SOPHIE WHITE & SARA REYNOLDS, Dept of Natural and Physical Sciences, Shepherd University, Shepherdstown, WV 25443. Examining the impact of road salt use on salinity levels in Town Run Tributary of the Potomac River.

Several studies in recent years have found an increase in salt concentrations in urban water sources due to heavy road-salt use. These increased salt concentrations negatively impact water quality, aquatic plants and organisms, and could even negatively impact drinking water quality. Our lab has been monitoring conditions and microbial populations in Town Run, a small urban tributary in Shepherdstown, WV, since 2022. In this study, we sought to build upon this baseline history to determine the impact of road salt on this water source. The salinity of Town Run was monitored during a major snowstorm (January 25th, 2026) and subsequent melting period to observe any changes in salinity levels. Data was collected from six sites at different points along the stream up until water flow entered the Potomac River. Using Potomac River data from the USGS, we obtained additional information on the flow rate of the water during the data collection period. Although none of the six sites showed a major increase in salinity during the sampling period, this result is notable because salinity levels in Town Run have historically been extremely low or undetectable. Continued monitoring will help reveal how episodic events, such as road-salt runoff, influence small urban tributaries. Understanding these patterns is important for evaluating how urban activities may affect local watersheds and aquatic ecosystem health.