

Are Our Urban Runoff Design Practices Really Saving Our Streams?

Dr. Larry A. Roesner, P.E.

Professor, Civil Engineering, Colorado State University

Abstract. The design of urban runoff management facilities generally includes peak shaving for flood control, and best management practices for removing pollutants from the runoff. A number of scientists have questioned whether the combination of these two control practices, which were developed independently of one another, is sufficient to protect aquatic ecosystems, and have concluded that they are not. But studies at Colorado State University show that if the design storms are properly chosen for peak flow control and used in conjunction with the proper BMPs, it is possible to preserve the predevelopment peak-flow frequency curve and to preserve geomorphic stability in an urbanized watershed. This approach is currently being used in Lincoln, NE, and Lenexa, Kansas.