



Sustainable Water Resources in the
Metropolitan Washington Region:

How We Address the Challenges of & Opportunities for Collaboration

Sustainable Water Resources Roundtable Meeting
March 31, 2015

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Metropolitan Washington Council of Governments



About the Council

The Council of Governments is an independent, nonprofit association of 22 local governments

- 300+ local, state & federal elected officials



■ Region's 2012 population – 5.2 million

■ About 30% of the people in the Bay watershed

■ About 85% of the people in the Potomac watershed





COG Members & Water Utilities

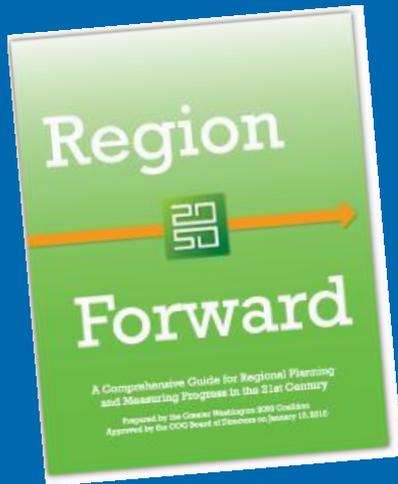
- District of Columbia:
District of Columbia
- Maryland:
Bladensburg*
Bowie
- Charles County
College Park
Frederick
Frederick County
Gaithersburg
Greenbelt
Montgomery County
Prince George's County
Rockville
Takoma Park
- Virginia:
Alexandria
Arlington County
Fairfax
Fairfax County
Falls Church
Loudoun County
Manassas
Manassas Park
Prince William County
- * adjunct member

- Participating Wastewater & Water Utilities
- District of Columbia:
DC Water
- Maryland:
Washington Suburban Sanitary Commission
- Virginia:
Alexandria Renew Enterprises
Fairfax Water
Leesburg
Loudoun Water
Prince William County Service Authority
Purcellville
Upper Occoquan Service Authority

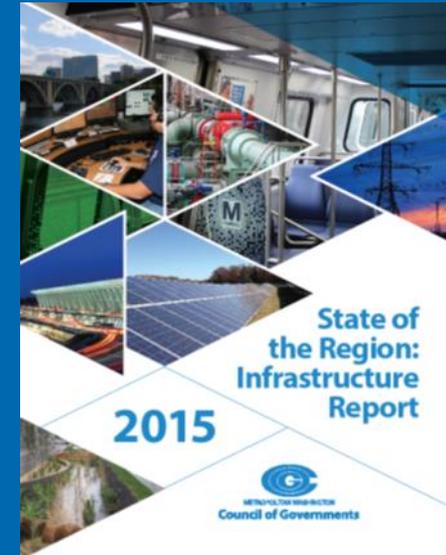




COG VISION & PRIORITIES



The region's vision for a more **Accessible, Sustainable, Prosperous, and Livable** metropolitan Washington.



Regional Infrastructure <http://www.mwcog.org/uploads/public-documents/pF5bXFw20150115102928.pdf>

Since 1957 - COG has helped tackle region's challenges (e.g., restoration of Potomac River, getting Metro system built, & strengthening emergency preparedness after September 11, 2001).

Today - COG's top priorities include advancing the Region Forward vision, addressing Regional Infrastructure, and supporting Economic Competitiveness



WATER RESOURCES: Wastewater, Stormwater & Drinking Water



- Who regulates:
 - U.S. Environmental Protection Agency (EPA)
 - Maryland Department of the Environment (MDE)
 - Virginia Department of Environmental Quality (VA-DEQ)
- Who's responsible:
 - Stormwater - Local governments
 - Wastewater – Local governments & authorities
 - Drinking water – Authorities & local governments & COE





WASTEWATER

COG Region WWTPs - Major Plants (≥ 2.0 MGD)



COG Region Major (>2 MGD) Wastewater Treatment Plants & Capacity

District:

Blue Plains – 370 {serves DC, & parts of VA& MD; & ~47% of overall region}

Virginia:

