

DISCUSSION DRAFT

June 24, 2010

Recommendations for Developing Post 2010 Restoration Goals for the Anacostia River Watershed:

Follow up to Goals Subcommittee Meeting on May 20, 2010

Summary and Milestones

The following recommends a process for moving forward in the development of the “Post 2010 Restoration Goals” for the restoration of the Anacostia watershed. Actions taken by the Steering Committee on April 22, 2010 and the discussion of the Goals Subcommittee at its initial meeting on May 20, 2010 are briefly summarized. The recommended approach is designed to: (1) provide clear, quantified **Water and Ecological Quality Indicators** for water quality and related environmental conditions in the watershed; (2) define and quantify the **Causal Indicators** that are the principal factors that contribute to degraded water quality conditions; (3) Provide a means for estimating the economic and quality of life benefits of implementation (**Benefits Indicators**) and (4) clearly define the **Implementation Actions** to be taken which will provide a framework for accountability and responsibility as restoration proceeds.

The cornerstone of these “Post-2010 Goals” recommendations is the recently completed Anacostia Restoration Plan (ARP). The ARP is “the product of a two year planning effort to produce a systematic 10-year restoration plan for environmental and ecological restoration within the entire Anacostia River watershed.” Accordingly, the Post-2010 Goals use the same 10 year timeframe with due recognition of the somewhat longer implementation schedule of the Long-Term Control Plan (LTCP) for controlling Combined Sewer Overflows (CSOs) in the District of Columbia.

This Discussion Draft proposes to complete the process such that the Steering Committee would adopt new Post 2010 Targets at its December 16, 2010 meeting. With this in mind, recommended interim milestones are:

- August 26 Steering Committee Meeting:
 - Agree to set of Water Quality and Ecological Indicators
 - Agree to Causal Indicators
- October 28 Steering Committee Meeting:
 - Agree to Benefits Indicators
 - Complete Tabulation of Projected Implementation Actions by Implementing Entity through the 2020 ARP Implementation Period
- December 16, 2010 Steering Committee Meeting:
 - Set 2010 Targets for All Indicators

Whatever framework and schedule is ultimately agreed to, there will be a substantial number of tasks to accomplish this. It is expected that the Steering Committee will provide guidance to identify tasks and responsibilities under the general auspices of the ad hoc Post-2101 Goals committee.

Background

The “Aiming High” Agreement, December 3, 2001 - On December 3, 2001, the County Executives of Montgomery and Prince George’s County, the Governor of Maryland and the Mayor of the District of Columbia signed an agreement that provided indicators and targets associated with each of the six previously agreed to general restoration goals. The agreement established 51 indicators and associated targets for 2010. These have been the focus of annual reporting with data supplied by local jurisdictions and the report compiled and published by COG staff. Managing all 51 indicators proved sufficiently unwieldy that the subsequent focus was on 16 “leading” indicators and later 12 “key” indicators to simplify the reporting process. Attachment A lists the 6 general goals and the 12 key indicators.

Since 2001 - A lot has transpired since the 2001 agreement was signed. Among the key events are: (1) Completion of the ARP in April 2010; (2) Completion of Numerous TMDLs (see Attachment B); (3) Pending completion of other key TMDLs, including the Bay TMDLs for nutrients and sediment; (4) Significant changes in MS4 permitting requirements (See Attachment C); (5) Approval of the CSO LTCP in 2002; and (6) Issuance of an EPA Consent Decree in 2006 whereby WSSC agrees to control its Sanitary Sewer Overflows (SSOs). Each of these suggests that the whole issue of goals, indicators and targets should be revisited. The advent of the Bay TMDLs (which will include Anacostia-specific TMDLs), the completion of other TMDLs, the requirement for TMDL implementation plans in MS4 permits (not just for Bay TMDLs), Bay TMDL-driven Watershed Implementation plans (WIPs) and related Two-Year Milestones will all impact how local governments prioritize projects for implementation and reporting.

