

DRAFT (9/2/15)

FY 2016 Water Resources Work Program and Budget

July 1, 2015 to June 30, 2016

DRAFT



Metropolitan Washington
Council of Governments

ABSTRACT

This is the Annual Work Program and Budget (Fiscal Year 2016) 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 participating local wastewater and water utilities. The program has been developed to address regional water quality/water resources issues in the Metropolitan Washington region.



COG Members

District of Columbia

Maryland:

- Bladensburg*
- Bowie
- Charles County
- 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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I. REGIONAL WATER RESOURCES MANAGEMENT

This is the Annual Work Program and Budget for COG's Regional Water Quality Management (RWQM) Program for Fiscal Year 2016 (FY 2016). It includes information on COG's water resource programs; committee oversight; key challenges, drivers and priorities; budgets; and key deliverables. The work program is structured to meet the needs of COG's members to address critical regional water resource and water quality issues. Key features of the FY 2016 RWQM work program are summarized below.

A. COG's WATER RESOURCES PROGRAMS

Under the overall administration of COG's Department of Environmental Programs, 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 state and federal initiatives that have water quality/resource implications for the COG region. COG's four primary Water Resources Programs include:

- **Regional Water Quality Management Program (RWQM)** – This program addresses regional water quality issues, particularly in the upper estuary of the Potomac River. The primary support for the program is the Regional Water Fund – which is funded by the Blue Plains Parties¹ [under the terms of the 2012 Blue Plains Intermunicipal Agreement (2012 IMA), Service Agreement #2], as well as COG's local governments and wastewater utilities. Oversight of this program is by COG's Chesapeake Bay and Water Resources Policy Committee (CBPC) and the Blue Plains IMA Leadership Committee.
- **Blue Plains Intermunicipal Agreement (IMA) Support** – This program supports the coordination among the parties to the Blue Plains 2012 IMA, provides technical and policy support to the parties, and is funded solely by those parties. Oversight of this program is by the Blue Plains IMA Regional and Leadership Committees.
- **Urban Watershed Programs**, including the **Anacostia Restoration Program (ARP)** – The ARP supports the Anacostia Watershed Restoration Partnership. Oversight is by the Anacostia Watershed Steering Committee's (AWSC). Funding is provided by members of the Partnership, as well as through various grants. The regional aspects of the program are reflected in the RWQM Program; while oversight of specific grant-funded projects is by the grantor agencies.
- **Water Security and Resources** – This program addresses security issues of importance/impact to local drinking water and wastewater utilities and is funded through federal UASI² grant and EPA STAG³ funds, as well as contributions from the region's water and wastewater utilities. Oversight for this program is provided by the COG Chief Administrative Officers Homeland Security Executive Committee (CAO-HSEC) and state-federal Senior Policy Group (SPG), and the Water Security Work Group (RESF3A-Water).

¹ Blue Plains Parties – District of Columbia, DC Water, Fairfax County, Montgomery County, Prince George's County, and Washington Suburban Sanitary Commission.

² UASI - Urban Area Security Initiative

³ STAG – State and Tribal Assistance Grants

B. RWQM PROGRAM OVERSIGHT & COORDINATION

RWQM Annual Work Program and Budget – The primary focus for this program is to address water quality issues associated with the assessment and protection of the tidal estuary portion of the upper Potomac River and its tributaries. Overall funding levels for the program are set by the COG Board each January.⁴ The CBPC and the IMA Leadership Committee are responsible for approving the annual work program. Technical oversight is provided by the Water Resources Technical Committee (WRTC) and the IMA Regional Committee. Details for other water resource work programs are outlined in separate work plans and oversight is handled by the program funders.

Integrating Water Quality/Resource Issues – The RWQM Program is coordinated with the Department’s other related programs (e.g., energy, climate change, sustainability, air quality, security, and Anacostia watershed). It is also designed to complement and support the COG Board’s Mission and priorities on a wide range of issues that have water resource and broader environment implications – such as:

- [Region Forward](#) vision
- [Economy Forward](#) initiatives
- Water-specific [climate change & energy](#) commitments – in conjunction with COG’s [Climate, Energy, and Environment Policy Committee \(CEEPC\)](#)
- [State of the Region Infrastructure Report \(2015\)](#)
- [2015 Legislative Priorities](#)
- [2015 Focus on Economic Competitiveness](#)

C. CHALLENGES FOR FY 2016

The focus for the region’s water resource providers continues to be– ‘*to protect water quality and public health in a sustainable and affordable manner for the region.*’ The key features of the proposed FY 2016 RWQM Work Program generally reflect the same overall drivers, challenges, areas of focus and level of effort as FY 2014 and FY 2015. However, what is decidedly new in FY 2016 is that the region is now two years from the Chesapeake Bay Program’s (CBP’s) Bay TMDL 2017 Mid-Point Assessment period, other permit/regulatory matters have evolved, and several existing water resource challenges have become more pronounced. For example, our region’s aging and expanding water infrastructure, and associated work force needs, are not just challenges but are now two clear drivers for water resource programs. In summary, the region’s water resource providers continue to work towards the overall goal, while responding to the following drivers and challenges (see outlined also in Figure 1):

⁴ The COG Board adopted the FY 2016 budget for this program on January 14, 2015.

| Table 1 – Drivers & Challenges – FY 2016 | |
|--|--|
| Drivers | Challenges |
| NPDES & MS-IV Permits | <ul style="list-style-type: none"> • Meeting existing & new/evolving regulatory requirements, & other environmental objectives • Prioritizing & innovating to implement sustainable & affordable solutions given: <ul style="list-style-type: none"> ○ Constrained schedules/deadlines & resources ○ Limited/constrained funding • Effectively responding to new/emerging water resource issues • Responding to continued growth • Supporting the region’s economy |
| Bay TMDL & WIPs | |
| Local TMDLs & Restoration Goals | |
| Other Environmental Goals | <ul style="list-style-type: none"> • Maintaining existing/aging infrastructure • Building new infrastructure & implementing new technologies • Addressing extreme weather/climate impacts on water resources/infrastructure |
| Aging/Expanding Water Infrastructure | |
| Jobs Skills/Workforce Needs | <ul style="list-style-type: none"> • Addressing aging work force & new job/job skill needs |

As background for this annual work program, some of the key challenges and innovations that are shared and specific to these sectors are outlined below.

Background - Water Quality & Water Resources

- The Chesapeake Bay TMDL continues to be a primary driver for many of the requirements placed on the region’s wastewater plants and stormwater programs.
- New permit and implementation strategy requirements to address local water quality and local TMDLs are also evolving to be significant water quality drivers for those same facilities and programs (e.g., toxics (PCBs), bacterial standards, and climate change impacts, MD Net Zero Plan).
- Local governments and wastewater utilities continue to respond to demands to achieve more improvements in water quality in a cost effective and affordable manner in the face of budget, staffing and resource constraints, as well as population growth and climate impacts.
- Effectively conveying these challenges and resultant costs to the public and ratepayers continues to be a communications challenge for the region.
- Water infrastructure issues continue to be an area of local, regional and national concern, although they often manifest somewhat differently between wastewater/drinking water systems (large, aging systems) and stormwater (many new/dispersed systems are just now being implemented). At the same time, the region’s economy as well as public health and environmental quality depend on all of these water infrastructure systems operating consistently, reliably, and in a sustainable and affordable manner.
- The issue of adequacy of funding, affordability and increasing water rates is also a common issue.
- Another shared concern is the need for sufficient and adequately skilled workers to operate and maintain the region’s water facilities and systems (e.g., wastewater/drinking water workforces anticipate significant retirements over the next 5 to 10 years, while stormwater workforce needs are often focused on the need for new/credentialed workers).
- In order to address these broad water quality and water resource challenges, the region’s wastewater and stormwater programs and facilities continue to pursue cutting edge technologies and program implementation that are frequently cited as national examples.
- These challenges also provide the waste sector opportunities to implement more holistic/sustainable practices, to address dual water-energy needs, and to improve the visibility of

this sector and note its important role in supporting the local economy, providing local job opportunities and protecting the environment.

