

A vertical photograph of a waterfall cascading over dark, wet rocks. The water is blurred, creating a sense of motion. The background is a solid blue color.

METROPOLITAN WASHINGTON  COUNCIL OF GOVERNMENTS

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*One Region Moving Forward*

**COG's  
Regional  
Water Quality  
Management Program**

**Annual Work Program  
& Budget**

**FY 2013**

**(July 1, 2012 – June 30, 2013)**

Department of Environmental Programs  
Water Resources Program  
Metropolitan Washington Council  
of Governments

**7/9/2012**

**APPROVED**

**ABSTRACT**

This is the Annual Work Program and Budget (for Fiscal Year 2013) for COG’s Regional Water Quality Management (RWQM) Program. This work program is funded by and provides support to COG’s local government members, and local participating local wastewater and water utilities, to address regional water quality/water resources issues in the Metropolitan Washington region that are of importance to COG’s members.



**COG Members**

**District of Columbia:**  
District of Columbia

**Maryland:**  
Bladensburg\*  
Bowie  
Charles County **NEW**  
College Park  
Frederick  
Frederick County  
Gaithersburg  
Greenbelt  
Montgomery County  
Prince George's County  
Rockville  
Takoma Park

**Virginia:**  
Alexandria  
Arlington County  
Fairfax  
Fairfax County  
Falls Church  
Loudoun County  
Manassas  
Manassas Park  
Prince William County

\* *adjunct member*

**Participating  
Wastewater and  
Water Utilities &  
Others**

**District of Columbia:**  
DC Water

**Maryland:**  
Washington Suburban  
Sanitary Commission

**Virginia:**  
Alexandria Renew  
Enterprises  
Fairfax Water  
Leesburg  
Loudoun Water  
Prince William County  
Service Authority  
Purcellville  
Upper Occoquan Service  
Authority

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## SUMMARY

The RWQM Annual Work Program for FY 2013 continues to focus on a wide range of activities that have water quality/water resource implications for the Metropolitan Washington region. The organization of this FY 2013 document is as follows:

- **Section I. COG’s Regional Water Quality Management Program** (i.e., background, description of committee oversight, drivers and priorities for FY 2013, and FY 2012 accomplishments)
- **Section II. Funding Levels, Allocations, and Rationale** (i.e., summary tables and charts)
- **Section III. Annual Work Program and Budget** (i.e., detailed descriptions for program elements)

<b>I. Policy &amp; Program Development</b>
<i>Outlines support to COG’s Chesapeake Bay and Water Resources Policy Committee (CBPC), to fulfill its role in providing policy recommendations to the COG Board.</i>
<b>A. Policy and Advocacy</b>
<b>B. COG Board &amp; Member Support</b>
<b>C. Work Program Management</b>
<b>II. Water Quality Technical Analysis: Potomac Trends &amp; Reports</b>
<i>Outlines technical work on a wide range of water quality/water resource issues; and support to COG’s Water Resources Technical Committee (WRTC) and its subcommittees (i.e., Wastewater, Stormwater, and Water Quality Monitoring). The WRTC will continue to identify key policy issues and recommendations to be brought to the attention of the CBPC, COG’s CAOs, other COG policy committees, and local officials in the region.</i>
<b>A. Potomac Trends and Reports</b>
<b>1. Regional Water Quality Database</b>
<b>2. Potomac Monitoring Contracts</b>
<b>3. Regional Wastewater Flow Forecast Model &amp; WWTP Database</b>
<b>4. Potomac WQ Mgmt &amp; Analysis</b>
<b>B. State/Federal Regulatory Analysis</b>
<b>1. Core Technical Support to WRTC</b>
<b>2. Chesapeake Bay Water Quality, Watershed &amp; Other Models</b>
<b>3. Water Resources Emerging Issues</b>
<b>III. Watershed Management Services</b>
<i>Outlines work to address stormwater management, environmental initiatives, and related issues that have regional water quality implications and impacts; and to integrate those efforts with overall COGG policy priorities.</i>
<b>A. Urban Stormwater Regulatory Analysis &amp; Information Exchange</b>
<b>B. Watershed Management &amp; Forestry Projects</b>
<b>C. Implement Green Infrastructure &amp; Sustainable Agriculture Projects</b>
<b>IV. Complementary Water Resource Activities</b>
<i>Outlines work to address water supply and related issues that have regional water quality/water resource implications and impacts; and to integrate those efforts with overall COG policy priorities.</i>
<b>A. Water Supply Emergency &amp; Drought Management</b>
<b>B. Water Resources Community Engagement Campaign</b>

## SECTION I. COG'S REGIONAL WATER QUALITY MANAGEMENT PROGRAM

### A. BACKGROUND

For more than 35 years, COG's Water Resources (WR) program has focused on the stewardship of the region's water resources. These efforts began with the designation of COG in the 1970s as the regional water resources Planning Agency for the metropolitan Washington region pursuant to Section 208 of the federal Clean Water Act; and the associated creation of the Water Resources Planning Board to develop regional water resources plans in response to the federal designation of COG. These efforts continued with the creation of a "regional water resources technical program" under the terms of the Blue Plains Intermunicipal Agreement in 1985. Then in 1998, the "Chesapeake Bay Policy Committee" was created by the COG Board in response to the increased water quality implications of EPA's Chesapeake Bay Restoration efforts. In 2005 the committee's scope was expanded and its name changed to "Chesapeake Bay and Water Resources Policy Committee<sup>1</sup> (CBPC) in recognition of the many other water resource issues facing the region. The CBPC is the principal policy adviser to the COG Board of Directors on all Chesapeake Bay, Potomac River, and regional water resources issues, and has oversight authority for the annual work program and budget for COG's Regional Water Fund. The CBPC also works with COG's CEEPC<sup>2</sup> to address issues of cross-media concern (e.g., energy/water issues, climate change impacts).

Under the overall administration of COG's Department of Environmental Programs (DEP), Water Resources Program staff assist COG's local government members, and affiliated wastewater treatment and drinking water utilities, with protecting, restoring, and conserving the region's water resources as well as addressing the policy and technical implications of various state and federal initiatives that have water quality implications for the COG region. COG's four primary Water Resources Programs include:

- **Regional Water Quality Management Program (RWQM)** – supports regional water quality issues and funded primarily through the Regional Water Fund – which is funded by the Blue Plains Parties<sup>3</sup> as well as COG's local governments and wastewater utilities
- **Blue Plains Intermunicipal Agreement Support (BP IMA)** – supporting the coordination amongst and funded by the parties to the Blue Plains IMA.
- **Urban Watershed Programs**, including the **Anacostia Restoration Program (ARP)** – supporting the Anacostia Watershed Restoration Partnership and Steering Committee, and funded by the members of the Partnership as well as through various grants, and
- **Homeland Security: Water Resources** – supporting issues of importance/impact to local drinking water and wastewater utilities and funded through federal UASI<sup>4</sup> grant and EPA STAG<sup>5</sup> funds.

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<sup>1</sup> The CBPC authority derives from COG's Board of Directors' Resolution 26-98 (adopted September 9, 1998). The Board subsequently addressed membership of the Committee and gave it expanded jurisdiction and budget authority by Resolution R17-05, May 11, 2005.

<sup>2</sup> CEEPC – Climate, Energy, and Environment Policy Committee

<sup>3</sup> Blue Plains Parties – District of Columbia, District of Columbia Water, Fairfax County, Montgomery County, Prince George's County, and Washington Suburban Sanitary Commission.

These Water Resource Program areas are coordinated with DEP's Environmental Resources Program (energy and climate change, green building, alternative fuels, and solid waste and recycling programs), and are also designed to complement and support the COG's Board's Mission and priorities on a wide range of related issues that have water resource and broader environment implications (e.g., Region Forward).

## **B. COMMITTEE OVERSIGHT**

This **Annual Work Program and Budget – Fiscal Year 2013**<sup>6</sup> (FY 2013) describes the priorities, key deliverables, and COG staff support specifically for the Regional Water Quality Management Program (RWQM). The primary focus for this program is to address water quality issues associated with the protection and assessment of the tidal estuary portion of the upper Potomac River. The overall funding levels for COG's annual budget are set by the COG Board in January of the preceding fiscal year, e.g., for FY 2013, the COG Board adopted the work program and budget on January 11, 2012. The CBPC is responsible for approving the annual regional water resources work program and budget allocations, while technical oversight is provided by COG's Water Resources Technical Committee (WRTC). The annual work programs and budgets for DEP's other program areas (both Water Resources and Environmental Resources) are overseen by other committees that fund those programs and are defined in separate work program documents.

## **C. DRIVERS FOR REGIONAL WATER QUALITY MANAGEMENT**

As has been the case over the past decade, the overall [Chesapeake Bay restoration](#) effort – specifically the development of nutrient (nitrogen and phosphorus) and sediment water quality standards has been the primary driver of water resource/water quality efforts affecting the Potomac River, local waters, and local pollution control measures (i.e., wastewater treatment and stormwater management). The Bay efforts are defined by a federal/state partnership<sup>7</sup> headed by the Environmental Protection Agency's (EPA) Chesapeake Bay Program Office (CBPO), and have evolved from a generally voluntary initiative to that of a primarily regulatory program with the establishment of the Chesapeake Bay TMDL in December 2010. TMDLs, or 'Total Maximum Daily Loads,' are limits on pollution loads in designated water bodies. In addition to the Bay-wide TMDL, EPA and the states have established a number of local TMDLs for smaller water bodies in the region. The Bay TMDL efforts have also been expanded to codify implementation at the local level through state [Watershed Implementation Plans](#). Four regional water quality Policy Principles (see text box next page) were adopted by the COG Board and guide the CBPC's ongoing efforts in regards to Bay and related water resource policy issues.

COG's wastewater treatment plants have also continued to implement highly advanced levels of treatment to address stricter NPDES<sup>8</sup> permit requirements for nitrogen; while at the same time

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<sup>4</sup> UASI - Urban Area Security Initiative

<sup>5</sup> STAG – State and Tribal Assistance Grants

<sup>6</sup> The period for COG's Fiscal Year 2013 is from July 1, 2012 through June 30, 2013.

<sup>7</sup> Chesapeake Bay Signatories include: states of Maryland, Pennsylvania and Virginia; the District of Columbia; the Chesapeake Bay Commission; and the EPA. The Headwater states of Delaware, New York, and West Virginia also participate many of in the larger Bay partnership efforts and are also responsible for portions of the Bay-wide TMDL load allocations/reduction efforts.

<sup>8</sup> NPDES - National Pollution Discharge Elimination System

the region's stormwater programs have continued to respond to MS-4<sup>9</sup> permits with increasingly aggressive implementation requirements.

In addition to these traditional EPA/state regulatory requirements, COG's members have also adopted several other regional and environmental objectives that have direct or indirect water quality/water resource implications (e.g., [Region Forward](#), [Climate Change Program](#)). The challenge for the region will continue to be how best to protect the region's critical water resources in light of these increased requirements, limited funding, and continued growth in the future (e.g., 39% population increase over next 28 years) - [Round 8.0 Cooperative Forecast](#).

In FY 2013 inventories/summaries of regional infrastructure needs (for wastewater, stormwater, drinking water, facilities and pipelines) and their associated costs will be prepared. There will also be a focus on how those investments may be impacted by ongoing changes in climate data, as well as the potential for other changes in the future.

***“Regional population is anticipated to increase by 39 percent during the forecast period, reaching nearly 6.8 million in 2040. This will add nearly 1.9 million people to the region by 2040, which is slightly less than as added during the previous 30-year period.”***

Source: “Growth Trends to 2040: Cooperative Forecasting in the Washington Region”

### **COG Policy Principles for the Restoration and Protection of the Chesapeake Bay and its Tributaries**

*(As adopted under COG Board Resolution R2—09, April 8, 2009)*

The COG Board endorsed these principles to guide regional policy regarding the Bay restoration effort and other water resource issues (originally developed in 1997 and updated in 2009).

- I. Holistic Requirements** – *Programs and policies to restore and protect the Chesapeake Bay and its tributaries, whether regulatory or not, shall reflect a holistic, multi-sector analysis of environmental benefits and costs as well as technical feasibility, before being established.*
- II. Equitable Responsibility** – *Programs and policies to restore and protect the Chesapeake Bay and its tributaries shall strive for equity and cost-effectiveness in allocating responsibilities among regions, counties and municipalities and among the different sources of pollution.*
- III. Sound Science** – *Programs and policies to restore and protect the Chesapeake Bay and its tributaries shall rely on a sound scientific foundation and shall be revised as needed, reflecting advances in that foundation.*
- IV. Communication and Voice** - *Programs and policies to restore and protect the Chesapeake Bay and its tributaries, whether regulatory or not, should be developed through a cooperative process among stakeholders including local governments and wastewater utilities. Given their implementation responsibilities, local governments and wastewater utilities shall be engaged at the earliest stages of these development processes.*

<sup>9</sup> MS-4 – Municipal Separate Storm Sewer System

## **D. FISCAL YEAR 2013 (FY 2013) – PRIORITIES**

The key water resource issues that are expected to define priorities for FY 2013 and beyond are:

### **Chesapeake Bay TMDL & Watershed Implementation Plans (WIPs)**

- Continued implementation of the federal Chesapeake Bay TMDL;
- Refinements made to the associated state (including District of Columbia) and local WIPs over the coming years; and
- EPA/CBP's efforts to update modeling tools, evaluate implementation progress, and conduct cost-benefit analysis in preparation for the 2017 re-evaluation of the Bay TMDL and assessing progress toward the 60-percent implement goal.

