

Attachment F
Covid-19 Grant Outcomes and Accomplishments Final Report

To finalize this award, you are required to provide to the Agency with a narrative of the outcomes and accomplishments related to the funds spent for the specific purpose as stated in the grant contract. You can use the secure link provided below to upload images, brochures, and other information to illustrate your outcomes and accomplishments.

<https://ncosbm.sharefile.com/r-rc7f2ca49d574af2a>

1. Organization:

Organization Name:	North Carolina Policy Collaboratory at the University of North Carolina at Chapel Hill
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2. Outcomes and Accomplishments:

The purpose of our project was to establish and carry out localized wastewater SARS-CoV-2 testing at Appalachian State University. In the first phase of the pilot project, during November, sampling events were carried out in 6 dormitories on Appalachian State campus with one duplicate sample to serve as a control. In December, because the majority of the students had left, three dormitories and one additional building were sampled. 3-4 samples were collected over one hour between the hours of 7am to 9am twice per week. Samples were transported in coolers to the lab where they were processed for shipping. Samples were incubated for 40 minutes at 75°C to inactivate any potential viral particles. The outsides of the sample bottles were disinfected, tops of the bottles were sealed with parafilm, and samples were shipped on ice (using ice packs) to Dr. Rachel Noble’s lab for RNA isolation, cDNA synthesis, and digital droplet PCR to detect SARS-CoV-2. Samples were pooled, 20-30 ml were concentrated on MCE member filters and processed in quadruplicate using both N1 and N2 primers.

All except for one dormitory sample was negative for the presence of the virus, consistent with low levels of positive cases in the dormitories during this time. Detection of the viral genetic material in one of the dorm samples led to targeted individual testing for the students in that particular dormitory. In the second phase of the pilot project, equipment and supplies were purchased and molecular testing capacity was set up in a laboratory in the Biology Department. Based on the success of the pilot project, the university made a decision to integrate dormitory waste water testing into its overall testing strategy and provided funding to support this endeavor. We started collecting samples from a small number of dormitories the first week students moved in (Feb. 1-5). We will establish our workflow using a small number of samples and continue to expand testing to more dormitories throughout the semester.