

# REGIONAL WATER QUALITY MANAGEMENT

## FY'20 WORK PROGRAM AND BUDGET

**DRAFT – SUBJECT TO REVISION – March 7, 2019**

July 1, 2019 to June 30, 2020

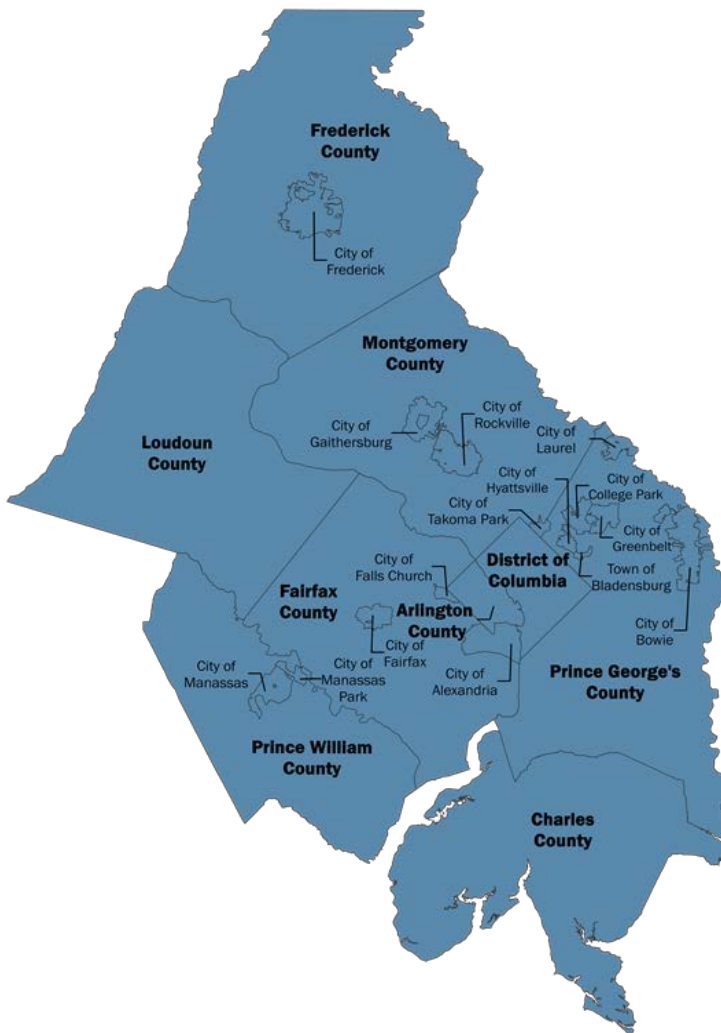


Metropolitan Washington  
**Council of Governments**

## ABSTRACT

This is the Annual Work Program and Budget (Fiscal Year 2020) for COG’s Regional Water Quality Management (RWQM) Program.

This work program is funded by and provides support to COG’s local government members <https://www.mwcog.org/about-us/cog-and-our-region/local-governments/> 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  
Hyattsville  
Laurel  
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

### Participating Wastewater and Water Utilities and Others

#### **District of Columbia:**

DC Water  
Washington Aqueduct

#### **Maryland:**

Washington Suburban Sanitary Commission

#### **Virginia:**

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

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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 2020 (FY 2020). 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 2020 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 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 Resource Program areas include:

- **Regional Water Quality Management (RWQM)** – This program addresses regional water quality issues, particularly in the Potomac River. The primary support for the program is the Regional Water Fund which is funded by the Blue Plains IMA Parties on behalf of the localities they serve<sup>1</sup> [under the terms of the 2012 Blue Plains Intermunicipal Agreement (2012 IMA), Service Agreement #2], and other COG’s local governments and utilities. Oversight of this program is by COG’s Chesapeake Bay and Water Resources Policy Committee (CBPC) and the Blue Plains IMA Leadership Committee. The work is supported by the Water Resources Technical Committee (WRTC) and IMA Regional Committee.
- **Blue Plains Intermunicipal Agreement (IMA) Support** – This program supports the coordination among the parties to the Blue Plains 2012 IMA, providing technical and policy support to the parties, and is funded solely by those parties. Oversight of this program is by the Blue Plains IMA Leadership and Regional committees.
- **Urban Watershed Programs**– This includes regional stormwater activities that support the needs of COG’s members’ and affiliated water utilities. The regional aspects of the program are incorporated in the RWQM Program; while oversight of specific grant-funded projects is by the grantor agencies.
- **Water Security and Resources** – This program addresses security and supply issues with local drinking water and wastewater utilities. The program is funded primarily through contributions from the region’s water utilities and through federal grants. Oversight for this program is provided by the Water Security Workgroup, National Capital Region Homeland Security Executive Committee (HSEC) and the HSEC Advisory Council.

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<sup>1</sup> Blue Plains IMA Parties – District of Columbia, DC Water, Fairfax County, Montgomery County, Prince George’s County, and Washington Suburban Sanitary Commission.

