

# June and September 2006 Storm Event Sampling

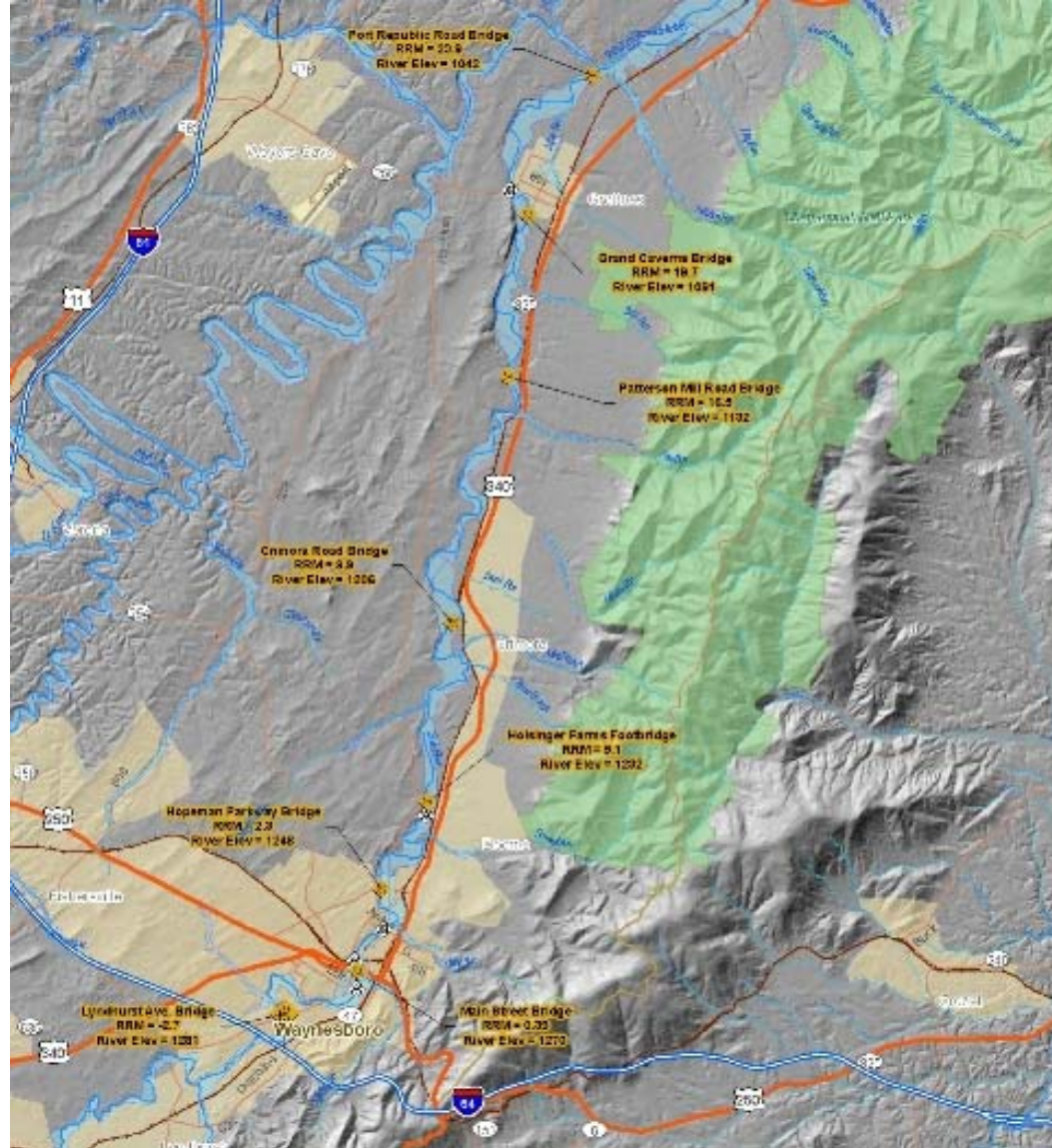
## Ecological Study of the South River and a Segment of the South Fork Shenandoah River