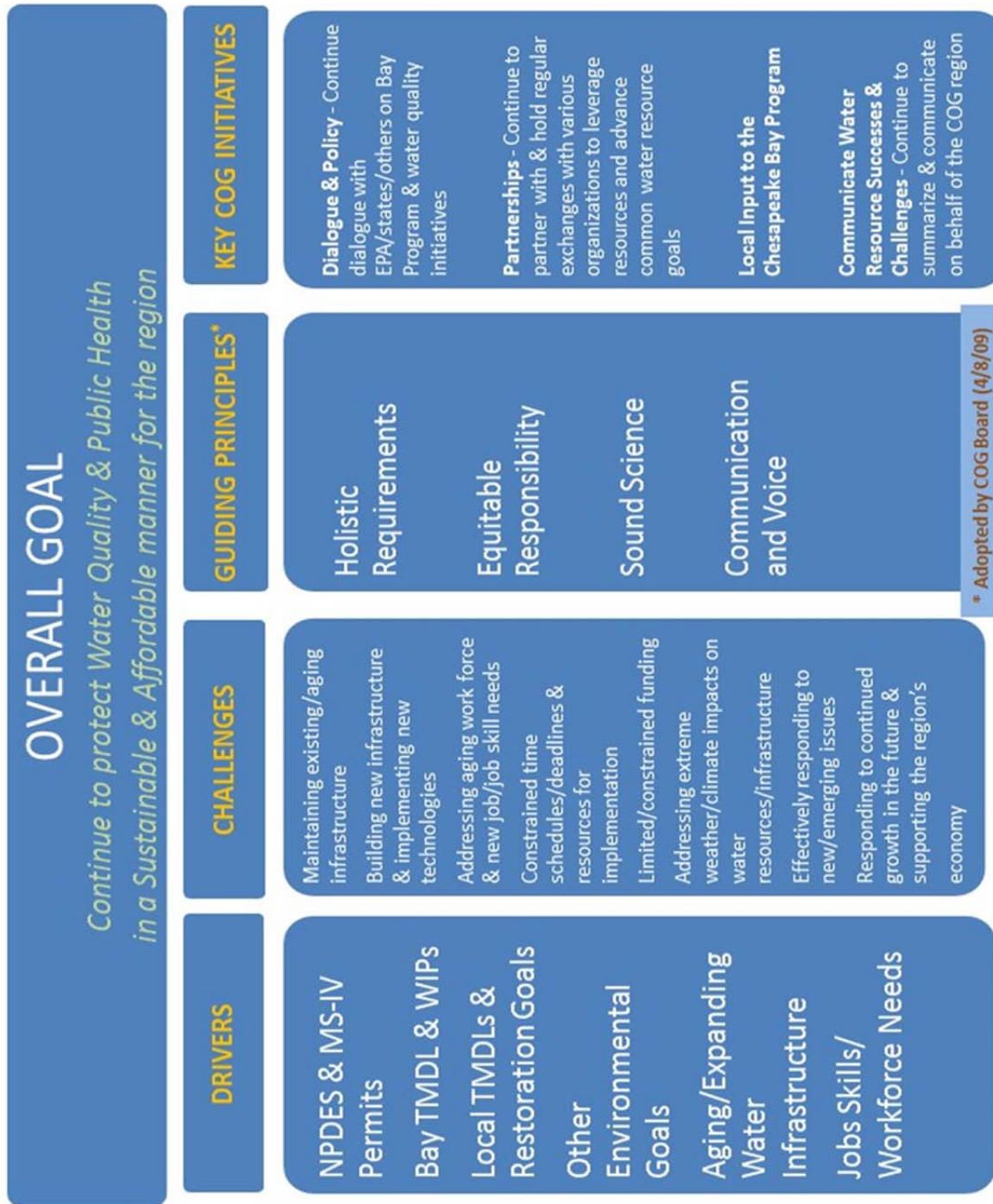
Background - Wastewater Management

- The wastewater industry is evolving from its fundamental role to treat wastewater in order to protect public health and the environment to that of being producers of, or recovery of, valuable water resources for their communities. This is reflected in how the industry defines its role as well as how it portrays itself in our communities; as water reuse, water reclamation or resource recovery facilities, energy efficiency, biofuel generation, and other treatment innovations (e.g., [Water Resources Utility of the Future](#)).
- Many of these efforts are linked to energy use, given that our wastewater treatment plants (like drinking water treatment plants) are dependent on external energy sources and are major energy users in our communities. These water-energy nexus issues also continue to be a key link between COG's water quality and climate change efforts (e.g., to reduce greenhouse gases) as well as to other water supply/source water protection efforts (e.g., [Nutrient Roadmap Primer](#)).
- All of these demands require development and use of cutting-edge technologies as well as operation of advanced treatment processes under very strict permit requirements.

Background - Stormwater Management

- The region's stormwater programs continue to be faced with increased regulatory and permit requirements, evolving technical solutions, as well as implementation, rate and funding challenges.
- There is also an emerging need for consistent requirements as well as streamlined permit and project reviews and report submissions in order to meet tight implementation schedules.
- As a result, the region's local governments continue to pursue new and innovative ways to address these challenges (e.g., green infrastructure, and public private partnerships) in order to fulfill their role of protecting water quality, meet permit requirements, as well as dealing with stormwater related flooding issues.

Figure 1



C:\budget and financial\Reg\WaterFund - FY16 to Current and Next FY\Water - FY 2016 WQAT\WP Templates & Drafts\Budget Doc & Spreadsheets & Other for Input\Box-Drivers-Challenges-Initiatives-graphic_DRAFT_FY16 version.pptx

D. KEY INITIATIVES FOR FY 2016

The FY 2016 RWQM Work Program has been developed to respond to the program drivers and challenges outlined above (see also **Figure 1**). The Work Program is structured to help leverage existing resources, provide synergies, and assist the region and COG's members to effectively address these challenges. Four key initiatives for FY 2016 are summarized below. Specific outcomes, work products and activities are provided in the detailed Program Description write-ups that follow.

