

Protecting the Potomac River, Local Tributaries and the Chesapeake Bay for Public Health and Environmental Quality

Department of Environmental Programs Water Resources

FY 2009 Work Program and Budget

July 1, 2008 to June 30, 2009





Approved (July 14, 2008)







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FY 2009 Water Re					
	Budget Sur	nmary	coc	Cuant.	Total
Program Area	RWF ¹	REF ²	COG Local	Grant; Other	Total
I. Policy and Program Development					
A – Chesapeake Bay and Water Resources Policy Committee	220,000		10,000		230,000
B – Water Resources Technical Committee	220,000		10,000		230,000
C – COG Board and Member Support	56,911		28,157		85,068
D – Work Program and Budget Development	50,000		10,000		60,000
E – Development of Regulatory and Legislative Policies and Priorities	40,000		0		40,00
Total	586,911		58,157		645,068
II. Development/Application of Technic	al Tools and Ou	treach			
A –Application of the Chesapeake Bay Water Quality and Watershed Models and Other Load Models	85,000			0	85,000
B – Development and Application of the Regional Wastewater Flow Forecast Model	50,000			0	50,000
C - Technical Workshops and Seminars	60,000			25,000	85,00
D - Wastewater and Stormwater Program Requirements and Regulatory Analysis	40,000			0	40,000
E – Growth, Sustainability and Climate Change (NEW)	40,000			0	40,000
F. Regional Outreach and Coordination (NEW)	10,000			15,000	25,000
Total	285,000			40,000	325,000
III. Water Quality Monitoring					
A – Regional Monitoring Program	150,000				150,000
B – Chain Bridge and Little Falls Monitoring	127,000				127,000
Total	277,000				277,000
IV. Water Supply and Drought Managen	nent				
A – Water Supply Task Force Management and Support	80,000			85,000	165,000
B – Wise Water Use Campaign	30,000			70,000	100,000
Total	110,000			155,000	265,000
V. Urban Watershed Management					
A. Urban Stormwater and Eco-Landscaping		20,000	25,000		45,000
B. Watershed Stream Ecology, GIS Applications and Forestry		45,250	33,157	50,000	128,40
C. Planning for Green Infrastructure and Sustainable Agriculture, and Related Database Management			58,157	150,000	208,15
Total		65,250	116,314	200,000	381,564
Grand Total	1,258,911	65,250	174,471	395,000	1,893,63

Overview

Purpose – Since its inception, COG's water resources (WR) program has focused on regional water resources policies and programs. It is designed to help protect and conserve the region's water resources while providing COG's members access to emerging policies, technology and regional environmental information. Among the program's strengths is its ability to project a local government voice to help shape regional water resources policies and programs, which are substantially the subject of state and federal law and regulation.

COG's Water Resources program responds directly to COG's mission of enhancing the quality of life and competitive advantages in the global economy through:

- Providing a forum for consensus-building and decision-making;
- Implementing intergovernmental policies, plans and programs; and
- Supporting the region as an expert information resource.

Organization - COG's WR program is organized in five broad areas: Policy and Program Development; Development/ Application of Technical Tools; Outreach; Water Quality Monitoring; Water Supply, Drought Management AND Water/ wastewater Security; and Urban Watershed Management. Each of these is designed to provide a coherent focus for gathering and analyzing regional WR information and preparing appropriate regional program and policy recommendations.

Focal Points for FY 2009 – The FY 2009 WR program will emphasize three focal points for achieving water quality goals: the Potomac River, local streams and the Chesapeake Bay. Whether policy-, program- or project-oriented, water quality conditions at each of these three levels will be considered. COG will be paying particular attention to several issues that are gaining heightened importance. Among these are:

- Reconciling continued rapid growth with water quality goals;
- Linking water quality issues and human health concerns;
- Widespread system management concerns as epitomized by WSSC's "Can the Grease" program;
- Accelerating the preservation of green infrastructure, land conservation and sustainable agriculture, each of which has a direct tie to regional water quality; and
- Addressing the impacts of climate change on the region's water resources.

The connection between continued growth and water quality remains a severe challenge. It's clear that the Chesapeake Bay restoration targets set in the Chesapeake 2000 agreement will not be met by 2010. Absent changes to current (non-regulatory) Tributary Strategy implementation plans, they may never be met. Accordingly, a much more regulatory Bay Program, including a strong focus on growth and growth management, is rapidly emerging. COG has been actively participating in the Bay Program's "2030 Analysis" which is likely to affect local wastewater, stormwater and possibly land use programs in unprecedented ways. COG's participation is designed to ensure that the voice of local governments and utilities helps shape new programs and policies being developed at the federal and state levels. COG's Chesapeake Bay Policy Committee (CBPC) has identified "Growth and Water Quality" as one of priority issues, in recognition of the forecast growth in population of 1.6 million and employment of 1.2 million by 2030.

To address each of these, COG's program is designed to collect and analyze regional information; provide regional water resources information to the media and the general public; work with COG members to provide information and develop a local government voice on critical issues; and work with appropriate state and federal entities to ensure that that voice is heard and has an impact. Among specific actions proposed for FY 2009 are:

- Publishing of a Potomac River Water Quality report reflecting the multi-year data collected at Chain Bridge;
- A series of workshops/work sessions relating growth and water quality addressing and helping to shape
 programs and policies that are likely to affect local wastewater, stormwater and land use programs; including the
 potential implications of COG's Climate Change initiative via various workshops that will require grant funding.
- Development of a proactive legislative tracking and advocacy program designed to anticipate federal and state legislative initiatives critical to regional water quality and local WR programs and to develop policy direction to ensure that the local government voice is incorporated into the legislative process. This will include an assessment of the regional funding needs identified in EPA's Clean Watersheds Needs Survey and development of policy recommendations to address critical infrastructure and funding needs for the region.
- One or more workshops on water quality and human health, in conjunction with other COG departments and committees; and
- Preparation of specific products and workshops to promote green infrastructure and sustainable agriculture
 in the region.

