP	X			X			X			
Sylvester	Nita	EPA							X		X	
Tango	Peter	USGS	X	X	X	X			X	X	X	X
Townsend	Howard	NOAA		X	X							
Trice	Mark	MDDNR	X			X			X			X
Varnell	Lyll	VIMS			X							
Wainger	Lisa	UMCES	X		X							
Wardrop	Denice	PSU	X	X	X	X			X			
Weller	Don	SERC	X	X	X	X						



Findings: Watershed Team

- Detailed recommendations on monitoring & data analysis to address management questions
- Maintain existing network – improve data mgmt
- Enhanced analysis of CBP and partner data to document, explain, and communicate changes in water quality
- Enhanced data collection on watershed landscape characteristics
- New monitoring stations targeting small basins: agric. and urban

Table 4. Rough estimated costs for improved watershed monitoring and assessment

Activity	Existing activities: currently coordinated by CBP, (#FTE)	Existing activities: currently coordinated by partners, (#FTE)	Additional support needed (#FTE)	Partnering opportunity	Does the effort vary by stage of activity?	Priority level	Total estimated additional cost (\$)	Total estimated cost (\$) of highest priority activities
Topic 1: Enhancing the assessment of existing information								
Status: Stewardship of data from maturing NTN sites	0.5	USGS, 0.25	0.5-1	USGS/States	Yes	High	50,000-100,000	50,000-100,000
Status: Continue to use and improve CBP modeling tools for targeting	2	USGS, 0.5	0.25-0.5	USGS/CBP-modelers	Yes	Low	25,000-50,000	
Status: Improve and update stream health indicator	0.5	ICPRB and States, 1	1	ICPRB/UMCES	Yes	Medium	100,000	
Status: Determine how data from state integrated assessments can be used to target - Database management	0	States, 0.25	0.25-0.5	States/ICPRB/CBP	No	Low	25,000-50,000	
Status: Determine how data from state integrated assessment can be used to target - Synthesize	0	States, 0.25	0.25-0.5	States/ICPRB/CBP	Yes	Low	25,000-50,000	
Documenting WQ change: Yearly updates of nontidal trends	0.2	USGS and States, 1	0.25-0.5	USGS/States	No	High	25,000-50,000	25,000-50,000
Documenting WQ change: Develop additional trend analysis techniques for shorter time periods	0	USGS, 1	1	USGS/Academics	No	Medium	100,000	

“Work with CBP partners to improve the quality and spatial resolution of information on the time history of land use, land-use practices (including implementation of BMPs), application rates of fertilizers and manure, point source loading, atmospheric deposition, and other causative factors within the watershed. **Without improved spatially specific time series data on these causative factors, the water quality data products will have very limited utility for determining the effectiveness of management actions.** “

Findings: Optimization Team

- CBP funded tidal monitoring has enabled huge advances in understanding of Bay ecosystem.
- All elements of current tidal monitoring have value, but some elements may be more critical to CBP management moving forward.
- Identified potential (and actual) dis-investment opportunities and identifies consequences of cuts
- Proposes creation of a Data Synthesis Center to facilitate periodic intensive analysis to answer specific questions.

Findings: Partnership Team

- Almost 300 monitoring programs identified.
- Nearly $\frac{3}{4}$ in watershed - good for watershed, but few tidal opportunities.
- Partner programs can provide useful information but, in general, cannot answer the specific, strategic, questions asked by CBP management.
- Partners are not free! Require either direct match or additional cost for QA, data mgmt, etc.
- Changes to CBP monitoring may impact partner monitoring.

Findings: Communications Team

- Documented multiple uses of monitoring data for communication
- Communication priorities
 - Linking restoration activities to pollution reduction
 - Identify success stories
 - Identify struggling situations
 - Look at smaller scale systems, i.e. “my” watershed
 - Highlight long term trends

Things happen...