- **Dialogue & Policy** - Continue dialogue with EPA/states/others on Bay Program & water quality initiatives to advocate for:
 - Adequate, affordable, & long-term funding streams, & holistic financial affordability assessments
 - Adaptive management & regulatory requirements that are affordable, feasible to implement, sustainable, & holistic
 - Trading programs that protect water quality, while being flexible & compatible with regulatory programs
 - Consistent/holistic guidelines for issues that affect both wastewater & stormwater (e.g., reuse standards, trading, managing nutrient cap loads)
 - Holistic solutions that address multiple water and related environmental challenges

- **Partnerships** - Continue to partner with & hold regular exchanges with various organizations to leverage resources and advance common water resource goals, including:
 - Work with organizations like the US Conference of Mayors, VACo/MACo, state regulatory agencies & EPA, as well as VAMWA/VAMSA, WEF/WERF, AWA/AWF, NACWA, NACO, etc. to address a broad range of technical, policy and economic issues
 - Work with many of those same organizations, community and state colleges, training and other similar organizations, as well other utilities to analyze shared infrastructure job skills/workforce needs and opportunities - and to work to develop a pilot program(s) for the water sector over the coming year

- **Local Input to the Chesapeake Bay Program (CBP)** - Continue to provide local input to CBP:
 - New Bay Agreement Management Strategies/work plans
 - Bay TMDL 2017 Mid-Point Assessment efforts
 - Phase 6 Watershed Model updates (i.e., the key tool that defines nutrient/sediment loads and the related reduction efforts)

- **Communicate Water Resource Successes & Challenges** - Continue to communicate on behalf of the COG region, for example:
 - Impacts and benefits of pollution control efforts in Potomac and local waters
 - Present current and future challenges faced by wastewater/stormwater managers
 - Current water infrastructure needs and opportunities for addressing some needs
 - Potential weather/climate vulnerabilities and the implications for regional water infrastructure

E. FY 2015 KEY ACCOMPLISHMENTS

The table below lists some of the key events, deliverables that helped to address many similar issues in FY 2015, and are therefore illustrative of the many ways this RWQM Work Program is expected to continue to actively support the regional water resource/water quality needs and interests of the COG region and its members in FY 2016.

| Table 2 – FY 2015 Accomplishments | |
|--|--|
| Key - Outcomes, Work Products & Activities | |
| Regional Water Quality Management | |
| Policy & Program Development | |
| <u>Local Voice</u> | |
| <ul style="list-style-type: none"> • Provided formal Input on State & federal legislation & other initiatives <ul style="list-style-type: none"> ○ Maryland General Assembly – Stormwater financial stipulation legislation (March 2015) ○ Chesapeake Bay Program <ul style="list-style-type: none"> ▪ Local Perspectives on New Bay Agreement (August 2014 & April 2015) ▪ Local Priorities & Concerns with Draft Management Strategies (April 2015) • Participation/Sponsoring of forums to provide local input <ul style="list-style-type: none"> ○ Joint COG-MACo Meeting(s) – Collaboration on common Stormwater Permit Issues (March 2015) • Partnered with various organizations to address common water resource issues <ul style="list-style-type: none"> ○ Greater Washington Board of Trade & COG Joint Workshop – Forum to provide updates on local stormwater fee & tax programs for local businesses (November 2014) ○ District of Columbia Silver Jackets Stormwater-Flooding Panel Discussion (May 2015) | |
| Water Quality/Water Resource Management & Technical Analysis | |
| <u>Work Products</u> | |
| <ul style="list-style-type: none"> • Produced draft water quality case studies factsheet focused on improvements in water resources in response to reduced discharges of nutrients by two of the wastewater plants in the region. • Produced a Chain Bridge load report that compared load from the locally funded Occoquan Watershed Monitoring Lab (OWML) dataset to those produced for the Bay Program by USGS as a way to monitor the EPA derived numbers. • Created a Sea Level Rise and Flooding study inventory and comparative analysis for work that applies to the region – both current and planned; to aid members in assessing regional tools. • Utilized the Regional Wastewater Flow Forecast Model to updated wastewater treatment plant flow projections and confirmed that the region’s capacity is adequate thorough at least 2040. • Provided technical comments on the new Bay Program Toxic Contaminant and PCB Management Strategies. | |
| <u>Communication Efforts – Workshops and Regional Work Group Participation</u> | |
| <ul style="list-style-type: none"> • Organized a Regional Water Quality Monitoring Workshop (November 2014) <ul style="list-style-type: none"> ○ Got member input on draft fact sheet for water quality case studies in the region (still under development) • Sharpened the focus of COG’s water quality data analysis project using the Occoquan Watershed Monitoring Lab’s Chain Bridge data. • Participated in the Salt Forum at the Baltimore Regional Cooperative Purchasing Committee, and | |

identified potential collaboration opportunities to develop a workshop on road salts on implication for water quality (in FY 2016).

- Hosted and helped to organize an American Water Resources Association meeting that addressed climate and flooding impacts to water infrastructure (September 2014).
- Hosted a District Silver Jackets meeting and organized a panel discussion by COG members on ‘the Challenges and Opportunities for Integrating Stormwater and Flooding Management – Local Perspectives’ that addressed climate and flooding impacts to water infrastructure and the region’s assets (February 2015).
- Organized a workshop on ‘Quantifying Infrastructure Risk to Climate Change’ (December 12, 2015).
- Represented COG interests and contributed comments and expertise towards the Chesapeake Bay Program Climate Adaptation Management Strategy development.
- Continued to actively participate and advance COG member perspectives in numerous EPA/Chesapeake Bay Program forums and as part of various work groups, including the new Toxic Contaminants and Climate Change Work Groups.

Urban Watershed Management Services

Urban Stormwater Regulatory Analysis and Information Exchange

- Sponsored a stormwater workshop in coordination with the Greater Washington Board of Trade (November 2014).
- Organized a workshop on TMDL Restoration/Action/Implementation Plan requirements in new stormwater permits (Spring 2015); to focus on exploring a revised approach to setting bacteria TMDLs.
- Provided input to DC DOEE staff on its Draft Consolidated TMDL Implementation Plan (spring 2015)

Watershed Management & Forestry Projects

- Provide staff support and opportunities to leverage grant support to address:
 - Pope Branch, Nash Run and Springhouse Run Watershed monitoring studies and bacterial analysis.
 - Stormwater management site assessment to install new technologies at existing facilities in the District of Columbia, Montgomery County and Prince George’s County.
 - Provided assistance to a Montgomery County HOA to coordinate RainScapes program opportunity; and to a Residential Community to coordinate candidate reforestation opportunity.
 - Work with the University of Maryland to provide biological technical assistance.
 - Provided ongoing evaluations of regional riparian forest buffers and watersheds using various environmental indicators, remote sensing and GIS applications, evaluation of the performance of various urban stormwater Best Management Practices.
 - Provided expertise and guidance to COG members on stream restoration, fish passage, stormwater management, wetland creation and riparian habitat restoration monitoring, design and technical, GIS-related watershed evaluations.
- Continued work on the Regional Tree Canopy grant with U.S. Forest Service.
- Continued to support the Community Forestry Network (CFN); and hosted meetings on forest management practices and Lyme disease prevention and awareness.
- Maintained the green infrastructure database for the Washington Metropolitan Area.
- Conducted several stream and riparian buffer assessment studies.

Green Infrastructure & Sustainable Agriculture Projects

Regional Agricultural Initiative

- Worked with the Prince Charitable Trust to develop support for farm market products and distribution.
- Maintained network of agricultural contacts via the Regional Agricultural Workgroup (RAW) to support agricultural-related activities, and supported three regional agricultural events with outreach and education materials.
- Supported efforts and provided advice to the CBPC, MSWG, CEEPC and the COG Board on Region Forward initiatives in areas such as climate adaptation, land use, stormwater management (e.g., green streets), local agriculture, and locally grown food.
- Leveraged grant support to develop mapping tools to use land cover data more effectively.
- Maintained the www.nationalcapitalfarms.org Web site

Water Resources Outreach, Water Supply & Water Security Support

Water Supply Management and Communication

1. Produced monthly water supply and drought monitoring reports
2. Updated a Drought Primer for the CAOs and COG members
3. Participated in an annual drought planning exercise with ICPRB and regional water providers
4. Worked with the Office of Communications and regional public information officers to produce social media on drought for the general public
5. Coordinated regional messaging and briefings in response to events such as a DC Water contamination event & the effect of Ebola patients on regional sewer systems
6. Continued to support the National Capital Region Water/Wastewater Agency Response Network (NCRWARN) and launched a new website that includes a GPS feature and is adaptable to various screen sizes, so it's Smartphone and tablet compatible
7. Provided coordination, management, technical and operational support for the operation and support of a regional water security monitoring network of biological and chemical monitors. This included the procurement of over \$300,000 in new water monitoring equipment through a regional UASI grant.
8. Through a regional UASI grant, COG initiated a regional study to identify engineering alternatives to increase the ability of NCR's water supply system to withstand regional emergencies and evaluate feasibility and cost of implementing emergency water supply interconnections, additional storage and upgrades to electric power supplies.