### **Regulatory Requirements, Infrastructure & Funding**

- Construction of the next phase of limit of technology nitrogen removal facilities at the region's wastewater treatment plants, and operating them under the TMDL load caps;
- Increased requirements being defined in local MS-4 stormwater management permits and links between meeting local as well as Bay TMDL requirements; and
- The challenge of funding implementation measures for the Bay and local TMDLs as well as funding replacement or upgrades of the region's extensive and aging water resource infrastructure needs.

### **Potomac River & Local Water Quality Management & Protection**

- Assessment of the impacts on Potomac and local water quality of decades of regional efforts to restore water quality through the implementation of advanced levels of wastewater treatment and stormwater management practices; and
- Understanding the challenge of meeting current and proposed regulatory requirements, as well as the challenges associated with climate change impacts (current and predicted) and predicted growth in the region.

### **Background and Key Milestones/Deadlines**

The official state WIPs and the local plans submitted by many COG members establish obligations for additional levels of wastewater treatment and stormwater BMP implementation and other measures to be taken over the next 13 years that are needed in order to reach Bay loading targets. Potential adjustments to the loading targets and the implementation plans are due to be considered during a 2017 mid-course evaluation. In the meantime, EPA and the states intend to track progress through the completion of successive sets of Two-Year Milestones (2YM).

A new generation of stormwater permits for both Phase I and Phase II jurisdictions will also establish requirements for local action in response to the Bay TMDL and local water quality issues. And wastewater plants will continue to balance expected growth in the region with their nutrient load caps. The challenge for the region will continue to be how to best meet these increased regulatory requirements in a manner that is also compatible with the region's other environmental and sustainability objectives – and to position the region to address these issues in light of the significant growth this region is expected to experience over the next 20-25 years.



## FY 2013 – KEY MILESTONES/DEADLINES

### BAY TMDL & WIP DEVELOPMENT SCHEDULE

*(as of June 2012)*

#### 2010

- **Late November – early December** – States/District Submitted Final Phase I WIPs
- **December 29** – EPA Issued Final Bay TMDLs in Federal Register (92 TMDLs, each with nutrient (nitrogen & phosphorus) and sediment loads sub-allocated at segment-shed levels)

#### 2011

- **July 15** – EPA reissued nutrient (nitrogen & phosphorus) and sediment allocations for the 19 state-river basins (based on an updated version, Phase 5.3.2 of its Watershed Model)
- **Nov. 18, 2011** – Virginia local governments submitted draft county WIPs, 2-Year Milestones
- **December 1** – States/District submitted Draft Phase II WIPs to EPA

#### 2012

- **Early January** – States/District submitted Final 2012-2013 2YM commitments to EPA
- **February 15** – EPA submitted formal comments on Draft Phase II WIPs
- **March 30** – States/District submitted Final Phase II WIPs to EPA
- **July 2** – Maryland submission of Final Phase II WIPs, potentially to include “locally approved” modeling scenarios
- **Later in 2012** – EPA to issue technical amendment to 2010 TMDL (if needed)

#### 2012-2016

- EPA and Bay Program Partners to assess implementation progress via 2-Year Milestones (internally and via independent evaluation)
- PA and Bay Program Partners to work on updating Watershed Model – Proposed Version 6 to be ready in time for 2017 mid-course evaluation

#### 2017

- States to submit Phase III WIPs to EPA – Draft by June 1, Final by November 1
- EPA to assess implementation progress:
  - **60% of WIP Implementation to be achieved and ensure practices in place to achieve 2025 goal**
  - Determine whether appropriate to use additional WSM updates for WIPs & and whether to revise TMDL allocations

#### 2025

- **100% of WIP Implementation to be achieved Bay-wide**

### STORMWATER REGULATIONS

*(as of June 2012)*

- **Fall 2012** - EPA to issue draft National Stormwater Rule with specific Chesapeake Bay provisions – provides opportunity to submit comments on behalf of COG’s members
- **1<sup>st</sup> half of FY 2013**– Revised Phase I MS-4 stormwater permits expected to be issued for most major local jurisdictions (except Montgomery County and the District of Columbia - which already have their new permits).
- **2012 & Beyond** – Continued implementation of MS-4 stormwater permits to meet local and Bay TMDL requirements.

**E. FISCAL YEAR 2012 (FY 2012) – ACCOMPLISHMENTS**

External water quality drivers in FY 2013 are expected to be similar to those in FY 2012, so it is illustrative to note key policy and technical accomplishments for the CBPC as well as the WRTC for FY 2012. These lists below also include COG staff’s work to provide support to the region’s wastewater utilities, COG’s local governments with stormwater program responsibilities, and related drinking water utilities.

**FY 2012 – ACCOMPLISHMENTS**

**Chesapeake Bay & Water Resources Policy Committee**

**Legislative, Regulatory & Policy Advocacy**

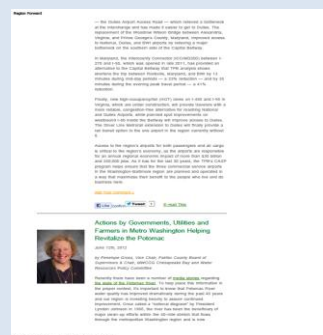
- Sent two **letters to the Virginia General Assembly** in support of a bill to reduce the impact of lawn fertilization on water quality and a bill to provide \$300 million in bonding authority to the Water Quality Improvement Fund to help pay for the state share of wastewater plants’ nutrient upgrades. (February 2012)
- Sent letters to EPA Region III:
  - Expressing concerns with TMDL/WIP Phase II process (March 2011)
  - Expressing support for DC Water’s proposed Green Infrastructure Pilot project. (May 2012)
- Sent letter to National Fish and Wildlife Federation in support of a stormwater performance grant to Prince George’s County. (May 2012)
- COG’s **Region Forward** blog featured Chair Penny Gross discussing improvements in Potomac water quality due to decades of local actions.

**Federal/State/Local Forums**


- Held a **second meeting with Jeff Corbin (Special Adviser to the EPA Administrator for Chesapeake Bay and Anacostia River Restoration) as well as state representatives** to discuss the concerns of COG’s members about the Bay TMDL and the development of state watershed implementation plans. (November 2011)
- Held a **CBPC tour at the Norman Cole wastewater plant in Fairfax County for EPA and state officials** to promote the work that local governments are doing to reduce wastewater nutrient loads to the Bay (May 2012).
- Held a **stormwater webinar for the COG Board** to educate local elected officials about the challenges being faced by local government stormwater programs in response to the Bay TMDL and other water quality initiatives (October 2011).

**Presentations/Information Exchange**

- Had presentations from outside speakers at CBPC meetings, including:
  - **Jay Sakai, Director of MDE’s Water Management Administration, on state funding plans (January 2012)**
  - **Jack Frye of the Chesapeake Bay Commission, on state legislative initiatives in Virginia (January 2012)**
  - **Tom Pelton, Chesapeake Bay Foundation, and member Karen Pallansch, now Alexandria Renew Enterprises, on the potential for Bay restoration to create “green” jobs.**



**Save the Date**



Please join the Chesapeake Bay and Water Resources Policy Committee’s tour of nutrient removal upgrades at Fairfax County’s advanced wastewater treatment plant. This tour will promote the work that local governments have done to benefit local water quality, the Potomac River and the Bay, and provide an opportunity to talk to state and federal officials about the work that remains to be done.

**Who should attend?**  
Local government elected officials, and state and federal water quality policy officials.

For more information, contact Heidi Bonaffion of COG staff at [hbbonaffion@mwco.org](mailto:hbbonaffion@mwco.org) or 202.942.3216

**Date:** Friday, May 18, 2012  
**Time:** 10 a.m. to 2 p.m. for the meeting and tour. Tour itself will run from 11–12:30  
**Location:** Fairfax County’s Norman M. Cole, Jr. Pollution Control Plant, Lorton, VA

**FY 2012 – ACCOMPLISHMENTS** (continued)

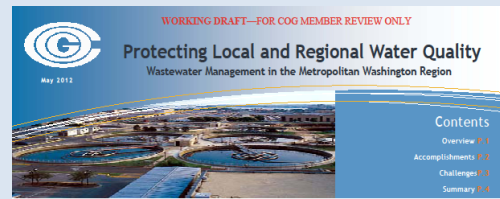
**COG Staff Support to WRTC**

**Presentations & Technical Analysis**

- Regular presentations on Bay Program’s TMDL/WIP development process, including schedule, load allocations and WIP assumptions.
- Presentations on CBP’s watershed model and related tools, such as MAST, CAST and VAST, as well as the current modeling structure of the Bay Airshed and Watershed Models – to assess air/water linkages.
- Updates on Region Forward water resource indicators that address progress of wastewater and stormwater implementation to meet Bay TMDL goals, and sentinel stream conditions.
- Updates on legislative and regulatory developments at the state and national levels.
- Produced draft stormwater factsheet to reflect regional cost/rate impacts and other information.
- **Patrick Hagen, UMD Center for Estuary Sciences** - Estimates for WIP implementation, based on stormwater BMP cost projections (Nov 2011).
- **Jason Papacosma - Arlington County’s Phase II WIP Analysis.** (Nov 2011)

**Regional Wastewater Management**

- Incorporated demographic data from COG’s 8.0 Cooperative Forecasting efforts into the Regional Wastewater Flow Forecast Model (RWFFM) for the Blue Plains Service Area.
- Completed an initial draft regional wastewater factsheet; including an inventory of the region’s WWTPs to confirm cap loads, treatment capacity, and proposed timeline for implementing Enhanced Nutrient Removal (ENR) / State of Art (SOA) nitrogen removal facilities.
- Begun analyzing CBP’s wastewater plant sewer shed data and septic assumptions and working with COG’s local governments/wastewater utilities to confirm/update the GIS maps and data.
- Co-sponsored with the CBP’s STAC (as well as WEF, DC Water, and HRSD) a wastewater workshop – **“Real World Wastewater Technologies Workshop- Advancing the World We Live In - Exploring Cutting Edge Wastewater Treatment Technologies”** (May 2012)



**WASTEWATER MANAGEMENT – A REGIONAL SUCCESS STORY**

The COG Region has had a long history of successfully implementing advanced treatment technologies at its wastewater treatment plants (WWTPs), which has resulted in many significant improvements to the water quality of the Potomac and Patuxent Rivers. The region is also on-track to meet the WWTP portion of its Bay TMDL (Total Maximum Daily Load) obligations. This fact sheet provides an overview of the major WWTPs in the COG region, notes the current WWTP implementation status to meet the Bay TMDL’s 2025 deadline, and notes the many challenges that these WWTPs still face.

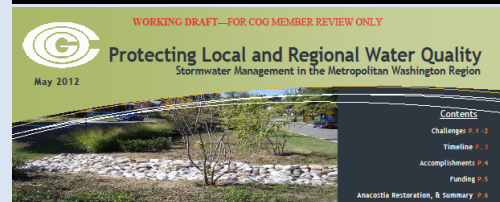
**OVERVIEW**

The COG Region has over thirty-five (35) different WWTPs serving the wastewater needs of the region. Overall approximately 92% of the region’s population of 4.9 million (per 2010 Census) are served by these WWTPs. Most of them are municipal facilities, operated by COG’s local governments or utilities. Of these WWTPs, nineteen (19) of them are considered “Major WWTPs”. For regional purposes, Major WWTPs are defined as those having a design capacity of equal to or greater than 2 million gallon per day (mgd). The region is also home to the Blue Plains WWTP – which at 370 mgd, is the largest advanced treatment facility in the world; and represents approximately 48% of the region’s current wastewater treatment capacity.

COG Region WWTPs - Major Plants (>= 2.0 MGD)



Historically, water quality in the Potomac River in the COG region has been heavily influenced by the presence of these WWTPs. That is why the decades of implementing advanced treatment at the region’s WWTPs has resulted in many water quality improvements to not only the local waters the plants discharge to, but also to the tidal portion of the Potomac River.



**STORMWATER MANAGEMENT – MEETING THE MANY CHALLENGES**

This fact sheet provides an overview of the challenges, accomplishments and financial implications of local government stormwater programs in the Washington metropolitan region, as well as a sense of the many deadlines that these programs are operating under.

Local governments in the region have been working since the 1930s to protect local and regional water quality. Great progress has been made, largely through employment of ever more sophisticated water quality technology at the area’s wastewater treatment plants starting in the 1960s. Despite this progress, there is a need to do even more, particularly in response to the pollution budgets known as Total Maximum Daily Loads (TMDLs). In addition to their wastewater efforts, COG’s member governments are now also focused on the challenge of reducing the negative water quality impacts of stormwater runoff.



COG’s members have accomplished a lot in the stormwater arena. This includes the pioneering development and implementation of new types of “best management practices”, or BMPs, known collectively as “low impact development” (LID) and “environmental site design” (ESD) practices. It also includes implementation of dedicated stormwater program funding mechanisms by most of COG’s member governments. Today, the region’s local government stormwater programs continue to adapt in response to changing federal and state regulations. This includes a new generation of municipal stormwater permits and the need for new revenue at a time of limited local government funding. And much of this has been happening at a very accelerated schedule over the past 10 years.

