

**ABSTRACT**

**ECONOMIC CONSIDERATIONS FOR RIPARIAN RESTORATION  
ON FARMS IN WESTERN WASHINGTON**

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The establishment of forested riparian buffers is widely recognized as a technique for creating stream shade and achieving temperature total maximum daily load (TMDL) targets across a watershed landscape. A temperature TMDL is currently under development for the Stillaguamish Watershed, and it is anticipated that forestation of bare riparian areas will be recommended as a method to improve stream temperatures. Over 160 stream miles in the Stillaguamish watershed cross or are adjacent to farmlands, and many of these miles do not have functioning riparian corridors. Farm owner resistance to installing buffers focuses on a significant degree of uncertainty about buffer efficacy and the economic implications for the farm enterprise.

In 2001, a grassroots watershed effort set out to develop an economic tool that Stillaguamish farmers could use to evaluate the economic implications of installing riparian buffers on their farms. A farm budget model was developed to simulate real riparian management decisions for farmers by accounting for real farm costs and revenues. The user manipulates variables such as buffer width, buffer type and amount of cost-share to design a buffer specific to their site. The tool is designed for use with Microsoft Excel and is easily accessible to a diverse number of users.

Economic impact is shown to be site specific, and several case studies using real farms are presented to demonstrate the range of impact. Several trends emerge from this analysis: 1) large sources of long-term buffer costs include buffer maintenance and foregone income from buffer areas; 2) negative economic impact to the farm enterprise is mitigated by cost-sharing and by buffer income generation; and 3) under certain conditions, buffers can be a potential net benefit for the farm. This analysis is helpful for identifying specific target areas on which to focus financial assistance. The analysis may also be used to quantify the benefit farms contribute by providing both existing and future forested riparian areas.