HINKSON CREEK COLLABORATIVE ADAPTIVE MANAGEMENT
ACTION TEAM / SCIENCE TEAM
Meeting Minutes
January 18, 2013
9:00 a.m.
MU General Services Building

Action Team Members Present: John Glascock, Larry Hubbard, Erin Keys, Tom Ratermann, Melissa Scheperle, Bill Florea, Todd Houts, Nicki Fuemmler

Science Team Members Present: Bob Angelo, Paul Blanchard, Joe Engeln, John Holmes, Dave Michaelson, Dan Obrecht, Barry Poulton

Staff Present: Mary Ellen Lea, Brett O'brien, Tom Wellman, Ted Haeussler, Sam McCord, Jennifer Dailey

1. **CALL TO ORDER / ROLL CALL**
   The meeting was called to order at 9:02 am by Erin Keys.

2. **APPROVAL OF AGENDA**
   Agenda was approved.

3. **APPROVAL OF MINUTES FROM LAST MEETING**
   Minutes from the previous meeting were approved.

4. **AGENDA ITEMS**

   - **Replacement for Georganne Bowman on Action Team**

   It was announced that Nicki Fuemmeler is replacing Georganne Bowman on the Action Team.

   - **Funding the Habitat Assessment**

   Jason Hubbart has arranged to receive a grant from USGS for $22,000 with the City, County and MU to provide $44,000 in matching funds, material, or labor.

   Larry Hubbard will check status of contract with MoRAP to perform the GIS analysis.

   - **Forum Nature Area**

   Wellman reported that the plan has been modified somewhat based on lidar ground elevation data.

   O'Brien said that Parks and Recreation is okay with the plan as presented so far and that planning work can proceed.

   The next tasks are to apply for a Corps Permit and to apply to Parks and Recreation to conduct a study at the site

   - **Discussion of potential projects in "Hot Spot" study and the City list of Potential Projects**

     Summary

Summarized the "Feasibility Analysis for Retrofitting Stormwater Treatment Structures or Best Management Practices", also know as the "Hot Spot" Study. (Study can be found at http://www.helpthehinkson.org/documents/HCWRPREPORT-REVISED20091130.pdf)

Action Team would like for Science Team to help determine what types of projects are the most worthwhile given what we know about the creek right now.

Science Team would like for the Action Team to give some idea of the replicability of certain types of projects as well as other basic information such as how the different types of treatment practices work.

In general, the group agreed that the various hot spot projects identified in the study would be worthwhile. The basin behind Home Depot seemed to get the most support.

The City's potential project list was discussed. Again, more information on how the types of treatments work along with things like amount of impervious surface (or percent impervious) draining to the site would be helpful for the Science Team.

The group discussed whether it was better to have small, distributed controls like bioretention, or large projects in or near the floodplain like wetlands. The consensus is that both are probably needed.

Monitoring was discussed a lot. Some individual practices have been studied in other parts of the country and those results should be valid here for certain types of them. Others, like those that depend on specific soil characteristics (such as rain gardens) may need more study here in typical development situations, such as those where the topsoil has been removed.

Rather than monitoring of individual practices, some suggest that monitoring of a sub-watershed where practices are planned would be more worthwhile as well as easier. The hard part would be to have a high level of confidence that a project or group of projects would actually be installed so that monitoring a pre- installation condition would not be wasted if the project(s) did not go forward. Depending on weather or climate conditions, 3-5 years of pre- installation monitoring might be needed. Others suggested depending on modeling for the pre- installation condition.

The Science and Action teams will meet separately to discuss these issues further and will try to have another joint meeting in March. In the meantime the Action Team will try to answer some of the basic questions about treatment practices and will continue to work on the potential project list to make it more useable.

Full Minutes

The discussion opened with the "Feasibility Analysis for Retrofitting Stormwater Treatment Structures or Best Management Practices" commonly known as the "hot spot" study. A summary of the history of the Hot Spot area study was presented. The study can be found at http://www.helpthehinkson.org/retrofits.htm

The study resulted from a 319 grant to the County, and a local engineering firm was hired to do the study

The study identified numerous potential projects in the "hot spot" area, which is roughly an area along both sides of Highway 63 from just north of the I70 interchange to the Broadway interchange and includes the commercial area on the west side of Conley Road.

The study identified project such as the stabilization of drainage ways, extended detention basins focused on small storms (~1”-1.5”), stream buffer enhancement and check dams in a channel to slow water.

The study was preliminary in nature. Configuring the basins that were proposed will require careful attention to detail to prevent resuspension of pollutants in large storms.

The area engineer for MoDOT was cautiously positive about some of the improvements within MoDOT right of way with caveats that roadside hazards cannot be introduced.

It was noted that one of the treatments, behind Wal Mart had already been constructed. The developer installed two extended detention wetlands to address redevelopment as well as new sites.

It was noted that there are some things that could be done in the hot spot area that are not mentioned in the report. The buffer along Hinkson through the golf course could be re-established where trees were removed, large scale soil and vegetative improvements could be implemented in right of way, the City has plans for a project in the Quail Drive area which connects directly to Hinkson through a pipe under the 63 fly-over, which is in the “hot spot” area.