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## **B. RWQM PROGRAM OVERSIGHT and 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 Potomac River and its tributaries. Funding levels for the annual work program are set by the COG Board each fall, with formal adoption of the work program the following spring.<sup>2</sup>

**Integrating Water Quality/Resource Issues** – The RWQM Program is overseen by the [CBPC](#) and 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 and energy](#) commitments – in conjunction with COG’s [Climate, Energy, and Environment Policy Committee \(CEEPC\)](#)
- [Economic Competitiveness](#)
- Housing Affordability, and
- [Legislative Priorities](#)

## **C. KEY INITIATIVES - FY 2020**

The FY 2020 RWQM Work Program has been developed to respond to the program drivers outlined in Figure 1. It is structured to help leverage existing resources, provide synergies, and assist the region and COG’s members in addressing those challenges. All of these efforts are guided by the CBPC’s Policy Principles. The **Key Initiatives for FY 2020** are described below; while specific outcomes, work products and activities are provided in the **Program Area Details** that follow.

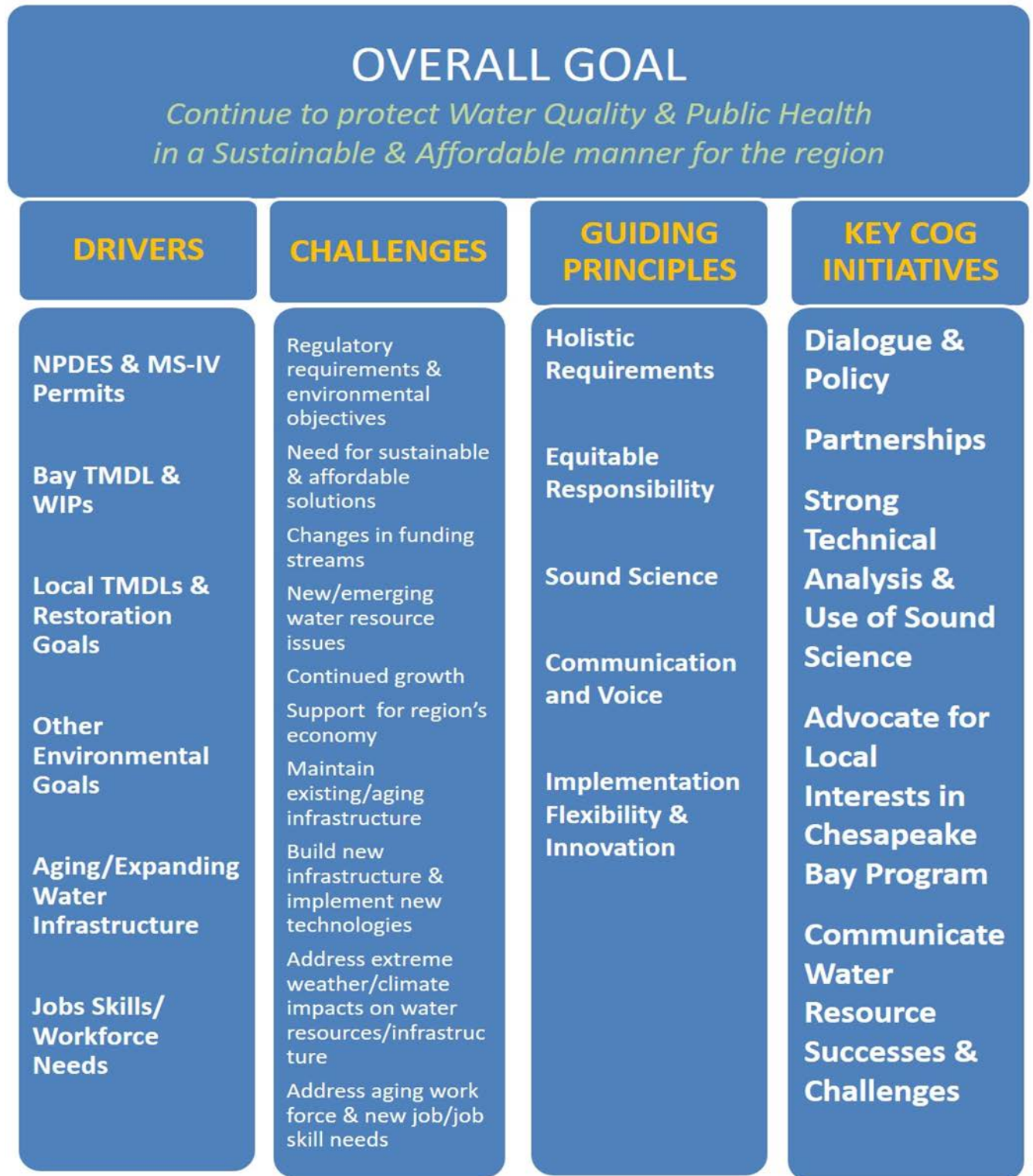
- **Dialogue and Policy** - Continue dialogue with EPA/states/others on Chesapeake Bay Program and water quality initiatives to advocate for local issues and needs, as well as ensuring an active local role/voice in decision-making that affects local governments and water utilities.
- **Partnerships** - Continue to hold regular exchanges and partnershipsto leverage resources and advance common water resource goals; address technical, policy and economic issues; and support shared infrastructure, job skills/workforce, and other opportunities.
- **Strong Technical Analysis and Use of Sound Science** – Continue technical analysis of information and advocate on behalf of COG’s members in various forums for the use of sound science in the development and implementation of federal/state programs and decisions, recognizing:
  - The changing nature of scientific knowledge and the need to utilize adaptive management principles – especially to address climate change impacts and uncertainties.
  - The need for equity and achievability in making decisions.
  - The need to balance innovation with risk when operating under permit/regulatory requirements – especially under extreme weather/varying climate impacts.
  - The potential cross-media and multi-sector benefits as well as unintended consequences of decisions.

