

Wastewater Management Community Outreach and Education

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Environmental Monitoring and Pretreatment



Department of Public Works and Environmental Services
Working for You!



A Fairfax County, VA, publication
Wastewater Management Program

Our Aim - Gain Understanding and Support

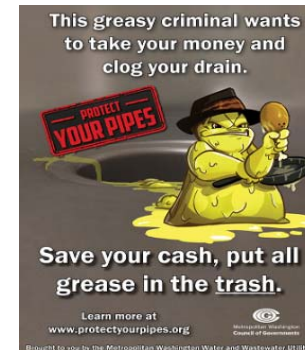
Efforts Address 2 of the 10 Principles of Effectively Managed Water Sector Utilities

1. Stakeholder Support and Sponsorship

Generate understanding of what we do and facilitate cooperation

2. Customer Engagement

Empower residents/users with information on services and importance of water quality, seek feedback



Public Engagement Forums



Earth Day



Town Hall Meetings



County Festivals



Scout Jamboree



Girl Scouts Badging



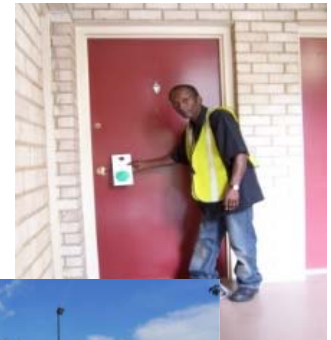
Grasses for the Masses

Campaigns for Protecting our POTW



Proper Disposal of Fats, Oil, Grease (FOG)

- Training videos (Restaurants)
- Door Hanger Events
- Grocery Store Events
- Vehicle Messages
- Multi-lingual Approach
- Sewer Science Lecture



Preventing Pharmaceuticals Flushing

- Police Station Take Back Program
- Local Pharmacy Take Back
- Sewer Science Lecture



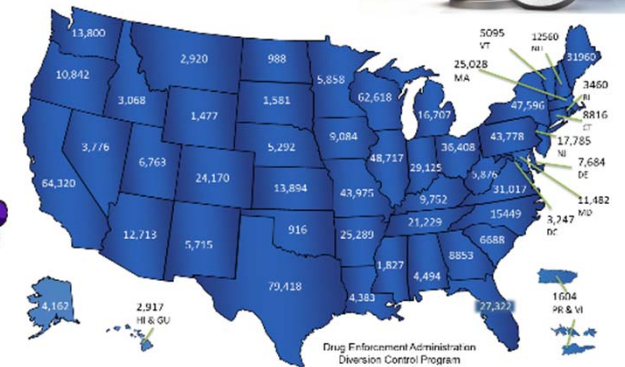
Regional Outreach Coordination - Metropolitan Washington Council of Governments

COG Regional Water Team Participation Allows:

- Resource leveraging
- Consistent messages
- Knowledge sharing



- 11th National Take Back Day: April 30, 2016
- DC, MD, and VA collected 45,746 pounds ~ 5.11%



Outreach Through County Social Media and Cable Channel



Wastewater Management Channel 16 Video Inventory

1. Where Does the Flow Go? (Elementary School)
2. Wastewater Management (High School)
3. Can the Grease (PSA)
4. Don't Flush your Medications (PSA)
5. Preventing Sewer Backups (PSA)

Partnership for Water Quality Education

Ms. Myra Thayer, FCPS' Science Coordinator, "teaching students the importance of water quality would give [them] the knowledge to becomeenvironmental stewards..... Sewer Science, would enlighten younger students about the importance of wastewater management in ensuring clean water. Teaching this message throughout the primary and secondary school years would help students become responsible citizens."



School-based Water Quality Education at All Levels

Elementary

Water Quality Day



Student Videos

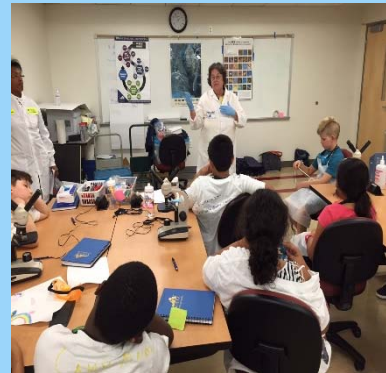


Middle

STEM Events



Lecture Workshops



High

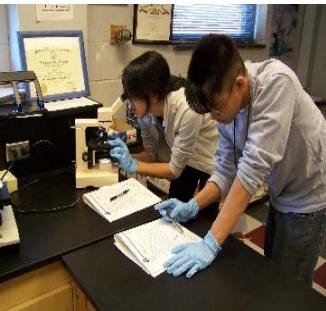
- Sewer Science
- Water Quality Science Projects
- Environmental Stewardship Videos
- Trades and Labor Recruitment



Adopted Water Environment Federation Sewer Science Program



- Hands-on learning lab about wastewater treatment and how process helps protect the environment
- Students create simulated wastewater and employ physical, biological and chemical treatment methods and conduct test for water quality
- Meets the requirement of grades 9-12 VA Standard of Learning, integrates chemistry, physics, and microbiology
- Facilitated by the teacher and wastewater mentor. Students learn first-hand from experienced WWM professionals and plant operators



Important Sewer Science Program Outcomes




- Over 17,500 FC students and 70 teachers have participated
- High School students volunteer for internships in our environmental lab
- Encourages/Reaffirms commitment to pursue science degrees
- VA Governor's Environmental Excellence Award for Outreach
- Assisted Washington Suburban Sanitation Commission, D.C. Water, Loudoun Water, and PW Service Authority in program adoption
- Program expansion underway for Elementary and Middle Schools



Other Education Opportunities from School System Partnership

Laboratory Staff Assist High School Students with Water Quality Science Projects



FREE HELP

Student Wastewater Science Project

Fairfax County Wastewater Management

As part of Wastewater Management Sewer Science Program, we are pleased to assist Fairfax County high school students with their science projects. Interested students may apply to this free program.