THE BRIEFING ROOM

THE WHITE HOUSE

Office of the Press Secretary

For Immediate Release May 12, 2009

EXECUTIVE ORDER

CHESAPEAKE BAY PROTECTION AND RESTORATION

By the authority vested in me as President by the Constitution and the laws of the United States of America and in furtherance of the purposes of the Clean Water Act of 1972, as amended (33 U.S.C. 1251 et seq.), and other laws, and 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, it is hereby ordered as follows:

PART 1 - PREAMBLE

STAY CONNECTED

- Facebook
- Twitter
- Flickr
- MySpace
- YouTube
- Vimeo
- iTunes

A NEW ERA of RESPONSIBILITY

FY 2010 BUDGET

MORE INFORMATION

YOUR MONEY at WORK

RECOVERY.gov

Press Release: Kaine Announces Plan to Address Shortfall

Posted: Sep 08, 2009 1:45 PM

Updated: Sep 08, 2009 4:20 PM

Press Release:

GOVERNOR KAINE ANNOUNCES PLAN TO ADDRESS FISCAL YEAR 2010 SHORTFALL~

Shortfall for remainder of fiscal year just over \$1.35 billion ~

RICHMOND - Governor Timothy M. Kaine today announced his executive spending reduction plan to meet the FY 2010 revenue shortfall of \$1.35 billion. The Governor's plan trims government spending by reducing the scope of some government programs, while protecting K-12 government fun



File Photo

• **Kaine Cuts Include Furlough Dav. Lavoffs**

Winners and losers in the Pa. budget

"The Commonwealth BY ROGER DUPUIS II AND ROBERT SWIFT (STAFF WRITERS)

since the Great Published: October 10, 2009

Kaine said. "The

economy in a c

weather the stor

The official rev

billion for FY 20

biennium to m

2008-2010 bien

meet the challer

Losers

n Human services: The state's Human Services Development Fund takes a 17 percent hit, to \$29 million. Child care assistance would drop 12 percent, to \$198 million.

n Public libraries: State subsidies drop 20 percent, from \$75 million to \$60 million.

n Higher education: Penn State (6 percent), state-owned universities (8 percent) and community colleges (9 percent) all are facing state cuts. Federal stimulus money may help offset these cuts. The Pennsylvania Higher Education Assistance Agency would drop about 3.5 percent, to \$455 million.

n Economic development: Community revitalization is being cut altogether.

n Parks and recreation: Funding for heritage parks is completely cut, while state parks face a 19 percent cut.

n The environment: The state Department of Environmental Protection will lose 31 percent of its budget, while flood-control projects will drop by 28 percent.

Three options

- Re-balancing of approximately \$500,000
- Re-balancing of approximately \$1,000,000
(original Management Board request)
- Fully-funded Monitoring program that
meets Senior Manager priorities
(additional resources become available)

Outcomes to date

- Initiation of conversations between managers and scientist and planning for regular interactions
- Focus on analysis and synthesis
- Additional sources of data and partnering opportunities
- Input into EO effort and state priority lists for future funding
- Consideration of conceptual models, points of departure

Phase II (MRAT)

