



SUBMISSION FORM

All submission forms must include the following information. Separate submission forms must be turned in for each eligible program. **Deadline: July 1, 2021.** Please include this submission form with the electronic entry. If you do not receive an email confirming receipt of your entry within 3 days of submission, please contact [Gage Harter](#).

PROGRAM INFORMATION

County: Stafford
Program Title: Stafford County Joins with Schools to Pivot to an Alternative Form of Field Trip Delivery
Program Category: Communications

CONTACT INFORMATION

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SIGNATURE OF COUNTY ADMINISTRATOR OR DEPUTY/ASSISTANT COUNTY ADMINISTRATOR

Name: Frederick J. Presley
Title: County Administrator
Signature: *Frederick J. Presley*

Title: Stafford County Joins with Schools to Pivot to an Alternative Form of Field Trip Delivery

Criteria for Selection

The nominated program must meet one or more of the following criteria:

1. Offer an innovative solution to a problem, situation or delivery of services.
2. Promote intergovernmental cooperation and/or cooperation with local, state and federal entities and/or a private enterprise in addressing a problem or situation.
3. Provide a model that other local governments may learn from or implement in their own localities.
4. Programs may be based on programs from another public or private entity but must represent innovative approaches or customization by the local government.

Challenge Faced

Stafford County celebrated Local Government Education Week in Virginia differently during the time of COVID, working with Stafford County Public Schools to repackage the popular wastewater treatment facility field trip into a virtual video experience. The purpose of Local Government Education Week is to engage with young people in the community to enhance education, increase civic participation and recruit employees. Typically, Stafford hosts the wastewater tours, third-grade tours at the Government Center and a Student Government Day for high schoolers, complete with a mock Board meeting. In the spring of 2020, due to the spread of COVID-19, Stafford County suspended all in-person facility tours (including school tours and Student Government Day), and many schools shifted to virtual learning. Rather than cancel this meaningful learning opportunity, Stafford's Department of Public Works (DPW)

found a new way to keep students engaged by taking the wastewater treatment tours to them. DPW partnered with the Schools to incorporate the grade six science curriculum components into a virtual wastewater treatment facility tour for students of all ages. Since July 2020, residents and students could continue learning about our County processes even during a worldwide pandemic. Plans call for expanding this innovative method of delivering a learning opportunity in the future, especially since not all classrooms can go on field trips, even during a non-pandemic time.

The Problem or Need for the Program

Due to the spread of COVID-19 in 2020, Stafford's Local Government Education outreach efforts were canceled, including wastewater treatment facility tours. The tours are one of DPW's most effective educational and outreach opportunities. Wastewater treatment facility tours are an effective way to raise awareness about the complexities of the wastewater treatment process and show people firsthand the impacts their everyday behaviors have on water quality and public health.

Stafford brainstormed ideas of making up for the loss of the tours. There are Standards of Learning for every grade in Virginia that map out what students are to learn. The staff decided to partner with the schools to create a video to follow the sixth-grade science students' curriculum. This decision was beneficial as Stafford County middle schools, with a few individual student exceptions, were closed to in-person instruction from March 2020 to March 2021. The Schools were struggling to pivot their teaching method, and having a video with content designed directly from their curriculum was very helpful.

Description of the Program

Wastewater treatment facility tours have long been a valuable learning tool for schools and the Department of Public Works because they encourage students to think about responsible water use and how their behavior impacts water quality. Every home and business in Stafford County use water and generates wastewater: including toilets, showers, baths, hoses and even washing machines. Showing students the wastewater treatment process allows them to see and understand the impact they have on public health and the health of the waterways.

In 2020, schools were found scrambling due to COVID-19. Institutions began switching to virtual learning, with teachers, students, parents and local leaders forced to adapt to an entirely new way of doing things. In the spring of 2020, there were several facility field trips scheduled, and as DPW staff decided to suspend all facility tours, the idea to recreate the tour virtually came to mind. DPW reached out to Stafford County Public School's K-12 Science Facilitator to discuss the best way to ensure that a virtual facility tour could:

- (1) Align with Public Works' mission of teaching students about the wastewater treatment process;
- (2) Encourage students to think about responsible water use and how the products they use every day can impact our most valuable resource – water;
- (3) Connect to SPSC standards of learning (SOL); and,
- (4) Become a free and accessible educational program to a wide range of both students and residents.
- (5) Further our goals of promoting local government and engaging students

After reviewing science standards of learning (SOLs) from several different grade levels, staff determined that grade six had the most relevant curriculum connections and could be understood by younger and older audiences.

