Wetland Monitoring and Evaluation – Floyd County

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Introduction

This document provides a preliminary summary of results for the 2023 monitoring program for Floyd County CREP wetlands.

Monitoring and Analysis

The FCC2, LP, and WW wetlands were equipped with automated water samplers and flow monitoring equipment. Wetlands WK and TJ were not equipped with automated water samplers and flow monitoring equipment. Instead, local stakeholders assisted in the collection of weekly to bi-weekly water quality grab samples which were delivered to ISU for nutrient assays. The WK wetland has 3 inflow tiles and the TJ wetland has two inflow sample locations that were sampled during 2023. For these two sites, the discharge the wetland likely received was estimated by scaling discharge from a nearby location having flow measurements.

Results and Discussion

Overall, 2023 was a relatively dry year at the monitored wetland sites causing inflow and outflow at some wetlands to decline to zero or near zero for part of the year. Although lower flow conditions generally result in higher percent nitrate removal, they also result in lower nitrate loads delivered to wetlands, and hence lower nitrate mass removal rates.

Table 1. Estimated percent nitrate loss for 2023

Wetland Site	% nitrate loss
WK	38
TJ	69
FCC2	32
LP	28
WW	32

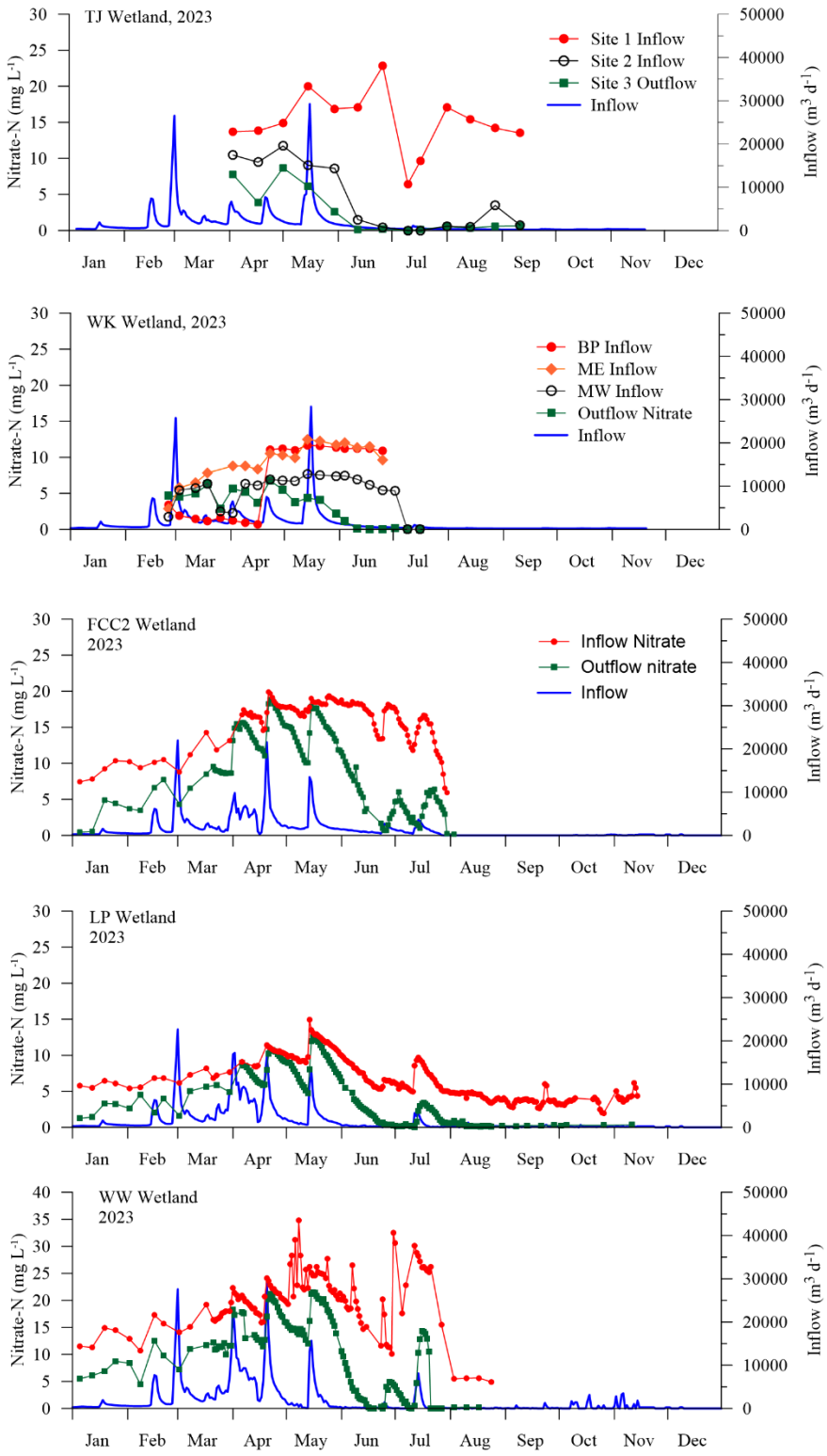

Fig1. Measured nitrate concentrations and flows for Floyd County Iowa wetlands monitored during 2023.