**STORMWATER PROGRAM DRIVERS** (See timeline on page 3)

**State and Local Stormwater Management Regulations:** Outline requirements for erosion and sediment control during the construction process and for the installation of BMPs to address stormwater runoff post-construction.

**MCA (Municipal Separate Storm Sewer System) Permits:** Issued by the states and EPA, these require local governments to implement a variety of programs (ranging from detection and correction of illicit discharges to public outreach and education) to lessen the volume of pollutants carried by their municipal stormwater conveyance systems. These regulatory permits require consistency with the pollution budgets of applicable TMDLs, and have been issued over time (i.e., Phase I for larger jurisdictions, and Phase II for smaller municipalities—based on population).

**Local TMDLs:** Established by the states and EPA, these TMDLs set target reductions for pollutants (nutrients, sediment, bacteria, trash and PCBs) in a number of waters in the region that have been designated as “impaired” (e.g. the Anacostia River, Four Mile Run and Seneca Lake).

**Chesapeake Bay TMDL:** Established by EPA in December 2010, this massive pollution budget requires reductions in nutrient (nitrogen and phosphorus) and sediment pollution throughout the Bay watershed and for major tributaries such as the Potomac River.

Sponsored by the CBP’s Scientific & Technical Advisory Committee (STAC) And Wastewater Treatment Work Group

Co-sponsored by:



**PURPOSE:** This workshop is addressing “cutting edge wastewater treatment technologies” - a critical topic in the Chesapeake Bay watershed. This topic is important to the local governments and utilities that operate wastewater plants in the Bay region, as well as to the state and federal agencies that regulate those plants. These plants will have to operate under strict nutrient load caps defined in the Bay Program’s TMDL - now and into the future, even as the growth in the Bay watershed continues. It will be important to build these facilities with less infrastructure, operate them using less energy and fewer chemicals, all the while ensuring reliable operations and minimizing heterogeneous GIG emissions.

This workshop is aimed at identifying those cutting edge technologies (focused on Nitrogen) that appear to be viable options, and to begin a dialogue between practitioners, designers, and regulators on how these practices can be successfully implemented in the Bay watershed.

**OUTCOME:** A formal report that summarizes the key findings, provides links to the presentations, and makes recommendations to STAC and the Chesapeake Bay Program Partnership.

**INVITATION-ONLY**  
RSVP BY MONDAY, APRIL 23<sup>RD</sup>  
TO: KATE JOHNSTON  
JOHNSTON@MWRG.EDU

Note: There will also be some additional opportunities to participate via Webinar.

**“Real World Wastewater Technologies Workshop”**  
Advancing the World We Live In - Exploring Cutting Edge Wastewater Treatment Technologies

Wednesday, May 16, 2012

Westin Hotel  
6631 West Broad Street,  
Richmond, Virginia 23230  
Westin-Richmond Hotel



Sponsored by the CBP’s Scientific & Technical Advisory Committee (STAC)

Co-sponsored by:  
DC Water  
HRSD  
MWCOG  
WERF

**FY 2012 – ACCOMPLISHMENTS** (continued)

**COG Staff Support to WRTC**

**Participate in Various CBP Committees & Work Groups**

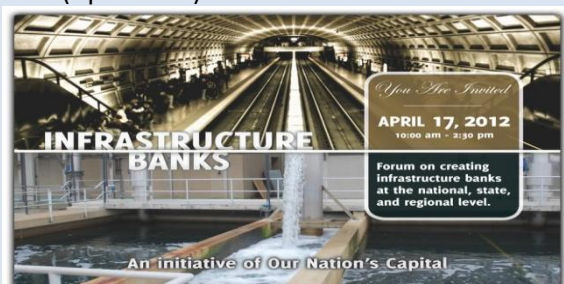
- Actively participate, monitor and advocate in various groups on behalf of COG’s members:
  - Water Quality Goal Implementation Team (WQGIT)
  - Wastewater Treatment Work Group
  - Urban Stormwater Work Group
  - Modeling Subcommittee
- FY 2012 key items included:
  - Addressed Combined Sewer Overflow (CSO) load assumptions in the Bay TMDL;
  - Assist DC Water to address multi-state TMDL/WIP load assumptions for the Blue Plains WWTP; and
  - Participate on CBP’s Urban Nutrient Management Expert Panel.

**Climate Change Impacts**

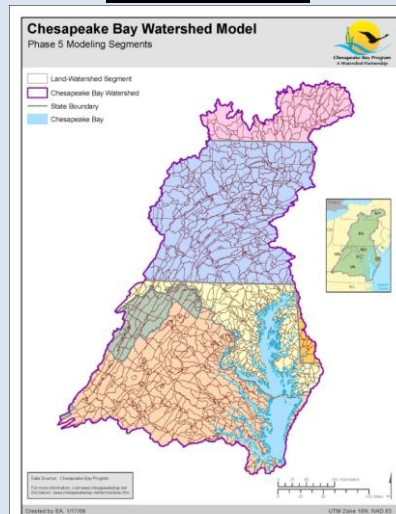
- Worked with DEP Environmental Resources staff to provide input and hold events that addressed critical water resources related to COG’s members:
  - Water Sector workshop (Sept. 2011) and final workshop (March 2012) to provide input on EPA Sustainable Communities Climate Adaptation Guidebook for the COG region.
  - Presentation to WRTC on climatological data used in water resource planning and potential implications of climate change on those parameters (Jan. 2012)
  - Presentation to WRTC on Bay Air Model applications and links to Watershed Model/WIPs (May 2012)
  - ***Climate Impacts Symposium*** (May 2012)

**Water Resources Infrastructure Needs**

- COG staff presented regional overviews of the scope and complexity of regional water resource infrastructure to:
  - The Urban Land Institutes’ (ULI) Washington Regional Land Use Leadership Institute cohort (October 2011)
  - ***Infrastructure Banks for Metropolitan Washington forum*** (April 2012)



**CBP WATERSHED MODEL & AIRSHED MAPS**



**SPONSORS:**

Donald "Don" Broudy, Ph.D., President, University of Maryland Center for Environmental Science; Professor, Marine Science, UMD; Chair, National Research Council's Ocean Studies Board.

Astris "Troy" Boudreau, Jr., Ph.D., Director, University of Maryland (UMD) Earth System Science Interdisciplinary Center; Professor, UMD Department of Atmospheric and Oceanic Sciences; Chair, UMD Board on the Environment; Chair the National Research Council's Board on Atmospheric Sciences and Climate.

Ray Naylor, Ph.D., Professor of Oceanography, Department of Meteorology, Pennsylvania State University.

Wade Smith, Ph.D., Environmental Scientist, Nobile, Inc.

Julia Koster, ACP, Director, Intergovernmental Affairs Planning Division, National Capital Planning Commission.

Kambiz Ajami, Environmental Coordinator, Fairfax County, VA.

Lorenz von der Tak, P.E., D. WRE, Vice President, Principal Water Resources Engineer, and Deputy Director for Water Resources and Ecosystems Management, OCHM HILL, Chair, AWWRA Climate Change Committee.


Jessica Greenis, Staff Attorney and Adjunct Professor, Harrison Institute for Public Law at Georgetown University Law Center.

Robert Kaufmann, Environmental Protection Specialist, Sustainable Transport and Climate Change team, Office of Natural Environment, Federal Highway Administration.

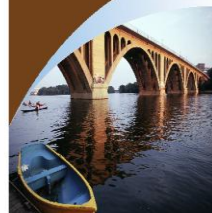
Shawn Pruebing, Director of Environmental Programs, Metropolitan Washington Council of Governments.

**CLIMATE IMPACTS SYMPOSIUM**

MAY 21, 2012



A WORKSHOP FOCUSING ON THE PLANNING IMPLICATIONS OF POTENTIAL CHANGES IN PRECIPITATION PATTERNS, SEA LEVEL RISE, FLOODING, AND WATER QUALITY IN THE NATIONAL CAPITAL REGION



**FY 2012 – ACCOMPLISHMENTS** (continued)

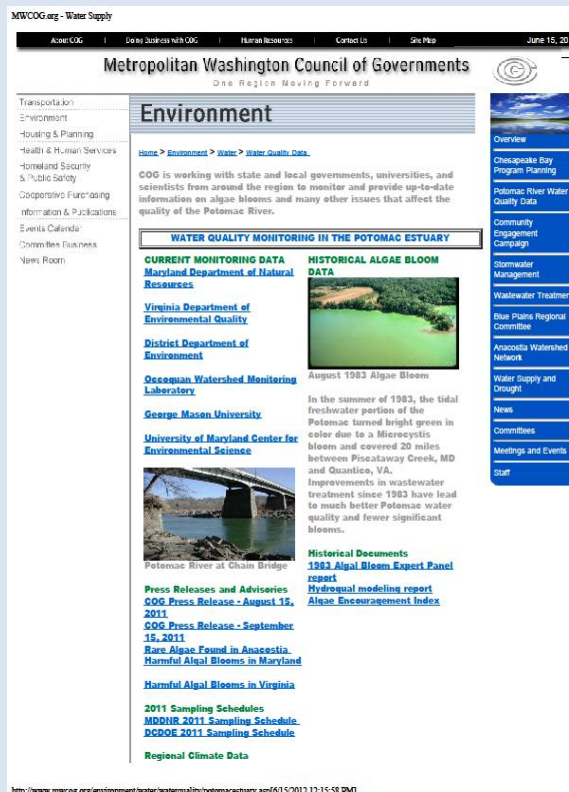
**COG Staff Support to WRTC  
& Other COG Committees**

**Monitoring Data & Database Work**

- Expanded scope and format of COG’s **Water Quality Monitoring Data** website to make data sources more accessible and to post information regarding ongoing water quality issues (e.g., algal blooms) for COG’s members.
- Continued to maintain /operate the **Chain Bridge Monitor** (via Occoquan Watershed Monitoring Lab) - a critical Potomac River estuary pollution monitoring station. This data is used to measure water quality and estimate pollutant loads entering the Potomac estuary, calculate trends, and are compared to USGS loads used in the Chesapeake Bay Program’s Watershed Model.
- Updated water resource maps to reflect addition of Charles County, Maryland to COG region.
- Continued the cooperative operation and funding of the **USGS Flow Gage at Little Falls**, which is needed to measure pollutant loads and also to track flows under the *Regional Drought Plan*.
- Obtained and processed year 2011 data from OWML; calculating the annual load for the Potomac River at Chain Bridge for 2011; and preparing trends analysis for WRTC review (results/analysis pending).

**Potomac Water Quality Issues – Algal Blooms**

- Convened conference calls with technical experts (state, local, and academic) to monitor, sample, and track algal blooms in the Potomac River (July - Sept. 2011)
- Worked with local and state public information staff to issue a press release noting the status of the blooms and indicating that experts were monitoring the situation (Sept. 2011)
- Posted results, status information and links to state reporting sites on COG’s website.



**Water Quality - Potomac Estuary: COG Website**



**FY 2012 – ACCOMPLISHMENTS** (continued)

**Other Complementary Water Resource Activities**

**The District of Columbia’s Water Pollution Control Contingency Plan**

- Updated the plan.

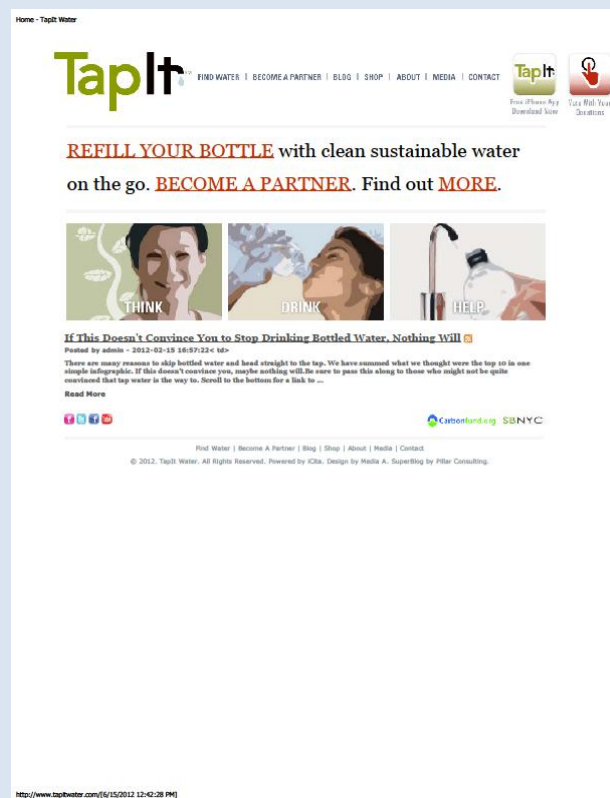
**Regional Water Security Activities**

- Continued operation and coordination of regional water security monitoring network.
- Completed a **National Capital Region) (NCR) WARN Operational Plan** for regional water/wastewater mutual aid.
- Continued operation and coordination of regional water security monitoring network.
- Expansion of the NCRWARN mutual aid network to cover more than 80% of the population in the NCR.
- Supported regional water/wastewater preparedness, situational awareness, and response during Hurricane Irene and Tropical Storm Lee.
- Completed backup water and power assessments for acute care hospitals in the NCR.
- Implemented emergency backup water solutions at a majority of those facilities in FY’2012.
- Completed dozens of emergency backup power assessments for critical water infrastructure.
- Presented the region’s work on cross-sector emergency planning for the water sector, risk communications, and water security monitoring at two National conferences
- Procured one new and one refurbished portable GC/MS unit for use in water and wastewater monitoring and response.
- Obtained grant funding for physical security upgrades at key regional water infrastructure facilities.