I. Policy and Program Development





The Policy and Program Development program area includes five discrete activities:

- A. Chesapeake Bay and Water Resources Policy Committee (CBPC);
- B. Water Resources Technical Committee (WRTC);
- C. COG Board and Member Support;
- D. Work Program and Budget Development; and
- E. Development of Regulatory and Legislative Policies and Priorities

The common thread to these activities is the support by the COG staff on behalf of the CBPC and the WRTC to develop water resources programs

Activity	Key Work Product(s)
A. Chesapeake Bay and Water Resources Policy Committee	 Presentations to COG Board (as appropriate) Updated state and federal legislative priorities for the region (1st half of year) Legislative briefing on regional water issues (1st half of year) Report on regional implication of continued growth on prospects for meeting anticipated water quality regulations (2nd half of year) CBPC agendas and meeting summaries (Bi-monthly)
B. Water Resources Technical Committee	 WRTC meeting and/or work session agendas and highlights (Bi-monthly)
C. COG Board and Member Support	Reports (as needed)
D. Work Program and Budget Development	Draft WP&B (March 2009)Final WP&B (June 2009)
E. Development of Regulatory and Legislative Policies and Priorities	Technical briefings (Bi-monthly)Develop regional input (as required)

FY 2009 Water Resources Work Program and Budget		
Program Area I. Policy and Program Development		
Activity A. Chesapeake Bay and Water Resources Policy Committee		
Committee Oversight	Chesapeake Bay and Water Resources Policy Committee; COG Board of Directors	
Staffing Lead: Karl Berger Staff Resources: Stuart Freudberg, Ted Graham, Tanya Spano, Steve Bieber		
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The committee has established four broad priorities for action in calendar 2008: advocate for funding and policy initiatives at the state and federal levels, identify links between growth policies and water quality, support regional public outreach efforts with a water quality focus and help coordinate the Trash-Free Potomac Watershed Initiative.

Within these broad areas, the committee will continue its lead role in supporting appropriate state and federal legislation, commenting on policy issues to the Chesapeake Bay Program, concentrating on Potomac River water quality issues, providing a water quality focus to the Greater Washington 2050 Initiative and helping to frame the issue of compounds of emerging concern for the public and elected officials. In addition, the committee will evaluate water/wastewater and related infrastructure funding needs that have been identified for the region, and consider potential regional support for a national Clean Water Trust Fund that would be established to address these needs.

- Presentations to COG Board (as appropriate)
- Updated state and federal legislative priorities for the region (1st half of year)
- Legislative briefing on regional water issues (1st half of year)
- Report on regional implication of continued growth on prospects for meeting anticipated water quality regulations (2nd half of year)

		Budget
\$220,000	Regional Water Fund	
10,000	COG Local Funds	
\$230,000	Total	

FY 2009 Water Resources Work Program and Budget		
Program Area	Program Area I. Policy And Program Development	
Activity B. Water Resources Technical Committee		
Committee Oversight Chesapeake Bay and Water Resources Policy Committee		
Staffing	Lead: Tanya Spano Staff Resources: Tomlyne Malcolm, Heidi Bonnaffon, Ted Graham, Karl Berger, Steve Bieber; COG planning and public health staff	
Partners	Partners Chesapeake Bay Program, Northern Virginia Regional Council, ICPRB	
Activity Description		

The WRTC is the lead technical resource to the CBPC on all regional water quality management issues. COG staff support to this committee entails evaluation and technical analysis of regulations, policies and other initiatives that affect or may affect COG member wastewater, stormwater and related water quality and water resource programs.

The technical support required to address specific water quality issues is outlined under other FY 2009 project writeups. This project element supports COG staff's work with the WRTC to:

- Assess the cumulative impact of these initiatives;
- Synthesize data and conduct analysis:
- Define the key technical issues and identify the potential impact to the COG region and COG's members;
- Make presentations, prepare technical summaries, and prepare and submit technical comments on behalf of the WRTC; and
- Develop policy recommendations from the WRTC to the CBPC and ultimately the COG Board.

Key topics that the WRTC expects to address in FY 2009 will include assessments of:

- The Chesapeake Bay Program's (CBP) Bay updates to all of its models, reevaluation of water quality impairments, potential revisions to the nutrient/sediment load caps, potential reallocation of existing tributary and source loads, and development of the Bay TMDL;
- State Tributary Strategy implementation and development of local jurisdictional loads;
- Funding needs for point source, non-point source and agricultural sectors;
- Water quality/water resource assumptions and implications of predicted 'growth' in the region including the CBP's 2030 Land Use Change Model, linkages to the Bay TMDL, and development of water quality indicators for COG's Greater Washington 2050 initiative.
- EPA's Clean Watersheds Needs Survey both the recently released 2004 report and as well as input on development of the 2009 report; to quantify regional infrastructure funding needs, as well as to consider whether to recommend that the CBPC consider regional support for a national Clean Water Trust Fund.
- Continued monitoring of various water quality challenges and regulatory initiatives for the Potomac and Anacostia Rivers including pharmaceuticals/personal care products (e.g., EDCs), PCBs, bacteria, etc. to assess linkages between water quality and other environmental issues/initiatives (e.g., air quality, environmental and human health).

In addition to coordination and integration of these many issues, emphasis will be given to continue to address specific wastewater and stormwater topics through special technical work sessions. This will include continued efforts to integrate water quality issues with other COG Departments' programs/activities/committees to expand stakeholder input and to develop more holistic assessments of impacts and benefits of various environmental initiatives.

- Meetings of the WRTC (Bi-monthly), and conference calls/meetings of work groups (as required)
- Technical work sessions to address specific wastewater & stormwater issues (2-3 times per year)
- Briefing material, presentations, technical analyses and comments, and policy recommendations to the WRTC, and to the CBPC on behalf of the WRTC (Bi-monthly)
- Priority recommendations for COG's FY 2010 Regional Water Work Program & Budget (spring 2009)

		Budget
\$ 220,000	Regional Water Fund	
\$ <u>10,000</u>	COG Local Funds	
\$ 230,000	Total	

FY 2009 Water Resources Work Program and Budget		
Program Area I. Policy and Program Development		
Activity C. COG Board and Member Support		
Committee Oversight	Committee Oversight Chesapeake Bay and Water Resources Policy Committee	
Staffing Lead: Ted Graham		
Activity Description		

This task enables COG to fulfill its role as a member service organization by responding to member requests for information on regional programs and policies and serving as a clearinghouse for environmental information. It provides for COG staff to respond to special requests for technical assistance or other support from the COG Board and COG members. Typical examples include reporting on the latest regulatory requirements under the Clean Water Act or proposed funding strategies at the federal and state level. It provides funds for staff support in developing water resources presentations to the COG Board and other COG committees and COG members. It also provides for preparation of presentations by elected official leaders at the COG Board, to Congressional committees and state legislative bodies.

Outcomes and Major Products

- Response to requests (as requested)
- Federal and state legislative and regulatory summaries (as requested)
- Briefings and presentations to COG Board and others (4-6 per year)
- Preparation of presentations and testimony for use by elected official leaders (4-6 per year)

	Budget	
\$ 56,911	Regional Water Fund	
\$ <u>28,157</u>	COG Local Funds	
\$ 85,068	Total	

FY 2009 Water Resources Work Program and Budget		
Program Area I. Policy and Program Development		
Activity D. Work Program and Budget Development		
Committee Oversight	Committee Oversight Chesapeake Bay and Water Resources Policy Committee	
Staffing Lead: Ted Graham		
Activity Description		

This task funds management and administrative activities in support of the FY 2009 work program and covers the preparation of the FY 2010 regional water resources work program and budget in collaboration with the Water Resources Technical Committee. It also includes preparation of performance appraisals participation in internal staff meetings and program wide direct costs.

