

Incidental Maintenance Plan Addendum

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

Incidental Maintenance on HEL Cropland

Landowner:			County:
Farm:	Tract:	Field:	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) are required to control sheet, rill, and wind erosion to acceptable levels, and ephemeral gullies.

This plan addendum addresses the need for remedial tillage that is beyond the approved conservation system to address incidental maintenance issues. This addendum is *in addition to* other requirements to control sheet, rill, and wind erosion to acceptable levels, and ephemeral gullies.

Going beyond the allowances in this plan addendum to control all required forms of erosion could put you at risk of losing USDA farm program benefits.



Fall field rutting caused by wet conditions at harvest
(Photo by Mike Staton, MSU)

WHAT ARE INCIDENTAL MAINTENANCE ISSUES?

In Indiana, incidental maintenance issues are minor in nature and only affect a small portion of the HEL field - either five (5) acres or ten percent (10%) of the field, whichever is less.

The most common need for remedial tillage is rutting, but other issues such as spotty replanting, perennial weed infestations, insect or small mammal issues, minor shaping/grading/land leveling/spoil spreading (from tile installation, ephemeral gullies, etc.), breaking crusted soils, etc. may also apply.

WHAT IF THE ISSUE IS BIGGER THAN “INCIDENTAL”?

If more than 5 acres or 10% of the HEL field (whichever is less) is impacted, then a *variance* needs to be requested by NRCS before using more tillage than your conservation system allows.

TILLAGE LEADS TO MORE TILLAGE

Before doing any corrective tillage on your HEL field, document the situation. Take a few photographs to document field conditions to confirm that tillage is justified. Also mark the treated areas on a map with notes on the actual onsite conditions and the dates.

Tillage breaks up soil structure, destroys residue on the surface and below ground, and reduces pore spaces in the soil profile – all of these lead to soil structure that will have issues when field conditions aren't perfect. Therefore, tillage is not an approved part of your system to alleviate perpetual problem areas in your HEL field, and other conservation measures will need to be implemented.

Stay in contact with your local NRCS office. If the HEL tract is pulled for a random compliance review, NRCS must ensure that the tillage was incidental in nature, necessary, and an acceptable solution.

RUTS AND OTHER NEEDS FOR TILLAGE

Ruts are the most common incidental maintenance issue. Ruts may occur at harvest when the crop is at risk of excessive deterioration and **soil loss** but soil

conditions aren't sufficient to avoid damage. Ruts may also occur at planting time when soil conditions are not suitable, but when planting dates are getting late.

These ruts are very detrimental to HEL fields, especially in extremely wet areas with deep cuts. Not only are these areas severely compacted, but if left untreated, the ruts will interfere with normal planting operations creating rough, uneven areas that retain water and causing crop residue to be spread unevenly, ultimately resulting in variability in the field.

The need to use more tillage than normal can be detrimental to HEL fields.

It may be necessary to repair issues before the next crop according to this addendum.

However, to meet the requirements of this plan addendum, **only** those portions of the HEL field that need tillage should receive it – any more than allowed could put you at risk of losing your USDA farm program benefits.

IS IT DRY ENOUGH TO FIX WITH TILLAGE?

First of all, fields need to be dry enough before attempting to repair with any tillage type equipment. Your real objectives are to fill and level out the issues using as little disturbance as needed, and not cause any further soil compaction.

Collect a handful of soil in an undisturbed area and right above the operating depth of the tillage tool. Form it into a ribbon using your thumb and forefinger. If the ribbon extends beyond two (2) inches before breaking off, the soil is too wet to till.

When soil is dry enough to proceed, till only deep enough to even out and fill in the issue.

Deep tillage used alone to break up compaction is generally a waste of time and fuel. It may cause soil smearing or just move the compaction deeper in the profile. However, if a deep-rooted cover crop such as cereal rye and a brassica is planted immediately after deep tillage (or even planted without any additional tillage), the actively growing roots will do a much better job in breaking up the compaction and will also help to build your soil organic matter.

CORRECTIVE ACTION REQUIRED

After maintenance tillage operations are completed following harvest, planting a cover crop will help revive soil structure and provide important cover through the fall and winter.

After the maintenance tillage operation are completed prior to planting, plant the crop as soon as possible to



A soil health management system that includes continuous no-till and cover crops after low residue crops.

get active roots growing to revive soil structure and provide cover.

OPERATION AND MAINTENANCE

Many Indiana farmers find the need for incidental maintenance is less of a problem where they use a soil health management system that includes continuous no-till for all crops, plus high-residue crops in rotation, plus cover crops after low-residue crops.

The recommended soil health management system uses the four principles: 1) minimizing disturbance, 2) maximizing soil cover, 3) providing continuous living roots, and 4) maximizing biodiversity. This system improves aggregate stability and soil structure and increases infiltration. Plus, soil organic matter improves resilience to help your bottom line.

TECHNICAL AND FINANCIAL HELP

USDA Natural Resources Conservation Service will provide technical assistance to plan and design the right practice(s) to implement any of these recommendations. USDA financial assistance may also be available.