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<sup>2</sup> The COG Board adopted the FY 2020 budget for this program on November 14, 2018

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- **Advocate for Local Interests and Input in the Chesapeake Bay Program (CBP)** - Advocate for COG's members and provide local input and data to those Chesapeake Bay Program activities of interest to the COG region and its members, including:
    - Development and implementation of Phase III Watershed Implementation Plans (WIPs) and related goal planning for 2025 and beyond.
    - Future Watershed Model updates (i.e., the key tool that defines nutrient/sediment loads and the related nutrient and sediment load reduction efforts).
    - Monitoring and providing input on modeling assumptions including about how climate impacts may affect water quality and the performance of water resource facilities.
    - Participating in (and in some cases Chairing) various committees including the Water Quality Goal Implementation Team, and work groups that address modeling, wastewater, urban stormwater, land use, climate resiliency, and toxics.
  
  - **Communicate Water Resource Successes and Challenges** - Continue to communicate on behalf of the COG region and in support of COG Board initiatives, to address/recognize:
    - Impacts and benefits of pollution control efforts in Potomac, Anacostia, Patuxent, and Occoquan Rivers, other local waters/streams, and the Chesapeake Bay
    - Current and future challenges faced by wastewater and stormwater managers (e.g., funding, staffing, feasibility, climate and capacity issues)
    - Water infrastructure needs and opportunities for addressing those needs
    - Contributions of the water sector workforce and to promote the education pathways and skill sets for filling future water sector jobs
    - Potential weather/climate vulnerabilities and the implications for regional water infrastructure and permit compliance

**Figure 1: RWQM Program Drivers, Challenges, Guiding Principles and Key Initiatives FY20**



Source: COG

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## II. FUNDING AND BUDGET

COG's water resources programs are supported by funding from the Regional Water Fund, the Regional Environmental Fund, COG membership fees, federal grants, private foundations, and contributions from COG member utilities.

### A. FUNDING SOURCES

- **Regional Water Fund (RWF)** - The COG Board of Directors adopted its FY 2020 Work Program and Budget on November 14, 2018 which included **\$1,540,459 for the RWF** – an overall increase of 3.86% compared with FY 2019. The total funding amount was allocated consistent with the 2012 IMA with a 5% per jurisdiction population growth cap applied to jurisdictions that would have experienced a larger increase. The RWF primarily supports work performed under the **Regional Water Quality Management Program (RWQM)**.
- **COG Membership Fees and Other** – All 24 members<sup>3</sup> of COG pay an annual fee to be a member of COG using a per capita rate applied to each jurisdiction. This is adjusted using a 5% per jurisdiction population growth based cap to establish a “population adjusted for budget”. For FY 2020, the COG member dues represent an increase of 3.86% from FY 2019. A total of **\$ 128,800 of those Membership Fees are used to support regional water resources programs.**
- **Grants or Other** – This recognizes that some program areas can use local, state, federal and other grants to leverage leverage member and utility funds. In FY 2020, those funds are estimated to total to **\$1,252,161 in support of regional forestry, agriculture, and water security initiatives t.**

### B. FUNDING LEVELS, BUDGETS and ALLOCATIONS

Table 1 below shows the Regional Water Fund contributions by jurisdiction and Table 2 outlines how the RWF and other funds are to be allocated to address the water resource priorities for FY 2020. **Charts 1 and 2** provide a graphical overview of the funding sources, how those funds are allocated, and the key funders' contributions.

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<sup>3</sup> Town of Bladensburg and the City of Hyattsville are Adjunct Members and pay a per capita rate of ½ of a regular member.



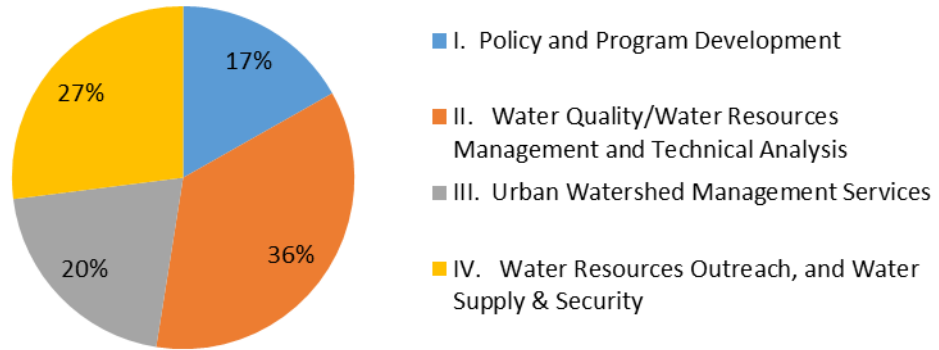
**Table 1: Local Government Contributions to COG’s Regional Water Fund FY 2020**

<b>Local Government Contributions to COG’s Regional Water Fund FY 2020</b>	
<b>Jurisdiction</b>	<b>Regional Water Fund Allocations</b>
<b>Alexandria, City of</b>	\$ 30,508
<b>Arlington County</b>	\$ 45,478
<b>Bowie, City of (WSSC)</b>	\$ 11,269
<b>College Park, City of (WSSC)</b>	\$ 6,332
<b>District of Columbia (DCWATER)</b>	\$ 308,400
<b>Fairfax County</b>	\$ 308,400
<b>Fairfax, City of</b>	\$ 4,860
<b>Falls Church, City of</b>	\$ 2,725
<b>Gaithersburg, City of (WSSC)</b>	\$ 13,566
<b>Greenbelt, City of (WSSC)</b>	\$ 4,265
<b>Loudoun County (Loudoun Water)</b>	\$ 80,714
<b>Montgomery County (WSSC)</b>	\$ 308,400
<b>Prince George's County (WSSC)</b>	\$ 308,400
<b>Prince William County</b>	\$ 89,778
<b>Rockville, City of</b>	\$ 13,853
<b>Takoma Park, City of (WSSC)</b>	\$ 3,511
<b>TOTALS</b>	<b>\$ 1,540,459</b>

