Background on Highly Erodible Land (HEL) Compliance

When did HEL Compliance begin?

- Congress passed the Food Security Act of 1985 (P.L. 99-198), in a 5 year omnibus Farm Bill that included a lower level of commodity price and income supports and established a dairy herd buyout program. Several enduring conservation programs were created in the 1985 Farm Bill to address national agricultural production issues, including sodbuster, swampbuster, and the Conservation Reserve Program.

- The Highly Erodible Land Conservation (HELC) and Wetland Conservation (WC) provisions of the 1985 Food Security Act were designed to reduce soil loss on erosion-prone lands and to protect wetlands for the multiple benefits they provide. HELC provisions apply to all land that is considered highly erodible, as determined by NRCS through the use of specific soil loss tools and methodology.

What determines if a cropland field is HEL?

- A soil is considered to be HEL if the erosion index (EI) is greater than 8. For water erosion, the EI is determined through the formula $R \times K \times LS / T$. $R$ is rainfall value, $K$ is the soil erodibility factor, and $LS$ is the length and percent slope value (steepness), and $T$ is the soil loss tolerance value. For wind erosion, the EI is determined through the formula $C \times I / T$, where $C$ is the climatic factor (wind speed and soil moisture), $I$ is the soil erodibility index (texture), and $T$ is the soil loss tolerance value. If either one-third or 50 acres of any field has HEL soils, the field is considered to be HEL. A sample EI calculation for SE Nebraska would be as follows: $150 \times .28 \times 1.10 / 5 = 9.24$. This example calculates the soil to be HEL.

Basic HEL compliance plan requirements:

- In the early years of State’s actions to implement the ‘basic’ HEL provisions, there was a lot of push back from farmers and farm groups because of the economic hardship to install conservation practices -- both structural practices like terraces, and management practices such as no-till. This resistance resulted in several Congressional town hall meetings, and one in particular in Platte County in about 1988. As a result of those the activities and the involvement of farm groups, an “alternative” way for farmers to meet the HEL provisions was established.

Alternative HEL compliance plan requirements:

- The more relaxed “alternative” method of meeting erosion reduction requirements became known as “Alternative Conservation Systems” or ACS’s as they were called. They later became known as “acceptable conservation systems” with the same acronym of ACS. The ACS level of allowable erosion in Nebraska could be as high as 2 to 4 times the soil loss tolerance value. Many Nebraska farmers are still using ACS-type plans that result in erosion as high as 4 times the soil loss tolerance value.

2T as the maximum allowable erosion rate:

- The sheet and rill erosion requirements for Highly Erodible Land compliance was revised with the 1996 Farm Bill. Currently, sheet & rill and wind erosion must be limited to no more than 2
times the T value, or 2T. * This is key issue #1 for Nebraska. This level of erosion control will not be difficult for most farmers to meet, however we do anticipate resistance for some crops and locations, for example potato production. We believe nearly all Nebraska corn and soybeans producers can meet the 2T HEL requirement by implementing a total no-till system, with no disking or tillage.

**Controlling ephemeral gully erosion:**
- The OIG report stated that Food Security Act requirements for HEL compliance requires that all forms of erosion, including water erosion, wind erosion and ephemeral gully erosion must be controlled for the producer to remain in compliance. Ephemeral gully erosion are the ditches that form in farmed fields where water concentrates and starts what could later become a classic gully. The previous ACS systems in Nebraska described that ephemeral gully erosion must be controlled to ensure there are no-off site damages, but did not specifically require that ephemeral erosion must be stopped from occurring in the field. * This is key issue #2 for Nebraska, and will be more challenging to implement in Nebraska, and other Midwest states as well.

**Summary of corrective actions:**
- There are two main adjustments that Nebraska needs to implement to fully meet agency responsibilities for HEL compliance:
  - All new HEL compliance plans must be limited to a sheet & rill and wind erosion rate of 2 times the T value (2T). State Conservationists do have some limited authority to approve plans that exceed 2T in specific instances where soils have severe limitations such as depth to bedrock, etc.
  - All ephemeral gully erosion in cropland fields must be controlled to meet compliance requirements whether or not the sediment is leaving the field.