

May 8, 2015

CONSERVATION AND FLOOD CONTROL IN EXTREME WEATHER EVENTS

When farmers west of DeWitt, who were landlocked at their farmsteads, say the flood line of Swan Creek was higher than June of 1984, it is shocking to hear that. But when Swanton received almost half their average annual rainfall in one night, with a report of 13.5 inches and with common 8 to 10 inch reports in such a wide area of the county, it's a flood that will be talked about for a long time.

There are 6 new Lower Big Blue NRD flood control structures on tributaries of Turkey Creek in Saline County that are now completed out of 7 and they worked as designed. It's too bad the 7th wasn't done. This provides almost a section of land of permanent pool water and a flood pool on 2.6 sections of land or 1,692 acres.

With Swan Creek and other structures above DeWitt there are now 26 flood control structures operated by the Lower Big Blue NRD. Many of them filled up to capacity and spilled over the emergency spillways. Fourteen of the 19 flood control structures in the Swan Creek watershed, as reported by the NRD, had flood water going through the emergency spillways. In all they have a flood pool of more than 20,000 acre feet of water, or in other words, flood control for a foot of water covering 31 sections of land.

There are 576 sections of land in Saline County. With an estimated range of 8 to 10 inches in the Swan Creek basin and 4 to 6 inches in the Turkey Creek basin, it was too much rain too fast on three-fourths of the county, that's 432 sections of land with considerable runoff that drains towards the Blue River, Turkey Creek and Swan Creek.

The flood control structures hold the water back allowing it to be slowly released downstream. Slowing the water down and allowing it to be gradually released reduces damage to roads, bridges, fences, cropland and other property. There is no question, in my mind, the newly completed high hazard flood control structure designed by the NRCS by the City of Wilber water tower and full credit of landowners around it saved homeowners in town from a huge mess along the creek.

The big difference that I noticed compared to the June of 1984 flooding was improvements we have made as a whole, protecting topsoil our number one resource. No-till, terraces, sediment basins, waterways and buffer strips protected fields, but the extent of erosion that still occurred with this extreme weather event made our best farmers sick to their stomachs. Of note, tillage in the ephemeral areas in the fall or spring is not solving anything and that soil was lost to the tillage layer. We have to come up with new ways in the future to save soil and reduce flooding to handle weather extremes and tillage is not the answer. There is a reason why our pastures always soak up more water and we can drive on them first after intense rainfall events.

It's been 31 years since the Village of DeWitt had mandatory evacuation by the National Guard of the entire town and all the work and challenges to cleanup and recover. It's hard to believe but without the flood control structures the situation would have been even worse. Without our continuous no-till farming practices and added conservation structures over those years, the topsoil losses and flooding would have been even worse. Please report any conservation structure damage from NRCS designed structures to Saline County NRCS, phone number (402) 821-2151, in case any emergency funds would become available.



For those farmers that have made conservation and sustainability of your land a top priority and for the future of your farm operation, don't be discouraged or feel helpless. Your efforts over the last 31 years is transforming agriculture. Future conservation practices and/or management to be implemented by you as a result of this week's storm will serve the next generation.

FLOODING IMPACT ON SEEDLING EMERGENCE

Both corn and soybeans are impacted negatively by fields with flood waters. Oxygen is needed by plant cells for growth and development and for germination. Waterlogged for more than 2 days is long enough time to decrease final stands and is more detrimental with temperatures of the soil and water in the 70's vs the 50's. Young corn plants, generally speaking, can survive about 2-4 days unless smothered. Crusting, plants covered by sediment or buried under residue and increased damping off all are challenges in flooded fields. Evaluating stands will be necessary to see what extent has to be replanted. Time is still on our side. More information on corn and soybean survival in saturated soils can be found at the following resource: <http://bit.ly/1Jsv68F>

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