II. FUNDING AND BUDGET

COG's Regional Water Quality Management (RWQM) Program is primarily funded by the Regional Water Fund, with supplemental funding provided by allocations from the Regional Environmental Fund, and COG membership fees. In some cases grants and other funding sources support specific projects and activities.

A. FUNDING SOURCES

Regional Water Fund (RWF) - The COG Board of Directors adopted its FY 2016 Work Program and Budget on January 14, 2015 which included a funding level of **\$1,360,797 for the RWF** – reflecting an increase of 1.8% compared with FY 2015, and after applying a 5% cap to jurisdictions that would have experienced a larger increase.

Regional Environmental Fund (REF) - When the COG Board of Directors adopted its FY 2016 Work Program and Budget on January 14, 2015, it also included a funding level for the **REF of \$615,783** – reflecting an increase of 1.5% compared with FY 2015. This amount also reflects the previous COG Board decision in FY 2013 to cap COG Membership Fee increases at no more than 5%.

COG Membership Fees & Other – All 22 members⁵ of COG pay an annual fee to be a member of COG. That fee is set using a per capita rate that is applied to each jurisdiction using “population adjusted for budget.” For FY 2016, the per capita rate was set at \$0.71 (no change from FY 2015), with individual jurisdiction increases capped at 5% (based on population growth).

Grants or Other – This funding model recognizes that some program areas are heavily dependent on local, state, and federal grants, and that some projects can be leveraged through COG's regional work.

B. FUNDING LEVELS, BUDGETS & ALLOCATIONS

The information below provides background on these funding sources, notes the levels of funding that were approved by the COG Board (see **Table 3**, page 11) and outlines how those funds are to be allocated to address the water resource priorities for FY 2016 (see **Table 4**, page 12). **Charts 1, 2 and 3** (page 13) also provide a graphical overview of the funding sources, how those funds are allocated, and the key funders' contributions.

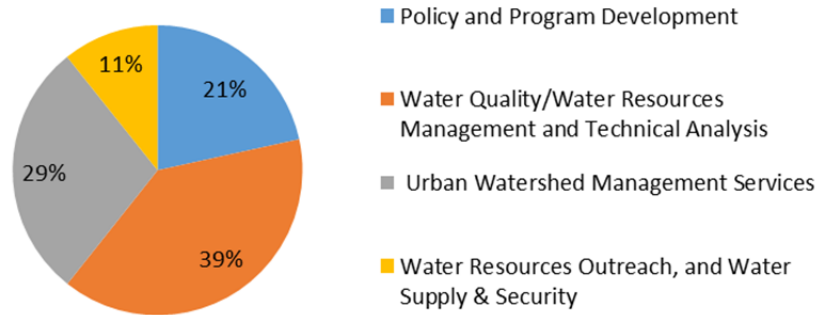
⁵ Town of Bladensburg is an Adjunct Member and pays a per capita rate of ½ of a regular member.

| TABLE 3 | | |
|---|--|--|
| Local Government Contributions to COG's Regional Funds – FY 2016 | | |
| Jurisdiction | Regional Water Fund Allocations | Regional Environmental Fund Allocations |
| Alexandria, City of | \$27,395 | \$18,819 |
| Arlington County | \$40,467 | \$27,798 |
| Bowie, City of | \$10,367 | 0 |
| College Park, City of | \$5,643 | \$3,876 |
| District of Columbia | \$272,838 | \$85,554 |
| Fairfax County | \$272,838 | \$141,681 |
| Fairfax, City of | \$4,441 | \$3,051 |
| Falls Church, City of | \$2,468 | \$1,695 |
| Gaithersburg, City of | \$12,425 | \$8,493 |
| Greenbelt, City of | \$3,879 | \$2,665 |
| Loudoun County | \$67,105 | \$45,247 |
| Montgomery County | \$272,838 | \$111,685 |
| Prince George's County | \$272,838 | \$99,784 |
| Prince William County | \$80,120 | \$55,038 |
| Rockville, City of | \$12,034 | \$8,267 |
| Takoma Park, City of | \$3,101 | \$2,130 |
| TOTALS | \$1,360,797 | \$615,783 |

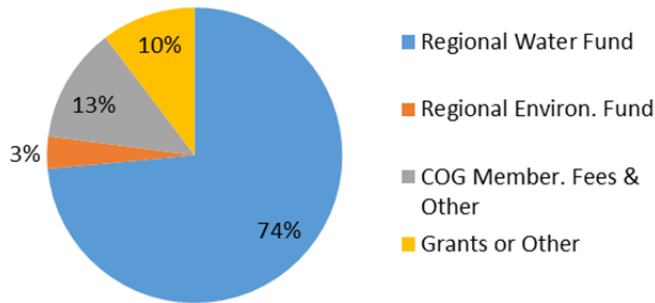
| COG Regional Water Quality Management Program | | | | | |
|--|---------------------|------------------------|--------------------------|------------------|--------------------|
| Table 4 - Program Budget Allocations | | | | | |
| Program Area | Regional Water Fund | Regional Environ. Fund | COG Member. Fees & Other | Grants or Other | Total |
| I. Policy and Program Development | | | | | |
| A. CBPC & Board/Member Support | \$180,000 | \$0 | \$0 | \$0 | \$180,000 |
| B. Regional Policy/Legislative Development & Advocacy Efforts | \$135,411 | \$0 | \$39,364 | \$0 | \$174,775 |
| C. Work Program Management | \$75,000 | \$0 | \$20,000 | \$0 | \$95,000 |
| TOTAL | \$390,411 | \$0 | \$59,364 | \$0 | \$449,775 |
| II. Water Quality/Water Resources Management and Technical Analysis | | | | | |
| A. Regional Water Quality Database & Analysis | \$255,000 | \$0 | \$0 | \$0 | \$255,000 |
| B. Potomac Monitoring Contracts | \$160,386 | \$0 | \$0 | \$0 | \$160,386 |
| C. Regional Wastewater Flow Forecast Model & WWTP Database and Analysis | \$100,000 | \$0 | \$0 | \$0 | \$100,000 |
| D. Regional Water Resources Infrastructure/Funding Analysis | \$50,000 | \$0 | \$0 | \$0 | \$50,000 |
| E. Technical & Program Support to WRTC | \$80,000 | \$0 | \$0 | \$0 | \$80,000 |
| F. Chesapeake Bay Watershed Model & Water Quality Model Work | \$60,000 | \$0 | \$0 | \$0 | \$60,000 |
| G. Water Resource Climate Change & Related Assessments | \$60,000 | \$0 | \$0 | \$0 | \$60,000 |
| H. Bay & Local – TMDL/WIP & Permit Support | \$50,000 | \$0 | \$0 | \$0 | \$50,000 |
| TOTAL | \$815,386 | \$0 | \$0 | \$0 | \$815,386 |
| III. Urban Watershed Management Services | | | | | |
| A. Urban Stormwater Regulatory & Program Support | \$45,000 | \$20,000 | \$35,000 | \$0 | \$100,000 |
| B. Green Infrastructure | \$0 | \$45,250 | \$40,022 | \$150,000 | \$235,272 |
| TOTAL | \$45,000 | \$65,250 | \$75,022 | \$150,000 | \$335,272 |
| IV. Water Resources Outreach, and Water Supply & Security | | | | | |
| A. Community Engagement Campaign | \$40,000 | \$0 | \$103,515 | \$10,000 | \$153,515 |
| B. Water Supply Emergency and Drought Management | \$70,000 | \$0 | \$0 | \$0 | \$70,000 |
| TOTAL | \$110,000 | \$0 | \$103,515 | \$10,000 | \$223,515 |
| GRAND TOTAL | \$1,360,797 | \$65,250 | \$237,901 | \$160,000 | \$1,823,948 |