**Community Engagement Campaign Activities**

- Successful development of a **Lawn and Garden blog**:
  - Achieved 171% of page view goals (5,331 page views as of April 2012)
  - Achieved 112% of subscriber goals (reached 2,531 subscribers as of April 2012)
  - Key messages repeated multiple times per week
- Continued support of the **regional Wise Water Use campaign**
- Initiated successful banner ad “mini campaign” on **Fats, Oils and Grease (FOG)**
  - Over 500,000 impressions in Nov - Dec.; second campaign on lawn care in April-June is expected to get equal or greater number of impressions
  - **TapIt campaign** is expected to have 600 establishments signed on by November 2012. Currently over 300 establishments are signed on in the COG region.

**Tapitwater Link**



Home - TapIt Water

**TapIt** FIND WATER | BECOME A PARTNER | BLOG | SHOP | ABOUT | MEDIA | CONTACT

REFILL YOUR BOTTLE with clean sustainable water on the go. **BECOME A PARTNER**. Find out **MORE**.

**THINK DRINK HELP**

**If This Doesn't Convince You to Stop Drinking Bottled Water, Nothing Will**

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There are many reasons to stop bottled water and head straight to the tap. We have summed what we thought were the top 10 in one simple infographic. If this doesn't convince you, maybe nothing will. Be sure to pass this along to those who might not be quite convinced that tap water is the way to. Scroll to the bottom for a link to ...

Read More

© 2012, TapIt Water. All Rights Reserved. Powered by iCta. Design by Melia A. Superling by Pflar Consulting.

http://www.tapitwater.com/[6/15/2012 12:42:28 PM]



## FY 2012 – ACCOMPLISHMENTS

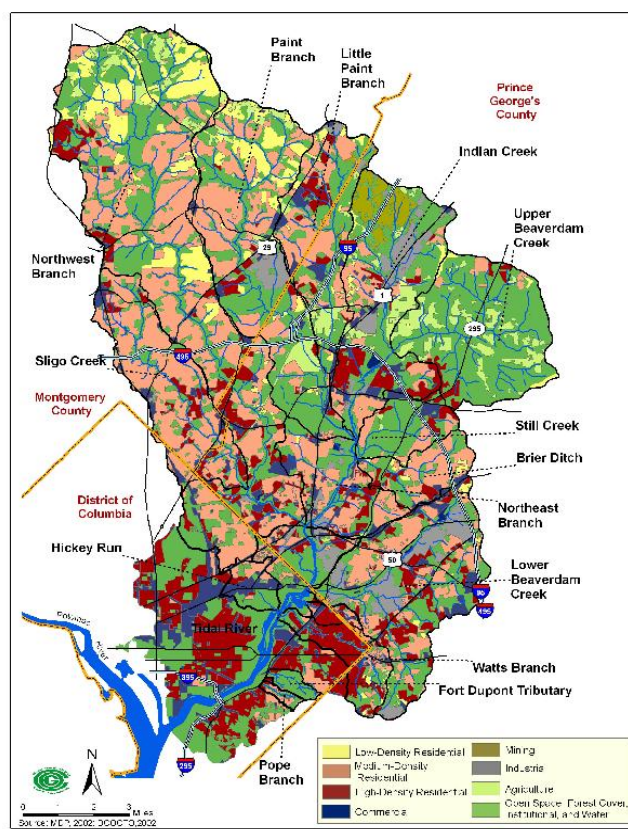
(continued)

### Other Complementary Water Resource Activities

**Anacostia Restoration Program** - Completion of the draft Anacostia Restoration Plan

- Identifies eight major restoration strategies and 3, 018 projects needed to restore the watershed. More than half of the plans projects involve stormwater management.
- Plan's projects will produce multiple benefits in the watershed's communities, parks, forests, & streams.
- On the occasion of the second Capitol Riverfront Business Improvement District (BID) Anacostia Summit, the Partnership issued its first anniversary report, which can be found at: [Anacostia Restoration Plan](#). Produced in conjunction with the local jurisdictions, the report showed substantial progress toward many of the policy and programmatic goals in the ARP.
- COG staff also developed a publicly-available, web-based tracking tool for all ARP projects and for other important projects that are identified in the future. This tool will be instrumental in developing future annual reports, providing information about project status, and providing accountability for ARP implementation.
- COG also applied for and received a \$175,000 grant from the National Fish and Wildlife Foundation (NFWF) for the purpose of constructing bioretention facilities at the National Park Service's Langston Golf Course and Kenilworth Aquatic Gardens.

## Anacostia Watershed Restoration





**FY 2012 – ACCOMPLISHMENTS** (continued)

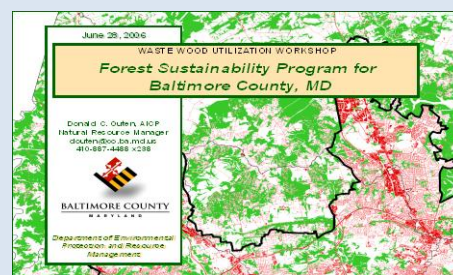
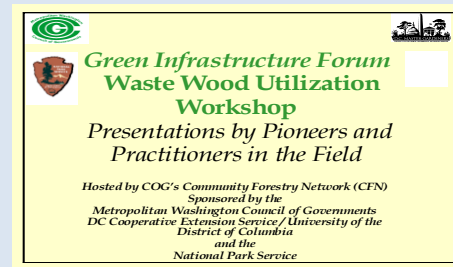
**Other Complementary Water Resource  
Activities**

**Watershed Management and Forestry Projects**

- Montgomery County-Upper Sligo Creek American Eel Habitat Restoration Completed (three cross vanes installed, new hiker-biker trail bridge over the Flora Lane tributary installed, sediment removed from weir no. 1, weir no.2 notch raised approx. 10 inches, riparian reforestation of approx. 0.25 acres, signage and kiosk installation, and fish reintroduction event).
- Prince George’s County- Paint Branch stream bank chemistry characterization and spring 2012 Northwest Branch macroinvertebrate sampling.
- Prince George’s County Anacostia Tributary herring Surveying-four spring 2012 haul seines and electrofishing surveys for determining ‘strength of run.’
- Watts Branch- fall 2011 water quality grab sampling, spring 2012 macroinvertebrate sampling (including two reference streams).

**Green Infrastructure & Sustainable Agriculture  
Projects**

- Regional Urban Tree Canopy & Management Plan- Three Workgroup meetings (December 7, 2011, February 17<sup>th</sup> and May 4<sup>th</sup> 2012) and draft strategy outline;
- CEEPC Committee Updates - Two urban tree canopy-related updates.
- Region Forward- regularly provided input and continued to track regional land use/land cover changes;
- Support for CFN Meetings- two spring 2012 meetings;
- Regional Green Infrastructure Structure Database Update- obtained \$165,000 grant funding from USFS/DCUFA for regional green infrastructure analysis (September 2011);
- Regional Agricultural Workgroup (RAW)-Three meetings held in FY12.
- Regional Agricultural Brochure- In partnership with RAW members, draft brochure on regional food production is in progress, with final brochure expected in early FY13.
- Regional Urban Timber Recovery Initiative- In partnership with DCUFA and Seneca Creek Joinery, hosted four urban timber utilization workshops and continued to expand wood processing capacity at both the Seneca Creek Joinery’s facility and within the District of Columbia (i.e., marshalling yard).



**Other Grants Obtained**

- DC Urban Forest Health Matrix (\$50,000)
- Watts Branch Phase II Monitoring (\$30,000)
- DCUFA Marshalling Yard Demonstration Project (\$75,000)
- CBT/PGDER Lower Northwest Branch Restoration (\$185,000)

## **SECTION II. FUNDING LEVELS, ALLOCATIONS AND RATIONALE**

### **A. FUNDING SOURCES AND FY 2013 ASSUMPTIONS**

**Regional Water Fund (RWF)** - The Regional Environmental Fund, established in 1988, is a voluntary, COG member fee-for-service contribution that helps support COG's regional environmental resources programs (climate and energy, solid waste and recycling, and program development). By long-standing practice, a portion of the REF is also used to support COG's urban watershed programs.

The COG Board of Directors adopted its FY 2013 Work Program and Budget in January, 2013, including the funding level of the REF. While the overall REF was to be increased by 2% compared with FY 2012, because the REF had been frozen since FY 2009, several jurisdictions would have experienced significant increases due to population changes; consistent with the Board's decision to cap COG Membership Fee increases at no more than 5%, a 5% cap was also applied to the Regional Environmental Fund for FY 2013. The effect of applying the cap is the net increase in the REF is 1.014%.

The Regional Environmental Fund is allocated among participating jurisdictions by "Population Adjusted for Budget." See the FY 2013 COG Work Program and Budget document for further information on jurisdiction population data. Note: Town of Bladensburg, City of Bowie, Charles County, City of Frederick, Frederick County, City of Manassas, and City of Manassas Park currently do not contribute to the Regional Environmental Fund.

**Regional Water Fund** - The Regional Water Fund, established in 1982, is a voluntary COG member fee-for-service contribution that helps support COG's water resources programs. As with the REF, the FY 2013 RWF funding level was included in the COG Board's adopted FY 2013 work program and budget. In aggregate it was increased by 2% above FY 2012 levels, with a 5% cap applied to jurisdictions that would have experienced a larger increase.

The RWF is allocated based on Section 9 of the 1985 "Blue Plains Intermunicipal Agreement" (IMA) and as codified under COG's Chesapeake Bay and Water Resources Policy Committee (CBPC) Bylaws. The allocation formula is as follows: the Blue Plains Users pay 80% of the RWF (DC Water – 20%, on behalf of the District of Columbia; Fairfax Co. – 20%; WSSC – 40%, on behalf of Montgomery and Prince George's Counties); with the remaining 20% allocated to the other jurisdictions by population adjusted for budget. By practice WSSC also pays the RWF for COG-member cities in Montgomery and Prince George's Counties. Note: Town of Bladensburg, Charles County, City of Frederick, Frederick County, City of Manassas, and City of Manassas Park currently do not contribute to the RWF.

**COG Membership Fee** – All 22 members of COG pay an annual fee to be a member of COG set using a per capita rate that is applied to each jurisdiction using "population adjusted for budget." For FY 2013, the per capita rate was increased to \$0.669134 (from \$0.65721), with individual jurisdiction increases capped at 5%. The Board allocates membership fees to COG programs to support match to federal and state grants, as well as to support specific program that may have no other source of funding. In the case of COG's Regional Water Resources and Environmental Resources Programs, a small amount of COG membership funds are allocated to complement the Regional Water and Environmental Funds; additional COG membership funds are allocated to support the Watershed Management Services Program and the Climate and Energy Programs.

**TABLE 1**  
**Local Government Contributions to**  
**COG's Regional Environmental Funds – FY 2013**

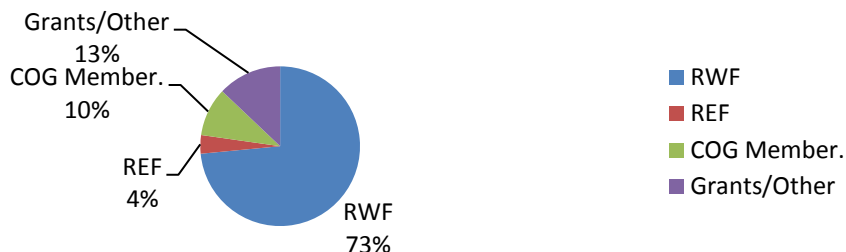
Jurisdiction	Regional Environmental Fund Allocations	Regional Water Fund Allocations
Alexandria, City of	\$ 17,698	\$ 25,889
Arlington County	\$ 27,425	\$ 40,117
Bowie, City of	0	\$ 10,115
College Park, City of	\$ 3,509	\$ 5,205
District of Columbia	\$ 76,867	\$ 256,818
Fairfax, City of	\$ 2,887	\$ 4,224
Fairfax County	\$ 136,997	\$ 256,818
Falls Church, City of	\$ 1,596	\$ 2,367
Gaithersburg, City of	\$ 7,557	\$ 11,054
Greenbelt, City of	\$ 2,635	\$ 3,856
Loudoun County	\$ 39,086	\$ 57,968
Montgomery County	\$ 108,482	\$ 256,818
Prince George's County	\$ 96,901	\$ 256,818
Prince William County	\$ 52,693	\$ 77,080
Rockville, City of	\$ 7,818	\$ 11,436
Takoma Park, City of	\$ 2,108	\$ 3,083
<b>TOTALS</b>	<b>\$ 584,259</b>	<b>\$1,279,666</b>

**B. BUDGET ALLOCATIONS**

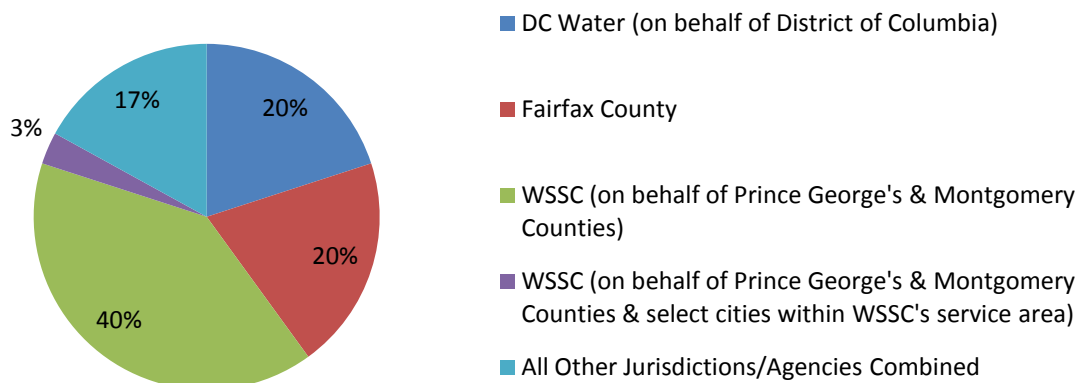
The table below outlines the budgets and funding sources for each program element; while the subsequent charts portray the funding jurisdiction/agency shares, the various sources of funding, and how the funds are allocated amongst the programs.

