Hinkson Creek CAM Science Team
Notes of the August 17, 2015 meeting

Team Members Present: Bob Angelo, Paul Blanchard, Joe Engeln, John Holmes, Jason Hubbart, Robb Jacobson, Dave Michaelson, Barry Poulton

Robb started the meeting by showing a recent photo of Hinkson Creek showing a wave of sediment moving through the system after a storm of roughly 1.2" of rain. He noted that this photo seemed to illustrate the high fine sediment fraction found during the Hooper/Hubbart survey. Jason suggested that the sediment load in Hinkson Creek might be building up after being removed during the 2009-2011 series of wet seasons.

The team then turned to major scientific questions remaining, potential experiments to address those questions and how each might fit our conceptual model. The following list includes the potential investigation. These are not in any priority order, but roughly follow the discussion with some changes made to group similar topics or techniques.

a. To what extent do bedrock control and backwater from the Missouri River (New and historical) influence flow and habitat availability? If there a break in the H/H data that show this? What about these data combined with Robb's work on the Missouri River?
b. Can the Kansas tolerance value be applied to Hinkson Creek to suggest some potential impactors? (After a good discussion led by Bob, who has used this method, it was decided that this was unlikely to be fruitful.)
c. Could the current invertebrate data be examined to determine the relationship between substrate type and water quality as indicated by the species data? Similarly, could we split these out by habitat type to examine possible stressors?
d. Would placing rock baskets in the creek at carefully selected locations provide information to help separate out some of the potential chemical impactors?
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f. Would placing Semi-Permeable Membrane Devices (SPMDs) in the creek at carefully selected locations provide information to help separate out some of the potential chemical impactors?
g. Would it be productive to pick one or more habitat types (pools or riffles were mentioned) and compare sites based on fine substrate present?
h. Should we examine dissolved oxygen in pools to test for stratification?
i. What could be learned by doing a low flow survey for factors such as DO and temperature?
j. What could be learned by doing a synoptic survey at selected sites for short periods during low flow examining pH, DO and taking grab samples for water quality? Compare based on or control for canopy cover and other factors?
k. What could be learned from the data from Jason's monitoring network looking at longitudinal variations as a function of storm event, base flow, diurnal variation, etc.? Which data are most likely to be informative (nitrogen, phosphorus, temperature, chloride, pH, etc.)
l. What could be learned about sub-basin and longitudinal variations by focused short term examinations of factors up and downstream of major tributaries?
m. What do we know about the locations of storm drains in Hinkson Creek and its tributaries? How might these, particularly if their drainage areas are known, be combined with the H/H data to inform future experiment design?

The minutes from the previous meeting were approved.

Robb will invite Garth Linder to our next meeting to present some of his work on urban streams.

Erin filled the team in on the event for Mark Hague and noted that their presence was not required.