Alexandria – 54

Arlington – 40

Ballenger Creek – 6

Broad Run – 10

Dale City #1 – 4

Dale City #8 – 4

H.L. Mooney – 18

Leesburg – 5

Noman Cole – 67

UOSA – 54

Maryland:

Bowie – 3

Frederick – 8

Mattawoman - 20

Parkway - 30

Piscataway – 30

Seneca Creek – 26

Western Branch – 30

TOTAL – 779 MGD (Million Gallons per Day)

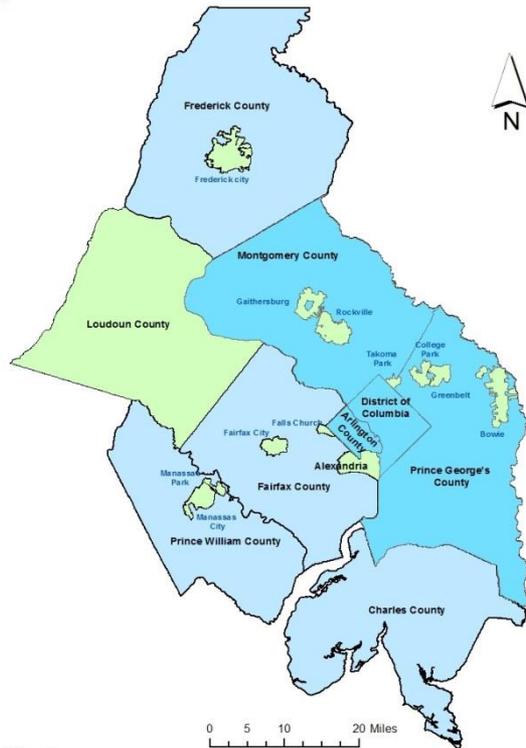
- 19 major WWTPs
- 16 collection providers
- Mix of local governments, authorities, & federal govt.



STORMWATER



MS4 Permit Status of COG's Member Jurisdictions

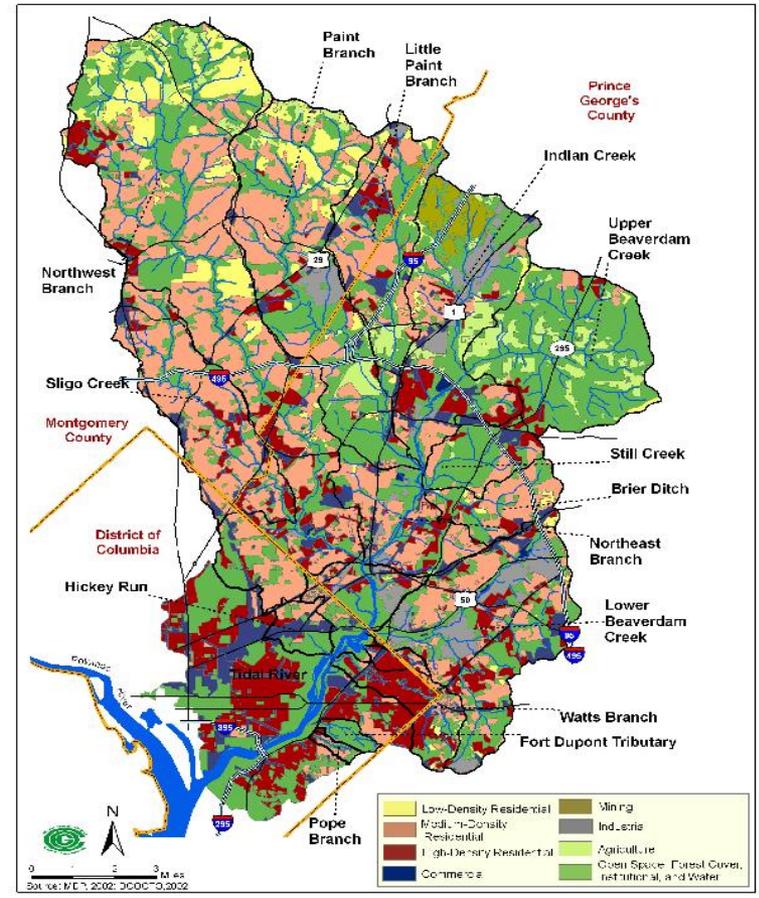


MS4 Stormwater Permits – COG Region

- Phase I (*larger counties*) or Phase II (*smaller counties and towns*)
- Phase I's – Revised permits either in place (Montgomery, District) or being renewed now
- Phase II's - Due for renewal in 2012, 2013