# Storm Event Sampling

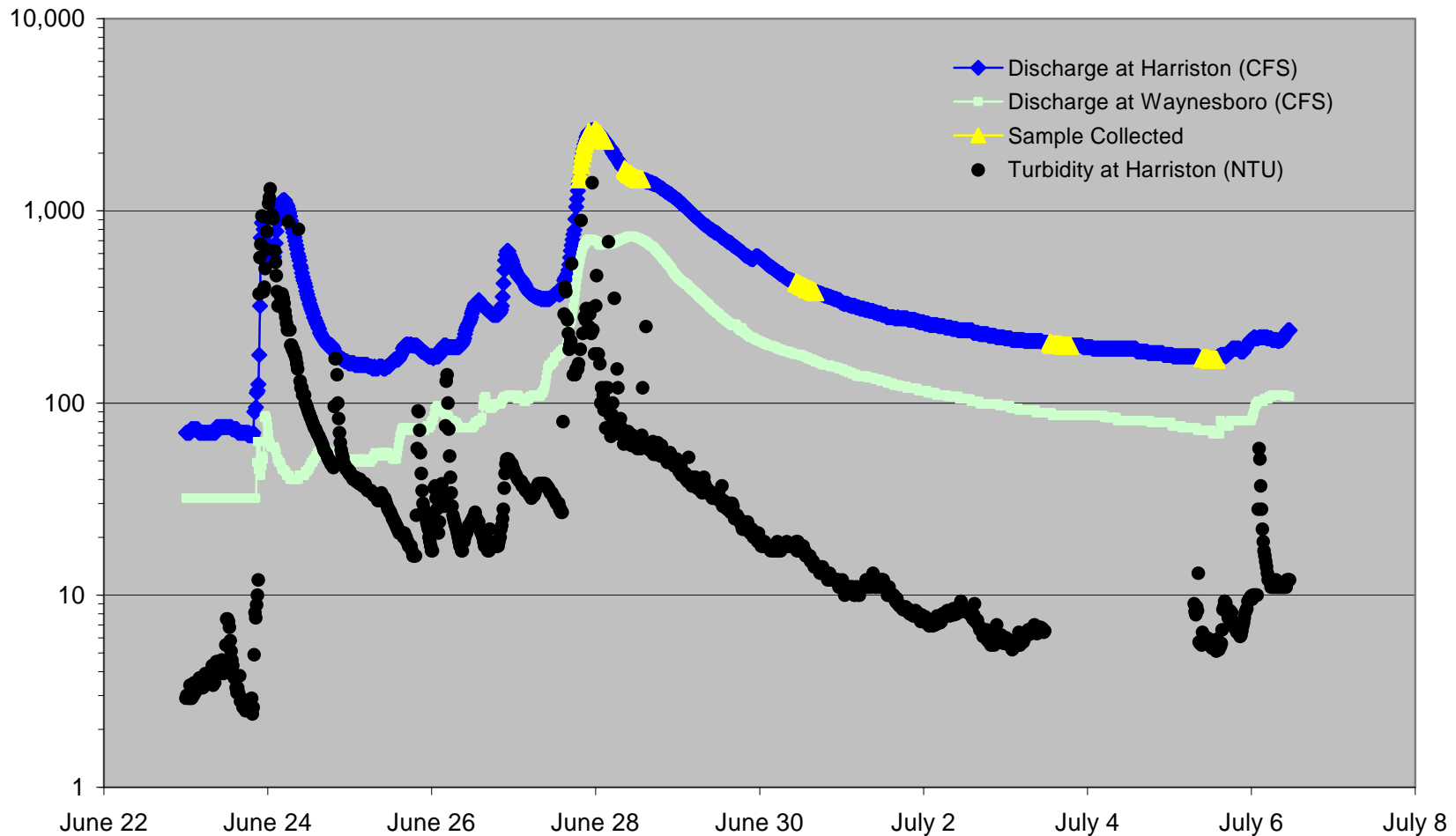
## Sampling Goals:

- One storm event of > 500-cfs flow each season at 7 bridge locations
- Manual collection of discrete surface water samples over various intervals on the hydrograph
  - Baseline conditions
  - 3-hr intervals during rising discharge
  - 1, 3, 5, and 7-days during falling discharge