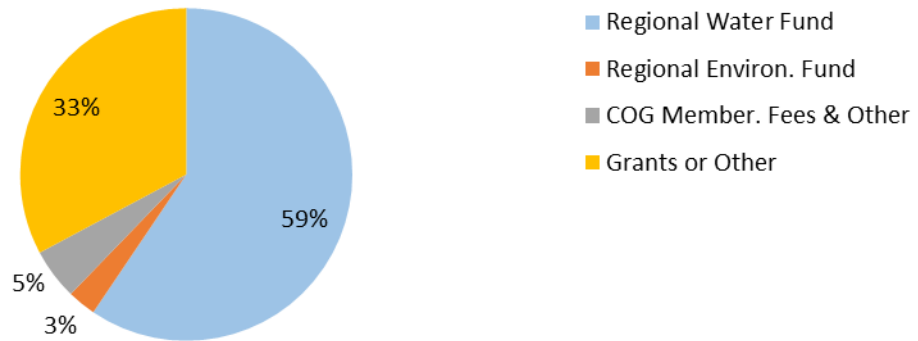
**Table 2: RWQM FY 2020 Program Budget Allocations**

COG Regional Water Quality Management Program					
Table 4 - FY 2020 Program Budget Allocations					
Program Area	Regional Water Fund	Regional Environ. Fund	COG Member. Fees & Other	Grants or Other	Total
<b>I. Policy and Program Development</b>					
A. CBPC & Board/Member Support	\$300,000	\$0	\$0	\$0	\$300,000
B. Regional Policy/Legislative Development & Advocacy Efforts	\$40,000	\$0	\$20,000	\$0	\$60,000
C. Work Program Management	\$51,337	\$0	\$10,000	\$0	\$61,587
SUBTOTAL	<b>\$391,337</b>	<b>\$0</b>	<b>\$30,000</b>	<b>\$0</b>	<b>\$421,587</b>
<b>II. Water Quality/Water Resources Management and Technical Analysis</b>					
A. Regional Water Quality Data & Analysis	\$160,000	\$0	\$0	\$0	\$160,000
B. Potomac Monitoring Contracts	\$157,049	\$0	\$0	\$0	\$157,049
C. Regional Wastewater Flow Forecast Model & WWTP Database and Analysis	\$80,000	\$0	\$0	\$0	\$80,000
D. Regional Water Resources Infrastructure/Funding Analysis	\$20,000	\$0	\$20,000	\$0	\$40,000
E. Technical & Program Support to WRTC	\$200,000	\$0	\$0	\$0	\$200,000
F. Chesapeake Bay Watershed Model & Water Quality Model Work	\$150,000	\$0	\$0	\$0	\$150,000
G. Water Resource Climate Change & Related Assessments	\$37,044	\$20,772	\$0	\$0	\$57,816
H. Bay & Local – TMDL/WIP & Permit Support	\$50,000	\$0	\$0	\$0	\$50,000
SUBTOTAL	<b>\$854,093</b>	<b>\$20,772</b>	<b>\$20,000</b>	<b>\$0</b>	<b>\$894,865</b>
RWQM TOTAL	<b>\$1,245,430</b>	<b>\$20,772</b>	<b>\$50,000</b>	<b>\$0</b>	<b>\$1,316,452</b>
<b>III. Urban Watershed Management Services</b>					
A. Urban Stormwater Regulatory & Program Support	\$70,772	\$0	\$51,000	\$0	\$121,772
B. Regional Agriculture & Forestry Management	\$81,893	\$51,122	\$27,800	\$315,470	\$476,285
TOTAL	<b>\$152,665</b>	<b>\$51,122</b>	<b>\$78,800</b>	<b>\$315,470</b>	<b>\$598,057</b>
<b>IV. Water Resources Outreach, and Water Supply &amp; Security</b>					
A. Community Engagement Campaign	\$44,244	\$0	\$0	\$118,000	\$162,244
B. Water Supply Emergency and Drought Management	\$98,120	\$0	\$0	\$416,000	\$514,120
TOTAL	<b>\$142,364</b>	<b>\$0</b>	<b>\$0</b>	<b>\$534,000</b>	<b>\$676,364</b>

**Chart 1**  
**RWQM Program Budget Allocations - FY 2020**



**Chart 2**  
**RWQM Program Funding Sources - FY 2019**



### III. ANNUAL WORK PROGRAM AND BUDGET

#### A. OVERVIEW and PROGRAM DESCRIPTIONS

The FY 2020 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 manage stormwater, provide wastewater treatment, and produce and distribute drinking water. It addresses priority issues in response to COG’s members’ needs, supporting and advocating on behalf of those members in a variety of technical and policy forums.

The FY 2020 RWQM Work Program is organized in four **Program Areas**. The tables that follow outline the individual program elements, their associated budgets and funding sources, and detail priorities and deliverables anticipated for FY 2020.

