



Prairie du Chien Flood Mitigation



PRAIRIE DU CHIEN DEBRIS & PEAK ATTENUATION BASINS (PARTIALLY FUNDED BY WI DNR FLOOD CONTROL PROGRAM)

CLIENT

City of Prairie du Chien, WI

LOCATION

City of Prairie du Chien, WI

SERVICES

- Civil Engineering
- Land Surveying
- Regulatory Permitting
- Public Funding
- Hydrologic & Hydraulic Analysis

PROJECT MANAGER

Kurt Muchow

PROJECT STATUS

Completed in 2017

Prairie du Chien is located on the prairie between the bluffs and the Mississippi River. During heavy rain events, excessive storm water runoff comes off of the bluffs carrying a significant amount of sediment and debris. The excessive runoff and debris cause drainage facilities to plug and overtop. This results in excessive flooding and property damage. Following a 2013 storm that dropped 10.31" of rain, Vierbicher assisted the City of Prairie du Chien in developing a Flood Mitigation Program to reduce the chances of future flooding within the 736-acre watershed.

The flood mitigation program included the design and construction of two new stormwater detention/sediment/debris basins, a new by-pass outlet and improvements to the existing drainageway. Combined, the improvements decreased the risk of flooding downstream. An important part of the design was the installation of trash racks to catch debris that washes out of the watershed during large storm events.

The 10-, 25-, 50-, 100- and 500-year storm events were modeled as part of the study, with a goal of safely passing the 500-year design flood. Vierbicher staff worked closely with the Department of Natural Resources, as the DNR wanted to eliminate static head pressure on any proposed basin during periods of dry weather to insure public safety; therefore, each basin was designed as a "dry basin" to attenuate peak flow.

Vierbicher provided engineering and surveying services for the project including preparation of plans and specifications, permitting, preparation of easements, bidding and contract award, construction staking and inspection. Vierbicher also assisted the City to secure a 70% grant from the DNR Municipal Flood Control Program to help fund the \$661,500 interceptor project.