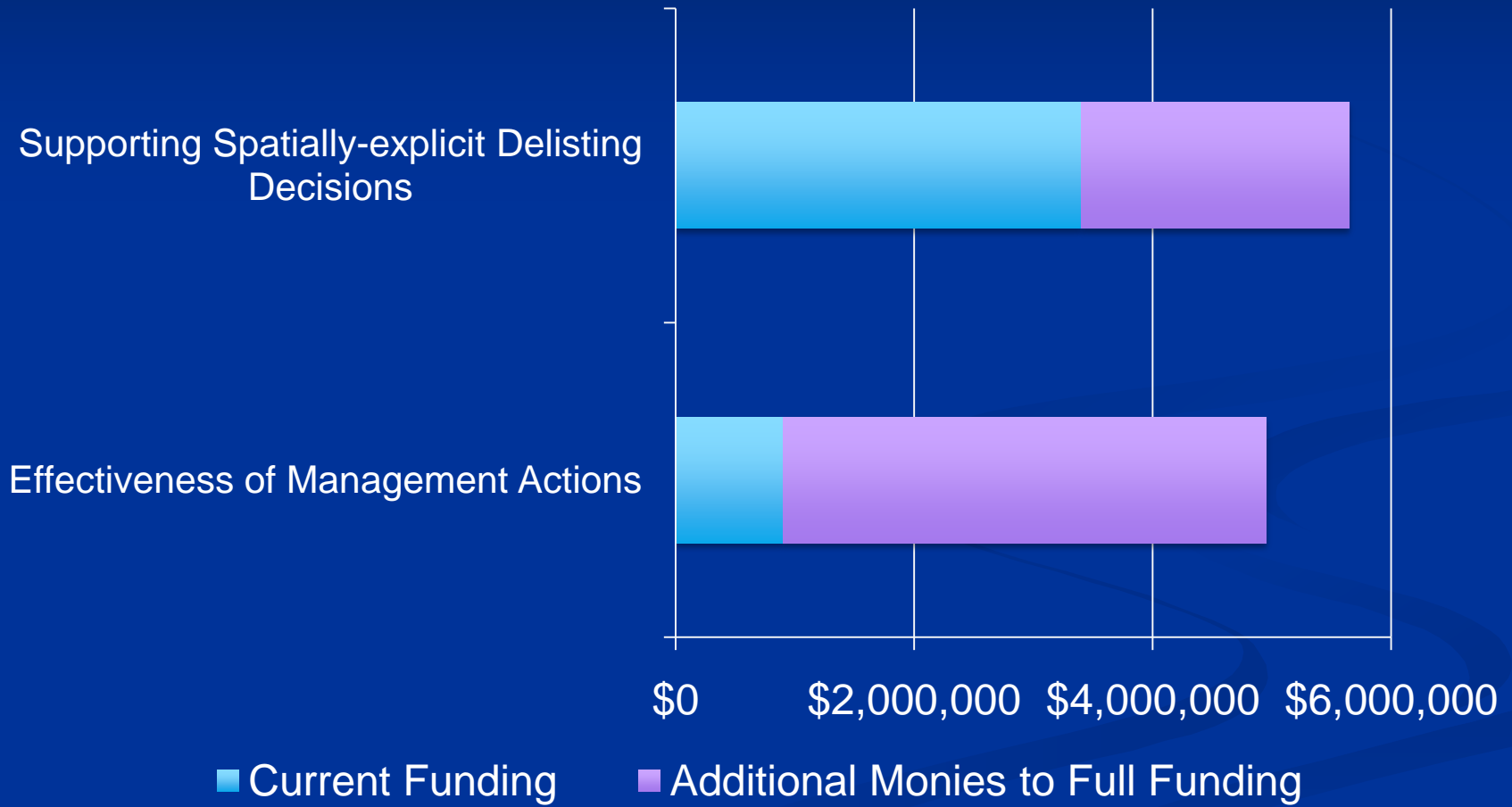


- Provided a strategic roadmap for
 - Future investments
 - Disinvestments, if necessary
- Monitoring to meet priorities
- Misperception of where consensus was appropriate or possible
- Mismatch in maturity of tidal/watershed monitoring programs
- Lack of value parameter for



2007	September	STAC requests comprehensive monitoring review
	March	CBP requests STAC monitoring review
2008	April	
	May	
	June	Workshop One, Senior Managers
	July	
	August	
	September	
2009	October	Workshop Two, Monitoring program managers and scientists
	November	
	December	Workshop Three, Senior Managers
	January	CBP prepares draft re-balancing options
	February	↓
	March	Management Board approves STAC report, requests additional info on options
	April	CBP and STAC propose MRAT process to Management Board; approved
	May	MRAT Kick-off Workshop
	June	Action Teams develop plan elements
	July	↓
	August	
	September	MRAT Summit Workshop
2010	October	Integrated monitoring plan options presented to Management Board
	January	Monitoring plan revisions implemented

Matching Priorities



If you compared:



CHESAPEAKE 2000



The Chesapeake Bay is North America's largest and most biologically diverse estuary, home to more than 3,000 species of plants, fish and animals. For more than 300 years, the Bay and its sediments have sustained the region's economy and defined its traditions and culture. It is a resource of extraordinary productivity, worthy of the highest levels of protection and restoration.

Accordingly, in 1983 and 1987, the states of Virginia, Maryland, Pennsylvania, the District of Columbia, the Chesapeake Bay Commission and the U.S. Environmental Protection Agency, representing the federal government, signed historic agreements that established the Chesapeake Bay Program partnership to protect and restore the Chesapeake Bay's ecosystem.

