

PROJECT SUMMARY

Polk County Public Works recently applied for and obtained funding from the Natural Resources Conservation Service (NRCS) Watershed Flood and Prevention Operations (WFPO) program to develop a detailed watershed plan for four streams in eastern Polk County. The goal of the plan is to build on previous efforts to develop a list of site-specific projects for which environmental assessment and preliminary, concept-level designs and cost estimates can be developed to move high priority alternatives towards construction. These alternatives, in-turn, will also be eligible for future funding from NRCS to complete design and construction, which will provide a great deal of savings and benefits to Public Works and the people of Polk County.



Figure 1. Watershed Plan Area

Polk County WFPO Watershed Plan
 Polk County Public Works
 2020



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 will be 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 will be project “scoping” to identify priorities and opportunities. Effective scoping will rely on the input not only of agency personnel that deal with water resource issues in these watersheds, but also the public. Citizens, landowners, business owners, farmers, and everyone that is impacted by flooding, water quality, and streams in eastern Polk County will have a seat at the table and an opportunity to help identify problem areas and potential projects of interest. Alternatives and strategies will be tailored to each watershed, with potential primary purposes of flood risk and damage reduction, improved water quality, and improved aquatic habitat.

This reach of Fourmile Creek near the confluence with Little Fourmile Creek is an ideal location for stream restoration and grade control projects. Bank erosion and geomorphology indicate that holding channel grade here may be critical to protect upstream infrastructure and the project site is amenable to floodplain reconnection, oxbow wetlands, and other feature consistent with potential project purposes (flood reduction, stream restoration, and water quality).



Opportunities for regional detention were identified in the previous Fourmile Creek Watershed Plan to help alleviate flooding in suburban and urban areas downstream. Areas like the one above offer opportunities to stack multiple benefits, including flood reduction, water quality improvement, and ecological benefits to streams and wetlands.



There are locations in these watersheds with aging infrastructure (culverts and bridges) that will need to be addressed in the coming years. Aligning the project purposes with infrastructure needs can maximize project benefits. For example, if “perched” culverts like those on the right are replaced with a bridge, the channel degradation will migrate upstream quickly and soon threaten upstream channel stability. This plan will consider these factors holistically as the plan, environmental assessment, and economic benefits are developed.



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