

# Reclassification of the Upper Little Juniata River Based on Continuous In-Stream Monitoring<sup>1</sup>

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As mandated by the Municipal Separate Storm Sewer System (MS4) program, municipalities are required to execute a storm water management program aimed at protecting, preserving, and improving existing streams by minimizing the impacts of runoff. The Little Juniata River; tributary to the Juniata River in the Susquehanna River and Chesapeake Bay watersheds, is situated in a designated, urbanized region and subject to possible high pollution concentrations via runoff during storm events. The Little Juniata is currently classified as a “Trout Stocked Fishery” with intent of upgrading to a “Class A, Wild Brown Trout Stream” per the PA Fish and Boat Commission expected recommendations. Additionally, there is a potential of High Quality Coldwater Fishery (HQCWF) designation from PA Department of Environmental Protection. Due to geographic location and surrounding land use, concerns of pollutants infiltrating the watershed during storm events could impair the stream, inhibiting the Little Juniata from attaining HQCWF designation. The intent of this study is to compile a comprehensive synopsis of the upper Little Juniata River by monitoring several locations along its reach. Continuous instream monitoring devices combined with portable samplers are relied upon for consistent data available in 15 minute increments as well as collection of water samples during normal flow and storm events. Thorough analysis of physical and chemical attributes attained via monitoring will supply a sound indication of the quality of the stream with its current designation as impaired, thus influencing river designation.

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