Funding & Budget Allocation Tables – FY2016

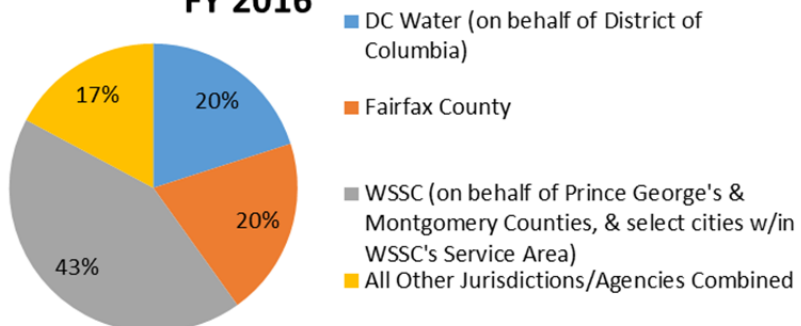
**Chart 1
 RWQM Program Budget Allocations - FY 2016**



**Chart 2
 RWQM Program Funding Sources - FY 2016**



**Chart 3
 Regional Water Fund
 Funding Jurisdiction/Agency Shares
 FY 2016**



III. ANNUAL WORK PROGRAM AND BUDGET

A. OVERVIEW

The FY 2016 RWQM Work Program continues to focus on a wide range of activities that have water quality/water resource implications for the Metropolitan Washington region. It is structured to address the many pressing challenges facing COG’s local government members and water utilities that provide wastewater treatment and drinking water services, and manage stormwater. The FY 2016 RWQM Work Program is designed to address priority issues in response to COG’s members’ needs, and to actively support and advocate on behalf of those members in a variety of technical and policy forums.

The FY 2016 RWQM Work Program continues to be organized into four key program areas. The tables that follow outline the individual program elements, their associated budgets and funding sources, and details regarding the key priorities and deliverables anticipated for FY 2016.

| RWQM Program Areas – FY 2016 | |
|---|--|
| 1. Policy & Program Development | |
| <i>Supports policy development, advocacy, CBPC support, and overall program management.</i> | |
| <ul style="list-style-type: none"> A. CBPC & Board/Member Support B. Regional Policy & Legislative Development C. Work Program Management | |
| 2. Water Quality/Water Resource Management and Technical Analysis | |
| <i>Supports technical work for the WRTC on a wide range of water quality/water resource issues.</i> | |
| <ul style="list-style-type: none"> A. Regional Water Quality Database & Analysis B. Potomac Monitoring Contracts C. Regional Wastewater Flow Forecast Model & WWTP Database and Analysis D. Regional Water Resources/Infrastructure/Funding Analysis E. Technical & Program Support to WRTC F. Chesapeake Bay Watershed Model & Water Quality Model Work G. Water Resources Climate Change & Related Assessments H. Bay & Local – TMDL/WIP & Permit Support | |
| 3. Urban Watershed Management Services | |
| <i>Supports work to address environmental initiatives with water quality implications/impacts and integrate efforts with other regional initiatives.</i> | |
| <ul style="list-style-type: none"> A. Urban Stormwater Regulatory & Program Support B. Green Infrastructure | |
| 4. Water Resources Outreach, and Water Supply & Security | |
| <i>Supports work to address water supply and security issues with water quality/water resource implications and impacts</i> | |
| <ul style="list-style-type: none"> A. Community Engagement Campaign B. Water Supply Emergency & Drought Management | |

B. PROGRAM DETAILS

| Work Program Areas – Detailed Descriptions | | | | | |
|--|---------------------|------------------------|------------------|-----------------|------------------|
| 1. Policy & Program Development | | | | | |
| PROGRAM AREA | FUNDING SOURCES | | | | |
| | Regional Water Fund | Regional Environ. Fund | COG Member. Fees | Grants or Other | Total |
| A. CBPC & Board/Member Support | \$180,000 | \$0 | \$0 | \$0 | \$180,000 |
| B. Regional Policy & Legislative Development | \$135,411 | \$0 | \$39,364 | \$0 | \$174,775 |
| C. Work Program Management | \$75,000 | \$0 | \$20,000 | \$0 | \$95,000 |
| Total | \$390,411 | \$0 | \$59,364 | \$0 | \$449,775 |

Activity Description
Working with the CBPC members and other stakeholders, COG staff will continue to address the CBPC’s water resource priorities, advance the [COG Board’s FY 2015/FY 2016 Legislative Policies](#), and to advocate on behalf of COG’s local government and utility members on water resource issues – as described and outlined in the Challenges & Priorities for FY 2016 (I.C) and Figure 1. [Note: The technical work and associated work products needed to support these policy recommendations are outlined in Program Area 2. Water Quality & Water Resource Management and Technical Analysis.]

This program area involves analyzing issues, preparing summary documents and presentations, selecting speakers, supporting regular CBPC meetings, and preparing materials/responding to requests for information/briefings on regional water resources issues; as well as the associated functions needed to support the overall Regional Water Quality Management Program. As outlined in the **Key Initiatives for FY 2016**, this program area emphasizes: Dialogue and Policy, Partnerships, Local Input to the Chesapeake Bay Program (CBP), and Communicating Water Resource Successes and Challenges.

Key Focus & Outcomes - Policy & Programmatic
Identify, recommend, and assist in development of policies and actions that will support the CBPC’s Priorities and Key Initiatives, work with other organizations to leverage the voice and input of local governments and utilities, and put forward recommendations/provide input to state and federal regulatory agencies. Specific activities related currently anticipated in FY 2016 may include, but are not limited to:

- **Dialogue & Policy**
 - Submitting comments on proposed state/federal legislation in support of adequate funding to address water infrastructure, as well as to address other key water resource issues. Recommend legislative policy positions and potential actions to the COG Board as appropriate.
 - Conducting the 5th Annual Water Resources Forum with the EPA and states to focus on a broad range of water infrastructure issues and needs, to highlight local successes, and to advocate for holistic, affordable, and sustainable solutions.
 - Continuing to address water infrastructure issues and needs specifically focused on funding, affordability, and jobs/workforce development. This would include:
 - Advocating for adequate funding to address requirements for the region’s aging water resources infrastructure.