<b>COG Regional Water Quality Management : Annual Work Program and Budget - FY 2013</b>					
<b>Table 2 - Program Budget Allocations</b>					
<b>Program Area</b>	<b>Regional Water Fund</b>	<b>Regional Environ. Fund</b>	<b>COG Member. Fees &amp; Other</b>	<b>Grants or Other</b>	<b>Total</b>
<b>I. Policy &amp; Program Development</b>					
A. Policy and Advocacy	\$245,000	\$0	\$0	\$0	\$245,000
B. COG Board & Member Support	\$70,000	\$0	\$38,200	\$0	\$108,200
C. Work Program Management	\$73,911	\$0	\$20,000	\$0	\$93,911
<b>TOTAL</b>	<b>\$388,911</b>	<b>\$0</b>	<b>\$58,200</b>	<b>\$0</b>	<b>\$447,111</b>
<b>II. Water Quality Technical Analysis</b>					
<b>A. Potomac Trends and Reports</b>					
1. Regional Water Quality Database	\$200,000	\$0	\$0	\$0	\$200,000
2. Potomac Monitoring Contracts	\$153,126	\$0	\$0	\$0	\$153,126
3. Regional Wastewater Flow Forecast Model & WWTP Database	\$47,629	\$0	\$0	\$0	\$47,629
4. Potomac Water Quality Management & Analysis	\$50,000	\$0	\$0	\$0	\$50,000
<b>B. State/ Federal Regulatory Analysis</b>					
1. Core Technical Support to WRTC	\$245,000	\$0	\$0	\$0	\$245,000
2. Chesapeake Bay Water Quality, Watershed & Other Models	\$50,000	\$0	\$0	\$0	\$50,000
3. Water Resource Emerging Issues	\$35,000	\$0	\$0	\$0	\$35,000
<b>TOTAL</b>	<b>\$780,755</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$780,755</b>
<b>III. Watershed Management Services</b>					
1. Urban Stormwater Regulatory Analysis and Information Exchange	\$0	\$20,000	\$30,000	\$0	\$50,000
2. Watershed Management and Forestry Projects	\$0	\$30,866	\$38,200	\$50,000	\$119,066
3. Green Infrastructure and Sustainable Agriculture Projects	\$0	\$14,384	\$44,915	\$100,000	\$159,299
<b>TOTAL</b>	<b>\$0</b>	<b>\$65,250</b>	<b>\$113,115</b>	<b>\$150,000</b>	<b>\$328,365</b>
<b>IV. Complementary Water Resource Activities</b>					
B. Water Supply and Drought Management	\$70,000	\$0	\$0	\$0	\$70,000
C. Water Resources Community Engagement Campaign	\$40,000	\$0	\$0	\$75,000	\$115,000
<b>TOTAL</b>	<b>\$110,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$75,000</b>	<b>\$185,000</b>
<b>GRAND TOTAL</b>	<b>\$1,279,666</b>	<b>\$65,250</b>	<b>\$171,315</b>	<b>\$225,000</b>	<b>\$1,741,231</b>

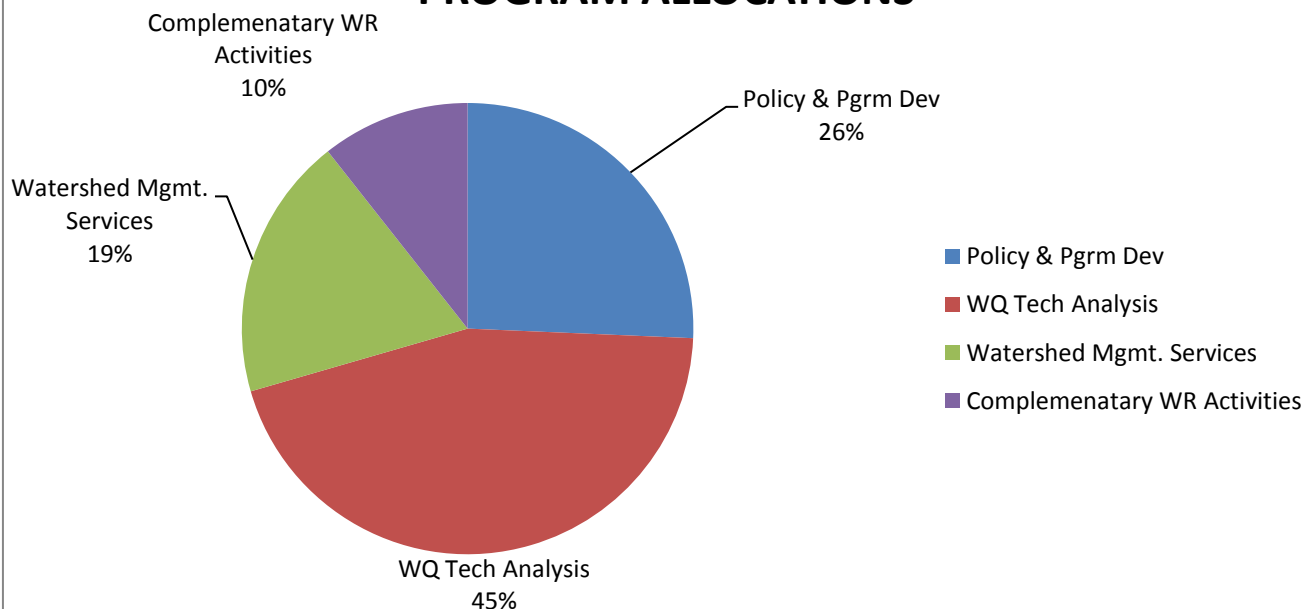
### FY 2013 - FUNDING SOURCES



### FY 2013 Regional Water Fund Funding Jurisdiction/Agency Shares



### FY 2013 - REGIONAL WATER FUND PROGRAM ALLOCATIONS



**SECTION III. ANNUAL WORK PROGRAM AND BUDGET**

The following pages provide tables for each of the four major program areas defined for FY 2013’s annual work program. These tables outline the individual program elements, their associated budgets and funding sources, and details regarding the key priorities and deliverables anticipated for FY 2013.

**Work Program Areas – Detailed Descriptions**

**I. Policy & Program Development**

PROGRAM AREA	FUNDING SOURCES				
	Regional Water Fund	Regional Environ. Fund	COG Member. Fees	Grants or Other	Total
A. Policy & Advocacy	\$245,000	\$0	\$0	\$0	\$245,000
B. COG Board & Member Support	\$70,000	\$0	\$38,200	\$0	\$108,200
C. Work Program Management	\$73,911	\$0	\$20,000	\$0	\$93,911
<b>Total</b>	<b>\$388,911</b>	<b>\$0</b>	<b>\$58,200</b>	<b>\$0</b>	<b>\$447,111</b>

**Committee Oversight:** Chesapeake Bay & Water Resources Policy Committee (CBPC)

**Program Manager:** Tanya Spano

**Lead Staff/Senior Staff:** Karl Berger / Heidi Bonnaffon / Steve Bieber

**FY 2013 Priorities:**

- CBPC - Continue to address the local government implications of the Chesapeake Bay TMDL, including the WIPs and Two-Year Implementation Milestones. In FY 2013 the focus will be on the planned updates to the CBP’s Watershed model and other tools that will be employed in the 2017 mid-course evaluation to ensure that the interests and needs of the COG region are adequately addressed. This will include increased focus on air modeling assumptions as well as the links between air reductions and water benefits. In addition, there will be a special emphasis on quantifying local costs and implications of meeting the CBP TMDL and other water resources needs, and to ensure that the CBPs’ cost-benefit analysis properly reflect the obligations of COG’s members.
- Other CBPC priorities include:
  - Coordinate with the new *Region Forward Coalition* and other COG policy committees on growth and sustainability as well as cross-media issues - as they relate to water quality (e.g., water resources and energy use, and planning/land-use and water quality, and potential air-water benefits/credits);
  - Advocate for federal and state cost-share funding to assist local governments to address Bay restoration and ongoing water resource infrastructure needs;
  - Assess and provide comments on federal/state legislative and regulatory initiatives regarding Bay restoration, local water quality, and related water resource issues; and
  - Educate other local government officials about the Bay as well as other local TMDLs/WIPs (i.e., importance and implications).
- COG staff - Support the CBPC to develop and advocate for regional policies on these priorities and federal and state initiatives; and to work toward consistency between these initiatives and protection of the region’s local water quality/water resource needs as well as broader environmental and policy objectives.

**Overview:** Funding supports COG staff’s work with and support to the CBPC and its Policy Work Groups (with input from the WRTC and its technical subcommittees, and supported by the technical work outlined under Program Area II.), to address the following key policy and program areas.

**A. Policy & Advocacy**

- Track state and local actions under the WIPs, including wastewater treatment and stormwater implementation, stormwater permitting provisions related to TMDL implementation; and comment, as appropriate, on federal and state policies.
- Continue to update regional cost information based on member estimates of what it will cost to meet TMDL and related water resource/infrastructure requirements.
- Update the COG Board, COG CAOs, and local elected officials/senior management, on water resources issues and seek formal action as appropriate – to include briefings/review of various regional water resource factsheets (e.g., wastewater, stormwater, water quality, EDCs, funding mechanisms, etc.) that highlight the successes, challenges and emerging concerns for the regions’ water resources;
- Provide oversight of the water quality/water resource metrics associated with *Region Forward*;
- Coordinate with the Climate, Energy and Environment Policy Committee (CEEPC) and other COG policy committees on cross-media environmental and growth-related issues;
- COG staff - Attend and actively participate on several key Bay Program committees on behalf of the COG region, to address member interests and reduce the need for direct COG member participation. This includes in particular, the Chesapeake Bay Program’s Water Quality Goal Implementation Team, which is responsible for TMDL development, as well as the Chesapeake Executive Council and the Bay Programs’ Principals’ Staff Committee. (COG staff participation in other technical Bay Program and related workgroups/committees is covered under Program Area II).

**B. COG Board & Member Support**

- COG staff - Respond to information requests and briefings on regional water resource issues in response to requests by the COG Board, COG policy committees, COG members, general public, and media requests; to support COG’s role as a clearinghouse for environmental information and a member service organization.
- COG staff – Update the CBPC web page on the COG web site to provide timely summary of Bay restoration developments as they relate to local governments in the region. Work with the committee to provide Bay TMDL briefings to other elected officials in the region.

**C. Work Program Management**

- COG managers - Prepare the annual Work Program and Budgets (WP&B); conduct staff performance appraisals; manage staff and program activities; and participate in internal staff meetings. Also supports Department-wide direct costs.

