Considering Communications- A Report to the Chesapeake Bay Program Monitoring Re-Alignment Action Team

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CBP must make science-based decisions, including in realignment of monitoring. But science and data play a crucial role in many aspects of communications and the implications of monitoring realignment on outreach to the public, media and government should be strongly considered.

Monitoring in Communications

- Bay Barometer: The Health and Restoration Assessment of the Chesapeake Bay. Monitoring data is especially vital in assessing goals for water quality, habitat and lower food web.
- River flow and pollution loads. Monitoring allows the partnership to provide information on the amount of water flowing through rivers and the levels of nitrogen and phosphorus carried to the Chesapeake Bay.
- Reports by other organizations. University of Maryland Center for Environmental Science's Report Card, the Chesapeake Bay Foundation's State of the Bay and numerous report cards by riverkeepers all depend in part on CBP monitoring data every year.
- Reports to Congress, the Office of Management and Budget, and the U.S. EPA (including Inspector General).
- 303d/305b Reports.
- Milestones. CBP partners have adopted a new approach of setting short-term goals, called milestones, every two years for implementing measures to reduce pollution. The partners must be able to measure and report on progress toward meeting milestones.
- 2025. The CBP has committed to implementing all measures needed for a restored Bay and watershed no later than 2025. Again, the partnership must have a means for measuring progress toward reducing pollution that goes beyond computer modeling.
- Executive Order. President Obama's Executive Order directs the partnership to "strengthen scientific support for decision making, including expanded environmental research and monitoring and observing systems"
- Continuous record of data. From a communications perspective, a continuous record of data that extends 25 year or longer is extremely valuable and credible.
- Media relations. Media outlets throughout the watershed regularly ask for information that is driven by monitoring data and methods. As Bay restoration continues to be a prominent issue, it is important to be able to answer media questions.
- Watershed organizations. There are an estimated 600 to 700 organizations involved in watershed restoration and protection in the Chesapeake region. These groups depend on data from the CBP partners to advance their work.
- Residents. There are nearly 17 million residents in the watershed and it is critical to have monitoring data on the issues they care about and understand which include:
    - Living resources: crabs, oysters, fish, birds
    - Algae blooms
    - Safety of water from a health perspective
    - Toxics
    - Bay grasses
    - Water clarity

- Streams, creeks and rivers. As the CBP enters a new era of restoration, monitoring the health of local waterways becomes more critical because they will show the first signs of improvement and matter the most to the majority of the watershed's residents.

Priorities Based on Communications Data
In addition to the anecdotal value of monitoring data in the communications vehicles listed, there is "monitored data" from the Communications Office that provides further information.

1) Most Visited Web Pages (Addendum A): This document lists the most visited web pages on www.chesapeakebay.net during the last year. Web visitors find these pages by navigating around the site or by using a search engine that directly links them to a page on the CBP site.

Many of the top ten are the main navigation buttons for the site, but otherwise the top 40 shows there is strong interest in living resources, bay grasses, maps, watersheds, Bay facts and figures, news, pollution (in general). From 40 to 70, there begins to be interest in more technical information such as chemical contaminants, phytoplankton, dissolved oxygen, invertebrates, water quality and water clarity. But note the continued strong interest in living resources and places (streams, rivers, communities).

2) Web page searches (Addendum B): These lists show the terms that CBP website visitors enter into our search function. These lists show the top 10 overall searches as well as top web page, map, publication and photo searches. There is significant overlap in the searched terms – again the greatest interest is in living resources, pollution, bay grasses, watersheds, tributaries and the Bay itself.

It is important to note that people visiting web pages and conducting web searches include the general public, researchers, scientists, restoration managers, government employees, etc. – a broad spectrum.

3) Media coverage (Addendum C): The value of various types of monitoring data can also be assessed by looking at media coverage. The Communications Office analyzed the headlines from January 1, 2008 through July 13, 2009 and counted the occurrence of key words. The top 10 terms are bay, water, crab, farm, river, oyster, green, fish, cleanup and environment. Again we see living resources, places (bay, river, water) and cleaning up pollution (green, cleanup, environment) at the top of the list.

Future Needs for Monitoring
Based on the direction of the Chesapeake Bay Program, the information desires of the media and public and needs for communications vehicles, there are four areas that monitoring data can be of assistance:

1) Directly linking pollution reductions to restoration activities: There is a growing need to show that restoration activities are generating tangible results. As the monitoring community knows, this is something that managers and elected officials are keenly interested in. This will be especially important to support the states' milestones, the Executive Order and the development of Chesapeake Stat.

2) Identifying success stories and positive trends: This is closely related to the first point. There is a need to identify specific places and ways that the health of the Bay and watershed are improving. From a communications perspective, the Bay community and public need to see that positive change is possible.

3) Identifying struggling situations and negative trends: Conversely from the last point and in the interest of objectivity and honest reporting, monitoring data should identify specific places and ways

that the health of the Bay and watershed is struggling or heading in a negative direction. It will be important that reasons for these problems are discovered and discussed.

4) Looking at smaller scale ecosystems: Data for the overall health of the Chesapeake barely changes because of its size and the time needed for improvement. Plus, most of the 17 million residents are more interested in their local waterways. Data on tributaries and sub-watersheds will help accomplish the first two items (linking pollution reductions to restoration and identifying success stories). It will also better engage the local population, organizations and governments in cleanup efforts. If the streams, creeks and rivers aren't restored, the Bay won't be.

