Restoring Our Urban Streams A Study Plan for Restoring/Rehabilitating

A Study Plan for Restoring/Rehabilitating Stroubles Creek in Blacksburg, Virginia

Daquan Zhou

Major paper submitted to the faculty of the Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of

Masters of Urban and Regional Planning
In
Department of Urban Affairs and Planning
Virginia Polytechnic Institute and State University

John Randolph, Chair Lee R. Skabelund, Committee Member

> Defended on April 28th, 2004 Blacksburg, VA

Keywords: urban stream restoration, Stroubles Creek rehabilitation, in-stream restoration, riparian restoration, watershed restoration and management

Restoring Our Urban Streams—A Study Plan for Restoring/Rehabilitating Stroubles Creek in Blacksburg, Virginia

Daquan Zhou

Abstract

As the Americans have become more aware of the impact to the environment from the human induced disturbances which includes physical, chemical and biological disturbances to the degradation of streams and rivers, many studies and experiments have been done in an attempt to restore streams and rivers to more natural conditions. At the same time, success in public education and community involvement has encouraged grass-root movements that engage people in stream restoration efforts.

Stroubles Creek is a freshwater stream located in Blacksburg, Virginia. The creek has experienced considerable disturbance due to land use changes over the past 100 years. The Stroubles Creek Water Initiative (SCWI), originated by the Virginia Water Resources Research Center at Virginia Tech, has been monitoring the creek for a number of years. This paper develops a planning framework for restoring and/or rehabilitating Stroubles Creek within the Town of Blacksburg. The results of stream monitoring and other research by SCWI are used to inform the recommended planning process, while a literature review and discussion of "urban stream restoration case studies" are used to guide future decision-making related to Stroubles Creek restoration/rehabilitation.