Steering Committee Action – Given the above background, the Anacostia Restoration Steering Committee at its April 22 meeting decided it was time to re-examine the Goals, Targets and Indicators that were adopted in 2001. Frank Dawson agreed to convene an ad hoc Post-2010 Goals subcommittee with a tentative objective of adoption of Post-2010 Goals at the December Steering Committee meeting.

The Goals Subcommittee’s First Meeting - The first meeting of the Goals Subcommittee took place on May 20, 2010. The attendees were (in person): Linda Howard, Dana Minerva, M.S. Cheng, Sam Moki, Stuart Freudberg, John Galli and Ted Graham; and (via phone) Frank Dawson, Pete Hill, Meo Curtis and Harriette Phelps.

Frank Dawson framed the overall issue at hand and set the stage for a wide-ranging discussion. The many points raised can be generally organized as follows:

Use the goals to clearly communicate with the public and other stakeholders

- Assess who the audience is and why goals are important;
- Goals need to connect with businesses and other stakeholders;
- Note that highly technical goals may not be helpful in terms of public information;
- Take the opportunity to revisit where we are with the current goals;
- Plan on a regular (biennial, perhaps) report of accomplishments;
- The 51 indicators adopted in 2001 are too many for the public to digest (Note: 12 “Key” indicators were later focused on from the original 51);
- The previously adopted “six restoration goals” still have communication value;
- Determine how the goals process will align with the Communications Strategy;
- We need to have goals to measure progress;
- Indicators need to be measurable;

- Continued use of the 12 Key Indicators would provide continuity with past efforts;
- Avoid the Bay program's trap of reporting WQ progress based on model results (i.e., there is no substitute for monitoring);
- Be honest in assessing why past goals have not been achieved.

Set the goals based on implementation of the ARP and couple with regulatory requirements to foster transparency and accountability

- There is real value in setting 2-year milestones (per the Bay Program) in moving toward 2020 or 2025;
- Seek pledges for implementation from implementing agencies;
- Address the role of the Partnership vis-à-vis enforcement;
- Determine how the Anacostia goals will coordinate with the Bay program's TMDLs, Watershed Implementation Plans (WIPs) and 2-Year Milestones;
- It is critical to relate reporting on the goals to implementation of the Anacostia Restoration Plan (ARP);
- The jurisdictions' MS4 permits are fairly prescriptive and mandate certain actions that should be explicitly acknowledged;
- Consider focusing more on what the ARP can accomplish rather than on goal setting;
- Recognize that the jurisdictions' MS4 permits will generally require implementation plans for various TMDLs;
- The goal of "Implementation of the ARP" is in itself a "stretch goal;"
- Work to translate ARP project implementation into water quality improvements – consider setting the WQ improvements from the ARP as the goal;
- Toxics issues need to be addressed, both in terms of indicators and implementation actions;
- Ensure that the goals process reinforces accountability;
- Be sensitive to actions (e.g., tree cover loss, development of forests and meadows, and potentially, parks and other open spaces) that work against restoration;
- Consider using the ARP and the MS4s as a starting point;
- Consider translating implementation of the ARP into WQ and other improvements (e.g., reforestation and wetland creation) and couple that with a request to all implementing agencies, federal, state & local, to define what they can accomplish in 10 years and in 2-year interim steps;
- Don't forget "policies and programs" as actions;
- Sort ARP implementation projects by land ownership to facilitate implementation pledges.

Implementation funding remains a concern

- Communication of goals and progress will be challenging while funding remains unresolved;
- Goals should be just that and not constrained by funding concerns;
- It will be important to know what implementation will cost.

