

## Hidden Valley Golf Course Stream Restoration Project Summary

### City of Delaware Finalizes Stream Restoration Project at Hidden Valley Golf Course

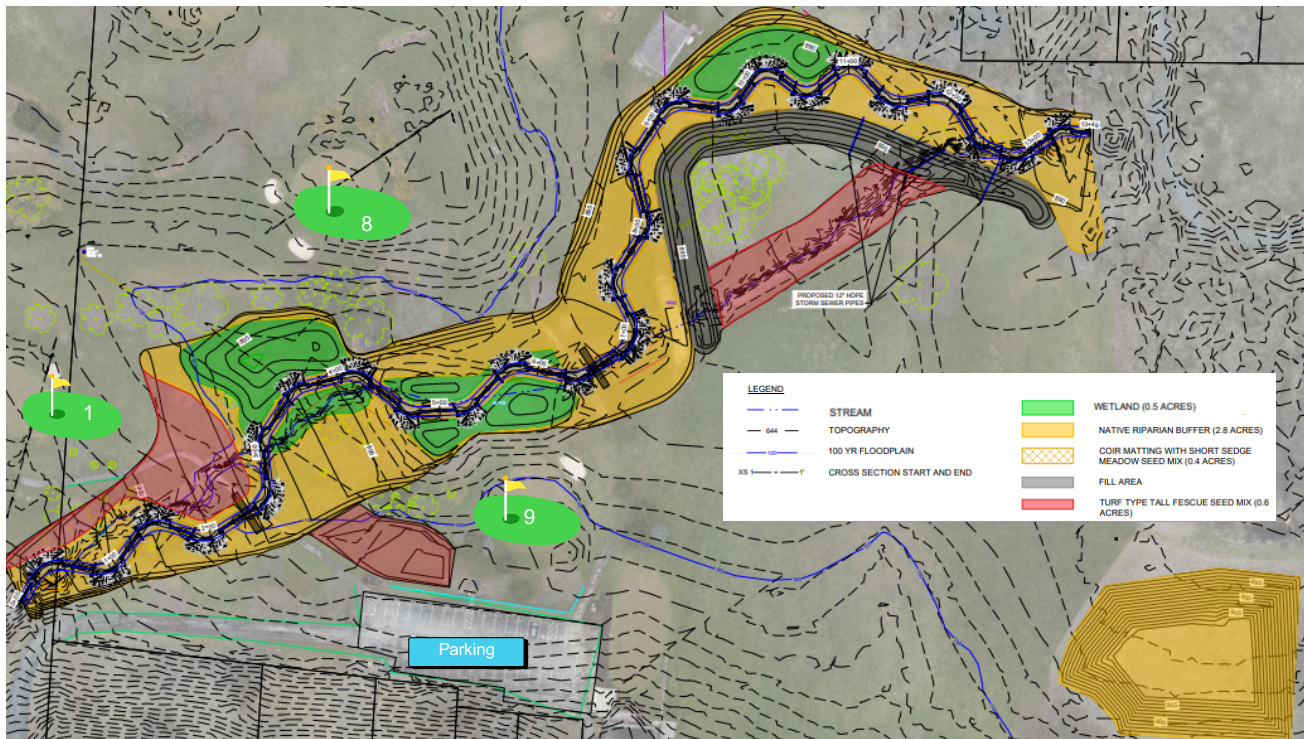


*Conditions before the stream and wetland restoration. The tributary exhibits low sinuosity.*



#### **Project Highlights**

The Hidden Valley Golf Course Stream Restoration project restored 1,346 linear feet of stream flow and created approximately 2.5 acres of riparian buffer and 0.5 acres of restored wetlands which will improve water quality by reducing sediment and nutrient levels in the discharge to Delaware Run downstream.



The City of Delaware received a Section 319(h) Nonpoint Source Award from the United States Environmental Protection Agency through an Ohio Environmental Protection Agency assistance agreement for the Hidden Valley Golf Course (HVG) Stream Restoration Project on October 25, 2022.

The Hidden Valley Golf Course Stream Restoration Project has been completed. The unnamed tributary that flows through the golf course drains approximately 62 acres of urbanized area. Prior to the restoration, the stream had no viable riparian buffer, and erosive flows had destabilized the streambanks. The restoration project addressed issues common within urban stormwater runoff such as erosional hot spots and channelized stream banks. The restoration project removed the pond and associated small dam to provide natural flow and floodplain connectivity. Other features were added to the overall structure of the stream such as sinuosity (bends), riffles (cobble/boulders), and riparian areas (native plants/tree stakes). The addition of toe wood creates structures to slow velocity along the stream bank and provides stability against erosion. The added tree/shrub staking alongside the stream corridor also improves the habitat while helping to reduce the amount of sediment entering the waterways. These additional features along with a new more connected flood plain reduces nutrient loading to the watershed. The project also addresses nonpoint source pollution by capturing drainage from the mixed land uses to constructed wetland features. These wetland features facilitate natural processes that capture and remove sediment and nutrient loading from the water prior to discharge to Delaware Run downstream.

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Protection  
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