- Advocating for federal/state regulatory & program requirements to be feasible, affordable, sustainable, and holistic in nature.
 - Working with U.S. Conference of Mayors, WEF, AWWA, and other national groups on ongoing dialogue with EPA over affordability and flexible permitting issues for all water quality issues.
- Working to advance water infrastructure job/workforce issues in support of the COG Board's Economic Competitiveness initiative and the related Aspen Institute's 'Communities That Work Regional Partnership' effort. Details are expected to include:
 - An overall assessment of common job skills & needs (for wastewater, drinking water, and stormwater)
 - Pursuit of common job skill training resources & opportunities (mainly wastewater, drinking water)
 - Pursuit of common credentialing (generally focused on green infrastructure/stormwater)
 - Collaboration and coordination to minimize duplication of local/regional/national efforts and
- Seeking input on issues & enhance regional understanding of water resource issues by:
 - Regular presentations from EPA/states & regional/national organizations to share perspectives.
 - Periodically tours of facilities/water resource projects to better understand the challenges of and fully appreciate the effort associated with successful implementation
- Coordinate with the Region Forward Coalition; Climate, Energy and Environment Policy Committee (CEEPC); Human Services & Public Safety Policy Committee (HSPSPC); the Multi-Sector Working Group, and other COG policy committees on growth/sustainability as well as cross-media issues and metrics - as they relate to water quality/water resources/water infrastructure (e.g., climate change, water resources and energy use, jobs/workforce issues, planning/land-use and water quality, and potential air-water benefits/credits).
- **Partnerships**
 - Continue to coordinate with other local government organizations to advance issues of mutual interest and common objectives, e.g., MACo/VACo, MLL/VML, US Conference of Mayors, CBP's Local Government Advisory Committee (LGAC)
 - Continue to coordinate with other regional and national organizations on matters of shared water resource interests, e.g., WEF, WERF, AWWA, WRF, NACWA, VAMWA/MAMWA, VAMSA/MAMSA
 - Support COG's members in a variety of forums, and leverage the efforts of other organizations to advance COG member perspectives.
- **Local Input to the Chesapeake Bay Program**
 - Continue to provide formal comments and input to the CBP on:
 - Implementation of the recently adopted Management Strategies,
 - 2-Year Milestone implementation assessments,
 - Phase 3 Watershed Implementation Plans, and
 - Overall work efforts in preparation for the 2017 Mid-term Assessment of the Bay TMDL implementation progress.
 - Phase 6 of the Watershed Model (given its key role in generating nutrient & sediment loads)
- Focus input on both technical concerns as well as ensuring that local governments/utilities' input is incorporated, and that concerns are adequately addressed (e.g., nutrient trading, account for growth, affordability, flexibility, etc.). Expand scope of issues to address new reporting on biosolids, septic/on-site systems, and Combined Sewer nutrient/sediment loads that also affect several COG members.
- **Communicate Balanced View of Water Resource Efforts**
 - Expand regional efforts to enhance communication on water resource issues to local elected officials,

| <p>COG Board, state and federal officials, and the COG region. Work to effectively communicate:</p> <ul style="list-style-type: none"> ▪ Regional water resource success stories, innovations and accomplishments ▪ Water resources infrastructure needs and challenges ▪ Continued improvements in water quality in the Potomac and other local waters <ul style="list-style-type: none"> • Integrate all efforts with COG's updated webpage and outreach tools | | | | | |
|--|-----------------|-----------------|-----------------|-----------------|---|
| Major Work Products & Activities | Quarter | | | | Other |
| | 1 st | 2 nd | 3 rd | 4 th | |
| <ul style="list-style-type: none"> • Meetings, conference calls & events in support of the CBPC (6 meetings/year) including: <ul style="list-style-type: none"> ○ Annual Water Resources Forum with Federal & state rep.'s ○ Tours of water resource facilities in the region | X X | XX | X X | XX | Bi-monthly & As required |
| <ul style="list-style-type: none"> • Support CBPC & its work groups to: <ul style="list-style-type: none"> ○ Analyze CBP & other water resource issues, & proposed state/federal legislation ○ Identify policy implications for the region & make recommendations ○ Prepare formal correspondence/comments on behalf of CBPC | | | X X | | Primarily spring, & As required |
| <ul style="list-style-type: none"> • Water Jobs/Workforce Initiative (coordinated w/ other COG Board activities/committees) <ul style="list-style-type: none"> ○ Proposed work plan & schedule to CBPC for endorsement ○ Other work products/efforts (TBD) | X X | XX | | | Initial plans, details TBD |
| <ul style="list-style-type: none"> • Update/report on water resource indicators/metrics in COG's Region Forward initiative | | | X X | | Estimated schedule |
| <ul style="list-style-type: none"> • Briefings/presentations/testimony for COG Board, its members, and to/for local elected officials & others • Respond to COG member & media information requests • Routinely update COG website as an active regional resource | X X | XX | X X | XX | Periodically (4-6 per year) & As required |
| <ul style="list-style-type: none"> • Mid-year review and draft policy priorities for CBPC • Annual Work Program & Budget for FY 2017 | | | X X | XX | Annually |
| <ul style="list-style-type: none"> • COG staff to conduct annual employee performance reviews • Program management and oversight | X X | | | | Annually & Ongoing |

| Work Program Areas - Detailed Descriptions | | | | | |
|--|---------------------|------------------------|------------------|-----------------|------------------|
| 2. Water Quality & Water Resource Management and Technical Analysis | | | | | |
| PROGRAM AREA | FUNDING SOURCES | | | | |
| | Regional Water Fund | Regional Environ. Fund | COG Member. Fees | Grants or Other | Total |
| A. Regional Water Quality Database & Analysis | \$255,000 | \$0 | \$0 | \$0 | \$255,000 |
| B. Potomac Monitoring Contracts (i.e., Chain Bridge & Little Falls Gage) | \$160,386 | \$0 | \$0 | \$0 | \$160,386 |
| C. Regional Wastewater Flow Forecast Model & WWTP Database and Analysis | \$100,000 | \$0 | \$0 | \$0 | \$100,000 |
| D. Regional Water Resources/Infrastructure/Funding Analysis | \$50,000 | \$0 | \$0 | \$0 | \$50,000 |
| E. Technical & Program Support to WRTC | \$80,000 | \$0 | \$0 | \$0 | \$80,000 |
| F. Chesapeake Bay Watershed Model & Water Quality Model Work | \$60,000 | \$0 | \$0 | \$0 | \$60,000 |
| G. Water Resources Climate Change & Related Assessments | \$60,000 | \$0 | \$0 | \$0 | \$60,000 |
| H. Bay & Local – TMDL/WIP & Permit Support | \$50,000 | \$0 | \$0 | \$0 | \$50,000 |
| Subtotal | \$815,386 | \$0 | \$0 | \$0 | \$815,386 |

Activity Description

Working with the WRTC members and other stakeholders, COG staff will continue to address a wide range of technical issues associated with the CBPC's water resource priorities, and to work with local government and utility members to share information, collaborate, and raise greater awareness of the successes and challenges facing the region's water sector, as outlined in Challenges & Priorities for FY 2016 (I.C) and Figure 1. The work program area involves, but is not limited to: analyzing issues, preparing summary documents and presentations, organizing speakers, supporting regular CBPC meetings, and preparing materials/responding to requests for information/briefings on regional water resources issues; as well as the associated functions needed to support the overall Regional Water Quality Management Program.