Recommended Process for Setting Post-2010 Goals

Principles – In synthesizing the disparate perspectives on just what should constitute the Post-2010 goals the following principles are relied on:

- The provisional timeframe for the Post 2010 Goals is 2020, reflecting the 10-year implementation period for the ARP. An alternate timeframe, 2025, may be considered as the goals setting process continues, recognizing the CSO LTCP schedule.
- Maximum use will be made of applicable regulatory requirements already in place or pending including: (1) Implementation of the applicable provisions of the MS4 permits that impact the Anacostia watershed; (2) Development of implementation plans for TMDLs that focus on the Anacostia watershed (including the Chesapeake Bay TMDLs) and their subsequent implementation; (3) Implementation of the CSO LTCP; and (4) Implementation of the WSSC consent decree to control SSOs.
- Projected water quality improvements will reflect full implementation of the ARP, the CSO LTCP and the SSO consent decree.
- Responsibility and accountability will focus on efforts to remove, mitigate or otherwise improve the key causal factors that degrade water quality and related environmental conditions.
- Federal, state and regional agency and other stakeholder responsibility will be accomplished by identifying specific actions to implement the ARP and other mandated actions, organized by jurisdiction and by implementing agency.
- Corollary benefits, economic, environmental and general quality of life, attributable to restoration will be addressed to the extent possible.

Step 1. Agree on types of indicators needed

Three Types of Indicators – By focusing on cause and effect, the restoration indicators may be divided into three types:

- **Water Quality and Ecological Indicators** that reflect water quality and related ecological conditions in the Anacostia River and its tributaries; and
- **Causal Indicators** that reflect the principle causes for degraded conditions and also provide a framework for restoration responsibility and accountability.
- **Economic and Quality of Life Benefits Indicators** that reflect the non-water-quality benefits of restoration.

The 12 previously adopted Key indicators are mostly “water quality” indicators, but also include “causal” indicators. For example, CSOs contribute mainly to bacterial contamination; stream restoration, stormwater retrofits, wetland creation and forest cover all address how to repair conditions in the watershed that directly lead to degraded water quality.

For Reporting to the Public: The following is a list of proposed indicators that the Partnership will use to measure progress toward its goals. It is likely that this list will be too extensive and technical to form a succinct and understandable message to the public. While the Partnership’s data will be publicly available, it is anticipated that the Partnership will in all likelihood choose a subset of the indicators for its principal communications with the public. More on this follows the discussion of the recommended indicators.

Recommended Water Quality Indicators – Potential water quality indicators to be adopted as part of the Post 2010 Goal Setting Process include the following. Some may involve sub-indicators and the appropriate locations for measurement will have to be determined or confirmed.

- Water Clarity/Total Suspended Solids

- Total Suspended Solids at the confluence of NE & NW Branch
 - Total Suspended Solids and Secchi Depth in the Tidal Anacostia
 - Extent of SAVs in the Tidal Anacostia
- Bacteria
 - Enterococci at the Confluence of NE & NW Branch
 - Enterococci in the Tidal Anacostia
- Trash (Units to reflect the trash TMDL)
- Nutrients
 - TN at the confluence of the NE & NW Branches
 - TP at the confluence of the NE & NW Branches
- Dissolved Oxygen in the Tidal Anacostia
- Aquatic Community Health (IBI scores)
- Fish Passage (Miles of anadromous fish spawning range)

For each of these, a “baseline” value will be determined based on the 2010 value and a projected improvement made for 2020, presuming full implementation of the ARP. As appropriate, progress since the 2001 agreement was signed will also be reported.

Causal Indicators – The following “causal indicators” are candidates for adoption as part of the Post 2010 Goal Setting Process:

- Ratio of area where stormwater is controlled to total area of impervious surface;
- Percentage of area covered by tree canopy;
- Total area of tidal wetlands;
- Total area of nontidal wetlands;
- Extent of stream restoration in streams where stormwater volume has been reduced sufficiently to make restoration worthwhile;
- Volume of CSOs – Annual volume of overflows; and
- Volume of SSOs.

For each of these a baseline 2010 value will be determined for each of the three major watershed jurisdictions and for the watershed as a whole.

