

# Laboratory Capabilities

**EPA Region 3**

**Office of Analytical Services & Quality Assurance  
Fort Meade, MD**

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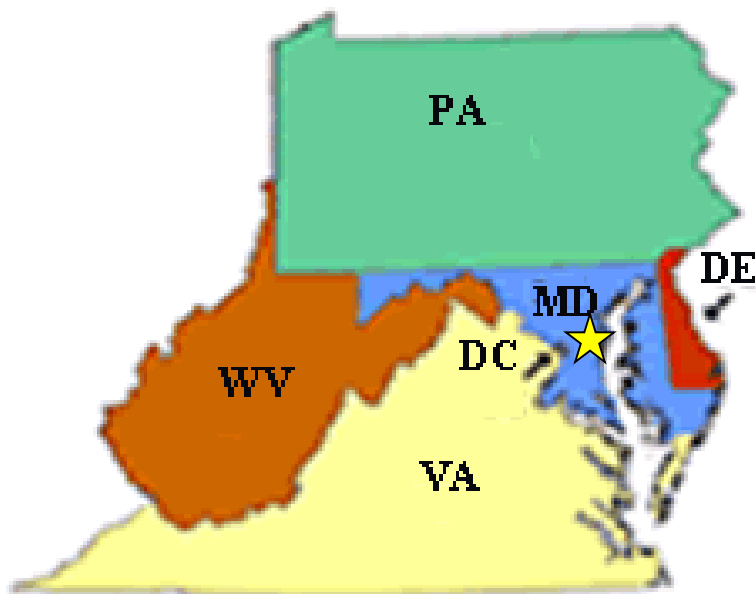
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## Laboratory Branch

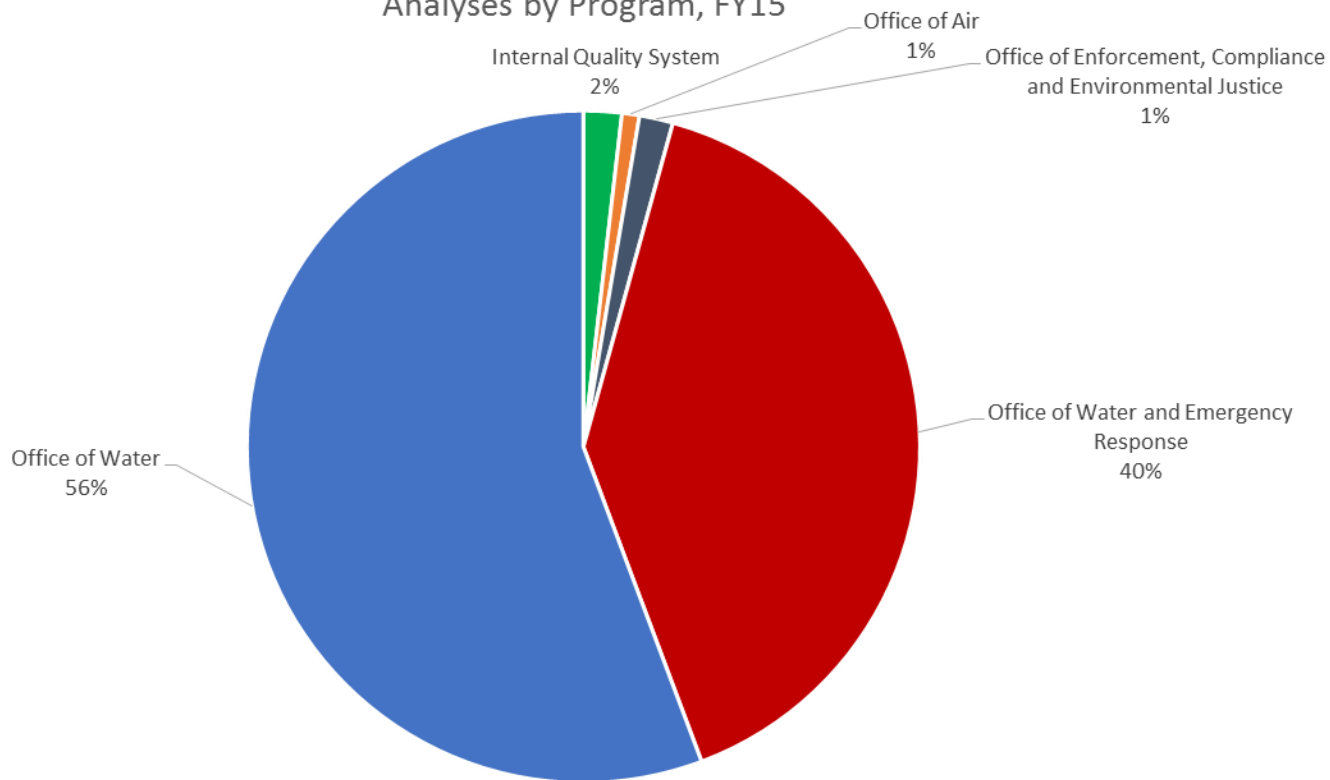
Provides analytical support to EPA in the Mid-Atlantic