The group in general seemed interested in pursuing the basin(s) behind Home Depot that were mentioned in the report. Home Depot may have some sort of environmental stewardship program and might be willing to work on that. There was consensus that the other “hot spot” projects looked good, but the Home Depot might be the most beneficial and have the fewest hinderences to implementation.

There was some concern that work done to improve I-70 would eliminate water quality work if it was done too close to the intersection of 63 and 70. Glascock noted that that work was a long way off and that it was unlikely to have a significant affect on the proposed projects. He noted however, that the work to connect Conley Rd and the Business Loop would likely have an effect on the ability to monitor improvements if the proposed monitoring site were kept on the west side of the 63 flyover where the main channel from the 63/70 intersection flows.

A discussion of projects in general ensued including the list of potential projects the City has compiled. (It would be helpful to estimate percent impervious surface contributing to the projects on the list.)

The Action Team is still struggling to determine which projects or types of projects to focus on first. There is a concern that money, time, and effort will be spent on projects that are then deemed to have been off-point.

Engeln noted that there was a lot of interest in rain gardens.

The group discussed whether monitoring is needed on all the types of projects. It was noted that there is a lot of research out there about many of the types of treatments and that much of this could be. For instance, a bioretention cell, being a filtration device (with an underdrain) is not as dependent on local conditions, whereas a rain garden (with no underdrain) is very dependent on soils. So one has to be more careful about whether monitoring data from another locale is applicable. It was noted that most of the rain gardens constructed locally have been on soils that were not subjected to modern development methods where top soil is stripped from the site and only a little is brought back to establish landscaping.

Hubbard noted that for the University it makes the most sense for projects to be implemented as redevelopment takes place on campus. He pointed out that a rain garden had just been constructed in the animal science area and that it might be a good candidate to monitor to determine how rain gardens do on tight soils. He said a 6-acre tract near Columbia Regional would likely be developed soon and might present an opportunity to install treatments.

It was noted that one criteria by which to judge a project is replicability. If a project cannot be repeated often enough to have a positive effect at the watershed scale then it may not be a good choice to focus on.

Some of the members asked for a synopsis of some of the project types. It was explained that bioretention cells and rain gardens generally treat small area (up to 5-10 acres) and thus can be used up-slope in the watershed, and that a lot of them would be necessary to start making an observable difference. Wetlands and extended detention basins treat much larger areas (maybe as much as 1 square mile for wetlands) and generally need a lot of room. It was noted that there aren't that many places in the developed parts of the watershed to implement these. (Editor's note: Coming up with a summary of common BMPs will be an agenda item at a future meeting.)

It was noted that the small treatments like bioretention cells can be good downstream of developments like filling stations to catch and hold accidental spills, limiting the damage caused further downstream.

Action team members asked asked whether there was a preference for small distributed projects in the upper areas of the watershed or large projects near the creek where water. Many of both action and science team members thought that some of all the above types of treatment would be needed.

Also action team members asked if there were particular questions that the science team wanted to answered through installation and monitoring, and if the science team had an opinion about what types of treatments would provide the best benefit to cost to address Hinkson issues as we understand them today.

Engeln noted that the habitat assessment will help frame the questions that the science team will have.

It was noted that it is difficult to get pre- project data because of the uncertainties involved and that it would be easier in many cases to compare modeled results to actual results. Blanchard pointed out that monitoring pre- and post- improvements in a subwatershed might be more beneficial than monitoring individual practices.

It was asked whether extended storage of the water quality storm (and/or up to the one-year storm) is really beneficial. This is important because there are several ponds or lakes which could possibly be improved to accomplish this in exchange for the City doing some maintenance on the dams. The group agreed that whether the pond retrofits are worthwhile depends on the percentage of the watershed treated.

Wellman pointed out that the County House branch may be a good one to set up monitoring and then start a program to retrofit BMPs and see what happens. He said that the retrofits may help address some flooding issues in County House as well, and that this makes it an attractive watershed to focus on. (Editor's note: There are other watersheds where this would be true.) He spoke about some of the projects that could be included in the retrofits including extended detention at Health Dept, replacement of rusted out pipe with system that would increase time of concentration, and tree wells that would also function as traffic calming. One drawback would be that County House is pretty far down in Hinkson watershed. Another is that County House watershed is primarily residential and thus not as typical of some areas that we know need to be addressed.

Other potential project areas discussed were:

Moon Valley Lake – we need a site visit to determine the existing condition and see if there are things that could be done.

Landfill – a wetland will be installed in the floodplain just west of the material recovery center, stream buffer enhancement and soil improvement are also being discussed

Oak Forest Detention retrofits – This is still being pursued by the City.

The Hinkson floodplain area south east of animal sciences on campus – some buffer and riparian enhancement may be possible.

5. ANNOUNCEMENTS / COMMENTS FROM ACTION TEAM

None.

6. COMMENTS OF VISITORS

None.

7. AGENDA ITEMS FOR NEXT MEETING

Custodian of Records

Hinkson Timeline

8. UPCOMING MEETINGS

Stakeholder - January 31th, 4pm, Boone County Government Center, Room 301

Action Team – February 15, University General Services Building

Action / Science Teams Joint Mtng – March 13, University General Services Building

8. ADJOURN

Meeting adjourned at 11 am