

MONITORING RIPARIAN STREAM WATER FLOW AND QUALITY

Monitoring the flow and quality of stream water within the riparian zone is essential for determining the transport and fate of agricultural contaminants in the ecosystem. Spatial and temporal variabilities in stream contaminant fluxes are assessed using five permanent stream monitoring/sampling stations instrumented along the 1st-order stream channel, from the stream head (station 1) to the watershed outflow (station 5).



Pictured here is one of the stream sampling/monitoring stations (station 3) during Autumn baseflow conditions. The V-notch weir on the front restricts flow, establishing an accurate stream height/discharge relationship; the automatic sampler/logger is housed in the elevated shed on the right. Stream flows are logged at each of the five stations in 15-minute intervals. Water samples are collected regularly, and analyzed for a variety of nutrients and other potential contaminants; from these data, fluxes (quantities of contaminants per unit time) are determined. Thus, conditions under which unremediated contaminants are most widely and readily exported from the watershed via stream flow can be evaluated.

Contacts: Jonathan Angier
Gregory McCarty

angierj@ba.ars.usda.gov
mccartyg@ba.ars.usda.gov

Link to Publications: