

HEL Ephemeral Gully Plan Addendum

Natural Resources Conservation Service - Indiana - April 2017 (ver. 1.0)

Ephemeral Gully Control on Cropland – “Fix it, don’t disk it!”

Landowner:		County:	
Farm:	Tract:		Date:
Assisted by:			

FARM BILL REQUIREMENTS

Since the origination of the Food Security Act of 1985, as amended, fields designated as Highly Erodible Land (HEL) were required to control sheet and rill erosion, wind erosion, and ephemeral gully erosion to acceptable levels.

This plan addendum addresses ephemeral gully erosion control requirements to remain in compliance with the Food Security Act of 1985, as amended, and is *in addition to* other requirements to control sheet and rill and wind erosion to acceptable levels. Not controlling all required forms of erosion could put you at risk of losing USDA farm program benefits.

WHAT ARE EPHEMERAL GULLIES?

“Ephemeral gullies” are small channels that are formed in natural, concentrated water flow areas. Ephemeral gullies are generally shallow, yet visible, and are normally easily filled in by annual tillage. They will typically re-develop again in the same location after additional runoff events. Disking or smoothing the gullies will **NOT** fix the problem.



Ephemeral Gully

In contrast, “classic gullies” are deeper channels that are not easily filled by normal tillage equipment and usually not crossable.



Classic Gully

EPHEMERAL GULLY CONTROL

Ephemeral gullies typically form after runoff events in areas that are disturbed and un-protected by residue and growing vegetation. Control of ephemeral gullies begins with minimizing runoff by improving water infiltration and protecting the soil surface – in other words, a soil health management system using the four principles of minimizing disturbance, maximizing soil cover, providing continuous living roots, and maximizing biodiversity.

SOIL PROTECTION PRACTICES

The use of high residue crops, no tillage at all, and cover crops after low-residue crops in the drainage area of the ephemeral gullies are initial steps.

VEGETATIVE PRACTICES

Depending on the slope and intensity of runoff events, and the overall health of the soil (i.e. – how long the soil health management system has been in place),

ephemeral gullies may still form. In these cases, the next step is to apply a vegetative practice.



Heavily Drilled Wheat

Drilling a high rate of a winter grain/cover crop *every fall* after harvest in the channel area may be all that is needed. Wheat, cereal rye, or triticale are all effective; do not use annuals that winter kill. Seed as early as possible to achieve the greatest amount of top growth and roots. Drilling in a serpentine pattern or across the slope is more effective than up and down the hill.



Water Sediment and Control Basin

Where annual winter species are not working, small areas of perennial grass is the next step. These areas will need to be avoided when spraying for long term control, and reseeded as needed. Tall grasses that are deep-rooted and somewhat tolerant of corn herbicides such as orchardgrass, switchgrass, etc. work well.

STRUCTURAL PRACTICES

If minimal tillage and vegetative control measures are not working, then the next alternative is a structural practice such as water and sediment control basins, grassed waterways, terraces, or other practices.

TECHNICAL AND FINANCIAL HELP

USDA Natural Resources Conservation Service (NRCS) will provide technical assistance to plan and design the right practice(s) to implement any of these

requirements. USDA financial assistance may also be available.

OPERATION AND MAINTENANCE

You will need to be prudent in checking for known areas of ephemeral gullies, *any other potential areas, and any new ephemeral gullies that form after runoff events in the future*. Anywhere water concentrates from a heavy rain, there is potential for ephemeral gullies, especially if the site is left unprotected. Maintaining cover and live roots, eliminating tillage, and crop rotation diversity must be maintained.



Water Sediment and Control Basin

YOUR EPHEMERAL GULLY CONTROL

PROGRESSION PLAN: the following sequence of practices will be used if/when ephemeral gullies form to remain in compliance with HEL provisions (if option #1 does not control them, move to option #2, and so on):

1. **No-Till + Cover Crops after low-residue crops in ephemeral gully drainage areas;**
2. **#1 + Plant winter grains/cover crops at heavier rates in ephemeral gully channels;**
3. **Plant perennial vegetation in ephemeral gully areas;**
4. **Install structural practices in ephemeral gully areas.**



Grass Waterway