Stormwater Management

- Local Drivers:
- Construction, & post-construction regulations
 - MS4 permits
 - Local TMDLs
 - Bay TMDL
 - Restoration Goals





DRINKING WATER

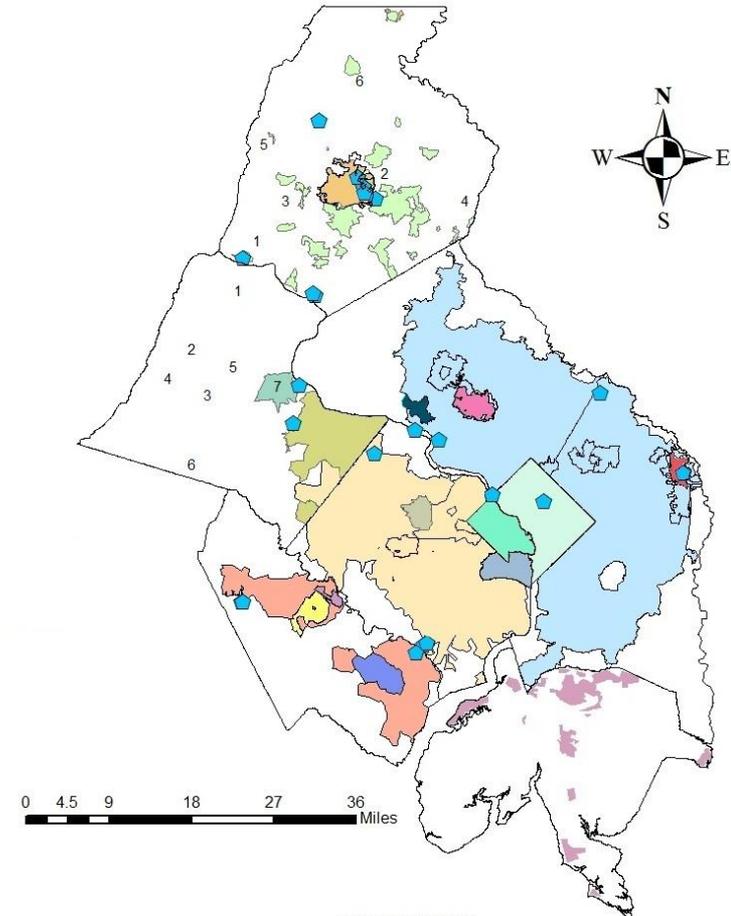
Service Areas for Washington Metropolitan Region Water Suppliers & Distributors

- 13 suppliers
- 27 distributors
- Mix of local governments, authorities, federal govt., & private firms
- Water Sources: Potomac River, Occoquan and other reservoirs, and groundwater