This task will also help support COG staff in submitting certain work program proposals or grant applications designed to secure funding support from outside agencies. This also helps support costs associated with proposal writing or preparation of RFPs for certain pass-through contracts such as for special water quality studies.

- Preliminary FY 2009 budget (1st quarter)
- Midyear Budget Review (3rd quarter)
- Proposed FY 2009 final work program and budget (3rd quarter)
- Final FY 2009 work program and budget (4th quarter)
- Grant Proposals (Ongoing)

		Budget
\$ 50,000	Regional Water Fund	
\$ <u>10,000</u>	COG Local Funds	
\$ 60,000	Total	

FY 2009 Water Resources Work Program and Budget		
Program Area	I. Policy and Program Development	
Activity	E. Development of Regulatory and Legislative Policies and Priorities	
Committee Oversight	Chesapeake Bay and Water Resources Policy Committee; Water Resources Technical Committee	
	Lead: Tanya Spano, wastewater; Ted Graham, stormwater Staff Resources: Steve Bieber, Tomlyne Malcolm, Karl Berger Partner organizations:	
Ctoffing	Northern Virginia Regional Commission (NVRC)	
Staffing	Virginia Association of Municipal Wastewater Agencies (VAMWA)	
	 Maryland Association of Municipal Wastewater Agencies (MAMWA), the Virginia Association of Stormwater Management Agencies (VAMSA), Stormwater Association of Maryland (SWAM). 	

Working with members of COG's Chesapeake Bay and Water Resources Policy and Water Resources Technical committees, COG staff will participate in or otherwise monitor the various forums at the state and federal levels that determine or influence water quality regulations at the local level. Policy implications will be presented to member government officials for review and, where appropriate, regional comment developed and legislative recommendations if appropriate.

Among the key issues and forums in which we will participate are the Chesapeake Bay Program's Water Quality Steering Committee's effort to: a) analyze new water quality modeling results, b) determine if the Bay Program's nutrient and sediment caps should be revised and/or reallocated, and c) how to implement the Bay-wide Total Maximum Daily Load; as well as efforts by Maryland and Virginia to revise stormwater permitting regulations.

COG staff will coordinate with a number of related stakeholders in which our members also participate in tracking these issues and developing regional positions. See partner organizations under "Staffing."

- Participation in federal and state agency meetings regarding nutrient and sediment reallocations
- Participation in federal and state agency meetings regarding development of Bay TMDL guidelines
- Participation in the Wastewater Workgroup of the Chesapeake Bay Program's Nutrient Subcommittee;
- Coordination with local and regional entities providing input on the development of new stormwater regulations in Maryland and Virginia.
- Development of regional regulatory comments and/or legislative recommendations.

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		Budget	
\$40,000	Regional Water Fund		

II. Development and Application of Technical Tools and Outreach





COG's effectiveness in helping to shape and implement regional WR programs and policies depends in large measure on access to and participation in the use of use of a variety of technical modeling tools. It is also important to ensure that COG's members are kept abreast of emerging technical and policy issues, generally through workshops.

Activity	Key Work Product(s)		
A. Application of the Chesapeake Bay Water Quality and Watershed Models and Other Load Models	 Beta testing of the COAST tool. Technical assessment and memorandum on Bay model results for the Potomac (quarterly). Presentations regarding the status of the Phase 5 WSM, the Chesapeake Bay Water Quality Model (WQM), and application of the COAST tool (Quarterly). 		
B. Development and Application of the Regional Wastewater Flow Forecast Model	Updated projections & presentations (1 st & 4 th Quarters)		
C. Technical Workshops and Seminars	 Climate Change – Wastewater Workshop (Fall 2008); Stormwater/Drinking Water Impacts Workshop (TBD) Potomac Water Quality Futures Forum (Winter 2008) Coast/Local Watershed Modeling (Winter 2008) Growth, Water Quality & Planning (Spring 2009) EDCs & Related (TBD) TN Bioavailability (Spring 2009) Others (TBD, based on grant \$) 		
D. Wastewater and Stormwater Program Requirements and Regulatory Analysis	 Assessment of CBP/state Bay TMDL implementation schedule assumptions (Quarterly) Presentations to WRTC, CBPC, and other COG committees (Ongoing) 		
E. Growth, Sustainability and Climate Change	GW2050 Indicators (Fall 2008)CBP 2030 Land Use Projection Assessment (Fall 2008)		
F. Regional Outreach and Coordination	Integrated Wastewater Collection System & Pharmaceuticals Disposal Outreach Plan & Budget (Fall 2008)		

FY 2009 Water Resources Work Program and Budget		
Program Area II. Development and Application of Technical Tools and Outreach		
Activity A. Application of the Chesapeake Bay Water Quality and Watershed Models Other Load Models		
Committee Oversight Water Resources Technical Committee		
Staffing Lead: Steve Bieber & Karl Berger		

The Chesapeake Bay Water Quality Model (WQM) is the primary tool used by the Chesapeake Bay Program (CBP) to set nutrient and sediment load caps to meet water quality requirements. The CBP's Watershed Model (WSM) divides the 64,000 square mile Chesapeake Bay drainage basin into much smaller model segments (about the size of a county) and simulates soil erosion and pollutant loads from the land to the rivers. These modeling tools are being upgraded and will be used in fiscal 2009 to evaluate nutrient and sediment load caps to meet State water quality standards. It is anticipated that new regulatory requirements will result in adding specific and lower permit limits to regulated entities in the COG region, subject to the terms of TMDL consent decrees in Virginia and the District of Columbia and a Maryland/EPA MOU. To fully evaluate the implications of these anticipated regulatory and permit changes, it is essential to have a comprehensive understanding of the development and application of modeling tools used by the CBP to set nutrient and sediment load caps.

Participation in this effort will greatly enhance the active role of the region in development of the technical tools underlying major water quality management decisions, particularly related to Blue Plains, local watershed management efforts, and State-led basin and small tributary TMDLs. Some of the expected benefits include, but are not limited to, the following:

- Proactive and direct involvement in applying the modeling tools used to guide regulatory decisions for our region, the Potomac River and the Chesapeake Bay.
- A geographic focus on the COG region and the Potomac to insure that the modeling tools and regulatory decisions affecting the region are based on the "best available science."
- Serving as a research test bed for applying the Chesapeake Online Assessment Support Tool (COAST), a web based version of the CBP watershed model, at the local scale.
- Ability to test alternative watershed management scenarios at the local level, edit data, submit model runs, and
 perform analysis at a variety of scales, including small land/river segments that are highly relevant to local water
 quality management.