5) Highlighting long-term trends: Most often the Bay Program presents monitoring data in a way that focuses on short-term changes, such as the previous year. When looking at a large ecosystem (Bay) or major tributaries, this doesn't tell the story. In many cases, there are improvements visible in long-term trends – five, 10, 15, 20 years. Much of this data is available but the Communications Office needs to better utilize it in Bay Barometer and other vehicles. It will be valuable if the monitoring community can support this effort.

ADDENDUM A

Most Visited Pages on www.chesapeakebay.net (June 2008-June 2009)

Rank	Page	Visits
1.	Homepage	254,990
2.	About the Bay	77,535
3.	Animals and Plants	47,097
4.	Blue Crabs	38,989
5.	About Us	25,390
6.	Bay Restoration	23,401
7.	Bay Resource Library	23,239
8.	The Bay Watershed	22,622
9.	Bay Pressures	20,116
10.	News and Press	20,022
11.	Search Results	18,515
12.	Get Involved	16,528
13.	Air Pollution	15,969
14.	Watersheds	15,924
15.	Fish	15,869
16.	Crabs and Shellfish	15,545
17.	Comments Form	14,307
18.	Habitats	14,269
19.	Maps	13,479
20.	Fish (Bay Field Guide)	13,379
21.	Facts and History	13,169
22.	Facts and Figures	13,088
23.	Underwater Bay Grasses	12,575
24.	Food Web	11,949
25.	Aquatic Reefs (Bay Field Guide)	11,792
26.	The Bay in the News	11,741
27.	Birds	10,910
28.	Water Quality	10,126
29.	Bay Grasses (Bay Field Guide)	9,823
30.	Reptiles and Amphibians	8,814
31.	Indicators	8,770
32.	Nutrients	8,606
33.	Bay History	8,391
34.	Lower Food Web	8,081
35.	Air and Water Pollution	7,906
36.	Glossary	7,791
37.	Oysters	7,751
38.	Bay FAQ	7,526
39.	Find a Bay Group	7,183
40.	Birds (Bay Field Guide)	7,004
41.	The Estuary System	6,784

42.	Mammals	6,701
43.	Dissolved Oxygen	6,692
44.	Chemical Contaminants	6,642
45.	Wetlands	6,623
46.	Bay Geology	6,512
47.	Invertebrates (Bay Field Guide)	6,503
48.	Privacy Policy	6,235
49.	Mammals (Bay Field Guide)	6,161
50.	Streams and Rivers	6,107
51.	Plankton	6,051
52.	Blue Crab Management	6,033
53.	Blue Crab Harvest	6,002
54.	Data and Tools	5,801
55.	Restoring Water Quality	5,662
56.	Fiddler Crabs (Bay Field Guide)	5,650
57.	Catfish (Bay Field Guide)	5,601
58.	Physical Characteristics	5,587
59.	Reptiles and Amphibians (Bay Field Guide)	5,574
60.	Sediments	5,388
61.	Who’s Who	5,286
62.	Help the Bay in Your Backyard	5,229
63.	Striped Bass	5,186
64.	Agriculture (Bay Restoration)	5,076
65.	Help the Bay	5,060
66.	Forests	5,056
67.	Eastern Painted Turtle (Bay Field Guide)	5,037
68.	Invasive Species	5,027
69.	Water Clarity	4,855
70.	Hard Clam (Bay Field Guide)	4,840

ADDENDUM B

Top Web Searches

Top 10 Overall Searches
Watershed
Blue crab
Oysters
Ecosystem
Pollution
Fish
Statistics
Animals
Sav
Chesapeake Bay

Top 10 Web Page Searches
Statistics
Ecosystem
Watershed
Blue crab
Oysters
Pollution
Animals
Nutrient pollution
Nutrients
SAV

Top 10 Map Searches
Map
Watershed
Chesapeake Bay
Blue crab
Rivers
Striped Bass
Tributary
Bay grasses
Pollution
Bald eagle
Osprey

Top 10 Publication Searches
Ecosystem
Blue crab
Watershed
Oysters
SAV
Poultry
Striped bass
Osprey
Fish
Dead zones

Top 10 Photo Searches
Fish
Oysters
Blue crab
Pictures
Chesapeake Bay
Animals
Watershed
Crabs
Pollution
Osprey

ADDENDUM C

Media Clips from Last Year and a Half

January 12, 2008 -- July 13, 2009

Total Articles -- 4,594

Bay	757
Water	512
Crab	342
Farm	272
River	227
Oyster	194
Green	175
Fish	173
Cleanup	170
Environment	141
Help	141
Marcellus Shale or Gas Drilling	129
EPA	112
Natural Gas	112
Pollution	108
Sewer	106
Watermen	102
Grant	78
Restoration or Restore	73
Protect	72
Health	67
Growth	57
Climate or Global Warming	56
Sewage	52
Tree	50
Poultry	49
Watershed	46
Regulation	45
Crab Harvest	43
Runoff	42
Development or Developer	41
Fish Kill	30
Volunteer	30
Rockfish	28
Lawsuit	26
Eagle	25
Shad	19
Algae Bloom	18
Nutrient	14