Benefits Indicators – The **Economic and Quality of Life Benefits Indicators** reflect the non-water-quality benefits of restoration. A candidate list of these is:

- Estimate of jobs created based on projects completed
- Linear miles of neighborhood green street installation
- Linear miles of commercial green highway/street installation
- Reforestation or other restoration, e.g. meadows, of public spaces
- Estimate of property value increases based on water quality improvements and other aspects of implementation
- Increase in recreational use of the river and streams (from Park Service, M-NCPPC, and other sources)

Restoration Actions - The types of projects that comprise the Restoration Actions are those listed on p. 67 of the ARP, plus the CSO and SSO controls not included on that list:

- Stormwater retrofitting, including green streets, green highways, and tree installation
- Stream Restoration
- Wetland Restoration
 - Tidal
 - Nontidal
- Fish passage blockage removal
- Trash Reduction
- Toxic Remediation
- CSO Controls as specified by the LTCP
- SSO Controls as specified by the consent decree

Restoration Actions – The ARP contains over 3,000 restoration projects which are site-specific. These, along with other projects identified in MS4 permits and in TMDL implementation plans and other actions identified by partners can be combined as part of an implementation schedule spread out over the 10-year implementation period to define the explicit implementation responsibilities for individual agencies and others responsible for implementation.

Accountability Framework - These Restoration Actions will also serve as the basis for the Accountability Framework for each individual implementing agency and the Partnership as a whole.

It is envisioned that the agencies to be included in this will include:

- Federal
 - USACE
 - NPS
 - EPA
 - GSA
 - BARC/Arboretum
 - DOT
 - Navy Yard
- State
 - MD DNR
 - MDE
 - SHA
- Local
 - Prince George's County DER
 - Prince George's County DPW&T
 - Montgomery County DEP
 - Montgomery County DOT
 - M-NCPPC – PGC
 - M-NCPPC – MC
 - DC DOE
 - DC DOT
 - COG
- Private Sector

- Citizens and community-based organizations

For its principal communications with the public, it is anticipated that the Partnership will use a meaningful subset of the indicators, e.g. a shortened and simplified list of the indicators that the Partnership uses for tracking progress scientifically. These might be presented as answers to the following questions:

- What is the progress toward making the water safe for swimming and other recreation?
 - Measured by progress toward meeting the e coli standard
- What is the progress toward cleaning up trash?
 - Measured by progress toward meeting Trash TMDL goal
- What is the progress toward reducing stormwater pollution and erosion?
 - Measured by progress toward meeting TSS goals.
- What is the progress toward making fish safe to eat?
 - Measured by whether the principal game fish meet fish tissue safety standard.

Step 2: Evaluate modeled results of implementing the Anacostia Watershed Restoration Plan as well as the planned actions and establish goals for each of the indicators.

Two-year “improvement” milestones and overall 2020 goals will be set for each of the indicators, based on implementation of the “Restoration Actions” (see the following section). Achieving the improvements to the indicators will provide the Accountability Framework for the Partnership as a whole.

Implementation targets will be set for each agency or other stakeholder with implementation responsibilities for one or more of the above actions, expressed in two-year increments through 2020. These may be determined by regulatory requirements or other means yet to be determined. These targets will be used to provide the ‘improvement” estimates for the causal indicators and hence form the basis for estimates of improvements to the water and ecological quality indicators.

Monitoring

In the end, progress in terms of water quality will require an ongoing monitoring and reporting program. The Partnership’s Management Committee prepared a Monitoring Plan that has served the Partnership well but is always vulnerable to funding concerns. As implementation of the ARP proceeds, it will be critical for regular monitoring to determine whether “in the water” monitoring is proceeding as projected. It is envisioned that the periodic reporting responsibilities will be woven into the regular COG work program with input from the many implementing and monitoring agencies. In the short term, the Management Committee should be tasked with reviewing the Monitoring Plan and related budget requirements to ensure that the monitoring and reporting capability is in place.