The Regional Fund contribution will ensure that a full spectrum of local impacts will be explored, including the tidal fresh Potomac and embayments in the Washington area. This effort will support staff efforts to: a) ensure that the most appropriate technical assumptions and data have been utilized; b) characterize the resulting water quality impacts in the tidal fresh Potomac and embayments in the Washington region; and c) identify management implications for pollutant loadings for various sectors (e.g., wastewater, urban stormwater, air deposition, etc.). This will also provide for briefings and work sessions with the WRTC and CBPC related to the regional implications of the upgrade and application of the Phase 5 WSM and the WQM.

- Participate in Beta testing of the COAST tool to develop staff proficiency.
- Technical assessment and memorandum on Bay model results for the Potomac as they become available.
- Regular updates to the WRTC regarding the status of the Phase 5 WSM, the Chesapeake Bay Water Quality Model (WQM), and application of the COAST tool (Quarterly).

Budget				
\$ 85,000	Regional Water Fund			

FY 2009 Water Resources Work Program and Budget			
Program Area	Program Area II. Development and Application of Technical Tools and Outreach		
Activity	Activity B. Development and Application of the Regional Wastewater Flow Forecast Model		
Committee Oversight Water Resources Technical Committee			
Staffing	Lead: Tanya Spano Staff Resources: Tomlyne Malcolm, Mukhtar Ibrahim; Lana Sindler		
Activity Description			

COG staff will continue to update the Regional Wastewater Flow Forecast Model (RWFFM) inputs for the COG region, including working with each jurisdiction/agency to:

- Update and verify the GIS sewershed and septic area boundaries;
- Develop accurate baseline year flow figures for areas outside of the Blue Plains Service Area; and
- Update the wastewater flow factors if required.

COG staff will then utilize the latest demographic figures from COG's approved Cooperative Forecast (Round 7.1) to generate updated wastewater flow and nutrient load projections for the COG region and compare the results with various local, state, and Chesapeake Bay Program projection methodologies.

COG staff will also work with the WRTC members to assess the potential impact of the flow projections to the region in terms of: nutrient load caps versus expected growth; wastewater plant capacity constraints; as well as watershed permit and trading options. It will also serve as an important check on the flow and load information assumptions in the state Tributary Strategies and CBP's 2010/2030 projection assumptions and alternative growth scenarios.

Outcomes and Major Products

- Preliminary regional wastewater flow projections (based on approved Round 7.1 Cooperative Forecasts) (1st Quarter)
- Analysis of projected population trends, wastewater flow figures, and related nutrient loads (1st Quarter)
- Updated RWFFM (incorporating updated demographic data, revised wastewater flow factors & hydraulic base flows for COG region) (4th Quarter)

Budget

\$50,000 Regional Water Fund

FY 2009 Water Resources Work Program and Budget		
Program Area	II. Development and Application of Technical Tools and Outreach	
Activity	C. Technical Workshops and Seminars	
Committee Oversight	Water Resources Technical Committee	
Staffing	Lead: Tanya Spano Staff Resources: Tomlyne Malcolm, Heidi Bonnaffon, Karl Berger, Steve Bieber, Ted Graham	
Partners	WEF, WERF, AWWA, AwwaRF, NVRC, ICPRB, CBP, COG wastewater/stormwater/drinking water organizations and utilities	

The technical workshops and seminars proposed for FY 2008 are anticipated to include:

- 'Climate Change/Sustainability Impacts and Options for Wastewater Plants' in collaboration with WEF/WERF, DC-WASA, and COG's other wastewater utilities to highlight potential local impacts of Climate Change and local mitigation and adaptation efforts that can be utilized locally) Fall 2008
- Potomac Water Quality Futures Forum (explore wide spectrum of issues: Bay TMDL, local impairments, EDC concerns, drinking water issues, Climate Change impacts, growth implications, expanded stormwater requirements). It will also address policy issues such as adaptive management (see III. A. Potomac Monitoring Program).

 Fall/Winter 2008
- *'Climate Change and Stormwater/Drinking Water Implications'* (workshop to assess the potential supply needs, water quality, and runoff impacts associated with potential changes in precipitation patterns) TBD
- Stormwater Workshops (to address monitoring, programmatic, regulatory issues, etc.) TBD
- Contaminants of Emerging Concern (e.g., EDCs) & Other Future Water Quality Challenges (as appropriate, continue FY 2008 efforts to reflect ongoing developments regarding endocrine disruptor compounds and water quality/water resources/watershed protection challenges in collaboration with the CBP, EPA, the states, WERF & AwwaRF and COG's members) specific workshops TBD
- 'Nitrogen Bio-Availability, Modeling and Fate in the Environment' (to focus on nitrogen-specific issues as part of the upgraded CBP Potomac Model in support of DC-WASA and WERF priority research issues) Spring 2009
- 'COAST & Other Localized Watershed Modeling Tools' (present benefits and challenges of using various modeling tools available to evaluate water quality impacts at a local/regional-scale in collaboration with the CBP, state agencies, universities, and other local governments) Winter 2008 (tentative)
- 'Growth, Planning & Water Quality Impacts' (a continuation of FY 2007's workshop in collaboration with the CBP, states, regional authorities, and COG's members. Will include both technical and policy workshops to: (a) review year 2030 Bay projection results; (b) develop local growth scenarios; and (c) investigate how other localities have incorporated water resource issues into their planning efforts.) Spring 2009

Collaborative efforts, co-sponsoring, and grant funding to supplement these efforts will also be sought in order to leverage COG's RWF monies. These efforts, in particular those associated with growth, climate change, and EDCs will also be coordinated with other COG environmental staff, committees, and stakeholders.

This activity is to provide an in-depth discussion of critical and complex issues. By providing a forum for outside speakers and presentations, this approach also supports COG's members' efforts to increase the dialogue with state regulators and other interested parties on these issues. This approach builds on FY 2007's highly successful workshops on wastewater and EDC issues, drinking water and risk communication, and stormwater workshops. CBPC and WRTC members will be asked to indicate their priorities and areas of interest.