Drinking Water Treatment Plant Service Areas -COG Region-

3/27/2014

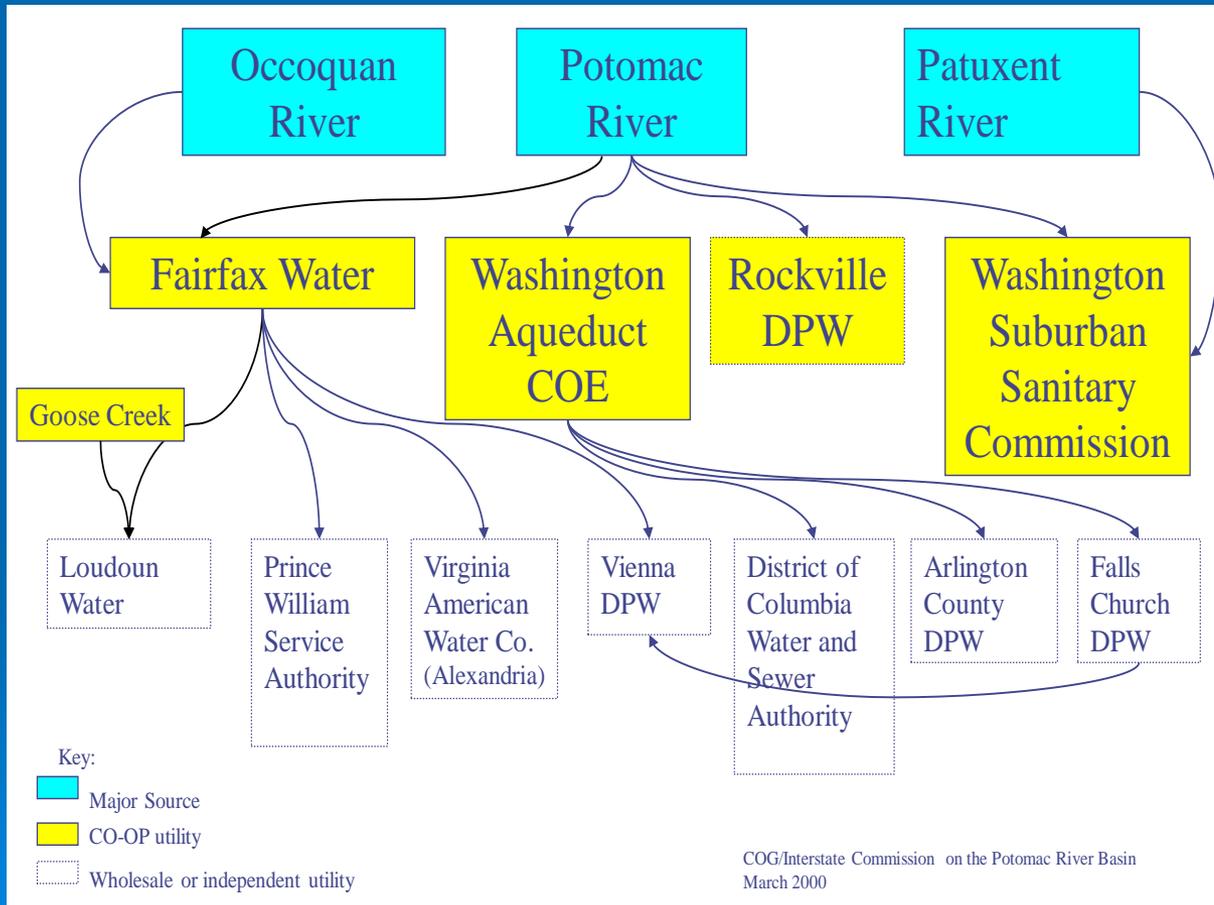


WAWRC/DW & WW Maps



Water Supply

(not including groundwater sources)



Thousands of critical buildings and functions:

- The U.S. Capitol Complex
- The White House
- The Pentagon



Regional Climate Planning

National Capital Region Climate Change

Prepared by the Climate Change Steering Committee
Metropolitan Washington Council of Governments

Adopted November 12, 2008



Climate Energy FINAL 2014

* Indicates a goal that is new in the 2016 A
** Status indicates the percent total that has been achieved based on the COG annual climate and energy report

REGIONAL GREENHOUSE GAS REDUCTION

Goal: To reduce the region's greenhouse gas emissions by 20% by 2020.

Implementation Actions:

Greenhouse Gas (GHG) Inventories and Reporting	
1	100% of jurisdictions complete GHG inventories
2	100% of jurisdictions complete community GHG inventories
3	100% of jurisdictions adopt GHG emissions reduction plans
4	75% of jurisdictions adopt plans to reduce GHG emissions

BUILD ENVIRONMENT AND INFRASTRUCTURE

Goal: To reduce non-transportation energy consumption and greenhouse gas emissions by 20% by 2020.

