



# *Hinkson Creek*

## Collaborative Adaptive Management Action Team

### Early Action Items

#### **Current Education and Support Activities**

1. Timeline of major events in Hinkson Creek watershed since the Creek was listed in 1998. This timeline will include positive and negative changes to the creek and community. The timeline will be displayed on the Help the Hinkson Website. It is expected that this timeline will be completed by January 2013.
2. Virtual Tour of Hinkson Creek - A power point presentation will be finalized by September 2012. This will be presented to the Stakeholders and made available on the Help the Hinkson Website.
3. Maps and GIS layers: lidar and 2 foot contour maps will be made available to Science Team and Action Team members.
4. Development of Conceptual Model – The Science Team has developed a draft conceptual model this will be used as a tool to identify stream processes and prioritize mitigation activities.

#### **Proposed Surveys and Assessments:**

1. Physical Habitat Assessment – This work has been identified by several members of the Science Team as an essential first step. Currently, both biological and chemical parameters are measured on a regular basis within Hinkson Creek. However, physical attributes that influence or provide food and cover for macro invertebrates and fish have not been thoroughly investigated. These parameters would include sediment embedment, pool riffle sequencing, channel width to depth ratio, stream bank stability and vegetation, riparian corridor width and human disturbances. Science Team members will identify parameters, sampling locations and budget needs. Optimistically, this assessment could start as early as Spring 2013.
2. Public Perceptions Survey – in 2005 a baseline survey of 10,000 residents in HCW was conducted with 46% response. The survey results indicated the public had a high level of concern about increasing development, with very little knowledge about water quality, and causes of pollution. Since then the City/County/University have initiated numerous educational programs, clean-ups, ordinances, etc. If we replicate the essential items in the previous survey we may be able to determine the following:
  - a. What support do the elected officials have among the community members to direct funding and projects in the Hinkson Creek watershed?
  - b. What's the change in attitude and awareness after 7 years?
  - c. What items are still difficult for the community to understand? (This will help focus future educational activities.)

It is expected that the development of the survey, mailing, analysis and reports will take a total of 6-8 months at a cost of \$30,000 in materials. This does not include staff time.

3. Compilation of body of knowledge, identify data gaps. Several agencies including the University of Missouri, EPA, DNR, MDC and USGS have conducted scientific studies in the Hinkson Creek watershed over the past 30+ years. Some of the results are easily accessible in journal articles or state databases. However, much of the data exists as gray literature or theses. Since the ScienceTeam is a volunteer group, assistance is needed to help develop a database of known studies, review pertinent information to evaluate the relevance of previous studies and present findings to the ScienceTeam. This will help the Science Team prioritize additional focused studies to increase understanding of Hinkson Creek ecosystem processes.

### **Potential Construction Activities:**

Forum Nature Area (First focus on the area near Forum Boulevard, south of the parking lot.)

Possible Work: Enhance wetlands, re-establish bottomland hardwood forest, spread flow from small channels over floodplain areas, install step pools.

Stream Benefits: Flow modification, pollutant removal, riparian corridor restoration.

Forum Roadside Channel, west side of Forum Blvd., just south of Hinkson Creek

Possible Work: Install step pools.

Stream Benefits: Flow modification, pollutant removal, reduce sediment to stream

Moon Valley Area

Possible Work: Re-establish or widen bottomland hardwood forest next to creek, install wetlands, spread flow from small channels over floodplain areas. stabilize stream banks.

Stream Benefits: Flow modification, pollutant removal, riparian corridor restoration, stream stabilization.

Landfill Property

Possible Work: Re-establish or widen bottomland hardwood forest next to creek, install wetlands, demonstrate agricultural soil improvement methods.

Stream Benefits: Flow modification, pollutant removal, riparian corridor restoration, stream stabilization.

Oak Forest Subdivision, Existing Detention Basins

Possible Work: Install valve system to improve performance, install step pools.

Stream Benefits: Flow modification, pollutant removal.

Providence and Elm Trash Collector

Possible Work: Install trash collector.

Stream Benefits: Trash/debris removal, pollutant removal.

Various Small Wastewater Treatment Facilities

Possible Work: Remove small wastewater treatment facilities and connect to sewer system.

Stream Benefits: Pollutant removal.

**Advance Understanding:**

1. Effectiveness of current ordinances and policies.
  - a. Post Construction Best Management Practice effectiveness
  - b. Stream Buffer widths
  - c. Open bottom culverts/bridges
  - d. Evaluate Scoring Matrix for Best Management Practices
  - e. Study area soils more thoroughly to make modeling more accurate and make efficient soil improvements

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