Outcomes and Major Products

Workshops and/or seminars (3-5 during the year)

Presentation and background material (for each event)

Summary documents (after each event)

Feedback/evaluation process (for each event)

Policy and technical recommendations as appropriate (as needed)

Budget

13

\$ 60,000 Regional Water Fund

\$ 25,000 Potential EPA/WERF/State Grants and/or Cost-share opportunities

\$85,000 Total

FY 2009 Water Resources Work Program and Budget		
Program Area	II. Development and Application of Technical Tools and Outreach	
Activity	D. Wastewater and Stormwater Program Requirements and Regulatory Analysis	
Committee Oversight Water Resources Technical Committee		
Staffing Lead: Tanya Spano - Wastewater, Ted Graham - Stormwater Staff Resources: Tomlyne Malcolm, Heidi Bonnaffon		
Partners	WEF, VAMWA, VAMSA	

Regional water quality requirements, pollutant loads and permit limits are defined by: water quality standards; Tributary Strategies and related Implementation Plans; TMDLs; and NPDES permitting policies. In addition to ongoing implementation of CBP nutrient and sediment standards and the Bay TMDLs, EPA will also be continuing its national program to implement nutrient standards in non-tidal waters (e.g., streams and lakes) that are likely to have local impacts. EPA and the states are also still developing enforcement policy guidance to address 'annual' nutrient load limits at WWTPs as well as potential load requirements for MS4 stormwater permits. COG will also continue to explore the development and implementation of local TMDLs, including those focused on PCBs, trash and bacteria as well as those addressing nutrients and sediment

COG staff will focus on these issues and address their potential impacts on wastewater and stormwater permits as well as implications for Potomac modeling and water quality monitoring programs. In addition, staff will continue to address local concerns as several new permit options develop (e.g., annual load limits, watershed permits, interstate trading potential, etc.). Particular focus will be on the potential impact these initiatives will have on the Blue Plains WWTP, the region's other wastewater plants and municipal stormwater programs as the states and the CBP develop the Bay nutrient and sediment TMDLs over the next few years. COG staff will continue to work with the WRTC members to refine cost estimates, rate impacts and associated issues for the region's wastewater treatment plants and stormwater management controls to reflect final Tributary Strategies' load allocation and pollution control technology commitments and water quality standards. Whenever possible, these efforts will also include coordination with other DEP staff and COG departments to address the associated cost, funding and pollution control assumptions for multimedia issues (air controls, land use planning, etc.). This information will be used to prepare key technical and policy recommendations for the WRTC and CBPC.

Outcomes and Major Products

- Assessment of CBP/state Bay TMDL implementation schedule assumptions (Quarterly)
- Presentations on to WRTC, CBPC, and other COG committees (Ongoing)

Budget

\$40,000 Regional Water Fund

FY 2009 Water Resources Work Program and Budget		
Program Area II. Development and Application of Technical Tools and Outreach		
Activity E. Growth, Sustainability and Climate Change		
Committee Oversight	Water Resources Technical Committee	
Staffing	Lead: Tanya Spano and Ted Graham Staff Resources: Tomlyne Malcolm, Karl Berger, COG planning staff	
Partners	NVRC; MD-NCPPC; WERF, NACWA, AwwaRF; local water/wastewater authorities/ organizations	

COG staff will continue to evaluate the CBP's '2030 Land Use Change' modeling efforts to assess the validity of the data inputs and projection methodologies, to ensure that projections are reasonable valid, and whether the resultant nutrient/sediment loads generated for the COG region are reliable for assessing water quality impacts. This effort will also continue to assess the validity of assessing such loads at a local level and linking this information to local land use decisions. The goal of this work effort is to assess the technical veracity of the modeling and the potential policy implications of using the model to assess local impacts. This work will be done in conjunction with local partners and COG's Planning Directors and their staff.

COG staff will continue to evaluate local, state and federal initiatives related to growth, sustainability and Climate Change issues, and to work with local officials and organizations to identify potential issues, impacts and options for addressing these issues. As needed specialized workshops will be organized to share this information (see II. C.). In addition, environmental indicators – specifically water quality related metrics, will be developed for potential inclusion in COG Greater Washington 2050 (GW2050) scenarios.

Outcomes and Major Products

- Preparation of initial water quality indicators for GW2050 application (Fall 2008)
- Presentations on '2030 Land Use Change' model and results (As required, and September 2008)
- Presentations on to WRTC, CBPC, and other COG committees (Ongoing)

Budget

\$40,000 Regional Water Fund

FY 2009 Water Resources Work Program and Budget			
Program Area	Program Area II. Development and Application of Technical Tools and Outreach		
Activity	Activity F. Regional Outreach and Coordination		
Committee Oversight Water Resources Technical Committee			
Staffing Lead: Tanya Spano Staff Resources: Tomlyne Malcolm, Jim Shell			
Partners	Local drinking water and wastewater authorities and organizations		
Activity Description			

COG staff will work with COG's members and local utilities to develop an integrated public outreach plan to address various water quality-related initiatives related to the proper disposal of oil and grease, disposal of other material that may cause problems in wastewater collection systems, as well as the disposal of unused pharmaceuticals and personal care products. The development of this outreach plan will be coordinated with COG member wastewater, collection system, and pretreatment staff, drinking water staff, as well as public information staff. The objective will be to utilize any existing local efforts and national guidance, and to develop an integrated multi-year plan that would help enhance existing efforts and ensure regionally consistent messaging. The plan would allow each participant to select the specific outreach elements that would best meet their jurisdiction/agency needs while benefiting from the cost savings that a regional effort could provide.

Outcomes and Major Products

- Preparation of a proposal for conducting an integrated public outreach plan (Fall 2008)
- Implementation of the plan elements (TBD, based on funding)

Budget

\$10,000 Regional Water Fund \$15,000 Grant funds/Local contributions

\$25,000

15

III. Water Quality Monitoring





COG has served as the water quality monitoring coordinator and regional repository for water quality and wastewater data in the Washington metropolitan region for more than two decades, a role formalized under the Blue Plains Intermunicipal Agreement of 1985. COG now serves as the repository for physical/chemical water quality data, hydro-meteorological data, and wastewater loadings for the COG region, as produced by federal, state, and local government agencies. Data exists for 99 stations on the mainstem of the Potomac River and the mouths of its tributaries (Point of Rocks to Point Lookout), and 46 stations in the Anacostia watershed. More than 33 wastewater treatment plants also send their monthly discharge monitoring reports (DMRs) and monthly operating reports to COG. COG supplements this data with flow gage data from the USGS and meteorological data from the National Weather Service.

Through analysis of data and modeling, COG can participate in regional planning studies to best address water quality issues in the near and long-term. There are two main elements under the Planning and Monitoring Program: the Regional Monitoring Program, and the Chain Bridge Monitoring Program. While always important, these issues have taken on a greater importance as the new criteria are developed and are transformed into standards. Monitoring will be instrumental in determining whether or not attainment of water quality standards has been achieved and to provide input into the proposed Potomac River Water Quality Model and updated Chesapeake Bay program Sediment Model. These will have major implications for additional water pollution prevention and control requirements. A key element of this program is the ready availability of and access to water quality data by COG members.