<b>RWQM Program Areas – FY 2020</b>	
<b>1. Policy and Program Development</b>	
<i>Supports policy development, advocacy, CBPC support, and overall program management.</i>	
<ul style="list-style-type: none"> <li>A. CBPC and Board/Member Support</li> <li>B. Regional Policy/Legislative Developments &amp; Advocacy Efforts</li> <li>C. Work Program Management</li> </ul>	
<b>2. Water Quality/Water Resource Management and Technical Analysis</b>	
<i>Supports technical work for the WRTC on a wide range of water quality/water resource issues.</i>	
<ul style="list-style-type: none"> <li>A. Regional Water Quality Data and Analysis</li> <li>B. Potomac Monitoring Contracts</li> <li>C. Regional Wastewater Flow Forecast Model and WWTP Database and Analysis</li> <li>D. Regional Water Resources/Infrastructure/Funding Analysis</li> <li>E. Technical and Program Support to WRTC</li> <li>F. Chesapeake Bay Watershed Model and Water Quality Model Work</li> <li>G. Water Resources Climate Change and Related Assessments</li> <li>H. Bay and Local – TMDL/WIP and Permit Support</li> </ul>	
<b>3. Urban Watershed Management Services</b>	
<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"> <li>A. Urban Stormwater Regulatory and Program Support</li> <li>B. Regional Agriculture and Forestry Management</li> </ul>	
<b>4. Water Resources Outreach, and Water Supply and Security</b>	
<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"> <li>A. Community Engagement Campaign</li> <li>B. Water Supply Emergency and Drought Management</li> </ul>	

## B. PROGRAM DETAILS

Program Area	Regional Water Fund	Regional Environ. Fund	COG Member. Fees & Other	Grants or Other	Total
<b>I. Policy and Program Development</b>					
A. CBPC & Board/Member Support	\$300,000	\$0	\$0	\$0	\$300,000
B. Regional Policy/Legislative Development & Advocacy Efforts	\$40,000	\$0	\$20,000	\$0	\$60,000
C. Work Program Management	\$51,337	\$0	\$10,000	\$0	\$61,587
<b>SUBTOTAL</b>	<b>\$391,337</b>	<b>\$0</b>	<b>\$30,000</b>	<b>\$0</b>	<b>\$421,587</b>

### Activity Description

Working with the Chesapeake Bay and Water Resources Policy Committee (CBPC) members and other stakeholders, COG staff will continue to address the CBPC’s water resource priorities, develop policy recommendations, advance the [COG Board’s legislative priorities](#), and advocate on behalf of COG’s local government and utility members on water resource issues. *[Note: The technical work and associated work products needed to support these policy recommendations are outlined in Program Area 2. Water Quality and Water Resource Management and Technical Analysis.]*

This program area includes analyzing issues; preparing summary documents and presentations; organizing outside speakers/presentations; supporting regular CBPC meetings (and joint meetings with other COG policy committees when warranted); preparing materials/responding to requests for information/briefings on regional water resources issues; and the associated functions needed to support the overall Regional Water Quality Management Program. As outlined in the **Key Initiatives for FY 2020 (Figure 1)**, this program area addresses **Policy, Partnerships, Advocating for Local Interests and Input to the Chesapeake Bay Program, and Communicate Water Resource Successes and Challenges**.

### Key Focus and Outcomes - Policy and 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. Examples of activities for FY 2020 include:

- **Dialogue and Policy**
  - Comment on legislation and support for adequate funding to address water quality, water infrastructure, and other key water resource issues. Recommend policy positions and potential actions to the COG Board as appropriate.
  - Organize the Bay and Water Resources Forum with the EPA and states focusing on expectations for implementing the requirements to comply with the Chesapeake Bay TMDL - given the Phase III Watershed Implementation Plan (WIPs) requirements, and preparations for any needed Bay Model updates. This will include addressing key issues such as the impacts of growth; the Conowingo Dam nutrient/sediment loads; projected climate change impacts; highlighting local successes and outreach efforts; and advocating for holistic, affordable, sustainable, flexible and innovative solutions.
  - Address water infrastructure issues and needs specifically focused on adequate and long-term funding, holistic financial affordability, flexible and innovative implementation, and jobs/workforce development.
  - Work to advance water infrastructure job/workforce issues in support of the COG Board’s Economic Competitiveness and Affordable Housing initiatives, and other regional priorities.
  - Obtain input on issues and enhance regional understanding of water resource issues by:

- Regular presentations from EPA/states and regional/national organizations to share perspectives.
- Periodic tours of facilities and water resource projects to better understand the challenges of and fully appreciate the effort associated with successful implementation.
- Coordinate with COG’s Region Forward Coalition; Climate, Energy and Environment Policy Committee; Human Services Policy Committee; the Metropolitan Washington Air Quality Committee, the Anacostia Watershed Restoration Partnership Steering Committee, and other COG policy committees on cross-cutting issues such as growth/sustainability, metrics as they relate to water quality, critical infrastructure, climate change, jobs/workforce issues, planning/land-use and water quality, tree canopy, and potential air-water benefits/credits.
- **Partnerships** – Regularly coordinate with:
  - Other governmental organizations on a broad range of technical, policy, and economic issues. Partners typically include MACo/VACo, MML/VML, CBP’s Local Government Advisory Committee (LGAC), the Chesapeake Bay Commission, and others;
  - Other regional and national organizations on matters of shared water resource interests (e.g., WEF, WERF, AWWA, WRF, NACWA, NACO, VAMWA/MAMWA, VAMSA/MAMSA); and
  - State and federal regulatory agencies (e.g., DOEE, MDE, VADEQ, and EPA).
- **Advocate for Local Interests and Input to the Chesapeake Bay Program**
  - Provide formal comments and input to the CBP on key matters of interest/impact to COG’s members for the Phase III WIPs and milestones.
  - With the support of the Water Resources Technical Committee, focus input on technical concerns ensuring that local governments/utilities’ concerns are adequately addressed (e.g., Conowingo loads, modeling of climate change and BMP performance impacts, nutrient trading, account for growth, affordability, flexibility, etc.). Address issues related to new reporting on biosolids, septic/on-site systems, and combined sewer nutrient/sediment loads that affect COG local governments and utilities.
- **Communicate Water Resource Successes and Challenges**
  - Regularly communicate about water resource issues to local elected officials, the COG Board, state and federal officials, and the COG region. Use the **CBPC’s Outreach Work Plan** to effectively communicate:
    - 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.
  - Integrate efforts with COG’s webpage, blogs, tweets and other social media tools.