# Primary Customers: Region 3 Programs & Initiatives (2015)

Analyses by Program, FY15



- Superfund Remedial & Removal
- Homeland Security
- RCRA Enforcement

- Drinking Water Certified (NELAC)
- Office of Enforcement, Compliance and Environmental Justice
- Criminal Investigation Division



## Lab Branch

- Accredited under the National Environmental Laboratory Accreditation Program (NELAP)
- Organic and Inorganic analyses including SDWA drinking water, NPDES wastewater, Superfund CLP equivalent methods, TCLP, RCRA solid waste, and RCRA hazardous waste characteristics
- Environmental Response Laboratory Network member
- Provide expert witness testimony and technical expert consultation for enforcement cases





## Organic Analysis

- Water, soil, air, wipe, tissue and waste samples
- GC, GC/MS, HPLC/MS/MS, FTIR, GC-FTIR
- NPDES, SDWA, Superfund and RCRA methods and On Demand methods
- Volatile and semi-volatile organics, pesticides, PCBs, nitroaromatic explosives, chemical warfare agents, organic dyes and glycols.
- In Development: PFOS/PFOA

## Microbiology

- Total coliforms, fecal coliforms, *E. coli*, heterotrophic bacteria
- Molecular detection of bacterial DNA (PCR) for microbial source tracking
- Drinking water, waste water, ground water





## **Inorganic and Classical Methods**

- Biochemical Oxygen Demand (BOD)
- Total Organic Carbon (TOC)
- Colorimetric determinations of phenol, nitrogen, and total cyanide
- Ion chromatography for anions
- Ammonia by continuous flow analysis (CFA)
- Grain size analysis
- RCRA Ignitability



## Metals

- Air, water, soil, sediment, wipes and tissues.
- Atomic emission spectrometry (ICP), inductively coupled plasma–mass spectrometry (ICP-MS), liquid chromatography with inductively coupled plasma–mass spectrometry (LC-ICP-MS) and cold vapor atomic absorption (CVAA).
- In development: As speciation



# Project Highlights

- Healthy Lawns-Provided analytical support in the areas of pesticides, chlorophyll, herbicides, nutrients.
- Atlantic Wood-Devised method to sample whole crabs. Separated hepatopancreas from crab meat. Performed analyses for Hg and metals on both sections of crab.





## Project Highlights

- Silly String-Supported Air Enforcement by qualitatively determining the presence of ozone-depleting substances (CFCs) from aerosol can propellants.
- Cardoza High School, Washington DC,-Hg Spill-Provided support to determine levels of Hg contamination.



## Project Highlights

- Immunoassay tests for Endocrine Disruptor Compounds (ORD – RMI Project)
- Biofuel fraud criminal enforcement
- Glycol LC/MS/MS method development
- **Microplastics in sediment and water**



# How can we work with you?



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