Major Work Projects/Activities	Quarter				Other
	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	
<ul style="list-style-type: none"> <li>• Submit comments and correspondence, as appropriate, on the progress of TMDL/WIP implementation and the achievement of 2-Year Milestones</li> </ul>	XX	XX	XX	XX	Ongoing
<ul style="list-style-type: none"> <li>• Refine and report on the water resource indicators/metrics submitted as part of COG’s <i>Region Forward</i> initiative; and support for CBPC participation in these efforts</li> </ul>	XX		XX		Per schedule
<ul style="list-style-type: none"> <li>• Expand regional outreach efforts, including providing input on several regional water resource factsheets/materials (see Program Area II)</li> </ul>	XX	XX	XX	XX	Quarterly
<ul style="list-style-type: none"> <li>• Develop policy recommendations and regional strategies to address: increased funding for stormwater management, full funding for wastewater ENR, and other infrastructure needs</li> </ul>					As required
<ul style="list-style-type: none"> <li>• Meetings, conference calls &amp; events in support of the CBPC:               <ul style="list-style-type: none"> <li>○ 6 meetings, including invited guest speakers</li> </ul> </li> </ul>	XX	XX	XX	XX	Bi-monthly

**COG Regional Water Quality Management Program  
Annual Work Program & Budget - FY 2013 (Approved)**

<ul style="list-style-type: none"> <li>○ Special sessions/joint meetings with Federal &amp; state rep.'s, &amp; COG's CEEPC &amp; others re: water/energy issues, growth/planning/water quality issues</li> </ul>					<b>&amp; As required</b>
<ul style="list-style-type: none"> <li>• Briefings/presentations to COG Board and its members</li> <li>• Presentations/testimony to &amp; for local elected officials &amp; others</li> <li>• Respond to COG member &amp; media information requests</li> </ul>					<b>4-6 per year &amp; As required</b>
<ul style="list-style-type: none"> <li>• Annual Work Program &amp; Budget (WP&amp;B) for FY 2014: Mid-Year Review, 2014 Priorities, Draft, &amp; Final WP&amp;B Packages</li> </ul>			<b>XX</b>	<b>XX</b>	<b>Annually</b>
<ul style="list-style-type: none"> <li>• COG staff to conduct annual employee performance appraisals</li> </ul>	<b>XX</b>				<b>Annually</b>



## Work Program Areas – Detailed Descriptions

### II. Water Quality Technical Analysis

<b>PROGRAM AREA</b>	<b>FUNDING SOURCES</b>				
	Regional Water Fund	Regional Environ. Fund	COG Member. Fees	Grants or Other	Total
<b>A. Potomac Trends and Reports</b>					
1. Regional Water Quality Database	\$200,000	\$0	\$0	\$0	\$200,000
2. Potomac Monitoring Contracts (i.e., Chain Bridge & Little Falls Gauge)	\$153,126	\$0	\$0	\$0	\$153,126
3. Regional Wastewater Flow Forecast Model & WWTP Database	\$47,629	\$0	\$0	\$0	\$47,629
4. Potomac WQ Mgmt & Analysis	\$50,000	\$0	\$0	\$0	\$50,000
<b>Subtotal</b>	<b>\$450,755</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$450,755</b>

**Committee Oversight:** Water Resources Technical Committee (WRTC)  
**Program Manager:** Tanya Spano  
**Lead Staff:** Christine Howard & Mukhtar Ibrahim (A1, A2, & A4) / Mukhtar Ibrahim & Lana Sindler (A3)

#### **FY 2013 Priorities:**

- While FY2012 was dominated by focus on the Bay TMDL and WIP developments, monitoring and modeling will regain core focus in 2013. This will include reviewing long-term water resource issues for the Potomac River, including assessments of: a) Water quality monitoring trends in the Potomac River; b) Management actions taken by local governments and utilities and resulting improved water quality in the tidal Potomac Estuary; and c) Analysis of loadings during storm events at Chain Bridge.
- Assessments will also seek to identify future challenges and issues for the Potomac River and the COG region, including continued development of Bay TMDL and Restoration efforts, Climate Change, the Region Forward initiative, projected long-term growth in the region, the potential implications of various compounds of emerging concern (e.g., endocrine disrupters); and algal blooms in the Potomac Estuary.
- Reviews will be conducted through technical forums/Webinars organized topically, that will include presentations by various experts, state and federal representatives, and COG staff.
- Conduct a workshop to identify any issues regarding the CBP's Watershed Model to be raised during the development of a revised modeling framework for the 2017 mid-course evaluation of the Bay TMDL.
- Identify matters to be brought to the attention of the CBPC, COG CAOs, other COG policy committees, and other local officials in the region – as well as any technical and/or policy recommendations.
- Summarize the results of these forums and their findings through the use of factsheets.
- Maximize the use of COG's Website as a regional resource that provides links to various regional monitoring databases; streamline data management activities; and through an iterative process, increase the availability/accessibility of data and program information to COG's members.
- Focus on further integrating data monitoring issues into the WRTC's Bay TMDL and WIP discussions, continue to redefine the role of the WRTC's Regional Water Quality Monitoring Subcommittee (e.g., to help shape forums/discussions regarding monitoring data), and will incorporate any monitoring data recommendations regarding Potomac water quality).

**Overview:** Funding supports COG staff's work with and support to the WRTC and its technical subcommittees (Wastewater Management, Stormwater Management, and Regional Water Quality

Monitoring); and to bring the WRTC's observations and recommendations to the attention of the CBPC - as well as to the COG CAOs, other COG Policy Committees, and COG Board of Directors, as necessary. These efforts include the compilation and summarizing of program and data to aid in making presentations, preparing briefings, developing factsheets. These efforts also include the compilation and management of various water quality monitoring and flow parameters that are used to develop loading trends for nutrient and sediment loads to the Potomac tidal estuary (i.e., via Chain Bridge monitoring) in order to compare to Bay Program estimates for those loads and the related TMDL load allocation assumptions. Data collection and reporting efforts will include those associated with preparing water resource metrics and indicators for Region Forward, as well as the CEEPC's FY 2013 Action Work Plan and water resource elements.

## **A. Potomac Trends and Reports**

### **1. Regional Water Quality Database**

- Prepare and update various factsheets/summaries/white papers on current water quality data trends & issues. These work products will integrate the technical work done under other program areas and link those findings to regional water quality impacts and implications. They will also support the CBPC's efforts to provide outreach to local elected officials and others in the COG region. Proposed examples/titles for these items may include:
  - *Potomac Water Quality Trends and Chainbridge Loads – Successes and Challenges (NEW)*
  - *COG Region's Wastewater Treatment Plants & Service Areas – Annual Inventory of Treatment Processes, Infrastructure Needs, and Sustainability Efforts (NEW)*
  - *Regional Stormwater Management – Meeting the Many Challenges*
  - *Regional Wastewater Management – A Regional Successes Story*
- Compile regional water quality monitoring data, conduct QA/QC and update COG's database – as well as to gather related program and process information to support preparation of the factsheets and other documentation;
- As part of the Potomac River water quality analysis, compile Chain Bridge data and compare loads to CBP loading estimates, as well as regional wastewater loads.
- Compile an inventory of regional water quality monitoring data and water resource databases and develop an on-line/interactive map for easy member access;
- Continue to enhance COG's Website to: provide a user-friendly location for accessing regional data and contact information; and to promote the exchange of monitoring data, watershed programs, wastewater/stormwater implementation programs and information, and related activities; and
- Provide water quality monitoring data and summary information in response to requests from COG's members and associated parties; and

### **2. Potomac Monitoring Contracts (i.e., Chain Bridge and Little Falls Monitoring)**

- Fund for year 5 of a 5-year contract with Virginia Tech's Occoquan Watershed Monitoring Laboratory to provide field and laboratory services to operate and maintain the Chain Bridge monitoring station – including water sample collection, laboratory analysis (nutrients and sediments), and associated technical assistance. Year 5 contract is estimated to be \$145,000;
- Fund local cost-share for year two of a 2-year joint funding agreement with the U.S. Department of the Interior – U.S. Geological Survey (USGS) for a streamflow data collection (flow, water temperature, and specific conductance) in the Potomac River basin at the Little Falls gage. This work is done in cooperation with the U.S. Army Corps of Engineer (Baltimore District). Funding will be approximately \$8,000 each year.

### **3. Regional Wastewater Flow Forecast Model (RWFFM) & WWTP Database**

- Utilize the results from the Blue Plains Service Area (BPSA) upgrades, update GIS data for the regions' wastewater treatment plant service areas, update the regional portions of the RWFFM, a incorporate the results of COG's Round 8.2 Cooperative Forecasting efforts (i.e., to include Census 2010 data).
- Inventory the region's WWTPs to confirm nutrient cap load values and treatment capacity

timelines, as well as other process information, apply the RWFFM results, and compare load caps to expected long-term growth in the Region.

- Review and confirm/correct CBP's assumptions regarding areas served by septic/distributed systems (i.e., areas not falling with the regions' wastewater treatment plan service areas).

**4. Potomac Water Quality Management & Analysis**

- Review local and CBP pollutant loading trends for the Potomac River, analyze trends, review findings with the Regional Water Quality Monitoring Subcommittee, summarize findings for the WRTC, and develop recommendations for the CBPC as appropriate.
- Summarize current state/District assessments of 'impaired waters' (303d listings) as compared to other water quality data/trends.
- Hold a series of topical forums/workshops/Webinars with the Regional Water Quality Monitoring Subcommittee to review Potomac trends, and develop recommendations about critical regional water resource issues (e.g., algal blooms, Bay models, Potomac water quality and monitoring data).
- Utilize regional factsheets/trend summaries as background information for the forums; and
- Issue factsheets/material to summarize those discussions; develop recommendations to the CBPC and others as appropriate; and utilize COG's Website to share these findings with COG members.

<b>Major Work Projects/Activities</b> <i>(Note: Timing of TMDLs/WIP deliverables are subject to change.)</i>	<b>Quarter</b>				<b>Other</b>
	<b>1<sup>st</sup></b>	<b>2<sup>nd</sup></b>	<b>3<sup>rd</sup></b>	<b>4<sup>th</sup></b>	
<ul style="list-style-type: none"> <li>• Prepare/update various factsheets/summaries/white papers on current water quality data trends &amp; issue updates.</li> <li>• Presentations to WRTC, CBPC and other COG committees</li> <li>• Postings on COG's Web sites, blogs, and other media links</li> </ul>	XX	XX	XX	XX	Quarterly
<ul style="list-style-type: none"> <li>• Post water quality monitoring database inventory on COG Website, utilizing 'clickable' maps to access database contacts and resources, &amp; provide routine updates</li> </ul>	XX		XX		Periodically
<ul style="list-style-type: none"> <li>• Manage contract for OWML sampling/data analysis at Chain Bridge &amp; cost-share agreement for Little Falls gage data</li> <li>• Provide periodic updates to WRTC (i.e., status and results will generally be integrated into various factsheets)</li> </ul>	XX				Annually & As required
<ul style="list-style-type: none"> <li>• Hold periodic meetings/conference call/webinars for the Regional Water Quality Monitoring Subcommittee to address: Potomac trends analysis, address any algal bloom issues, and develop recommendations for the WRTC</li> </ul>	XX		XX		Periodically, & As required
<ul style="list-style-type: none"> <li>• Produce updated wastewater flow projections and loading estimates (as part of Region Forward metrics and various factsheets)</li> <li>• Summarize analysis of CBPC's wastewater projections (including septic/distributed control assumptions)</li> <li>• Provide periodic updates to WRTC</li> </ul>	XX	XX		XX	Estimated timing of events
<ul style="list-style-type: none"> <li>• Potomac Water Resource Events (currently proposed)               <ul style="list-style-type: none"> <li>○ Climate Change Data Needs Assessment Workshop for Water Sector</li> <li>○ Workshop for COG's WWTPs to address the CEEPC's Goal #98 &amp; document regional activities/progress to identify best practice/feasibility</li> </ul> </li> <li>• Produce factsheets/summaries of the events</li> <li>• Transmit WRTC recommendations to CBPC</li> </ul>	XX				Estimated timing of events

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<ul style="list-style-type: none"> <li>• Provide data/trend information for presentations/testimony to and for other local elected officials/government/utility bodies</li> <li>• Respond to water resource data/information requests</li> </ul>					<p><b>As required (4-6 per year)</b></p>
<ul style="list-style-type: none"> <li>• Support for Region Forward initiative's indicators &amp; goals: Bay Goals - Water Quality Implementation – (Nitrogen &amp; Phosphorus loads for COG WWTPs &amp; other COG sources)</li> <li>• Percent of Wastewater Treatment Capacity Remaining</li> </ul>	XX		XX		<p><b>Based on program schedule</b></p>
<ul style="list-style-type: none"> <li>• Meetings, conference calls &amp; events in support of the Regional Water Quality Monitoring Subcommittee:             <ul style="list-style-type: none"> <li>○ 4 meetings, including inviting guest speakers</li> <li>○ Special sessions for technical work groups, including the participation of federal/state representatives</li> </ul> </li> </ul>	XX	XX	XX	XX	<p><b>Bi-monthly &amp; As required</b></p>

## Work Program Areas – Detailed Descriptions

### II. Water Quality Technical Analysis

PROGRAM AREA	FUNDING SOURCES				
	Regional Water Fund	Regional Environ. Fund	COG Member. Fees	Grants or Other	Total
<b>B. State / Federal Regulatory Analysis</b>					
1. Core Technical Support to WRTC	\$245,000	\$0	\$0	\$0	\$245,000
2. Chesapeake Bay WQ, Watershed & Other Models	\$50,000	\$0	\$0	\$0	\$50,000
3. Water Resource Emerging Issues	\$35,000	\$0	\$0	\$0	\$35,000
<b>Subtotal</b>	<b>\$330,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$330,000</b>

Committee Oversight: WRTC  
 Program Manager: Tanya Spano  
 Lead Staff / Senior Staff: Lana Sindler (B1 & B3) / Karl Berger & Steve Bieber (B2)

#### **FY 2013 Priorities:**

- Address a broad range of water resource issues, with a continued focus on the technical aspects of the Chesapeake Bay Program’s efforts to develop and implement the EPA Bay TMDLs, State/District’s Phase II WIPs and Two-Year Milestones, as well as various local TMDLs – including the precedent-setting flow-based TMDL for Accotink Creek.
- Continue assessment of the Watershed Model and other technical tools being used to generate nutrient and sediment loads at the state, river basin and local levels. Begin to focus on model upgrades to the tools to be used in the 2017 mid-course evaluation framework.
- Conduct a workshop in conjunction with CBP modeling staff to educate members about the use of the watershed model and plans for changes and upgrades for the 2017 mid-course evaluation.
- In addition to Bay Program issues, there will be continued efforts to determine how these Bay requirements relate or impact other water resource issues of importance to the COG region [e.g., growth, sustainability, Climate Change, emerging compounds of concern (EDCs), and infrastructure needs].