### **Major Work Products and Activities**

- Meetings, conference calls and events in support of the CBPC (Bi-monthly meetings; special events, and other meetings as needed), including:
  - Bay and Water Quality Forum with EPA/federal and state representatives.
  - Tours of water resource/wastewater and stormwater facilities in the region.
- Support CBPC and its work groups to:
  - Analyze CBP and other water resource issues.
  - Analyze proposed state/federal legislation.
  - Identify policy implications for the region and make recommendations.
- Prepare formal correspondence/comments on behalf of CBPC.
- Update/report on water resource indicators/metrics in COG’s Region Forward initiative.
- Briefings/presentations/testimony for COG Board members, local elected officials, and others.
- Respond to COG member and media information requests.
- Routinely update COG website as a regional resource.
- Mid-year review and draft policy priorities for CBPC (Spring 2020).
- Annual Work Program and Budget for FY 2021 (June 2020).
- Work Program management and oversight.

Program Area	Regional Water Fund	Regional Environ. Fund	COG Member. Fees & Other	Grants or Other	Total
<b>II. Water Quality/Water Resources Management and Technical Analysis</b>					
A. Regional Water Quality Data & Analysis	\$160,000	\$0	\$0	\$0	\$160,000
B. Potomac Monitoring Contracts	\$157,049	\$0	\$0	\$0	\$157,049
C. Regional Wastewater Flow Forecast Model & WWTP Database and Analysis	\$80,000	\$0	\$0	\$0	\$80,000
D. Regional Water Resources Infrastructure/Funding Analysis	\$20,000	\$0	\$20,000	\$0	\$40,000
E. Technical & Program Support to WRTC	\$200,000	\$0	\$0	\$0	\$200,000
F. Chesapeake Bay Watershed Model & Water Quality Model Work	\$150,000	\$0	\$0	\$0	\$150,000
G. Water Resource Climate Change & Related Assessments	\$37,044	\$20,772	\$0	\$0	\$57,816
H. Bay & Local – TMDL/WIP & Permit Support	\$50,000	\$0	\$0	\$0	\$50,000
<b>SUBTOTAL</b>	<b>\$854,093</b>	<b>\$20,772</b>	<b>\$20,000</b>	<b>\$0</b>	<b>\$894,865</b>

**Activity Description**

Working with the Water Resources Technical Committee (WRTC) members and other stakeholders, COG staff will address technical issues associated with the CBPC’s water resource priorities. This effort will support policy recommendations noted in Program Area 1. Policy and Program Development.

This program area produces technical work to support the region’s local governments and water utilities. It involves analyzing issues, preparing briefing documents and presentations, and organizing speakers, for WRTC meetings, as well as responding to requests for more information. This program area responds to one of the core principles of the CBPC, the use of sound science in setting regulatory policy.

**Water Quality Monitoring**

COG devotes a significant portion of the Regional Water Fund (about 10 percent) to a regional monitoring program that historically has been invested in a Potomac River fall-line monitoring effort. This monitoring is conducted for COG by Virginia Tech University’s Occoquan Watershed Monitoring Laboratory and is focused on measuring the amounts of nutrients and other substances entering the Potomac River estuary at Chain Bridge. This effort parallels a similar monitoring effort at the same location by the U.S. Geological Survey A workgroup of the WRTC has been working with COG staff to evaluate the benefits of this program. Depending on the outcome of this ongoing evaluation, this direct monitoring component may shift its focus in FY 20 to other regional priorities.

COG does not operate or fund any of the long-term water quality monitoring stations in the free-flowing or tidal portions of the Potomac River that are part of the Chesapeake Bay Program’s coordinated monitoring program. COG staff reviews and analyzes this data to produce presentations and fact sheets , including a Potomac water quality monitoring report that is being comprehensively updated in 2019 and is generally revised annually. COG staff also works with local, state and federal officials to determine priorities for future monitoring efforts.

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## **Water Quality Modeling**

COG staff tracks changes to and analyzes output from the Chesapeake Bay Program's suite of modeling tools, focusing mainly on the watershed model that serves as the accounting mechanism for the Chesapeake Bay TMDL. For this purpose, COG staff participates on a number of Bay Program workgroups, including the Modeling, Urban Stormwater, Land Use and Waste Water workgroups. Issue papers and technical presentations are provided to the WRTC and occasionally summarized for the CBPC. COG also maintains a regional model for predicting future flows at area wastewater plants based on COG's demographic projections.

