

PROJECT SUMMARY

Polk County Public Works has been developing a detailed watershed plan for four watersheds in eastern Polk County. The purpose of the plan is watershed protection, and specifically the restoration and stabilization of streams and creation of wetlands. The planning effort is funded by the Natural Resources Conservation Service (NRCS) Watershed Flood and Prevention Operations (WFPO) program. Plan outcomes include environmental assessment, preliminary concept designs, and cost estimates that make selected alternatives eligible for additional funding through NRCS for final engineering and construction. In summary, this plan will enable the implementation of extensive watershed protection projects in eastern Polk County. These projects will provide significant benefits to stream health, water quality, and function at significant savings to agencies, landowners, and residents.



Figure 1. Watershed Plan Area

Polk County WFPO Watershed Plan
Polk County Public Works
2020



0 5
Miles



The planning area includes the Fourmile, Mud, Spring, and Camp Creek watersheds in Eastern Polk County (see blue outlined areas in the map above).

The Fourmile, Mud, Camp, and Spring Creek Watersheds all flow into the Des Moines River on the east side of the Des Moines Metro area in eastern Polk County, Iowa. The total plan area covers over 141,000 acres with varying land use and topographic characteristics. The plan has been developed in close partnership with the Fourmile Creek and Mud, Camp and Spring Creek Watershed Management Authorities (WMAs), and a host of partner agencies. A key component of this effort was “scoping” to identify priorities and opportunities important to agency personnel that deal with water resource issues in these watersheds as well as the public. Citizens, landowners, business owners, farmers, and everyone that is impacted by flooding, water quality, and streams in eastern Polk County had opportunity to identify problem areas and potential projects of interest in the early stages of planning, conducted in early 2020. Initial scoping ranked flood reduction as the top concern, followed by watershed protection and water quality. Significant effort was put into feasibility analysis of a flood-focused plan, but due to a successful buyout program in Lower Fourmile and rapid development upstream in required flood storage areas, the purpose shifted to watershed improvement.

One potential project location is the stretch of Fourmile Creek in the Lower Greenway at Sleepy Hollow. This reach includes strategies to provide bank stabilization, to divert the stream’s energy away from eroding banks, and to improve habitat and the riparian corridor by increasing connectivity with the floodplain. Restoration practices include bank shaping, bendway weirs, and toe rock.



The photograph to the right shows bank erosion along Copper Creek. Goals of restoration in this stream include habitat diversity, grade stabilization, bank stabilization, and controlled access. This project will integrate with the mountain bike trail being developed at Copper Creek Park.



Stream restoration along Camp Creek at Thomas Mitchell Park will provide grade and bank stabilization, improve stream habitat through controlled scour hole formation, and clear erosion-inducing artificial obstructions. Practices planned include step pools, bank shaping, j-hooks, and bendway weirs.



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