Attachment A

The 12 Key Indicators and Associated targets

Goal 1- Reduce Pollutant Loads

1. TOTAL SUSPENDED SOLIDS

2010 Target: <80 mg/L, with a goal of supporting underwater grasses (i.e., SAVs)

2. Combined Sewer Overflows

2010 Target: initiation of LTCP CSO system improvements and achieve 40% reduction

3. BACTERIA

2010 Target: tributary system compliance with water quality standards 75% of the time; tidal river meet LTCP implementation and water quality achievement schedule

4. DISSOLVED OXYGEN

2010 Target: >2.0 mg/L at all times and no fish kills

5. TRASH

2010 Target: Achieve trash levels in the 'Light' range; Decreasing trend in annual tonnages

Goal 2 - Restore Ecological Integrity

6. AQUATIC COMMUNITY HEALTH

2010 Target: Better than 'Fair' for all Subwatersheds; increase in numerical IBI scores throughout watershed; Decrease in percent dominant taxon for tidal river -

7. STREAM RESTORATION

2010 Target: Restore 20 additional stream miles More than 10 miles of streams have been restored

8. STORMWATER RETROFITS

2010 Target: Double the amount of older watershed areas controlled (i.e., approximately 10 mi²)

Goal 3 - Improve Fish Passage

9. ANADROMOUS FISH SPAWNING RANGE

2010 Target: 20 additional stream miles

Goal 4 - Increase Wetland Acreage

10. WETLAND CREATION AND RESTORATION

2010 Target: 20 new non-tidal wetland projects (~15 additional acres); 60 tidal wetland acres

Goal 5 - Expand Forest Cover

11. RIPARIAN REFORESTATION

2010 Target: 12 additional miles. Approximately 45 additional acres

Goal 6 - Increase Public & Private Participation

12. ACTIVE "FRIENDS OF GROUPS"

2010 Target: Establish active advocacy group in every major subwatershed

Other Restoration Indicators of Interest:

TOTAL PHOSPHORUS AND TOTAL NITROGEN

2010 Target (Revised): Per TMDL targets 67% reduction in Total Phosphorus and 80% reduction in Total Phosphorus

Attachment B

Completed and Pending TMDLs in the Anacostia Watershed

From MDE's web site, the following TMDLs have been or are being developed for the Anacostia watershed:

- Bacteria – Approved 3/14/07
- PCBs (tidal) – Approved 10/31/07
- Sediment – Approved 7/24/07
- Nutrients – Approved 6/5/08
- PCBs (nontidal) – Under development 2010
- Trash – Public comment period ends 5/18/10

In addition the Chesapeake Bay Program is developing a "Bay TMDL" for sediment and nutrients for each of the 92 impaired tidal segments in the Bay Watershed. This is to be completed by December 31, 2010. The tidal portion of the Anacostia watershed is explicitly identified as a part of the 92 impaired "Bay" segments – "Anacostia Tidal Fresh – Maryland" and "Anacostia Tidal Fresh – District of Columbia." Accordingly, distinct WLAs will be developed for the Anacostia for total phosphorus, total nitrogen and sediment.

The District of Columbia and Prince George's County have similar TMDL coverage, although there is greater toxics coverage.

Attachment C

MS4 Monitoring and Reporting Requirements

- Based on Montgomery County permit, issued 2/16/10
 - Prince George's permit (pending) and the District of Columbia permit (draft issued) are expected to have similar provisions
- "Document progress toward meeting waste load allocations included in TMDLs for watersheds or stream segments located in the County"
- "Report annually...the progress toward meeting any applicable WLAs developed under EPA approved TMDLs in the watersheds established..."
- "This permit requires ... that the County develop TMDL implementation plans that include estimates of pollutant loading reductions (benchmarks) to be achieved by specific deadlines and describe those actions necessary to meet the storm drain system's share of WLAs in EPA approved TMDLs."
- "Implementation plan benchmarks shall be based on data available to and generated by the County and used as interim goals for guiding adaptive management activities."
- "Within one year of the effective date of this permit or the approval of an applicable TMDL by EPA, whichever is later, the County shall submit to MDE for review and approval a TMDL implementation plan for each EPA approved TMDLs for a watershed or portion of a watershed covered by this permit."
- "The County shall submit annual reports on or before the anniversary date of this permit that include...the identification of water quality improvements and documentation of progress toward meeting applicable WLAs developed under EPA approved TMDLs"

Attachment D

Anacostia Restoration Monitoring Strategy

This attachment will consist of the existing Anacostia Monitoring Strategy and will serve to highlight gaps in the monitoring program and budget limitations that will need to be addressed.