

Introduction

Soil erosion has occurred in what is now West Virginia since the beginning of time. Prior to discovery and settlement, erosion was at a slow rate and a part of the natural geologic process. Nearly all of the land was covered by forests, which protected the soil under layers of leaf litter.

With settlement came the need to live on and make income from the land. From time to time and place to place, people removed protective coverings which in the natural state ranged from trees and shrubs to grasses. This allowed rainfall and runoff to erode the soil at a faster rate.

In recent years, land use in West Virginia has changed quickly and significantly around many of the towns and cities. More land has been used for developmental purposes, including housing. An undesirable result has been accelerated erosion. Also undergoing erosion and contributing to stream sedimentation has been land disturbed by other land-use activities such as agriculture, road building, utility construction, and coal mining.

The first purpose of this handbook is to make people aware—especially those persons helping plan and make land-use decisions—of how erosion will accelerate at construction sites. The second purpose is to provide guidelines for reducing the erosion and to suggest the means and methods for controlling erosion.

The West Virginia State Soil Conservation Committee has been designated as the management agency for implementing agriculture and construction components of

the non-point source management program in West Virginia. This program was approved for implementation by the Environmental Protection Agency in December of 1989. Since that time, the program has been implemented by placing technicians at the local Soil Conservation District level to assist land users in developing erosion and sediment control plans for agriculture and construction activities. This assistance will be provided in the form of review, comment, and approval of sediment and erosion control plans and storm water management plans for urbanizing areas, developers, contractors, and municipalities.

As Chairman of West Virginia State Soil Conservation Committee, I am pleased to present this Erosion and Sediment Control Handbook for Developing Areas in West Virginia.

This handbook has been prepared in cooperation with the U.S. Department of Agriculture Soil Conservation Service, and the 14 locally governed Soil Conservation Districts. For further assistance in developing an erosion and sediment control plan, contact your local Soil Conservation District office or any office of the Soil Conservation Service.



Gus Douglass
Chairman, West Virginia
Soil Conservation Committee

Assistance from the Soil Conservation Districts

West Virginia has 14 soil conservation districts which serve all parts of the state. The districts are subdivisions of the state, and they are directed by boards of supervisors from within their borders. The supervisors give local direction and coordination to various government agencies providing help to the public. They provide needed services in getting conservation practices on the land. The agency which works most closely with the soil conservation districts is the Soil Conservation Service of the U.S. Department of Agriculture.

When districts were organized in the 1940's they spent almost all of their energies and resources assisting individual farmers. Conservationists helped farmers plan and use each acre within its capabilities and treat it according to its needs.

In more recent years, the districts also offered their services to other landowners and land users. These included those persons concerned with controlling sediment production, and managing storm water on developing areas—planners, leaders in local government, builders, industrial managers, educators, and others who needed to disturb land, but who wanted to conserve soil and keep sediment out of streams.

It was important that farmers, as well as developers and other land users, obtain the assistance of professional conservation technicians "before the bulldozer moves in." Soil and related water resources have definite limitations. If these limitations are disregarded in the construction of homes

or development of business and industrial areas, resulting mistakes can cost many thousands of dollars later. Also, the district supervisors are especially concerned about the worry and heartache caused individual home owners by inadequately planned construction. For them as for farmers, the soil is the first and final foundation for what they are constructing.

That's why I am so pleased about the updating and republication of West Virginia's "Erosion and Sediment Control Handbook for Developing Areas." The developer, or the individual building a home, can take this book and make his own checklist of factors to be considered and actions to be taken to assure the best and, in the long run, least costly development.

Of course, besides this book, the districts are still present and offer assistance in all parts of West Virginia. Working with the SCS and other federal and state agencies, we can tailor assistance to meet your needs, whether you are running a corporation or trying to decide how to build your own home. Use this book, or use the assistance, or use them both together. We exist to serve you, and we want to do that well.



Boyd Meadows
President West Virginia Soil
and Water Conservation District
Supervisor's Association

Assistance from the Soil Conservation Service

Technical assistance to help individuals, groups, and units of Government plan and establish needed soil and water conservation practices is provided by the Soil Conservation Service through fourteen local soil conservation districts in West Virginia.

The Service (SCS) is the United States Department of Agriculture's technical arm of action for conservation of soil and water resources. Its staff includes soil scientists, engineers, biologists, agronomists, foresters, plant materials specialists, geologists, and soil conservationists. All of these disciplines are brought together by the soil conservationists to help solve land and water conservation problems.

There are field offices located throughout West Virginia to provide technical help in all 55 counties in the State. SCS professional employees advise individuals, planners, builders, developers, and engineers on soil interpretations, proper land use, erosion and sediment control, storm water management, and numerous problems associated with soil and water conservation. Technical assistance may be on site or consultative in nature.

The policy of the Soil Conservation Service is not only to protect and preserve, but to restore and renew soil and water resources in the State and Nation.



Rollin N. Swank
State Conservationist
USDA Soil Conservation Service

Assistance from other Federal and State Agencies

The need has been growing for two decades for cooperation to solve conservation problems in developing areas. The cooperation, to work effectively, had to involve many agencies, organizations, groups, and individuals.

The Clean Water Act of 1987 requires that each state develop and submit a Non-Point Source (NPS) Assessment Report and Management Program to the Environmental Protection Agency (EPA) for approval. Programmatic and technical expertise is essential to the initiation and operation of a successful NPS program. Under agreement with the West Virginia Department of Natural Resources, the State Soil Conservation Committee has been designated as the management agency for implementing agriculture and construction components of NPS programs in West Virginia. The Committee has responsibility for carrying out State programs dealing with non-point source pollution management programs.

The voluntary state plan strongly encourages those engaged in construction activities in developing areas to prepare sediment control plans and have them reviewed by the State Soil Conservation Committee for technical adequacy. An educational program for both the public and the construction industry is a major part of the plan.

West Virginia's Department of Natural Resources must report annually to the U.S. Environmental Protection Agency (EPA) the progress being made in improving water quality. This handbook should provide information useful in implementing the water quality management plan.

Many agencies must cooperate in the effort. In the U.S. Department of Agriculture, the Soil Conservation Service offers technical assistance. Other USDA agencies helping with land-development conservation include the Agricultural Stabilization and Conservation Service; the Economics, Statistics, and Cooperative Service; the Cooperative Extension Service, operating as a part of West Virginia University; and the Forest Service. They offer a variety of services ranging from financial assistance to research and educational programs.

Other Federal, State, and local agencies also are involved. The EPA has overall national responsibility for reduction and prevention of pollution in the environment. The Office of Surface Mining of the U.S. Department of the Interior regulates reclamation of lands disturbed by coal mining activities. The West Virginia University Agricultural Experiment Station provides chemical analysis of soils to aid in land stabilization. The State Department of Environmental Protection, Division of Natural Resources, Water Resources Branch, has major responsibilities in maintaining water quality. The State Department of Environmental Protection, Enforcement and Abandoned Mine Lands Divisions have major responsibilities in mine reclamation. The State Department of Highways is responsible for controlling erosion and sediment during highway construction. The West Virginia Department of Health has responsibility for problems of health and sanitation. The State Geological and Economic Survey is concerned with geology, hydrology, and preservation of scenic and historical areas.

Local governments establish land development policies and are responsible for community planning. Local government is the developer when public land is used for schools, parks, and other public purposes.

Managers in industries and businesses also share in the responsibility for preventing water pollutants from leaving developing areas. Finally, developers and individuals building homes need to work closely with government agencies toward solving their own conservation problems.