Activity	Key Work Product(s)
A. Regional Monitoring Program	 Updates to COG's Monitoring Web Site (Monthly) Expanded RMS membership (to include SW representation)
B. Chain Bridge and Little Falls Monitoring	 Trends Report (December 2008) Final technical memo on prior year data and loads (4th Quarter)

FY 2009 Water Resources Work Program and Budget		
Program Area III. Water Quality Monitoring		
Activity A. Regional Monitoring Program		
Committee Oversight	Water Resources Technical Committee and Regional Monitoring Subcommittee	
Staffing Lead: Steve Bieber Staff Resources: Christine Howard; Mukhtar Ibrahim		

COG will continue storing and managing the region's water quality monitoring data in a central, readily accessible database encompassing the region's water quality and wastewater information for the Potomac and Anacostia Rivers. This item also covers support to the Regional Monitoring subcommittee, support for COG staff to respond to information requests by members, and support for COG staff to participate in regional monitoring efforts, such as specialized efforts by USGS, EPA, and others.

A highlight for fiscal year 2008 was COG's first ever Potomac Monitoring Forum, which was held on March 10 & 11, 2008 at the Cacapon Resort State Park in Berkeley Springs, WV. This forum was attended by over a hundred water monitoring professionals from local, state, and federal government, academia, private industry, and non-profit organizations.

The Forum concluded with a group facilitated discussion to identify action steps that could be taken by COG and Forum participants to help chart the future direction of Potomac River monitoring. Some of those actions will be the focus of new activity for COG in fiscal 2008. Specifically, COG staff will be working with COG's member jurisdictions and Forum participants to:

- Inventory ongoing watershed efforts and make a directory available on the COG web site so all interested parties can leverage from other programs and optimize what is already being done.
- Review historical data to identify trends and examine underlying causes.
- Identify successful monitoring approaches from watersheds from the COG region and elsewhere, and promote their application in the Potomac and Chesapeake Bay.
- Address the concept of Adaptive Management at a workshop to explain and provide examples of how this approach could be used in the Potomac River.

COG staff will continue to coordinate local government involvement in the Potomac shallow-water monitoring effort that began in 2006. In addition, COG stall will examine whether other long-term monitoring programs need to be established to develop baseline assessments for the Potomac TMDL programs being developed by Virginia, Maryland and the District of Columbia. COG will continue working with other agencies to improve data sharing and reporting.

- Inventory ongoing watershed efforts and make a directory available on the COG web site.
- Review historical data to identify trends and examine underlying causes. Complete and publish a regional stream condition status and trends report.
- Update COG's Water Quality Procedure Guide to reflect changes in member protocols.
- Convene meetings of the Regional Monitoring Committee (at least twice a year)
- Reporting to WRTC in areas of need for regional monitoring, focusing on long-term Chain Bridge monitoring and other potential programs.
- Incorporate Adaptive Management and its potential application to Potomac monitoring as part of a COG workshop.

		Budget
\$ 150,000	Regional Water Fund	

FY 2009 Water Resources Work Program and Budget	
Program Area	III. Water Quality Monitoring
Activity	B. Chain Bridge and Little Falls Monitoring
Committee Oversight	Water Resources Technical Committee and Regional Monitoring Subcommittee
Staffing	Lead: Steve Bieber Staff Resources: Christine Howard; Mukhtar Ibrahim Cooperators: Virginia Tech's Occoquan Watershed Monitoring Laboratory; USGS MD-DE- DC Water Science Center; U.S. Army Corps of Engineers.
Activity Description	

This project continues to maintain the single most important Potomac estuary pollution monitoring station (at Chain Bridge). It involves operation of an automated storm monitoring and grab sampling system for conventional pollutants and nutrients at the Chain Bridge monitoring station on the Potomac River. Data collected by this project are used to measure and estimate pollutant loads entering the Potomac estuary, calculate trends, and calibrate the Chesapeake Bay Watershed Model. It also provides an important "reality check" on modeled load estimates that are critical to the Chesapeake Bay Program's load allocation process. The monitoring program is subject to modification as necessary to supplement regional monitoring needs for regulatory and cooperative programs.

This project also covers the local share of the USGS gage at Little Falls, which is a cooperative project between COG and the U.S. Geological Survey. Access to the gage site is provided by the Baltimore District, U.S. Army Corps of Engineers. Water temperature and specific conductance monitoring are also supported by the U.S. Army Corps of Engineers.

- Operation of Chain Bridge Monitor
- Final technical memo on prior year data and loads (4th Quarter)
- Presentations to technical committees as requested.
- Potomac River Water Quality Report analyzing fall line data and loadings, including presentation to the Water Resources Technical Committee and the Regional Monitoring Committee. (4th Quarter)

	Budget
\$ 120,000 (Chain Bridge - OWML) \$ 7,000 (Little Falls - USGS) \$ 127,000	Regional Water Fund Regional Water Fund Total

IV. Water Supply and Drought Management





During FY 2009, there will be continued efforts to maintain and update the Water Supply Emergency Plan (WSEP). The completed 2005 WSEP provides important coordination and communication guidance in the event of a regional water/wastewater incident and is an annex to the Regional Emergency Coordination Plan. During FY2008 the region's water utilities and local governments through the Water Security Work Group continued to oversee regional projects designed to address drinking water security and reliability. These projects have included the establishment of a regional water security monitoring network, spill model upgrades, distribution system modeling, and the assessment of emergency water interconnections and storage as well as power supply and capabilities. Additional efforts to enhance regional water supply operations plans and best management practices for water security will continue in FY 2009. During 2009 staff intends to seek grant funds to conduct a Regional Emergency Plan Exercise that will involve water and wastewater utilities, health officials and emergency managers. Additional efforts will continue to secure grants to address regional water and wastewater security needs.