Implementation Actions:

Energy Efficiency	
5	100% of jurisdictions track and/or report energy use in public buildings.
6*	75% of jurisdictions participate in energy efficiency programs.
7*	75% of jurisdictions disclose energy use in public buildings.
8*	75% of jurisdictions prepare an energy efficiency action plan.
9*	75% of jurisdictions perform walk-through energy audits.
10*	50% of jurisdictions participate in utility energy efficiency programs.
11*	50% of jurisdictions develop a policy on outdoor lighting in appropriate areas.
12*	At least 6 jurisdictions implement energy efficiency programs including active consideration of decentralized energy and/or microgrid systems.
13*	25% of households region-wide participate in the Home Energy Performance Program (HPWES) (home energy audits and energy efficiency upgrades).

SUSTAINABILITY AND RESILIENCE

To increase the resilience and sustainability of the region.

Climate Resiliency – Adaptation

37) 40% of jurisdictions assess their climate resiliency.

Description: Climate change mitigation and adaptation are interconnected. Mitigation reduces the magnitude of climate change, but does not eliminate it. Adaptation prepares for the unavoidable impacts of climate change. The Washington region includes an increasing number of extreme weather events, including drought, heavy rain, and storm surge. The region must prepare for the potential impacts of climate change in order to provide focus to the most serious problems/concerns that may be exacerbated.

Examples:

- Miami-Dade County Vulnerability Assessment (NOAA) Ready areas and community assets in the City of Flagstaff, AZ conduct a risk assessment and to deliver the services it provides the operation type (emergency services).
- The Northern Virginia Regional Commission (NVRC) identifies vulnerable elements (infrastructure, tidal wetlands, etc.) due to repeated and increasingly severe design criteria as part of the potential impact of climate change benefit evaluation of the climate design criteria.

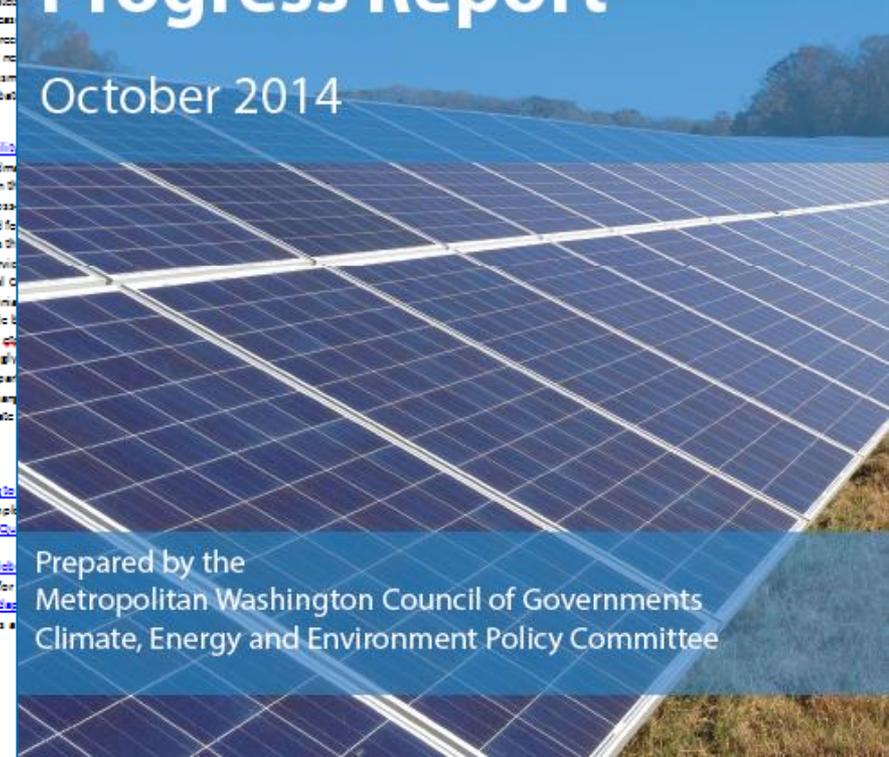
Resources:

- NOAA's Roadmap to Adapting to Droughts, resources, and examples.
- Chicago Area Climate Change Guidelines for municipalities.
- ICL's Climate Adaptation Guidebook to develop a preparedness plan for climate change and features a...