### **Data summary**

COG uses existing sources of information, such as the Bay Program's wastewater database and its watershed model, to update regional summaries of key water quality parameters, such as the total amount of nutrients removed and effluent discharged by wastewater treatment facilities in the region.

### **New Focus**

Two areas that COG staff proposes to emphasize in this technical area in FY 20 are (1) developing data to support a new emphasis on reducing salt impacts to local waterways and (2) developing new ways of measuring improvements in local water bodies and presenting that information in briefing documents, online dashboards, etc.

## **Major Work Projects/Activities**

### **Monitoring**

- Update the Potomac water quality fact sheet, which summarizes CBP data progress toward attainment of water quality standards in the Potomac estuary, with updated data from the CBP monitoring network.
- Based on ongoing member assessment of the Chain Bridge monitoring program, either continue to manage the contract for fall-line monitoring at Chain Bridge or initiate new monitoring contract(s) for other priorities.

### **Modeling**

- Update COG's data summary of wastewater loadings and assist members with comparing this CBP data with their own records.
- Update COG's summary of other nutrient load sources in the region and assist members with comparing the CBP data with their own records.
- Update flow and load projections for the region's wastewater facilities using COG's regional flow forecast model.
- Track new developments in Chesapeake Bay Program modeling, with a particular focus on updated projections of climate change impact, to be summarized in WRTC presentations.

### **Data Summary**

- Update COG region's Region Forward indicators and goals.



Program Area	Regional Water Fund	Regional Environ. Fund	COG Member. Fees & Other	Grants or Other	Total
<b>III. Urban Watershed Management Services</b>					
<b>A. Urban Stormwater Regulatory &amp; Program Support</b>	\$70,772	\$0	\$ 51,000	\$0	\$121,772
<b>B. Regional Agriculture &amp; Forestry Management</b>	\$81,893	\$51,122	\$27,800	\$315,470	\$476,285
<b>TOTAL</b>	<b>\$152,665</b>	<b>\$51,122</b>	<b>\$78,800</b>	<b>\$315,470</b>	<b>\$598,057</b>

**Activity Description**

Stormwater management has become a major challenge for COG’s members, all of whom operate under MS4 permits. In this program area, COG assists those efforts through coordination on permitting issues, procurement initiatives and peer-to-peer workshops. COG also convenes a Regional Agriculture Work Group and Urban Tree Canopy Subcommittee that focus on linkages between trees, riparian buffers, healthy soils, conservation practices, and opportunities to improve regional water quality. This work program area complements other aspects of the overall Regional Water Quality Management Program through efforts to reduce the amount of pollutants reaching surface and ground waters.

**Urban Stormwater Regulatory and Program Support**

Anticipated activities for FY 2020 include:

- Promote peer exchange of technical information among COG members and throughout the wider Bay region about stormwater permit compliance issues, BMP performance, program management and other priorities identified by the members, primarily via workshops.
- Update COG’s regional summary of the financial resources available to pay for stormwater program requirements, including dedicated fee and tax revenue.
- Provide input on the Virginia Department of Environmental Quality’s salt management strategy; coordinate the sharing of information on salt mitigation efforts between northern Virginia, the District of Columbia and Maryland.
- Continue to provide staff support to the MACo-COG Maryland MS4 Phase 1 group in permit negotiations with the Maryland Department of the Environment.
- Analyze Chesapeake Bay Program modeling data for implications regarding stormwater BMP placement and performance.
- Collaborate with COG’s Anacostia Restoration Program staff on sharing metrics and other information developed within the Anacostia region with the entire COG membership.
- Continue to explore the potential for regional collaboration on bacteria source tracking to update existing bacterial TMDLs and inform future ones.

**Watershed Management, Agriculture, and Forestry Projects**

- The Anacostia Watershed Restoration Partnership has initiated a social media and messaging campaign focused on getting people/residents to view the river as a valuable resource and use it more. Lessons learned about effective messaging will be shared with the WRTC and CBPC. Funding for this activity is provided by members of the Partnership, as well as through various grants.
- Support implementation of the 2018 COG Tree Canopy Management Strategy and provide staff support to the new Urban Tree Canopy Subcommittee.
- Promote peer exchange of technical information among COG members and throughout the wider Bay region about the multiple benefits of forest cover, urban tree canopy, healthy soils, and healthy riparian buffers – especially the water quality benefits.
- Work with the CBPC and Regional Agricultural Work Group to implement recommendations from the 2019 “What Our Region Grows” report, including the promotion of conservation programs and healthy soils to improve water holding capacity (mitigate flooding), improve water quality, sequester carbon, and reduce greenhouse gas emissions.

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### **Major Work Products and Activities**

- Host at least two peer-exchange regional workshops on stormwater management, urban trees and forest BMPs, and regional agricultural issues.
- Update regional stormwater fee/tax and program cost information in fact sheet format.
- Provide briefings to COG's Chesapeake Bay and Water Resources Policy Committee on the capacity of regional stormwater programs to meet permit and Chesapeake Bay restoration goals.
- Work with other parties to convene a dialogue between environmental groups and local government stormwater managers on areas of mutual interest, such as education and outreach.
- Building on work in the Anacostia Watershed Restoration Program, develop regional metrics for assessing progress in meeting local water quality goals, such as stream health.
- Provide briefings to local government elected officials on stormwater issues, forestry issues, and agricultural issues as requested.
- Staff a CBPC Ad-hoc Agriculture Task Force to provide recommendations about agricultural and other issues that should be a priority for regional collaboration, including management actions to promote conservation programs, healthy soils to improve water holding capacity (mitigate flooding), improve water quality, sequester carbon, and reduce greenhouse gas emissions.