**Overview:** Funding supports COG staff’s continued technical work and analysis, as well as ongoing staff support to the WRTC and its subcommittees (i.e., Wastewater, Stormwater, and Monitoring) at bi-monthly meetings. These efforts will include developing presentations, inviting guest speakers, organizing special work sessions and forums, and preparing factsheets and other material to summarize key water resource issues for the region. As part of these efforts, the WRTC will continue to identify key policy issues and recommendations to be brought to the attention of the CBPC, COG’s CAOs, other COG policy committees, and other local officials in the region regarding these matters.

#### **B. State/Federal Regulatory Analysis**

##### **1. Provide Core Technical Support to WRTC & its Work Groups**

- Identify technical and policy concerns associated with the Bay TMDL WIP implementation process – as well as local TMDL implementation, including:
  - Efforts to sub-allocate TMDL state-basin loads to local levels; and
  - State/District efforts to define & sub-allocate nutrient/sediment loads to local/regional levels.
  - EPA’s efforts to establish local flow-based TMDLs.
- Invite speakers from federal/state governments and other entities to provide their perspectives, discuss their assumptions and planning efforts, and discuss issues of mutual concern regarding Bay

- Provide input on various materials that COG staff develops to summarize these issues for the CBPC, local elected officials and other entities. Factsheets will focus on a wide-range of water resource issues (e.g., wastewater treatment & water quality linkages; stormwater management & TMDL vs. permit requirements; infrastructure & program funding needs - for wastewater, stormwater & drinking water needs, in response to permit & TMDL requirements, as well as latest research & potential implications of EDCs/PPCPs on the region’s water resources).

**2. Assess Inputs & Applications of Chesapeake Bay Water Quality, Watershed & Other Models**

- Evaluate the data and assumptions being used to address the potential implications of Climate Change in the CBP’s Bay models and restoration efforts;
- Continue to evaluate the data inputs and assumptions used in the Bay Watershed Model (as well as various state versions) to define and sub-allocate nutrient and sediment loads associated with the Bay TMDL to local levels, and the degree to which that data and assumptions are consistent with local information and practices. Analyze other models that quantify loads;
- Advance COG member views on ways to improve the watershed model ahead of the 2017 Bay TMDL re-evaluation.
- Analyze the assumptions and loading implications of the CBP’s Watershed Model and the inputs from EPA’s various airshed models, compare to local air quality attainment/planning assumptions, review how air deposition is calculated, how air quality improvements are captured/credited, and identify any implications for the COG region – as well as any potential dual benefits (i.e., air quality improvements that also have water quality improvements).

**3. Monitor & Assess Implications of Various Emerging Issues**

- Evaluate a range of topics that are of interest to the COG region and/or have potential water quality/water resource implications for the Potomac River. These topics will include evaluation of linkages between growth policies and TMDLs, as well as wastewater and energy; summarizing key implications for the region; and identifying those that warrant further analysis or action.
- Evaluate issues related to Climate Change and its implications for the region’s water resources (e.g., evaluate changes in rainfall intensity-duration-frequency (IDF) in order to understand current trends as well as the potential for further changes once climate change impacts are factored in, as well as flooding and sea level rise impacts on local water resource infrastructure and planning.
- Continue to monitor ongoing developments associated with emerging compounds of concern [e.g., endocrine disruptors (EDCs), pharmaceutical and personal care products (PPCPs)] that have potential implications in particular for wastewater treatment and drinking water/source water protection). To be supplemented by activities sponsored under the existing Community Engagement Campaign (see III.C.).

<b>Major Work Projects/Activities</b> <i>(Note—Timing of deliverables associated with TMDLs and WIPs are subject to change.)</i>	<b>Quarter</b>				<b>Other</b>
	<b>1<sup>st</sup></b>	<b>2<sup>nd</sup></b>	<b>3<sup>rd</sup></b>	<b>4<sup>th</sup></b>	
<ul style="list-style-type: none"> <li>• Recommendations to the CBPC on formal comments to be sent to Bay Program Partners, EPA &amp; state governments regarding the Bay TMDL, Phase II WIPs, &amp; 2 Year Milestones processes; and related water resource issues/initiatives</li> </ul>	XX	XX	XX		<b>Quarterly &amp; 4-6 per year</b>
<ul style="list-style-type: none"> <li>• Meetings, conference calls &amp; events in support of the WRTC:               <ul style="list-style-type: none"> <li>○ 6 meetings, including inviting guest speakers</li> <li>○ Special sessions of the WRTC &amp; its technical work groups, including the participation of federal/state representatives</li> </ul> </li> </ul>	XX	XX	XX	XX	<b>Bi-monthly &amp; As required</b>
<ul style="list-style-type: none"> <li>• Bay Watershed Model workshop (focused on wastewater, septic/distributed systems, stormwater, &amp; air deposition loads)</li> </ul>		XX			<b>Estimated timing</b>

## Work Program Areas – Detailed Descriptions

### III. Watershed Management Services

PROGRAM AREA	FUNDING SOURCES				
	Regional Water Fund	Regional Environ. Fund	COG Member. Fees	Grants or Other	Total
A. Urban Stormwater Regulatory Analysis & Information Exchange	\$0	\$20,000	\$30,000	\$0	\$50,000
B. Watershed Management & Forestry Projects	\$0	\$30,866	\$38,200	\$50,000	\$119,066
C. Green Infrastructure & Sustainable Agriculture Projects	\$0	\$14,384	\$44,915	\$100,000	\$159,299
<b>Total</b>	<b>\$0</b>	<b>\$65,250</b>	<b>\$113,115</b>	<b>\$150,000</b>	<b>\$328,365</b>

**Committee Oversight:** WRTC, CBPC, & Regional Agricultural Work Group  
**Program Manager:** Steve Bieber  
**Lead Staff / Senior Staff:** Karl Berger (A) / John Galli (B & C) / Brian LeCouteur (C)

#### **FY 2013 Priorities:**

- Promote technical information exchange and provide support for COG members in the area of urban stormwater management and the implications of urban stormwater pollution to the region’s water quality and the Bay/local TMDL processes.
- Analysis of stormwater regulatory developments, expansion of the FY’2011 analysis of stormwater fees to cover cost data and stormwater management alternatives for meeting TMDL and MS4 requirements, and dissemination of findings to elected officials and technical staff.
- Provide limited direct staff support and opportunities to leverage grant support covering watershed monitoring studies, assessment of physical, chemical and biological conditions of local streams, riparian forest buffer and watershed evaluations using various environmental indicators, remote sensing and GIS applications, evaluation of the performance of various urban stormwater Best Management Practices and/or other watershed water quality enhancement-related projects and initiatives.
- Support ongoing work for the Regional Agricultural Initiative including marketing of local agriculture, mapping agricultural lands, further analysis of farm markets and support of the Regional Agricultural Workgroup (RAW) to explore opportunities that support agricultural-related activities.
- Cross-cutting work on the development of a regional urban tree canopy conservation and management plan. Strategic tree planting and tree canopy conservation and management are innovative voluntary measures that will achieve area-wide improvement of the tree canopy, providing water quality and air quality benefits.
- Support to the Region Forward initiative, the related regional sustainability coalition, and to expand cross-cutting regional policy capacity and coordination to advise the COG Board on *Region Forward* implementation projects and initiatives in areas such as climate adaptation, stormwater management, and access to locally grown food.

**Overview:** Funding supports COG staff’s work with and support to the CBPC, WRTC and its technical subcommittees; the CEEPC, and to bring the WRTC’s observations and recommendations to the attention of the CBPC - as well as to the COG CAOs, other COG Policy Committees, and COG Board of Directors, as necessary.

**A. Urban Watershed Regulatory Analysis and Information Exchange**

- This activity is designed to track accelerating developments in federal, state regulation of local stormwater management programs and to conduct both educational outreach to elected officials and technical information exchange among COG members.
- COG staff may conduct another webinar on stormwater regulatory developments for the COG Board among other outreach efforts. COG staff will continue to work with the Stormwater Subcommittee of the WRTC to update COG's stormwater fee survey information, to track BMP implementation costs and to provide peer networking on program management issues.
- Under this task COG staff will attend various stormwater education sessions and disseminate findings to member governments. In addition, COG staff will seek opportunities to obtain outside funds for the purpose of conducting workshops and educational seminars for member government staff.

**B. Watershed Management & Forestry Projects**

- This work element includes direct staff support and opportunities to leverage grant support covering watershed monitoring studies, assessment of physical, chemical and biological conditions of local streams, riparian forest buffers and watershed evaluations using various environmental indicators, remote sensing and GIS applications, evaluation of the performance of various urban stormwater Best Management Practices and/or other watershed water quality enhancement-related projects and initiatives.
- COG staff will also continue to pursue grant opportunities which promote and/or enhance COG member watershed and forest protection, restoration and management objectives and initiatives.
- In addition, COG staff will carry out cross-cutting work on the development of a pilot, phase one, regional urban tree canopy analysis and management strategy. Strategic tree planting and tree canopy conservation and management are among the several innovative measures that may help achieve area-wide expansion of tree canopy cover; providing water quality, - air quality, and other ancillary benefits. Part of this work will include reassessing watershed health indicators for Region Forward baseline report.
- Based upon continued grant support, COG staff will provide stream restoration, fish passage, stormwater management, wetland creation and riparian habitat restoration monitoring, design and technical, GIS-related watershed evaluation expertise and guidance to COG members.
- COG staff will also support the Community Forestry Network (CFN); amend and update the green infrastructure database for the Washington Metropolitan Area; and conduct several stream and riparian buffer assessment studies.

**C. Green Infrastructure & Sustainable Agriculture Projects**

- This work element provides for direct staff support and opportunities to leverage grant support covering green infrastructure projects for the Metropolitan region. This will include project areas such as maintaining current land cover mapping databases using remote sensing and GIS applications, as well as supporting ongoing regional Green Infrastructure initiatives.
- In addition, COG staff will carry out work to help integrate the Region Forward initiative and links to local food production and consumption, climate adaptation, stormwater management. This element is designed to support ongoing work for the Regional Agricultural Initiative including quantification of local food production, marketing of local agriculture, mapping agricultural lands, further analysis of farm markets and support of the Regional Agricultural Workgroup (RAW) to explore opportunities that support agricultural-related priorities and activities.
- COG staff will continue to pursue grant and partnership opportunities which promote and/or enhance COG member green infrastructure and agricultural programs and initiatives for the protection and enhancement of green space for agriculture, recreation, wildlife habitat, and watershed protection. Based upon such grant support, COG staff will continue to provide expertise and guidance to COG members. Activities supported in this work element, include pursuit of grant matching funds, staff support for the Regional Agricultural Workgroup and the [www.nationalcapitalfarms.org](http://www.nationalcapitalfarms.org) web site,



assisting COG membership on Green Infrastructure and Agriculture programs, staff support for the Region Forward initiative, as well as maintenance and expansion of the green infrastructure database for the Washington Metropolitan area.

<b>Major Work Projects/Activities</b> <i>(Note—Timing of deliverables associated with TMDLs and WIPs are subject to change.)</i>	<b>Quarter</b>				<b>Other</b>
	<b>1<sup>st</sup></b>	<b>2<sup>nd</sup></b>	<b>3<sup>rd</sup></b>	<b>4<sup>th</sup></b>	
• Synthesize findings from survey of members regarding SW fees, and use of SW funding, and present findings to CBPC and others		XX			
• Stormwater updates for COG Board or others – as appropriate					TBD
• Update regional stormwater fee survey & information sheet		XX			
• Update regional stormwater factsheet			XX		
• Work sessions/peer network of WRTC’s Stormwater Workgroup					3 X/year
• Stormwater workshops (as funding allows)					TBD
• Joint planning on Stormwater topics with Anacostia Partnership Steering Committee	XX	XX	XX	XX	
• Stormwater policy tracking (VAMSA, SWAM, CBP)	XX	XX	XX	XX	
• District of Columbia-Pope Branch Post-Stream Restoration Monitoring		XX	XX	XX	
• Prince George’s County – Upper Beaverdam Creek and Lower Northwest Branch Benthic Assessment Study					
• Prince George’s County – Northwest and Northeast Branch- River Herring and Resident Fish Habitat Utilization				XX	
• Montgomery County and Prince George’s County-Northwest Branch Streambank Chemistry-Related Assistance					
• District of Columbia - Watts Branch Benthic Stream Assessment Study	XX	XX	XX	XX	
• Development of a pilot, regional urban tree canopy analysis and management plan in coordination with COG DEP & CEEPC	XX	XX	XX	XX	
• District of Columbia – Regional Urban Tree Canopy and Land Use/Land Cover Analysis	XX	XX	XX	XX	
• District of Columbia Waste Wood Facility/Marshalling Yard Assistance (Urban Timber Utilization)		XX	XX	XX	
• Support for the Region Forward initiative and tracking/reporting of indicators and goals associated with: <ul style="list-style-type: none"> <li>○ Watershed Health</li> <li>○ Forest Coverage/Tree Canopy</li> <li>○ Acres of Impervious Surfaces</li> </ul>	XX	XX			Based on program schedule
• Support for CFN meetings					3X/year
• Regional Green Infrastructure Database Update				XX	
• Support for the Regional Agricultural Workgroup	XX	XX	XX	XX	
• Regional Agricultural Mini-Workshops			XX	XX	
• Regional Agricultural Brochure	XX	XX			
• Regional Urban Timber Recovery Initiative			XX	XX	
• Other potential grant supported project deliverables					TBD
• Presentations to the WRTC and CBPC					2X/year

**Work Program Areas – Detailed Descriptions**

**IV. Complementary Water Resource Activities**

PROGRAM AREA	FUNDING SOURCES				
	Regional Water Fund	Regional Environ. Fund	COG Member. Fees	Grants or Other	Total
A. Water Supply Emergency and Drought Management	\$70,000	\$0	\$0	**	\$70,000

**Committee Oversight:** Drought Coordination Committee, Water Security Work Group, WRTC & CBPC  
**Program Manager:** Steve Bieber  
**Lead Staff / Senior Staff:** Christine Howard (Drought Coordination); Heidi Bonnaffon & Julie Karceski (Water Security)

*\*\*Note: Additional program funds are provided annually through the regional Urban Area Security Initiative (UASI) grants & a U.S. EPA STAG grant (Grant total is \$3 to 5 Million - which includes support for Water Security issues).*

**FY 2013 Priorities:**

- Continue to focus on providing comprehensive and up-to-date information to these committees to enable the region to provide timely regional responses to potential and actual water supply/drought conditions as well as water security issues.
- COG staff – Provide continued technical, policy, and staff support to:
  - COG’s Drought Coordination Committee:
    - Implement a regional water supply work program to address water supply/drought management issues
    - Provide continued monitoring of regional water supply conditions
    - Prepare monthly drought outlook and conditions reports, and
    - Implement the regional Water Supply Emergency Plan in response to drought events and other water supply issues.
  - The regional Water Security Work Group to:
    - Coordinate and manage regional water security activities in areas such as modeling, monitoring, redundancy and resiliency, operational planning, identification of best practices, facility hardening, mutual aid, and training and exercises;
    - Continue to assess risks, threats, and vulnerabilities of the NCR’s drinking source water, drinking water distribution systems, and wastewater collection and treatment systems;
    - Identify strategies and best practices to address the highest priority risks, threats, and vulnerabilities, including the growing threat from cyber attacks.

