



TR-90

An Economic Analysis of Erosion and Sediment Damage in the Lower Running Draw Watershed

C. R. Taylor, D. R. Reneau, B. L. Harris, R. D. Lacewell, P. E. Mueller

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The development and implementation of agricultural non-point source (NPS) pollution control plans was mandated by the 1972 Federal Pollution Control Act Amendments, Public Law 92-500. The purpose of this particular report is to present the results of a study on the economic impact of implementing potential agricultural NPS pollution controls in Lower Running Water Draw watershed. The study focuses on: (a) the effects of erosion control on farm income, (b) off-site sediment damages in the watershed; (c) the costs of administering and enforcing alternative erosion controls, and (d) on-farm economics of soil conservation practices. Erosion controls considered include the traditional voluntary programs combined with economic incentives as well as possible regulatory programs.

The focus of the study is on erosion and sedimentation because sediment is a potential transporter of pollutants. Practices to control agricultural non-point source pollution would probably be aimed at reducing soil loss. Conservation and conservation related practices are, at present, considered the best technical practices to abate agricultural non-point source pollution.

This is a study of both conservation and environmental economics, two areas that tend to be closely related. For this project, the concern was over potential pollution (an off-site problem), but because of long-run farm income consequences, this concern cannot be separated from conservation problems (an on-farm problem). Accordingly, the report contains substantial information on the short and long-run on-farm benefits and costs of various soil conservation practices for the specific soil mapping units in Lower Running Water Draw watershed. The results of this study are applicable to the majority of the soils in the High Plains Land Resource Area. Only sheet and rill erosion are considered in the study.

The first section of the report describes the selected "Best Management Practices" and examines the on-farm

economics of soil conservation. The second section postulates various sediment damage control options and models the economic consequences of implementation, both to agricultural producers as a group, and to society.

Texas Water Resources Institute

1500 Research Parkway A110
2260 TAMU
College Station, TX 77843-2260

Phone:
979.845.1851
Fax: 979.845.0662
Email:
twri@tamu.edu

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