Guidelines:

- A maximum of two slots will be available each semester.
- All applications will be processed on a first-come, first-served basis.
- Project proposals must be original as developed by the students.
- Applications with project due dates of less than one month from time of application will not be considered.
- Students must be available during the laboratory's regular business hours of 8:30 a.m. to 4 p.m., Monday through Friday.
- All proposals for projects must be related to wastewater.

Please read and complete the application form.

Please send the completed form to:

Mail:
Attention - Student Project Program
Norman M. Cole Jr. Pollution Control Plant
9399 Richmond Highway
Lorton, VA 22079-1889

Fax:
703-550-1071

FAIRFAX COUNTY WASTEWATER MANAGEMENT

Quality of Water - Quality of Life

Department of Public Works and Environmental Services
Wastewater Treatment Division
9399 Richmond Highway
Lorton, VA 22079-1899
Phone: 703-550-9740, TTY: 711
E-mail: DPWESWMO Outreach@fairfaxcounty.gov
www.fairfaxcounty.gov/dpwes



Sample Project

Purpose: To find the amount of voltage created from the biofuel cell.

Hypothesis: If 90% of Primary Effluent is used with 10% of Returning Sludge, then microbial fuel cell will produce 0.2 to 0.3 volt.

Outgrowth of School Partnership – Trades & Labor Recruitment

Trades/Labor Internships for High School Graduates

Drivers:

- 57% of our workforce is trades and labor positions
- Many eligible for retirement
- Plant Operator position especially hard to fill

Pilot Trial:

- Mt Vernon HS Career Specialist recruitment partnership
- Participants assessed and placed on limited term positions
- Experience/accomplishments allows candidates to successfully compete for permanent positions
- Pilot success leads to workshop to expand program

Program Expansion:

- Onsite Workshop for all FCPS Career Specialists covering all HS
- Discussions on available positions and career opportunities
- Developing protocol for handling referral, assessment, and placement of students in limited term internships

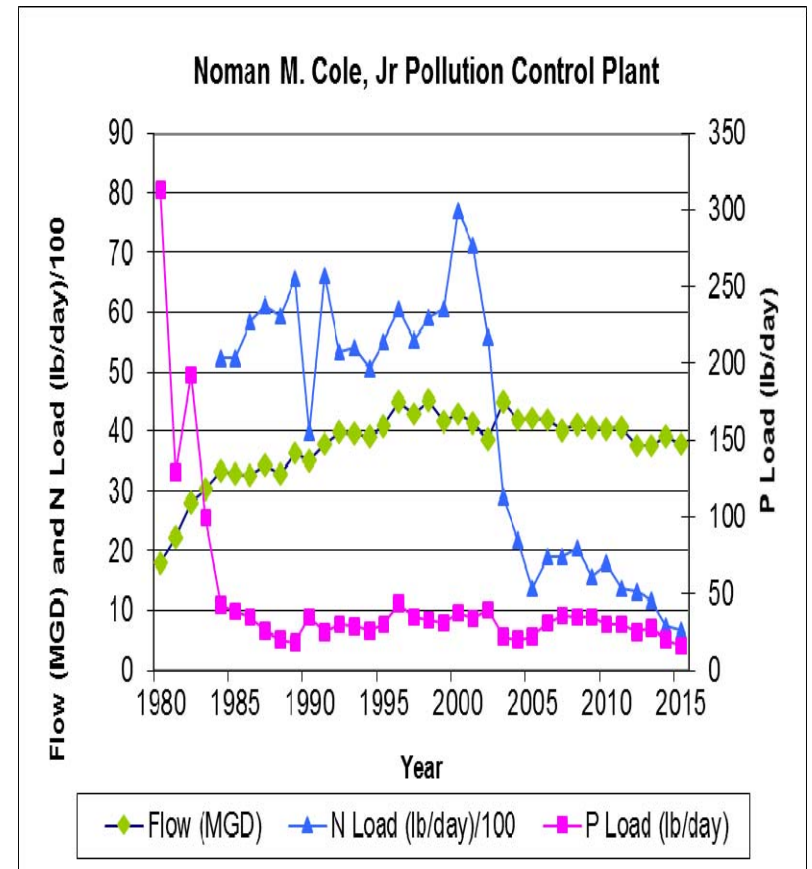


GMU/WWM Lectures on Gunston Cove



Teacher Lectures:
Gunston Cove Water
Quality Study

Lecture Focus: Importance of Wastewater Treatment on the Cove's Ecological Health



Restoration of Gunston Cove

- Decrease in nutrient (N/P) loading and chlorine toxicity
- Increase water clarity, dissolved oxygen, and pH balance
- Decrease in phytoplankton algae (algal blooms and hypoxia)
- Resurgence of submersed native vegetation (habitat/refuge)



Wild Celery

Cove Vegetative Coverage



Coontail

Cove Supports a Diversity of Species

Life Sustaining Aquatic Environment

- Abundant variety of fish food organisms
- Native freshwater mussel reappearance
- Ample fish assemblage
- Pohick now harbors more spawning than Accotink