Since its launch in 2003, the regional year-round Wise Water Use Campaign has become an integral component of water conservation education and drought response in the National Capital Region. The campaign continues to be comprehensive, reaching out to residents and businesses throughout the region, providing information on area water resources and tips on simple ways to save water. The Wise Water Use campaign involves broadcast media, theater and transit ads, internet, as well as public school education and community outreach, and partnership development. During FY2009, these activities will continue, with a strong emphasis on partnership development and coordinated activities as well as public school education.

on partnership development and coordinated activities as well as public school education.	
Activity	Key Work Product(s)
A. Water Supply Task Force Management and	Management and coordination of Water Supply Task Force meetings and Water Security Work Group (2008-9)
Support	 Stand-up and management of Drought Coordination Committee and Drought Tech Committee during periods of drought (as needed)
	 Tracking and monitoring of Potomac basin drought conditions and website updates (continuing year around effort)
	Management and coordination of Communications Work Group (quarterly)
	 Continued tracking and analysis of Low Flow Allocation Agreement, Water Supply Coordination Agreement, Washington Region Demand and Flow Forecast, MD-DNR Flow-by study; MDE Consumptive Use study and other major water supply related studies (continuing effort)
	Monthly Regional Drought Reports (Seasonal, May-Oct.)
	 Staff support and management coordination to the Water Supply Task Force's Water Security Work Group (continuing effort)
	 Continue to seek and secure Department of Homeland Security, Urban Area Security Initiative and federal earmark water/wastewater security grant funds for NCR utilities
	Continued management, and coordination or regional Water Security Monitoring Network
	Plan and conduct a regional Water Supply Emergency Plan Exercise (Winter 2009)
	Implementation of a one day regional functional exercise (Winter 2008)
	WSEP Exercise Summary After-Action Report (Spring 2009)
	Participation in Critical Infrastructure Protection Interdependency Seminar and Training Exercise (Spring and Summer 2008)
B. Wise Water Use Campaign	Continued implementation of a regional year-around wise water use ad campaign (Ongoing – Spring / Summer 2009 focus);
	 Major water resource awareness and wise water use program in local elementary/middle schools (Spring 2008/Winter-Spring 2009);
	Major efforts to develop public/private campaign partnerships for ongoing and future conservation efforts and funding (ongoing);
	Maintain and update COG water conservation/wise water use website (ongoing)
	Partnership promotional events (ongoing)

FY 2009 Water Resources Work Program and Budget	
Program Area	IV. Water Supply and Drought Management
Activity	A. Water Supply Task Force Management and Support
Committee Oversight	Water Supply Task Force/ Water Security Work Group
Staffing	Lead: Jim Shell Staff Resources: Steve Bieber; Christine Howard; Stuart Freudberg

Provide continued technical, policy, and staff support to COG's Water Supply Task Force for monitoring, assessment, and implementing a water supply work program addressing regional water supply and drought management issues. Work activities will also include: the continued coordination and oversight for regional water security and reliability; continued monitoring of regional water supply conditions; preparation of monthly drought outlook and conditions reports; response to media requests; briefings to the COG Board; CAO's, EPC, WSWG, WRTC; support and coordination of the Drought Coordination Committee, Drought Technical Committee and Communication Work Group; maintenance of the COG water supply web page; and participation and coordination in the annual drought and water security emergency exercises.

- Management and coordination of Water Supply Task Force meetings and Water Security Work Group (2008-9)
- Stand-up and management of Drought Coordination Committee and Drought Tech Committee during periods of drought (as needed)
- Tracking and monitoring of Potomac basin drought conditions and website updates (continuing year around effort)
- Management and coordination of Communications Work Group (quarterly)
- Continued tracking and analysis of Low Flow Allocation Agreement, Water Supply Coordination Agreement, Washington Region Demand and Flow Forecast, MD-DNR Flow-by study; MDE Consumptive Use study and other major water supply related studies (continuing effort)
- Monthly Regional Drought Reports (Seasonal, May-Oct.)
- Staff support and management coordination to the Water Supply Task Force's Water Security Work Group (continuing effort)
- Continue to seek and secure Department of Homeland Security, Urban Area Security Initiative and federal earmark water/wastewater security grant funds for NCR utilities
- Continued management, and coordination or regional Water Security Monitoring Network
- Plan and conduct a regional Water Supply Emergency Plan Exercise (Winter 2009)
 - Implementation of a one day regional functional exercise (Winter 2008)
 - WSEP Exercise Summary After-Action Report (Spring 2009)
- Participation in Critical Infrastructure Protection Interdependency Seminar and Training Exercise (Spring and Summer 2008)

	Budget
\$80,000 <u>\$85,000</u> \$165,000	Regional Water Fund DHS Urban Area Security Initiative Grants (ETOP); EPA

FY 2009 Water Resources Work Program and Budget	
Program Area	IV. Water Supply and Drought Management
Activity	B. Wise Water Use Campaign
Committee Oversight	Water Supply Task Force; Communication Work Group
Staffing	Lead: Jim Shell Staff Resources: Christine Howard; Brian LeCouteur
Activity Description	

Implementation of a regional and District of Columbia educational and information campaign for water conservation. Continued implementation of a multi-year regional wise water use campaign that 1) increases awareness of area water resources and their suppliers and engender support for wise water use and 2) maximize the use of existing infrastructure, defer unnecessary and wasteful uses of water, and/or delays the need to identify and select new drinking water supplies, 3) reduced wastewater flows to wastewater facilities; and 4) provide support to educational programs in area public schools; 5) continued implementation of a major educational program to enhance wise water use awareness among local elementary/middle schools; 5) conduct water conservation information workshops; 6) develop public/private partnerships and implementation of promotional outreach events with those partners; 7) print and distribution of a regional water conservation landscaping guide; and 8) continued design and maintenance of a COG water conservation/ Wise Water Use website.

- Continued implementation of a regional year-around wise water use ad campaign (Ongoing Spring /Summer 2009 focus):
- Major water resource awareness and wise water use program in local elementary/middle schools (Spring 2008/ Winter-Spring 2009);
- Major efforts to develop public/private campaign partnerships for ongoing and future conservation efforts and funding (ongoing);
- Maintain and update COG water conservation/wise water use website (ongoing)
- Partnership promotional events (ongoing)

	Budget
\$ 30,000	Regional Water Fund
\$ 70,000	Other sources (water utilities, partners)
\$100,000	Total

V. Urban Watershed Management

Residential "Rain Garden"





The Urban Watershed Management program addresses a range of local watershed management activities, including: improving the principles and practice of regional urban storm water controls, the integration of local storm water management control programs into a regional context, and support for urban forestry. It provides a focus for roughly one-third of C2K's 100 or so commitments, which have a direct effect on local government watershed management programs.

The funding for watershed management activities is a combination of local membership funds, Regional Environmental Funds, and external grants, thus supporting a core watershed management program coupled with grant-funded activities involving COG matching money as required. The Regional Environmental Fund is a key component of this funding, with a focus on the stormwater management interests of the Water Resources Technical Committee including technical exchange through timely workshops. A portion of the funds is intended to support member-endorsed activities and attract external funding contributions. Recent grant activity includes the Pope Branch and Fort Chaplin baseline stream assessment projects and the Holmes Run/Cameron Run biodiversity project.

There are three components of the Urban watershed Management Program: (1) Urban Stormwater and Eco-Landscaping; (2) Watershed Stream Ecology, GIS Applications and Forestry; and (3) Planning for Green Infrastructure and Sustainable Agriculture, and Related Database Management.

