Hinkson Science Team Meeting Minutes

A meeting of the Hinkson Creek Science Team was held on May 4, 2021, from 3:00 PM to 5:00 PM via webex call.

Science Team Members

Name	Organization	Present/Absent for Meeting
Catherine Wooster-Brown	U.S. Environmental Protection Agency	Present
Paul Blanchard	Missouri Department of Conservation	Present
Robert Voss	Missouri Department of Natural Resources	Present
John Holmes	Allstate Consultants	Present
Robb Jacobson	U.S. Geological Survey	Present
Dave Michaelson	Missouri Department of Natural Resources	Present
Dan Obrecht	University of Missouri	Present
Enos Inniss	University of Missouri	Absent
Barry Poulton	U.S. Geological Survey	Present

Other People in Attendance: Tim Rielly, Lynne Hooper, Ted Haeussler, Sean Zeiger, Nicki Fuemmler, Jon White, Michele Woolbright

Minutes

The minutes for April 6, 2021 were approved.

Discussion Items

1. Follow-up discussion to All Teams Meeting.
    - Presentations went well.
    - Good to get feedback on road salt study
    - Network of conductivity meters
    - Funding cycles, RFP?
    - Solicit feedback from action team and stakeholders
    - Discussion on impervious surface, stormwater, and chloride
        i. If a chloride experiment/study were to move forward, now is the time to initiate the process in order to have project ready to go next winter.
        ii. Is it best to focus on the experiment, which would provide feedback on how BMPs might reduce chloride inputs into Hinkson Creek? Or should the focus be

on deploying conductivity probes to get a better handle on spatial and temporal variations and possibly identify hot spots?

iii. Managing chloride once it is on the ground seems difficult. A focus on application maybe be more effective in reducing loads to the creek. Involve salt applicators? It seems the State, County, City and University are regulating/minimizing applications due to cost. Private applicators and homeowners may be the folks to focus on. Partner with private applicators for the salt experiment?

- John Holmes calculated impervious surface area: 6370 Acres
  i. Roofs: ~2,139 acres
  ii. Roads: ~1,712 acres
  iii. Other Impervious Surface ~2,515 acres

	Acreage	% of impervious	% of watershed
Buildings	2139	33.6	3.7
Roadways	1712	26.9	3.0
Parking Lots, Sidewalks, Driveways	2516	39.5	4.4
Total	6367	100	11.1

2. Presentation by Sean Zeiger: Measuring and Modeling sources of Water Quality Impairment in Hinkson Creek
   - Focus on stream flow and environmental flows
   - Hydrologic modeling, isotope analyses
   - Soil and Water Assessment Tool (SWAT) modeling
   - Landuse changes and sediment transport
   - Previously collected data show a parabolic curve for many parameters (TSS, TP, embeddedness, etc.) with a decrease from upstream site 1 to site 2 and 3, followed by increases at sites 5 and 6.
   - Agriculture landcover is highest at site 1 with declines going downstream, while urban land cover is low upstream and increase from sites 3 to 5.
   - Differences among up, mid and downstream reaches. Differences include geomorphology, inputs/loads, transport, embeddedness, etc.
   - Width:Depth ratio in stream changes where Flat Branch joins the Hinkson. This is slightly upstream from where back-watering from Perche Creek occurs.
   - Has some projects/grants that he is working on. Looking for collaborators who have interest in looking at the ecological responses in the stream, as well as folks interested in helping him chase down storms for monitoring.
   - Hydrological data may help tease out some of the results found in the Geosyntec data mining report in terms of invertebrates dealing with hydrologic stress.
   - Letters of support for projects/grants would be appreciated.

Next Meeting

The next meeting for the Science Team is currently scheduled from 3 pm to 5pm on June 1, 2021, via webex call.