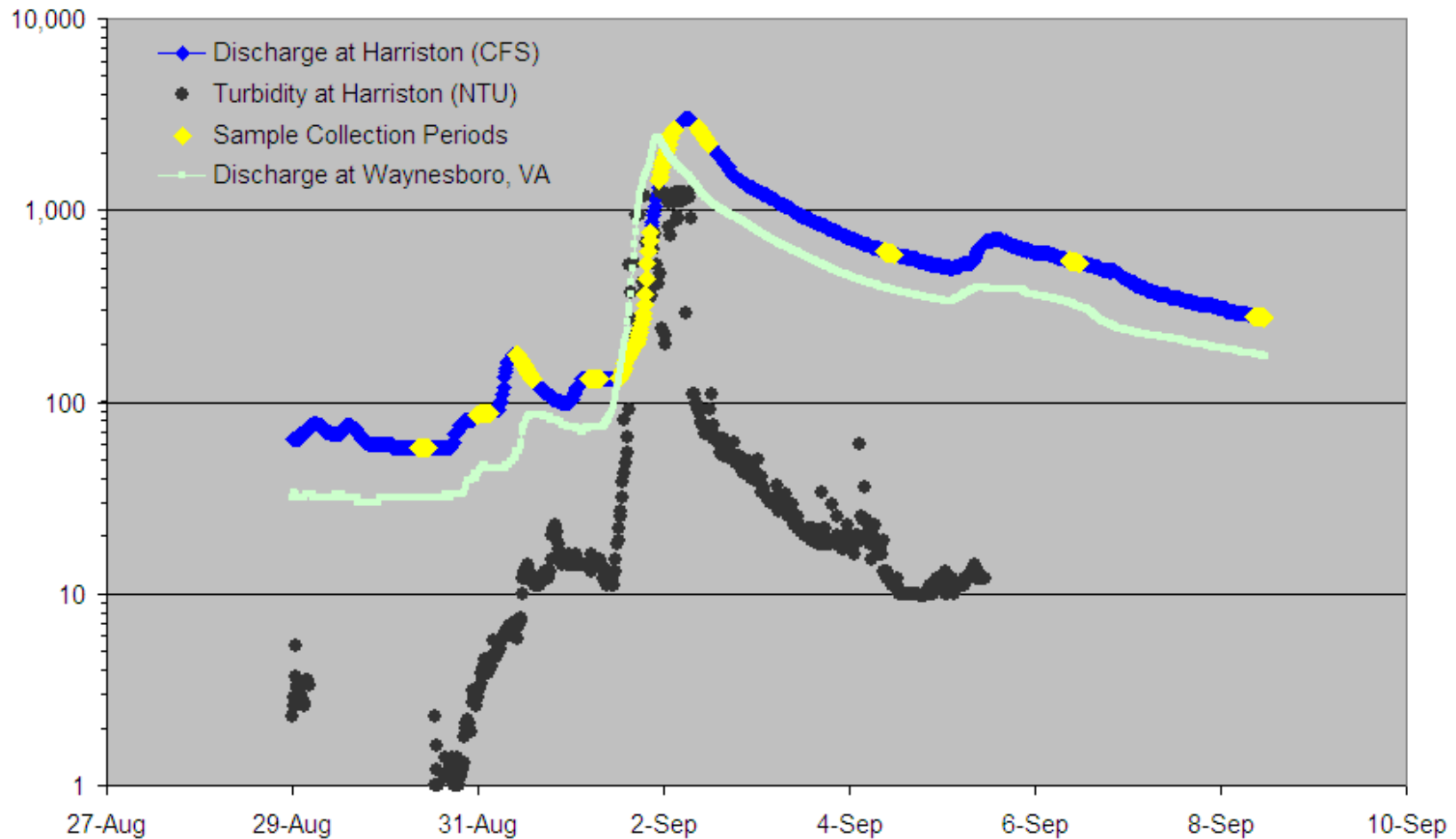
# Storm Event Sampling, June 28

## South River Real Time Discharge and Turbidity During Storm Event Sampling



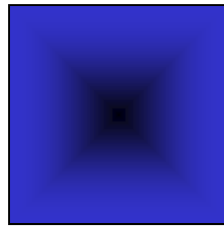
# Storm Event Sampling, September 1

## South River Real Time Discharge and Turbidity During Storm Event Sampling



# Storm Event Data

June 2006



# Storm Event Sampling – Discussion of June Results

## Total Mercury:

- Particulate mercury concentrations in surface water samples increase over river length
  - Concentrations decrease by a factor of ~7 on the falling limb
- Concentrations of total mercury in filtered samples are generally lower than those detected under baseline conditions (flow volumes approximately 20X greater than baseflow)

## Methylmercury:

- Particulate methylmercury concentrations initially high, decrease rapidly on falling limb due to association with particles
- Concentrations of methylmercury in filtered samples increase as water levels decrease due to lack of dilution