Activity	Key Work Product(s)
A. Urban Stormwater and Eco-Landscaping	 Individual meetings with COG jurisdictional members to educate and encourage the adoption of healthy lawn care principles and practices. Development and dissemination of a broadly accepted and endorsed set of guidelines or principles for responsible lawn care and landscaping to lawn care operators, public policy officials, home builders, and consumers. Development of one or more local/regional demonstration projects, working in collaboration with private business and university researchers. Presentation(s) to the Water Resources Technical Committee, Chesapeake Bay Policy Committee and Bay Program committees as appropriate (bi-monthly/as needed) Grant project deliverables (as specified in grants)
B. Watershed Stream Ecology, GIS Applica- tions and Forestry	 Upper and Lower Beaverdam Creek Benthic Assessment Study Regional Water Resources Indicators Database Herring Restoration, Festival Outreach Watts Branch Benthic Stream Assessment Urban Tree Canopy Goal Development Regional Forest Cover Benefits Assessment Urban Forest Resource Recovery Analysis Support for CFN
C. Planning for Green Infrastructure and Sustainable Agriculture, and Related Database Management	 Regional Green Infrastructure Database Update Support for Regional Agricultural Workgroup Regional Farmers Market Vendor Base Maintenance Regional Agriculture Web Site Enhancements Regional Agriculture Marketing Initiative

FY 2009 Water Resources Work Program and Budget	
Program Area	V. Urban Watershed Management
Activity	A. Urban Stormwater and Eco-Landscaping
Committee Oversight	Water Resources Technical Committee
Staffing	Lead: Ted Graham Staff Resources: Steve Bieber; Karl Berger; Heidi Bonnaffon

Promote technical information exchange and provide support for COG members in the area of urban stormwater management and environmentally responsible lawn and landscaping practices. Provide focus regarding the implications of urban stormwater pollution to the region's water quality. Continue to pursue grant opportunities that promote COG member urban stormwater, environmentally responsible lawn and landscaping practices, and environmentally sensitive site design (ESSD) objectives and initiatives. Identify opportunities to partner with members on increasing the awareness of the general public concerning the benefits and practices of responsible lawn care and landscaping including the appropriate use of chemical inputs, water, and plant species.

- Individual meetings with COG jurisdictional members to educate and encourage the adoption of healthy lawn care principles and practices.
- Development and dissemination of a broadly accepted and endorsed set of guidelines or principles for responsible lawn care and landscaping to lawn care operators, public policy officials, home builders, and consumers.
- Development of one or more local/regional demonstration projects, working in collaboration with private business and university researchers.
- Presentation(s) to the Water Resources Technical Committee, Chesapeake Bay Policy Committee and Bay Program committees as appropriate (bi-monthly/as needed)
- Grant project deliverables (as specified in grants)

	Budget
\$20,000	Regional Environmental Fund
<u>\$25,000</u>	COG Local Funds
\$45,000	Total

FY 2009 Water Resources Work Program and Budget	
Program Area	V. Urban Watershed Management
Activity	B. Watershed Stream Ecology, GIS Applications, and Forestry
Committee Oversight	Water Resources Technical Committee, Community Forestry Network
Staffing	Lead: John Galli Staff Resources: Phong Trieu; Brian LeCouteur; Aubin Maynard

This work element provides for limited direct staff support and opportunities to leverage grant support covering watershed monitoring studies, assessment of physical, chemical and biological conditions of local streams, riparian forest buffer and watershed evaluations using various environmental indicators, remote sensing and GIS applications, evaluation of the performance of various urban stormwater Best Management Practices and/or other watershed water quality enhancement-related projects and initiatives. COG staff will continue to pursue grant opportunities which promote and/or enhance COG member watershed & forest protection, restoration and management objectives and initiatives. Based upon such grant support, COG staff will continue to provide stream restoration, fish passage, stormwater management, wetland creation and riparian habitat restoration design and technical, GIS-related watershed evaluation expertise and guidance to COG members.

Activities supported in this work element, (some with grant support), include staff support to the Community Forestry Network (CFN); amend and update the green infrastructure database for the Washington Metropolitan Area; and several stream and riparian buffer assessment studies.

- Prince George's County Upper and Lower Beaverdam Creek Benthic Assessment Study (4th quarter)
- COG Region Water Resources Indicators Database Development (4th quarter)
- Northwest Branch- Herring Restoration, Festival and Outreach (3rd guarter)
- District of Columbia- Watts Branch Benthic Stream Assessment Study (3rd quarter)
- Urban Tree Canopy Goal Development
- Regional Forest Cover Benefits Assessment
- Urban Forest Resource Recovery Analysis (Urban Timber Utilization)
- Support for CFN (three meetings, total)
- Other potential grant supported project deliverables (TBD)

	Budget
\$45,250	Regional Environmental Fund
\$33,157	COG Local Funds
<u>\$50,000</u>	External Grant Support (TBD)
\$128,407	Total

FY 2009 Water Resources Work Program and Budget		
Program Area	V. Urban Watershed Management	
Activity	C. Planning for Green Infrastructure and Sustainable Agriculture, and Related Database Management	
Committee Oversight	Water Resources Technical Committee, Chesapeake Bay Policy Committee, and Regional Agriculture Workgroup	
Staffing	Lead: John Galli Staff Resources: Phong Trieu; Brian LeCouteur; Aubin Maynard	

This work element provides for direct staff support and opportunities to leverage grant support covering green infrastructure projects for the Metropolitan region. This will include project areas such as maintaining current land cover mapping databases using remote sensing and GIS applications as well as supporting ongoing regional Green Infrastructure initiatives. This element is also designed to 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. COG and the National Park Service are currently pursuing joint funding opportunities through their ongoing cooperative agreement. COG staff will continue to pursue other grant opportunities which promote and/or enhance COG member green infrastructure and agricultural programs and initiatives for the protection and enhancement of green space for agriculture, recreation, wildlife habitat and watershed protection. Based upon such grant support, COG staff will continue to provide expertise and guidance to COG members.

Activities supported in this work element, include pursuit of grant matching funds, staff support for the Regional Agricultural Workgroup, assisting COG membership on Green Infrastructure and Agriculture programs, as well as maintenance and expansion of the green infrastructure database for the Washington Metropolitan area.

- Regional Green Infrastructure Database Update and Expansion (Fall Winter 2008/09)
- Support for the Regional Agricultural Workgroup (4 Workgroup meetings per annum) (Summer 2008 Spring 2009)
- Regional Farmers Market Vendor Database Maintenance (Fall-Winter 2008)
- Regional Agriculture Web site Enhancements (Winter 2008/09)
- Regional Agriculture Marketing Initiative (Winter 2008, Spring 2009)
- Other potential grant supported project deliverables (TBD)

Budget		
\$58,157	COG Local Funds	
\$150,000	External Grant Support (TBD)	
\$208,157	Total	