For almost two decades, we, the signatories to these agreements, have worked together as stewards to ensure the public's right to clean water and a healthy and productive resource. We have sought to protect the health of the public that uses the Bay and ensures its beauty. The initiatives we have pursued have been deliberate and have produced significant results in the health and productivity of the Bay's main stem, the tributaries, and the natural land and water ecosystems that compose the Chesapeake Bay watershed.

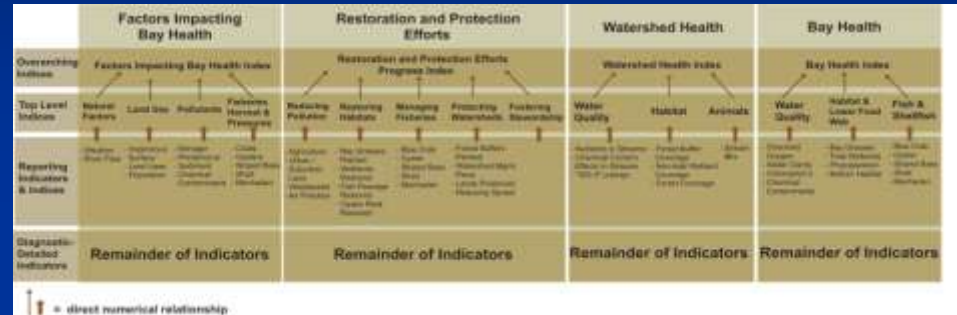
While the individual and collective accomplishments of our efforts have been significant, even greater effort will be required to address the numerous challenges that lie ahead. Increased population and development within the watershed have created ever-greater challenges for us in the Bay's restoration. These challenges are further complicated by the dynamic nature of the Bay and the ever-changing global ecosystem with which it interacts.

In order to achieve our existing goals and meet the challenges that lie ahead, we must reaffirm our partnership and commitment to fulfilling the public responsibility we undertook almost two decades ago. We must manage for the future. We must have a vision for our desired destiny and put programs into place that will secure it.

To do this, there can be no greater goal in this commitment than to engage everyone — individuals, businesses, schools and universities, communities and governments — in our effort. We must encourage all citizens of the Chesapeake Bay watershed to work toward a shared vision — a system with abundant, diverse populations of living resources, fed by healthy streams and rivers, sustaining strong local and regional economies, and our unique quality of life.

In affirming our commitment through this new Chesapeake 2000, we recognize the importance of viewing this document in its entirety with no single part taken in isolation of the others. This Agreement reflects the Bay's complexity in that such actions we take, like the flowery of the Bay itself, is connected to all the others. This Agreement responds to the problems facing this magnificent ecosystem in a comprehensive, multifaceted way.

By THIS AGREEMENT, we commit ourselves to nurture and sustain a Chesapeake Bay Watershed Partnership and to achieve the goals set forth in the subsequent sections. Without such a partnership, future challenges will not be met. With it, the restoration and protection of the Chesapeake Bay will be ensured by generations to come.



Provide an assessment of how well the current package of Bay Program funded monitoring programs support Bay Program objectives.



Doch weh! die Flamme faßt das Kleid.
 Die Schürze brennt; es leuchtet weit.
 Es brennt die Hand, es brennt das Haar,
 Es brennt das ganze Kind sogar.

Und Ming und Maunz, die schreien
 Gar jämmerlich zu zweien:
 „Herbei! Herbei! Wer hilft geschwind?
 In Feuer steht das ganze Kind!
 Miau! Mio! Miau! Mio!
 Zu Hilf! das Kind brennt lichterloh!“

Verbrannt ist alles ganz und gar,
 Das arme Kind mit Haut und Haar;
 Ein Häuflein Asche bleibt allein
 Und beide Schuh', so hübsch und fein.

Und Ming und Maunz, die Kleinen,
 Die sitzen da und weinen:
 „Miau! Mio! Miau! Mio!
 Wo sind die armen Eltern? Wo?“
 Und ihre Tränen fließen
 Wie's Bächlein auf den Bächen.