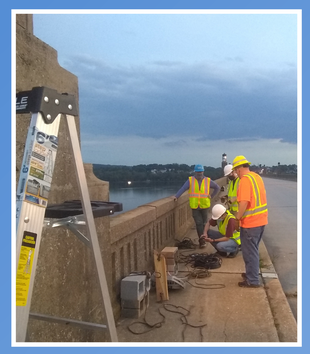
# COLUMBIA-WRIGHTSVILLE BRIDGE REHABILITATION PROJECT

**Veterans Memorial Bridge over the Susquehanna River**

## LIGHTING AND MAYFLIES STUDY - SUMMER 2020

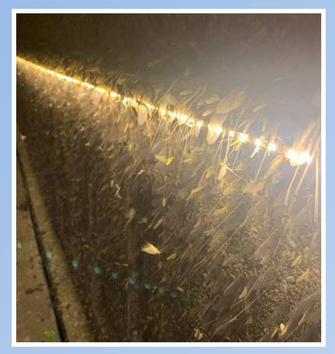
- **Light testing studies were performed at the Columbia-Wrightsville Bridge and Harrisburg Market Street Bridge between June and August 2020 with cooperation from the local municipalities**



Field crew setting up testing equipment

Video cameras were used to collect data on mayfly swarms throughout the evening

Mother Nature's timing and intensity of mayfly hatches for a variety of species (as shown on the car windshield) occurring throughout the summer was dependent on weather condition variables

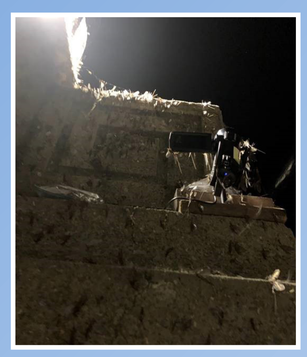


Mayflies on bridge barrier - attracted to light source

- **During the testing period, modifications to the existing lighting or placement of additional lighting occurred during evenings of mayflies swarming in order to observe how the mayflies interacted with the lighting variations of intensity, colors and location**

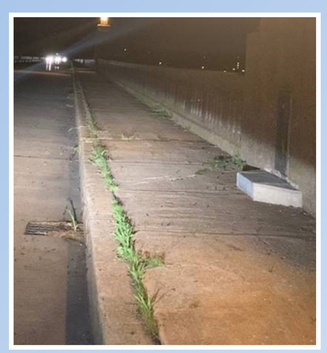
Dusk setting on the river brings out the mayflies on a humid summer evening

Mayfly deposits at the base of light after one night - existing fixtures

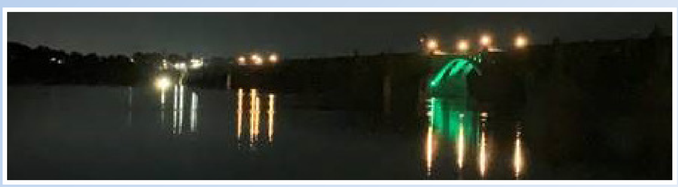


Video camera at the end of the night

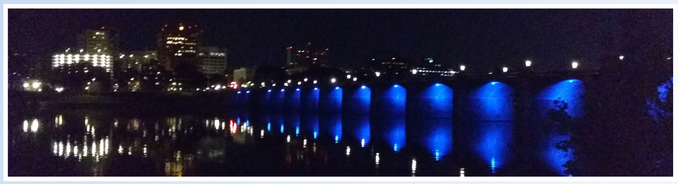
Mayfly deposits on bridge and sidewalk after 2 hours - existing fixtures



Mayfly deposits on bridge and sidewalk after 2 hours - new fixtures



Taken from Columbia River Park showing cooler (white colored- existing fixtures in distance) and warmer (yellow colored- new fixtures @ 2 locations) and green under bridge test lighting



Market Street Bridge in Harrisburg showing blue underbridge lighting

- **Data from the testing is currently being analyzed by researchers and potential solutions to mitigate the mayfly issue are anticipated in Winter of 2020/2021**

pennsylvania
DEPARTMENT OF TRANSPORTATION

U.S. Department of Transportation
Federal Highway Administration

RK&K

**OCTOBER 2020**