

CHESAPEAKE MONITORING COOPERATIVE

CMC
Chesapeake Monitoring
Cooperative

2022

CASE STUDY: JORDAN'S BRANCH BUSINESS CORRECTS PRACTICES IN RESPONSE TO MONITORING AND ANALYSIS RESULTS



Mike using the D-frame net to study benthic macroinvertebrates by carrying out the muddy bottom method through partnership with Izaak Walton League's Save Our Streams Program.

By Maria Burke

Jordan's Branch is a small tributary that feeds into the Chickahominy River located on the border of Henrico County and the City of Richmond in Virginia. Jordan's Branch starts near Libbie Mill, a highly urbanized shopping and residential area in Henrico County, then flows into Bryan Park, one of Richmond's historical parks and frequently used for recreation, before reaching the Chickahominy River. In 2017, a business owner in the Libbie Mill area emailed the Henrico County Department of Public Works (DPW) as he was concerned about the water runoff from the turfed dog runs from Impawsible Pups, the business next door. This water left a green slime and smelled strongly of urine and fecal waste. He made a request to have the water

tested in order to determine whether or not there was a hazard posed to his employees in addition to an environmental impact due to runoff into a nearby storm drain. Fecal coliform tests completed in-house with Henrico DPW were negative on a few occasions. Recommendations were made by the DPW for the manager of Impawsible Pups to investigate their drainage pipes.

In 2019, the stagnant water in the stormwater retention area at Libbie Mill gave off strong odors, prompting an investigation. Initially, the positive *Escherichia coli* (*E. coli*) tests were attributed to the fecal matter of wildlife. After an investigation of the storm sewer in Jordan's Branch near Libbie Mill, it was determined that the source of the *E. coli* was



Thanks to the James River Association's Program, James River Watch, we were able to work together to get a higher level of bacteria data by having volunteers like Jake collect bacteria samples.

In addition to collecting bacteria samples each month, Mike also takes notes on other stream conditions such as recent rainfall, odor, signs of wildlife, water and air temperature, and turbidity.

Impawsible Pups. Their property drained through the storm sewer and the stormwater pond. In addition, there was an illegal connection and they were performing illicit discharges when cleaning the turfed dog runs. Samples were analyzed at Enviro Compliance Laboratories, and the resulting levels were astronomically high. In Virginia, bacteria levels over 235 colony forming units (CFU)/100mL are cause for concern. The sample collected upstream of the MS4 discharge pipe measured 46 CFU/100 mL; and two samples taken at the discharge pipe measured 14,000 CFU/100 mL and 38,000 CFU/mL. A formal letter was sent to Impawsible Pups to immediately cease discharge of the contaminated water from the outdoor dog run pursuant to County code. The request for proposed resolutions was acknowledged by the owner and changes were put into place. Among these changes were a change in cleaning and disinfection protocol, staff education on proper procedures, the installation of a vacuum system, and a follow-up on the drainage.

In mid-2021, Stacey Sovick, a conservation specialist and HAWQS program coordinator with Henricopolis Soil and Water Conservation District, noticed the *E. coli* levels increasing over a two-month period from samples collected through their Henrico Area Water

Quality Samplers (HAWQS) volunteer monitoring program. This prompted the Henrico County DPW to take additional lab analyzed samples from six different locations above and below the dog kennel. Results from Enviro Compliance Laboratories confirmed Impawsible Pups as the source of the contamination again, with bacteria measuring 2800 CFU/100 mL below the kennel outfall. Deana Miller, an environmental program specialist with the Henrico County DPW, contacted Impawsible Pups with the information and inquired about their current protocol and whether anything had changed. The owner acknowledged that a turnover in their workforce had occurred, and he agreed to retrain his staff and closely monitor the practices and protocols to ensure proper implementation.

Since that time, HAWQS has continued monitoring this area and has not seen *E. coli* levels that are concerning, but their volunteers will continue frequent testing in order to ensure the levels remain low. Ongoing participation of volunteers in the HAWQS program as well as other programs in the Chesapeake Bay Watershed is vital to ensuring that water quality issues are addressed and resolved.



This project has been funded wholly or in part by the United States Environmental Protection Agency under Page 20 of 29 assistance agreement CB96334901 to the Alliance for the Chesapeake Bay. The contents of this document do not necessarily reflect the views and policies of the Environmental Protection Agency, nor does the EPA endorse trade names or recommend the use of commercial products mentioned in this document.



Dickinson



Chesapeake Bay Program
A Watershed Partnership



University of Maryland
CENTER FOR ENVIRONMENTAL SCIENCE

