1. INTRODUCTION

In undeveloped areas, stormwater that is generated from rain or snowmelt events is able to either slowly soak into the earth's surface or flow in a dispersed manner to the nearest river, stream, lake, pond, or other surface water. The ability of the earth's surface to absorb stormwater or deliver it slowly to streams is highly dependent on the natural vegetative cover of forests and tall-grass meadows. As development occurs, forests and meadows are converted into buildings, roads, driveways, parking lots, and short-grass lawns. The effect of development on natural surface waters is three-fold. First, the capacity of the earth to absorb stormwater is reduced which means more water from every storm event ends up in surface waters. This causes more frequent flooding and higher water levels. Secondly, stormwater runs off the land more quickly than it did predevelopment. This increases the flow rate in streams and leads to the erosion of streambeds and streambanks. Finally, stormwater picks up trash, debris, sediment, oil, fertilizers, pesticides, and other chemicals as it travels to surface waters. These man-made pollutants degrade water quality and harm the aquatic wildlife species that live in surface waters.

These problems have been recognized for decades and have led to stringent federal and state laws governing the release of stormwater from developed areas into surface waters. The Federal Water Pollution Control Act and its amendments (in particular the 1972 amendments which are commonly referred to as the "Clean Water Act") authorize the federal Environmental Protection Agency (EPA) to regulate point-source discharges to surface waters through the National Pollutant Discharge Elimination System (NPDES) permitting program. Permitting responsibilities may also be delegated to state agencies such as the Pennsylvania Department of Environmental Protection (DEP).

Discharges of stormwater from Municipal Separate Storm Sewer Systems (MS4s) are regulated under this NPDES program. A MS4 is a system of catch basins, inlets, pipes, ditches, open conveyances, roads, gutters, and other man-made structures that is used for collecting and/or conveying stormwater runoff to surface waters. The public entity owning the MS4 system is required to obtain NPDES permit coverage from DEP. The NPDES permit for small MS4s requires municipalities, among other things, educate the public about the MS4 program, involve

the public in decision-making aspects of the MS4 program, maintain maps of the MS4, screen the MS4 for illicit discharges, enforce ordinances regulating construction projects and the post-construction maintenance of stormwater facilities, conduct regular employee MS4 training, and construct Best Management Practices (BMPs) such as stormwater retention basins, wetlands, vegetated swales, and streambank restorations to reduce the pollutant load to local surface waters. Add these costs of compliance to the costs of the actual, physical maintenance of the MS4, and the strain on the average municipal general fund becomes unsustainable.

Traditionally, MS4 systems in Pennsylvania have been owned and maintained by the municipality, i.e., Townships, Boroughs and Cities. However, in 2013 and 2014, the Pennsylvania Municipal Authorities Act was amended through Acts 68 and 123 to allow municipal authorities to undertake stormwater projects and to charge a stormwater fee to property owners in the municipality. Recognizing the potential benefits of the new institutional arrangement allowed by the Municipal Authorities Act amendments, Cleona Borough and Cleona Borough Authority engaged in discussions and in 2017, the Authority revised its bylaws to include stormwater as an allowable service and the MS4 Permit was transferred from the Borough to the Authority. It is expected that towards the end of 2017 or beginning of 2018, ownership of the MS4 system shall be transferred from the Borough to the Authority as well, making the transition complete.

Many municipalities, or more recently in some case, their delegated municipal authority, not only in Pennsylvania, but nationwide have adopted stormwater fees to defray the costs of complying with the NPDES program for MS4s and maintaining their stormwater systems. As previously mentioned, recent amendments to the Municipal Authorities Act allows authorities such as the Cleona Borough Authority to assess fees for the purposes of funding the construction, maintenance, and operation of storm water management facilities, systems, and management plans. The amendments stipulate that the fees shall be "reasonable and uniform" but provide very little guidance as to what that might be. As a result, municipal authorities have been granted some latitude to develop a fee structure that makes sense and is reasonable to them. This report provides a framework for a Stormwater Management Fee for properties in Cleona Borough.