# Project Title: WWA Support of Little Yellow River Watershed Restoration

## Project Abstract

In what is now the Necedah National Wildlife Refuge and adjacent Meadow Valley State Wildlife Area, extensive drainage efforts in the early 20th century straightened the Little Yellow River and created large drainage ditches that changed the hydrology and vegetation communities. Those ditches--each up to 20 feet wide and 5 feet deep--drain wetlands and consolidate water, accelerating flow rates and increasing flow quantity, particularly during increasingly common flood events. This water flow strains or damages municipal roadway infrastructure (roadbeds, culverts, and water overpasses) while contributing to other downstream flood damage. By disabling a key ditch network to slow water flows, retain more water upstream, and restore associated wetland benefits, the strain on downstream road infrastructure will be reduced. Contemporaneously, other downstream IRA-funded infrastructure improvements will be accomplished on the local, rural road infrastructure. Expected outcomes include more resilient road infrastructure, reduced surface water outflows, improved wetland functioning, enhanced wildlife habitat, greater carbon sequestration, and improved evapotranspiration rates. An approach prototyped by the US Fish and Wildlife Service will be employed to disable the functionality of these large ditches through a succession of 132 ditch plugs with low head (less than 6 inches each). Each ditch plug is approximately 100 feet long, with fill created by removing bank spoil barriers that prevent ditch water connectivity to the surrounding flood plains. This project will restore or enhance over 1700 acres of wetlands along more than 14 miles of existing ditch.