



Storm clouds with silver linings: DRAP funds fix Rock County damage, reveal other needs

July 2017 Snapshot

When the waters receded from Rock County farmlands in June 2014, they left in their wake nearly 600 flood-damaged or heavily eroded conservation practices. Three years later, Rock County Soil & Water Conservation District staff reflected on some of the unforeseen challenges and resulting improvements.

“There were some places that recorded 22 inches of rain in eight days in the June ’14 event,” said Doug Bos, Rock County Soil & Water Conservation District assistant director.

Nearly 14 inches of rain fell in Luverne that June – nearly 10 inches more than the longtime monthly average, according to Midwestern Regional Climate Center data. Unofficial reports from other areas of Rock County showed higher rainfall totals.



June 2014 flooding in Rock County brought erosion damage.
Photo Credits: Rock County SWCD

The federal disaster declaration named eight counties, including Rock.

In Rock County alone, more than 30 bridges and culverts washed out, as did numerous roads. Responding to disaster declarations, the Minnesota Legislature in 2015 appropriated funds implemented through the Minnesota Board of Water & Soil Resources’ Disaster Recovery Assistance Program. DRAP aided 31 SWCDs, including Rock County.

Rock County staff from the Natural Resources Conservation Service, SWCD and Rock County Land Management Office surveyed the damage in June 2014. Besides the nearly 600 flood-damaged or heavily eroded conservation practices, they documented new areas requiring protective measures from gully erosion.

The estimated cost to implement all of those projects topped \$4.2 million.

Through four rounds of DRAP requests, which listed projects and partner-fund contributions, Rock County SWCD garnered nearly \$1.5 million. The money would provide cost sharing to private landowners who implemented or repaired conservation projects, or implemented new erosion or sediment management practices.

As of May 2017, the ongoing DRAP framework has spent and/or contracted \$945,000 on private lands in Rock County. Those projects have included installing and/or engineered 45 waterways, 100 terraces/water and sediment control basins and two streambank and shoreland protections.

The results came in spite of a few challenges.

Coordinating grant opportunities to address heavy erosion and damage has tested the limits of the Rock County SWCD technical and administrative staff, its partners and the Area 5 Technical Service Area, who already were administering programs and overseeing buffer activities.

The volume of large-scale engineered projects in Rock and surrounding counties made it difficult to secure construction contractors and technicians for design and onsite work. Weather conditions further delayed projects. Saturation continued after the June 2014 floods. A wetter-than-average August 2015 and September 2016 followed, with single-day deluges exacerbating matters.

Wet conditions delayed implementation in a couple of different ways. They delayed harvest, which pushed construction back. They kept water-table levels high, which meant sites were too wet for construction.

Prolonged wet conditions did bring a strange opportunity. The June 2014 flood not only affected the “weakest” erosion areas on the landscape, but also exposed vulnerable areas in need of some protection. Most years tillage would erase signs of that need.

The flood also brought in landowners who usually declined to participate in cost-sharing for erosion control conservation strategies. At first, these folks had sought help when rains opened gullies in fields. As time passed, some landowners waited – or backed out of cost-share contracts – as fall 2014 and spring 2015 brought drier conditions. Everything seemed OK after fall tillage. Wet falls in 2015 and 2016 punctuated by storms that brought washouts inspired many of these folks to re-sign conservation contracts using the DRAP funding to conserve soil.

It’s only two-thirds of the way through the first round of funding. But, Rock County SWCD staff are starting to see the effects of the 2014 DRAP process and how it affects district dynamics and on-the-ground conservation.

Bos summarized the experience to date:

“The funding to install these greatly needed conservation practices has been very welcome, but we just never anticipated the huge demand this would place on our staff. We were in the process of training new engineering technical staff and – other than NRCS on Environmental Quality Incentives Program-funded projects – we had to rely totally on our Southwest Prairie (Area 5) TSA.

“Given that the TSA was stretched thin with their other 10 counties, some of which had damages from heavy rainfall events also, we tried hiring private engineering to keep ahead of the demand. What we found out was that most engineering firms are not familiar with conservation practice design and installation and can be very expensive. In some cases, the engineering was more than the cost of the conservation practice.

“Fast forward to today, we have projects getting done with a combination of our engineering technicians, Southwest Prairie TSA and some private engineering. We definitely have had a large learning curve, but it is finally coming together.”



A constructed water and sediment control basin, top left, will capture surface flow and dissipate energy to prevent gullies.