National Capital Region Climate and Energy Progress Report

October 2014

Prepared by the
Metropolitan Washington Council of Governments
Climate, Energy and Environment Policy Committee





Water Resource Drivers



* Adopted by COG Board (4/8/09)



Challenges & Opportunities

Sector / Challenges	Potable Water	Wastewater (also CSOs/SSOs, & Biosolids)	Stormwater
Replace Existing/Aging Infrastructure <i>(i.e., plants, ancillary systems, BMPs, and pipe networks)</i>	X	X	????
Add New Infrastructure or Retrofits/Upgrades	X	X	X
Enhance Linked Energy Infrastructure <i>(e.g., electrical grid &/or alternative power sources)</i>	X	X	
Deal with Growth Impacts <i>(e.g., cap loads versus increased demands/impacts)</i>	X	X	X
Meet New Standards & Regulations <i>(e.g., time & ability to implement, available technology, need for permitting flexibility)</i>	X	X	X
Protect Existing Resources & Address New Environmental Challenges & Risks <i>(e.g. climate change, extreme events)</i>	X	X	X
Address Work Force Issues <i>(e.g., loss of experienced staff, 21st Century training needs)</i>	X	X	X
Address Major Funding Demands & Rate/Fee Impacts <i>(e.g., competing demands, economy, affordability, & implementation schedules)</i>	X	X	X

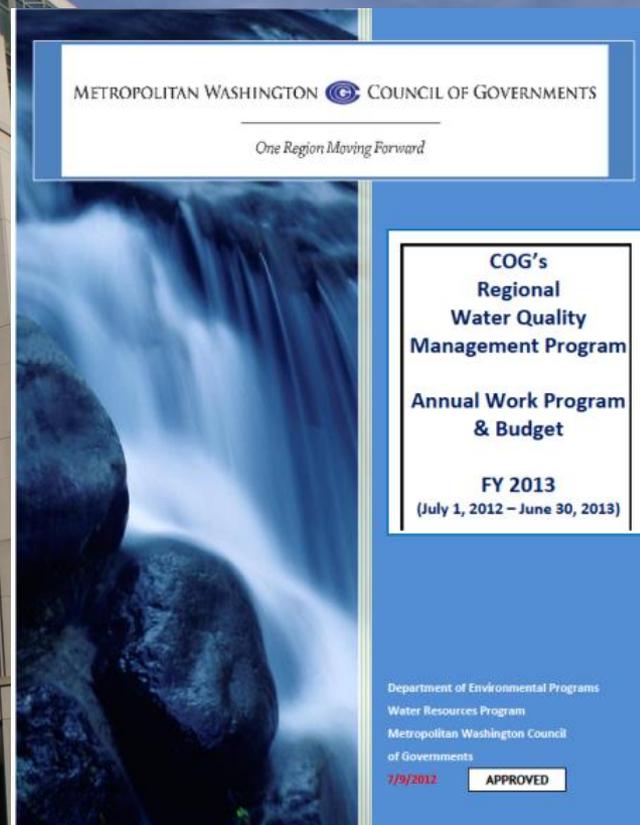
COG Support Activities



- Wastewater
 - Regional water quality assessments, coordination on wastewater issue, & Blue Plains coordination support
- Stormwater
 - Permitting & regulatory coordination, & watershed restoration)
- Drinking Water
 - Drought plan, source water protection, supply/demand planning, & water conservation

Collaborative Efforts:

- Regional Water Quality Assessments
- Technical/Regulatory Support
- Climate/Extreme Weather Impacts
- Blue Plains IMA Coordination & Support
- Security & Mutual Aid
- Permitting & Regulatory Tracking
- Watershed Restoration – Anacostia
- Policy & Advocacy





Contact Information

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