

WILDLIFE

Natural materials enable erosion control

by Steven Smith / sgsmith@noble.org



Unfortunately, eroded areas are all too common. Erosion usually is a result of overuse of the area through poor tillage, off-road vehicle traffic, grazing

or excessive herbicide application. Improperly using these practices over a prolonged period will significantly weaken or completely remove the necessary vegetation needed to protect the valuable topsoil from being washed away by water or blown away by wind. Once the topsoil is gone, it will take decades to hundreds, if not thousands, of years to replace it. Erosion typically starts small and increases over time. Here are a few strategies using natural materials, such as old hay and wood mulch, to reduce actively eroding gullies.

The gully in Figure 1 was present on the McMillan East Farm when the Noble Foundation began managing the property in 2008. We think the land above the gully was farmed in the past. This gully was approximately 20 feet wide at the widest point and 15 feet deep at the deepest. We used 20 to 25 old round bales to fill the gully as seen in Figure 2. Typically, many landowners fill gullies like this with tires, rocks, concrete or other



hard materials. We chose to use round bales because they would serve as a temporary soil for vegetation to establish. The round bales also act as a sponge, soaking up water, as well as slowing and redirecting the water.

We also created a small diversion terrace made of mulch donated by a local tree trimming company. The mulch terrace helps protect the head cut (the ledge where water enters the gully). Reducing the amount and ►

| | | |
|--|--|---|
| <p>speed of water entering a gully is necessary to reduce future erosion. Properly implemented land use practices are the key to preventing erosion from starting. All this work was completed with a farm tractor with a front-end loader equipped with a bale spear and bucket.</p> <p>The eroded area in Figure 3 was created by water running off the same</p> | <p>field with the abovementioned gully. In this area, all the topsoil was completely eroded away leaving only subsoil, which is not conducive to plant establishment and growth. A gully had begun to form approximately 30 yards from the edge of the exposed subsoil. This gully was roughly 4 feet wide at the widest point and 3 feet deep at the deepest. Due to the small-</p> | <p>er size of the area, we were able to fill the gully with soil from old brush piles. This soil replaced the missing topsoil and added existing vegetation. To protect this new soil and facilitate vegetation establishment, we created several mulch terraces to slow excess runoff and capture soil (Figure 4). The captured soil will help provide a place for vegetation establishment. ■</p> |
|--|--|---|