

Natural Resources Conservation Service

Soil and Plant Science Division

Central Appalachian Interior Mountains and Plateaus



Marietta, OH Soil Survey Office

Investigation for Emergency Watershed Protection— Streambank Stabilization

Purpose

The Emergency Watershed Protection (EWP) Program offers technical and financial assistance to help local communities relieve imminent threats to life and property caused by floods, fires, windstorms, and other natural disasters that impair a watershed. The Pleasant Valley Sewer District, near Chillicothe, Ohio, contacted the Ross County NRCS Field Office requesting assistance for streambank erosion that has continued to endanger a sewer line that is routed under an area of the North Fork Paint Creek shown in Figure 1.

The Area Engineer and the Area Resource Soil Scientist contacted the Marietta, Ohio Soil Survey Office for assistance with an investigation of the soil materials adjacent to the stream bank. The soils information would be used to determine the type of stabilization structure needed to protect the newly installed sewer lines. On July 1, 2020, Dan Benyei, soil scientist at the Marietta Soil Survey Office, met with Ohio NRCS Area 5 staff on site to complete two soil borings, over 15 feet deep, using a truck-mounted Giddings soil probe. Soil boring is a technique used by soil scientists to determine the soil properties. Based on existing soils information of the area, and the new soil samples, Dan was able to assist with characterization of the soil materials observed. The Area Engineer will use the information in the design of a suitable structure to address site and soil conditions.

Key Outcomes

The sewer district personnel have noted that the streambank erosion has accelerated greatly within the last few years. Without any noticeable increase in urbanization upstream from the site, an increase in severity of storm events may be the major contributor to the streambank erosion. Further investigation is on-going to prevent water quality degradation. In the meantime, the Marietta Soil Survey Office personnel will continue to assist with this and similar NRCS program projects that protect the community, land, water, and structures in the area.





Figure 1. Streambank erosion immediately upstream from the recently repaired section of sewer line which crosses under North Fork Paint Creek.