A tour script was written and approved by both DPW and Stafford County Public Schools with the following objectives in mind:

Virtual Wastewater Treatment Facility Tour Objectives:

1. Understand the stages of the wastewater treatment process
2. Learn about the impacts of Fats, Oils, and Grease (FOG) on the water and sewer system
3. Investigate and understand the following grade six science SOLs:
 - a. Functions of the Chesapeake Bay watershed
 - b. Local, state and federal government have a significant role in managing and protecting water, air, plant and wildlife resources
 - c. Conservation of resources and environmental protection include individual acts of stewardship
 - d. Pollutant prevention and waste management are less costly than cleanup
 - e. Natural processes, human activities, and biotic and abiotic factors influence public health and the watershed
4. Discuss career pathways

Introducing students to the impacts of fats, oil, and grease (FOG) on water quality is essential in wastewater treatment facility tours. It is a lesson they will need to remember their whole lives.

Fats, oil and grease do not break down like human waste and toilet paper and can easily clog and damage infrastructure. In 2019, Stafford County spent over \$1.6 million removing fats, oil and grease from the sewer pipes. With more people home in 2020 and access to clean water playing a critical role in public safety efforts, Stafford's residential water and sewer use increased by approximately 10 percent.

Staff wrote a script, practiced with employees, and filmed the employees who work at the plants. The resulting video was provided to schools and placed on the County's website.

Creating a virtual tour of Stafford's wastewater treatment facility has allowed DPW to increase outreach and educational efforts by 40% percent and reach an even broader and more diverse audience.

Budget Challenges in the Time of COVID

Stafford's economy and revenues indeed fell during the pandemic. But the educational outreach video, which cost virtually nothing to produce in-house by staff, taught children valuable lessons about protecting Stafford's aging water system and hopefully will help them be more careful in the disposal of fats and water use. Stafford's shift to virtual wastewater treatment facility tours continued efforts to educate the next generation about responsible water use and preventing pollutants from entering the water and sewer systems. These efforts may result in one less bowl of cereal milk poured down the drain, and fewer sewer system overflows in the future. Each small change makes an impact and contributes to ongoing efforts to protect the aging infrastructure.

As well, the video provided a free supplement to online learning.

Expanding and Advancing Diversity, Equity and Inclusion

This tour provides the opportunity for all students, regardless of location or economic reality, to learn about the wastewater treatment process and the vital role that both local government and the public play in protecting public health and safety as well as the health of our waterways and the wildlife that depend on it. By going virtual, schools do not have to fund a trip off-campus or schedule an entire day out of the classroom to travel to one of Stafford's facility locations.

Another aspect of a virtual tour versus a traditional in-person tour is that students can take the tour as many times as needed. Teachers can also pause the tour at any point allowing the teacher to engage students on a personal level and meet their individual learning needs. Students are also able to access the video at home to share with siblings, parents, family members and friends, raising awareness in all communities.

The Cost of the Program

The benefit of a virtual tour versus a traditional in-person tour is that it creates a free field trip for any student, anywhere. By taking the tour to a virtual platform, schools and parents no longer need to fund a trip off-campus or schedule an entire day out of the classroom to travel to one of Stafford's facility locations.

For the wastewater treatment facility staff, personnel no longer have to step away from their daily tasks to give a two-hour tour. Many of the facility operations that are halted to keep students safe during tours can continue operating.

The cost to produce this virtual tour was minimal since Stafford County's Community Engagement office already had the camera equipment and editing software. The staff time that went into producing this video was the largest expense incurred.

The Results/Success of the Program

Creating a virtual tour of Stafford's wastewater treatment facility has allowed the DPW to increase outreach and educational efforts by 40% percent and reach an even broader and more diverse audience.

In addition to students that were able to take a virtual field trip to one of Stafford's wastewater treatment facilities in 2020, many of Stafford's newly elected local leaders and newly hired staff members were also able to tour the facility from the safety of their homes or offices.

The tour showed students who look and sound like them, working at an essential job in the local government – keeping our precious water resources clean. This type of activity plants a seed when students start considering their future careers. The video also raised awareness of one of our most persistent problems in Public Works – the incorrect disposal of fats, oils and greases that clog and destroy expensive infrastructure. Children are often the first to adopt more environmentally friendly practices, and this video empowers them with the knowledge that will be useful their entire lives, wherever they live.

Worthiness of Award

Creating a virtual tour of the County's wastewater treatment facility enriches the public's understanding of county government and elevates awareness of county services in numerous ways. This tour provides the opportunity for all students, regardless of location or economic reality, to learn about the wastewater treatment process and the important role that local government and the public play in protecting public health and safety as well as the health of our waterways and the wildlife that depend on it. It is innovative and can be used for any government process that any local government wants to communicate to the public. It is low-cost and solved a problem never faced before by local government – how to provide opportunities to students during a worldwide pandemic.

Supplemental Materials

Click here to watch the tour: <https://vimeo.com/436820739/3f297af01e>