STORM IMPACT ON CONSERVATION

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Planning for normal rainfall events has been part of doing business on Wisconsin farms for centuries. In recent years, we are observing more intense rainfall events on localized areas of the state sometimes approaching rainfall factors that should only occur every 100 years. Dealing with those intense storm events are very challenging and not planning for them results in amazing damage from erosion and offsite deposition of soil and nutrients. Natural Resource Conservation Service has several suggestions on reducing risks caused by unexpected rainfall events.

What does it mean to design for a ten year event? What is a 100 year storm event? What are the engineering design issues associated with those excessive rainfall events? We will explore how to assess the value of a grassed waterway and buffers, how to evaluate the structural integrity of a Grade Stabilization Structure following a major rain event, methods to repair gulley erosion created from excessive rainfalls.

Identifying ways to slow water flow down on croplands and prevent massive gulley erosion on cropland acres is vital in conservation planning. Practices such as using cover crops to protect soil surface have increasing value in reducing flood damage. The use of common conservation practices on uplands greatly reduces cropland degradation. This session will explore the value of true no tillage capturing the concepts of soil consolidation factors. We will look at how soil reacts to saturated conditions and how that reaction may influence management decisions?

Anticipating heavy erosion potential creates new conservation planning options. The design and use of upland buffers, field edge buffers, surface water buffers. Treatments for headlands provide added protection. Cover Crops added into row crop scenarios are increasing in popularity. The value of grasses for erosion control remains critical. The value of keeping soil in place and staying in compliance is always important to economic bottom line.

This session is designed to explore soil reaction to excessive storm events, define why soils become vulnerable, and look at basic engineering concepts as they relate to soil erosion protection. The goal of this presentation is to provide options to producers to help them protect their soil from excessive rainfall factors and reduce risks from offsite sedimentation and runoff events.

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