Integration of Efforts For Multiple Benefits

All of these work efforts are integrated, and many activities serve multiple purposes. COG staff also actively work coordinate and collaborate with other organizations to leverage COG's resources. Some key examples include, but are not limited to:

- COG's historical regional **Water Quality and Wastewater Databases**, monitoring contracts, and analysis support provides:
 - Assessment of regional water quality management progress and associated water quality improvements
 - Ability to compare local loading data at Chain Bridge to EPA/CBP/USGS data trends for Potomac River
 - Wastewater nutrient data to compare against CBP's nutrient trend data & to verify progress to-date
 - Wastewater nutrient data to support COG's Greenhouse Gas (GHG) Inventory efforts
- COG's regional **Wastewater Information Database** for processes, loads, permit conditions, capacity, and the **Regional Wastewater Flow Forecast Model (RWFFM)** and associated analysis support provides:
 - Ability to verify CBP's data and assumptions about COG region WWTPs
 - Ability to characterize key information about COG region WWTPs water infrastructure elements
 - Ability to project wastewater flows for region, assess capacity to support Region Forward goals, to analyze flow versus load capacity constraints in light of the Bay TMDL, and to generate GHG emissions for CEEPC's GHG Inventory effort – as well as to highlight the advances being made by the region's WWTPs
- **COG staff's technical knowledge, hands-on analysis of key modeling tools & data, as well as active participation and leadership in various CBP activities and committees/work groups - as well as other local/regional/national forums & associations**, ensures that:
 - COG staff can analyze the data, assumptions and implications of data & tools being used by the CBP – as well as to collaborate with other organizations with similar perspectives to leverage resources
 - COG staff can identify critical technical and policy issues & recommend positions for COG's members
 - COG member government and water utility perspectives are presented & advanced in those settings
 - COG staff can holistically address water quality/water resource issues on behalf of the region regardless of the source or specific water issue being addressed (e.g., even with new toxic and climate initiatives)

Key Focus & Outcomes - Technical

As outlined in the **Key Initiatives for FY 2016 (Section I.D. – page 6)**, in FY 2016 this work program area will emphasize:

- Traditional water quality analysis of the Potomac watershed
- Extensive work to position the region in preparation for the CBP's Bay TMDL 2017 Mid-Point Assessment
- Technical work and recommendations to support the CBPC and COG Board with its policy priorities
- Addressing new or emerging toxic/PCB water quality issue with implications for wastewater and stormwater
- Enhancing linkages and understanding between flooding, stormwater management and climate impacts – including leveraging work being done by/for other organizations (e.g., COE, USGS, CBP, etc.)
- Focus on fact sheets and similar useful work products and web applications to increase each/availability of information to COG's members

Specific work products and activities for the coming year are outlined below.

| Major Work Projects/Activities | Quarter | | | | Other |
|---|-----------------|--------------------|------------------|-----------------|---------------------------------|
| | 1 st | 2 nd | 3 rd | 4 th | |
| <ul style="list-style-type: none"> Prepare additional fact sheets to complement overall Potomac Water Quality Fact Sheet, including: <ul style="list-style-type: none"> New Chain Bridge loads fact sheet Potomac estuary SAV fact sheet Algal bloom fact sheet(s) (addressing water quality, as well as human health/drinking water issues) Wastewater trends vs. water quality trends fact sheet Water resource infrastructure fact sheet Updated stormwater management fact sheet | | XX XX XX | XX XX | XX | |
| <ul style="list-style-type: none"> Update regional water quality and wastewater database inventory and wastewater process information Support ongoing regional water infrastructure efforts Make information web accessible Produce list of monitoring services available to local governments from non-profits/universities in the region | | XX | | XX | Ongoing |
| <ul style="list-style-type: none"> Manage contracts for OWML sampling/data analysis at Chain Bridge & cost-share agreement for Little Falls gage data Host a workshop of local flow gages & funding challenges | XX | XX | | XX | Annually & As required |
| <ul style="list-style-type: none"> Continue to update wastewater flow projections and loading estimates for region to reflect annual COG demographic projections, and compare to CBPC's projections Continue to work with Blue Plains and other COG wastewater plants to identify potential influent nutrient load versus hydraulic capacity constraints Verify CBP's WWTP process data - including biosolids/septic data, with COG's members to ensure accuracy/completeness for its use in CBP's Annual Progress runs & 2017 Mid-Point Assessment Utilize RWFFM, CBP database, & COG WWTP information database to develop data for COG's GHG Inventory | XX | XX XX | XX XX | XX XX | Estimated timing of events |
| <ul style="list-style-type: none"> Provide data/trend information in presentations to WRTC, CBPC and other audiences Respond to water resource data/information requests Report on status of Region Forward indicators & goals: <ul style="list-style-type: none"> Bay Goals - Water Quality Implementation Progress for Wastewater & Stormwater management | XX | XX | XX | XX | Ongoing |
| <ul style="list-style-type: none"> Hold two work sessions for members that focus on water quality monitoring results, including: <ul style="list-style-type: none"> Late fall workshop – to focus on (1) summer algal bloom conditions; (2) review of draft COG staff algal bloom fact sheet; and (3) Potomac trend data from OWML analysis of Chain Bridge data. Hold regular WRTC meetings, conference calls, &/or work sessions/workshops on a variety of water resource topics, | XX | XX | XX | XX | Estimated timing of events, TBD |

| | | | | | |
|---|----|----|----|----|---------------------------|
| <p>including:</p> <ul style="list-style-type: none"> • Climate change studies & new analysis/implications and links between flooding & stormwater management • Review of CBP toxics activities & focus on PCBs, and evaluate options for regional coordination • Evaluate road salts and water quality impacts & options • Overview of Water Infrastructure data work & input on regional Water Jobs initiatives • Share sustainability tools and best practices for including energy efficiency, alternative energy, water reuse, and climate vulnerability assessments • Update Climate Change data for Water Sector (e.g., related to CEEPC's Goals) | | | | | |
| <ul style="list-style-type: none"> • Prepare recommendations to the CBPC on formal comments to be sent to Bay Program Partners, EPA & state governments regarding various Bay activities, but in particular: <ul style="list-style-type: none"> • Bay Agreement Management Strategies • Bay TMDL - Phase II WIPs, & 2-Year Milestones • Bay TMDL 2017 Mid-Point Assessment | XX | XX | XX | XX | Quarterly & 4-6 per year |
| <ul style="list-style-type: none"> • Continue to: <ul style="list-style-type: none"> ○ Track the development of new data and assumptions for use in an updated version of the CBP's Watershed Model to be used in the CBP's Bay TMDL 2017 Mid-point Assessment ○ Provide member input to Bay modeling efforts through staff participation on various Bay program groups, including the Wastewater, Urban and Land Use, Monitoring and Trading workgroups, and the Modeling Review Team | XX | XX | XX | XX | Monthly |
| <ul style="list-style-type: none"> • Support COG Board's Regional Infrastructure and Economic Competitiveness initiatives (e.g., prepare presentations, reference information and coordinate speakers for COG Board, CAOs, CBPC and WRTC presentations) | XX | XX | XX | XX | Ongoing, Estimated timing |

Work Program Areas – Detailed Descriptions

3. Urban Watershed Management Services

| PROGRAM AREA | FUNDING SOURCES | | | | |
|---|---------------------|------------------------|------------------|------------------|------------------|
| | Regional Water Fund | Regional Environ. Fund | COG Member. Fees | Grants or Other | Total |
| A. A. Urban Stormwater Regulatory & Program Support | \$45,000 | \$20,000 | \$35,000 | \$0 | \$100,000 |
| B. B. Green Infrastructure | \$0 | \$45,250 | \$40,022 | \$150,000 | \$235,272 |
| TOTAL | \$45,000 | \$65,250 | \$75,022 | \$150,000 | \$335,272 |

Activity Description

This work program area complements the overall Regional Water Quality Management Program by working to reduce the flow of pollutants into surface waters. The work will be coordinated with other COG work programs and activities, as well as with work being done by COG members and other organizations to maximize synergies, avoid duplication of effort, and to leverage resources.