Program Area	Regional Water Fund	Regional Environ. Fund	COG Member. Fees & Other	Grants or Other	Total
<b>IV. Water Resources Outreach, and Water Supply &amp; Security</b>					
<b>A. Community Engagement Campaign</b>	\$44,244	\$0	\$0	\$118,000	\$162,244
<b>B. Water Supply Emergency and Drought Management</b>	\$98,120	\$0	\$0	\$416,000	\$514,120
<b>TOTAL</b>	<b>\$142,364</b>	<b>\$0</b>	<b>\$0</b>	<b>\$534,000</b>	<b>\$676,364</b>

**Activity Description**

Working with COG members and affiliated water utilities, staff will address priority water resources projects and programs. The work is coordinated with other COG programs and activities, work being done by COG members and other organizations such as the regional Homeland Security Executive Committee (HSEC), Environmental Protection Agency (EPA), Department of Homeland Security (DHS), the Centers for Disease Control and Prevention (CDC), Maryland Department of the Environment (MDE), Virginia Department of Environmental Quality (VADEQ), Virginia Department of Health (VDH), District Department of Energy and Environment (DOEE), District Department of Health (DOH), the Federal Bureau of Investigation (FBI), and other private and public-sector organizations in order to maximize synergies, avoid duplication of effort, and leverage resources.

Anticipated activities for FY 2020 will occur throughout the year and include:

**Community Engagement Campaign**

- Implement the regional educational and information campaign elements Wise Water Use, TapIt and Protect Your Pipes to promote responsible water use, accessible/sustainable access to drinking water, and protection of critical infrastructure.

**Drinking Water Supply, Security and Drought Management**

- Facilitate communication and notification among local and state governments, water utilities, the media, and the general public for water supply emergencies, including drought.
- Integrate regional Homeland Security initiatives given the importance of and linkages to drinking water and source water protection to enhance preparedness, response and resiliency.
- Provide comprehensive and up-to-date information to enable timely regional responses to potential and actual water supply emergencies.
- Coordinate and develop regional water messaging for source water protection, infrastructure, water supply emergencies, preparedness and specific contaminants.

**Drought Coordination Committee**

- Implement a regional water supply work program to address water supply/drought management issues.
- Monitor regional water supply conditions.
- Prepare monthly drought outlook and conditions reports from April – October.
- Update the Water Supply Emergency and Drought Awareness Response Plan based on the outcomes of a 2019 regional drought exercise.
- Implement the regional Water Supply Emergency and Drought Plans in response to water supply emergency events.

**Water Security Work Group**

- Coordinate and manage regional water security activities in monitoring, redundancy and resiliency, planning, facility hardening, notification, communication, mutual aid, and training and exercises.
- Work with utility partners to assess risks, threats, and vulnerabilities of NCR source water, drinking water, treatment plants, distribution systems, and wastewater collection and treatment systems.
- Identify strategies and best practices to address the highest priority risks, threats, and vulnerabilities.
- Update the regional all-hazards Water Supply Emergency Plan as needed.

### **Major Work Products and Activities**

- Continue a regional educational and outreach Community Engagement Campaign focused on Wise Water Use, TapIt and Protect Your Pipes messaging – including website and events (Year-round and Seasonal).
- Manage and coordinate Drought Coordination Committee and Drought Technical Committee during periods of drought (Summer).
- Track and monitor Potomac basin drought and water supply conditions and website updates.
- Prepare monthly Regional Drought and Water Supply Outlook Reports (Seasonal: May – Oct).
- Staff support for assessing Drought Watch Trigger and preparing updates to Response Plan.
- Staff support and management coordination to the Water Security Work Group.
- Implement the recommendations from the “*Potomac Sheen After Action Report*” and after-action reports from related exercises.
- Continue management and coordination of a Regional Water Security Monitoring Network.
- Continue management and coordination of NCRWARN (regional utility mutual aid network).
- Implement and support one or more regional exercises.
- Update the WRTC and CBPC regarding drought reports and general briefings regarding regional security initiatives.

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## Appendix A

<b>Local Government Contributions to COG's Regional Water Fund FY 2019 and FY 2020</b>		
Jurisdiction	FY 2019	FY 2020
	Regional Water Fund Allocations	Regional Water Fund Allocations
Alexandria, City of	\$ 29,837	\$ 30,508
Arlington County	\$ 43,312	\$ 45,478
Bowie, City of	\$ 10,732	\$ 11,269
College Park, City of	\$ 6,169	\$ 6,332
District of Columbia	\$ 296,820	\$ 308,400
Fairfax County	\$ 296,820	\$ 308,400
Fairfax, City of	\$ 4,629	\$ 4,860
Falls Church, City of	\$ 2,676	\$ 2,725
Gaithersburg, City of	\$ 13,296	\$ 13,566
Greenbelt, City of	\$ 4,062	\$ 4,265
Loudoun County	\$ 76,870	\$ 80,714
Montgomery County	\$ 296,820	\$ 308,400
Prince George's County	\$ 296,820	\$ 308,400
Prince William County	\$ 87,502	\$ 89,778
Rockville, City of	\$ 13,383	\$ 13,853
Takoma Park, City of	\$ 3,394	\$ 3,511
<b>TOTALS</b>	<b>\$1,483,141</b>	<b>\$ 1,540,459</b>