

Farmland Assessments Soil Survey – Slope and Erosion

I had difficulty writing this article this month. The topic just seemed so “dry.” Then it occurred to me. It is dry! The topic’s dry and so are your fields. Let’s hope for some much needed rain and learn a little about soils and their debasements (adjustments) for slope and erosion. Next month we’ll look at flood and drainage debasements. At least we’ll be talking water next month.

The County recently received the updated digital soil survey. The soil survey was part of a cooperative agreement between Henry County, Henry County Soil & Water, Interstate RC & D, Bi-State Planning, Illinois Department of Agriculture, and the USDA Natural Resource Conservation Service.

The purpose in updating the soil survey was to bring the existing soil survey up to current standards and to improve the accuracy and precision of the original survey. In the past the information was printed on paper and kept in several very large books. The new soil survey is in digital format making it very easy to use with the County’s GIS (geographic information system). The computer (GIS) now houses this data as well as many other pieces of data. The soil survey, parcel boundaries and land use are maps, or layers of data, in the GIS. One overlays the other to determine soil types within each land use category within a tract of land.

Each soil is assigned a number and the number is followed by a letter. The letter relates to the slope. That letter is sometimes followed by another number. This number relates to the amount of erosion. Here are a couple of examples.

Soil type – 86C2 Osco Silt Loam
86 – Osco Silt Loam
C – 5-10% slope (average 7.5% or 8%)
2 – Moderate erosion

Soil type – 87B Dickinson Sandy Loam
87 – Dickinson Sandy Loam
B – 2-5% slope (average 3.5% or 4%)
Only slight erosion – no adjustment

The slope and erosion adjustment process begins with the Illinois Department of Revenue assigning a productivity index to each soil type. They also provide an adjustment table to determine the percent adjustment for slope and erosion.

The soil survey gives us a range of percentage of slope for each soil. The range is averaged. This average percent of slope for each soil type is then taken to the adjustment table. When a number follows the slope we must also adjust for slight, moderate or severe erosion. The end result is an overall adjustment factor ranging from 0% to 78%. This factor is applied to the productivity index to arrive at the adjusted productivity

index. Then the value assigned to each productivity index each year by the Department of Revenue is applied to arrive at an assessed value.

The following is an example of a thirteen acre tract of cropland.

Soil ID	=	PI	X	Adjustment Factor	=	Adjusted PI	=	DOR Certified Value	X	# of Acres	=	Assessed Value
86C2		125		0.91		114		\$247.82		8		\$1,982.56
87B		92		0.99		91		\$38.33		3		\$114.99
87A		92		1.00		92		\$45.21		2		\$90.42
Total Assessed Value for this tract											\$2,187.97	

The method of calculating the slope and erosion debasement has not changed with Bulletin 810, however, the soil types and associated PI's may have changed. Please contact the assessment office if you would like to check the various soil types on a particular tract of land.

Next month I will discuss flood and drainage adjustments and what you as a landowner need to do if you have flooding on a tract of land. Bulletin 810 and the updated procedures handed down from the Department of Revenue have brought about some major changes for anyone in a drainage district. Be sure to watch for next month's article.