Outcomes, Work Products & Activities: Technical

Specific activities related currently anticipated in FY 2016 may include, but are not limited to:

Watershed Management and Green Infrastructure Programs

- Provide staff support and opportunities to leverage grant support to address:
 - Watershed monitoring studies
 - New technological stormwater management retrofit and associated load reduction studies
 - Assessment of physical, chemical and biological conditions of local streams
 - Riparian forest buffer and watershed evaluations using environmental indicators, remote sensing and GIS applications, evaluation of the performance of various urban stormwater Best Management Practices
 - Provide expertise and guidance to COG members on stream restoration, fish passage, stormwater management, wetland creation and riparian habitat restoration monitoring, design and technical, and GIS-related watershed evaluations.
- Continue the development of a regional urban tree canopy analysis and management strategy to help achieve area-wide expansion of tree canopy cover; providing water quality, air quality, and other ancillary benefits. Link this work to the watershed health indicators for Region Forward baseline report.
- Support the Community Forestry Network (CFN); amend and update the green infrastructure database for the Washington Metropolitan Area.
- Conduct several stream and riparian buffer assessment studies.

Green Infrastructure & Sustainable Agriculture Projects

- 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.
- Support efforts and provide advice to the CBPC and COG Board on Region Forward initiatives in areas such as climate adaptation, land use, stormwater management (e.g., green streets), local agriculture, and locally grown food.

- Provide limited direct staff support and opportunities 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. Leverage grant support to include:
 - Maintaining current land cover mapping databases using remote sensing and GIS applications
 - Supporting ongoing regional Green Infrastructure initiatives
 - Integrate the Region Forward initiative and links to local food production and consumption, climate adaptation, stormwater management
 - Continue work for the Regional Agricultural Initiative including quantification of local food production, marketing local agriculture, mapping agricultural lands, and further analysis of farm markets
 - Support the Regional Agricultural Workgroup (RAW) to explore opportunities that support agricultural-related priorities and activities
 - Maintain the www.nationalcapitalfarms.org Web site

| Major Work Products & Activities | Quarter | | | | Other |
|--|-----------------|-----------------|-----------------|-----------------|---------------------------|
| | 1 st | 2 nd | 3 rd | 4 th | |
| Projects: | | | | | |
| District of Columbia- Nash Run and Springhouse Run Pre-Stream Restoration Monitoring | XX | XX | X | | |
| Prince George’s County – Northwest and Northeast Branch- River Herring and Resident Fish Habitat Utilization | | XX | XX | | |
| Montgomery County & Prince George’s County- Streambank Chemistry-Related Assistance | | | XX | XX | |
| District of Columbia – Pope Branch, Nash Run and Springhouse Run Bacterial BST Analysis | XX | XX | XX | XX | |
| Montgomery County & Prince George’s County Grant Partnership - SWM Technical Assistance | XX | XX | | | |
| Develop a pilot, regional urban tree canopy analysis and management plan in coordination with CBPC & CEEPC | XX | XX | XX | XX | |
| District of Columbia – Regional Urban Tree Canopy and Land Use/Land Cover Analysis | XX | XX | | | |
| District of Columbia Waste Wood Facility/Marshalling Yard Assistance (Urban Timber Utilization) | XX | XX | XX | XX | |
| <ul style="list-style-type: none"> • Support for the Region Forward initiative and tracking/reporting of indicators and goals associated with: <ul style="list-style-type: none"> ○ Watershed Health ○ Forest Coverage/Tree Canopy ○ Acres of Impervious Surfaces | XX | XX | XX | XX | Based on program schedule |
| <ul style="list-style-type: none"> • Support for CFN meetings | | | | | 3X/year |
| <ul style="list-style-type: none"> • Regional Green Infrastructure Database Update | | | | XX | |
| <ul style="list-style-type: none"> • Support for the Regional Agricultural Workgroup | XX | XX | XX | XX | |
| <ul style="list-style-type: none"> • Regional Agricultural Mini-Workshops | | | XX | XX | |
| <ul style="list-style-type: none"> • Other potential grant supported project deliverables | | | | | |
| <ul style="list-style-type: none"> • Presentations to the WRTC and CBPC as requested | | | | | 1-2X/year |

Work Program Areas - Detailed Descriptions

4. Water Resources Outreach, and Water Supply & Security Support

| PROGRAM AREA | FUNDING SOURCES | | | | |
|--|---------------------|------------------------|------------------|-----------------|-----------|
| | Regional Water Fund | Regional Environ. Fund | COG Member. Fees | Grants or Other | Total |
| A. Community Engagement Campaign | \$40,000 | \$0 | \$103,515 | \$10,000 | \$153,515 |
| B. Water Supply Emergency and Drought Management | \$70,000 | \$0 | \$0 | ** | \$70,000 |

***Note: Additional program funds (roughly \$1.5M) are provided annually through the regional Urban Area Security Initiative (UASI) grants. A majority of those grant funds are pass-through funds to contractors for engineering assessments and related work products. .*

Activity Description

Working with COG’s members and affiliated water and wastewater utilities, COG staff will continue to address high priority water resources and water projects and programs. This work program area is intended to complement the overall Regional Water Quality Management Program. The work will also be coordinated with other COG work programs and activities, as well as with work being done by COG members and other organizations such as the Department of Homeland Security (DHS), the Federal Bureau of Investigation (FBI), the U.S. Secret Service, the Department of Defense, and many other private and public sector organizations in order to maximize synergies, avoid duplication of effort, and to leverage resources.

Outcomes, Work Products & Activities: Technical

Specific activities related currently anticipated in FY 2016 may include, but are not limited to:

Community Engagement Campaign

- Continued implementation of a regional educational and information outreach effort – the Community Engagement Campaign. In FY 2016, the campaign elements will continue the FY 2015’s three outreach focus areas: Wise Water Use, *TapIt* to address accessible/sustainable access to drinking water, and Protect Your Pipes messaging.

Emergency Drinking Water & Security Support & Drought Management

- Continued focus on communication and coordination among local and state governments, water supply utilities, the media and general public in the event of serious droughts or other water supply emergencies.
- Continue to integrate efforts with regional Homeland Security issues given 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.
- 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.

- 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
 - Update Water Supply and Drought Awareness Response Plan to outline steps needed to enter a drought ‘WATCH’
 - Implement the regional Water Supply Emergency Plan in response to drought events and other water supply issues.
- The regional Water Security Work Group:
 - 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
 - Update the regional all-hazards Water Supply Emergency Plan as part of efforts to update the NCR Homeland Security Strategic Plan

| Major Work Products & Activities | Quarter | | | | Other |
|---|-----------------|-----------------|-----------------|-----------------|-----------------------|
| | 1 st | 2 nd | 3 rd | 4 th | |
| • Continue a regional educational & outreach Community Engagement Campaign focused on Wise Water Use, TapIt and Protect Your Pipes messaging – including website & events | XX | XX | XX | XX | Year-round & Seasonal |
| • Manage and coordinate Drought Coordination Committee and Drought Technical Committee during periods of drought | XX | XX | XX | XX | Summer / As required |
| • Track and monitor Potomac basin drought and water supply conditions and website updates | XX | XX | XX | XX | Year-round / Ongoing |
| • Monthly Regional Drought and Water Supply Outlook Reports | XX | XX | | XX | Seasonal (May – Oct) |
| • Staff support for assessing Drought Watch Trigger and preparing updates to Response Plan | | | | | Timing TBD |
| • Staff support and management coordination to the Water Security Work Group • Continued management and coordination of Regional Water Security Monitoring Network | XX | XX | XX | XX | Ongoing / As required |
| • Continued management and coordination of NCRWARN (regional utility mutual aid network) | XX | XX | XX | XX | Ongoing / As required |
| • Implementation of a regional table top exercise | | | | | Timing TBD |
| • Updates to WRTC regarding drought reports & general briefings regarding regional security initiatives | XX | | XX | | Periodic |