**Overview:**

**A. Water Supply Emergency and Drought Management**

COG’s Board of Directors initially established a “Task Force on Water Supply Issues” (July 1999) to review the region’s water supply systems, drought emergency plans, and long-term water supply plans and needs. Continued efforts in this area focus on communication and coordination among local and state governments, water supply utilities, the media and general public in the event of serious droughts. These efforts are also integrated with regional Homeland Security issues because of the great importance of and linkages between

drinking water/source water protection issues in response to potential security threats and those associated with drought or other natural phenomenon.

This program involves three main tasks:

1. Water Supply and Drought Management Tracking and Reporting;
2. Review Drought Watch Trigger and develop recommended changes in Response Plan;
3. Drought and Water Supply Emergency Response and Planning; and
4. Support for the Regional Water Security Work Group.

Major Work Projects/Activities	Quarter				Other
	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	
<ul style="list-style-type: none"> <li>• Manage and coordinate Drought Coordination Committee and Drought Technical Committee during periods of drought</li> </ul>	XX	XX		XX	Summer / As required
<ul style="list-style-type: none"> <li>• Track and monitor Potomac basin drought and water supply conditions and website updates</li> </ul>	XX	XX	XX	XX	Year-round / Ongoing
<ul style="list-style-type: none"> <li>• Monthly Regional Drought and Water Supply Outlook Reports</li> </ul>	XX	XX		XX	Seasonal (May – Oct)
<ul style="list-style-type: none"> <li>• Staff support for assessing Drought Watch Trigger and preparing updates to Response Plan</li> </ul>					Timing TBD
<ul style="list-style-type: none"> <li>• Staff support and management coordination to the Water Security Work Group</li> <li>• Continued management and coordination of Regional Water Security Monitoring Network</li> </ul>	XX	XX	XX	XX	Ongoing / As required
<ul style="list-style-type: none"> <li>• Continued management and coordination of NCRWARN (regional utility mutual aid network)</li> </ul>	XX	XX	XX	XX	Ongoing / As required
<ul style="list-style-type: none"> <li>• Implementation of a regional table top exercise</li> </ul>					Timing TBD
<ul style="list-style-type: none"> <li>• Updates to WRTC regarding drought reports &amp; general briefings regarding regional security initiatives</li> </ul>	XX		XX		Periodic
<ul style="list-style-type: none"> <li>• Support for the Region Forward initiative and tracking/reporting of indicators and goals associated with:               <ul style="list-style-type: none"> <li>○ Water Usage (per capita)</li> </ul> </li> </ul>	XX	XX			Based on program schedule

**Work Program Areas – Detailed Descriptions**

**IV. Complementary Water Resource Activities**

PROGRAM AREA	FUNDING SOURCES				
	Regional Water Fund	Regional Environ. Fund	COG Member. Fees	Grants or Other	Total
B. Water Resource Community Engagement Campaign (CEC)	\$40,000	\$0	\$0	\$75,000	\$115,000

Committee Oversight: CEC Public Information Officers Committee / WRTC  
 Program Manager: Steve Bieber  
 Lead Staff / Senior Staff: Heidi Bonnaffon, & Tanya Spano (Wastewater)/Karl Berger (Biosolids & Stormwater)

**FY 2013 Priorities:**

- Continue to focus on innovative means for targeting various water resource messages, and to leverage those funds in order to most cost-effectively support the work of COG’s local governments and agencies that deal with these issues.
- Continue using online advertising and social media tools (e.g., blogging, banner ads, Facebook, Twitter), to get our messages out in a geographically targeted and cost-effective way. The Campaign uses a variety of tools to target the general public, elected officials, consumers/rate payers, homeowners, and other key groups. Accomplishments will be summarized monthly and the effort will be adjusted to continue what has worked well and change what has not. Success and effectiveness of the campaign will be measured every step of the way by tracking:
  - The number of visitors from COG jurisdictions;
  - The number of subscribers;
  - The number of completed surveys (or other transactions); and
  - Links or mentions in the media or other blogs.
 The campaign will also utilize available audio, video, and other materials from national organizations as well as local utilities and local, state, and federal, governments.
- Continuation of the “*TapIt*” program to expand its roll out in the COG region to address accessible/sustainable access to drinking water.

**Overview:**

**B. Community Engagement Campaign**

This activity supports continued implementation of a regional educational and information outreach effort – the Community Engagement Campaign. In FY 2013, the campaign elements will be:

**Wise Water Use Materials, Events, and Outreach**

The CEC has a long history of hosting Wise Water Use events, and CEC members extensively promote water conservation on their own with support from COG staff as needed. This item would continue that support and provide materials and other support to help CEC members prep for events, successfully carry out events, and insure common water conservation messaging throughout the region. For example:

- Information and web links to campaign site in annual utility water quality mailing to customers
- Outreach Events (e.g., displays, handout material, Wayne Water Drop, prize packs, PSA ads on You Tube)
- Shower Timers and Black-Susan Seeds
- Partnership Development
- Landscape Guides

- Mascot and campaign materials
- Website outreach
- Campaign phone hotline

**Banner Ad Mini Campaigns**

Due to the high number of impressions for relatively low cost, we will be expanding the Banner Ad Mini Campaigns to address various sub-themes within Wise Water Use and Source Water Protection. We propose to re-run banner ads on (Do not flush), fats, oils and grease (FOG), as well as lawn care, and other messages which could be ready to run when desired. Based on results achieved so far, it is estimated that banners ads receive 500,000 impressions within a month.

**TapIt**

The "TapIt" pilot project is a water bottle refilling network that will give Metro Washington residents free access to clean sustainable water on the go. Business owners sign up as 'partners' to provide tap water to those who carry a reusable bottle. Just a few benefits of this regional outreach effort include:

- Encourage community investment in water service and resources.
- Elevate the value of water service in the minds of consumers.
- Promote reusable water bottles (reduces plastic bottle litter and waste).
- Provide utilities and local governments with tools that help them communicate with consumers and decision-makers about the value of water service and clean water.

An ambitious goal was set to get 600 businesses to join the TapIt network. As part of the campaign we would print TapIt placards, maps, and member logos on TapIt water bottles to be given out at events or sold.

<b>Major Work Projects/Activities</b>	<b>Quarter</b>				<b>Other</b>
	<b>1<sup>st</sup></b>	<b>2<sup>nd</sup></b>	<b>3<sup>rd</sup></b>	<b>4<sup>th</sup></b>	
• A regional educational & outreach Community Engagement Campaign	XX	XX	XX	XX	Ongoing
• An online information distribution & blogging campaign • A COG Community Engagement Campaign website	XX	XX	XX	XX	Year-round
• Community Engagement Campaign promotional outreach events	XX	XX	XX	XX	Seasonal Fall/Winter
• Implement regional Banner Ad Mini Campaigns	XX	XX	XX	XX	Seasonal
• Implement a regional "TapIt" program	XX	XX	XX	XX	Ongoing

APPENDIX

Chart 4 – COG Committee Structure

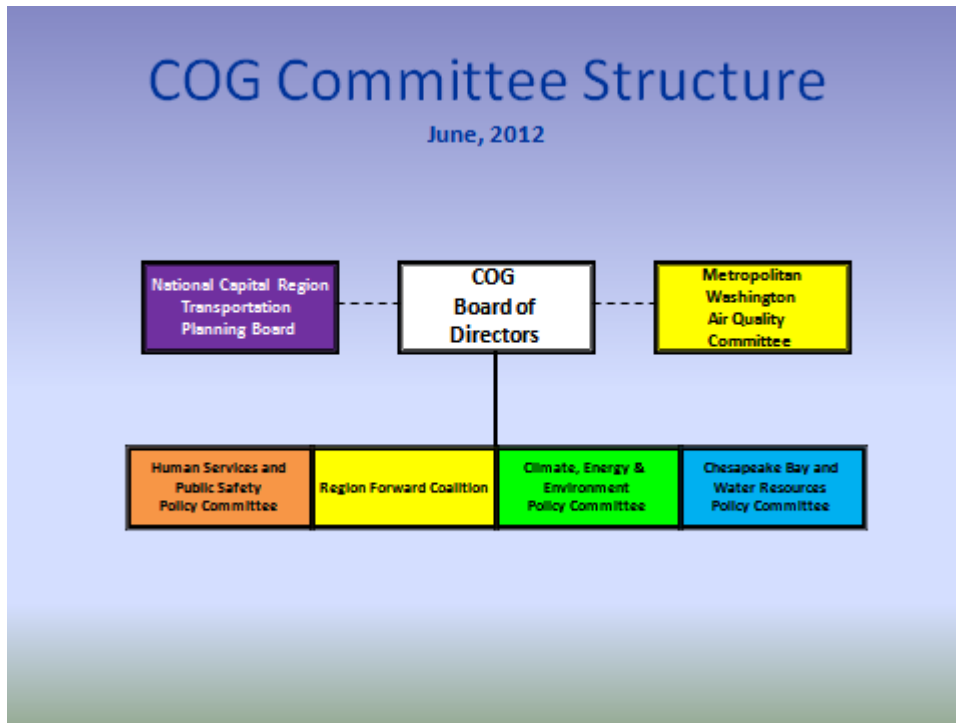


Chart 5 – COG Water Resources Committees

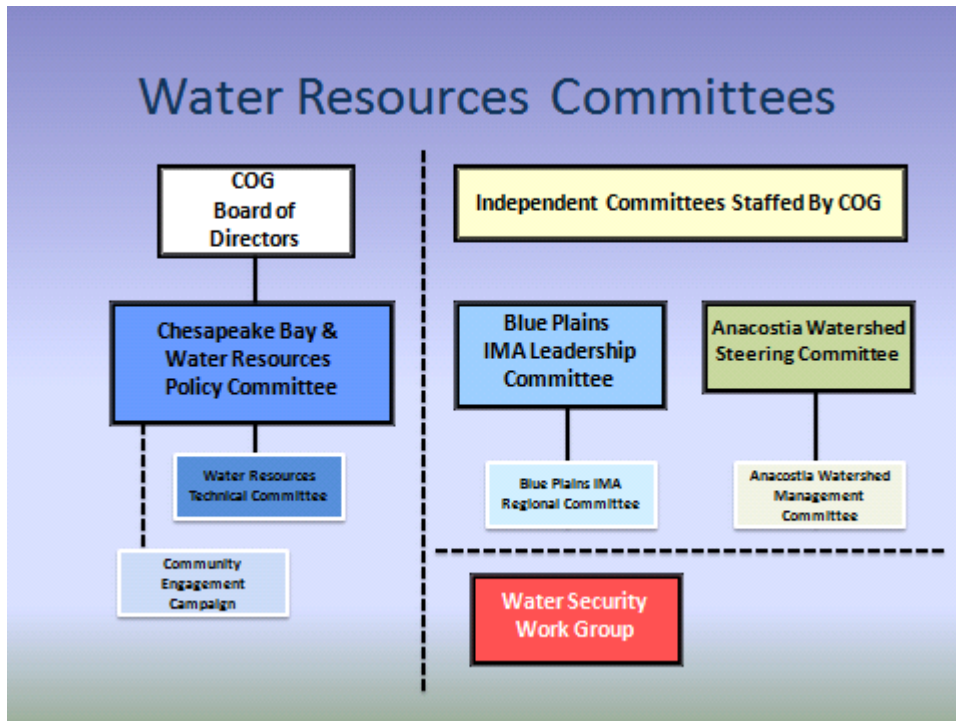


Chart 6 – DEP Staffing Organization

# COG/DEP Program Management Structure June, 2012

