

Technical Advisory Committee for the Raccoon Creek Partnership

Meeting Minutes – 11/03/2010

In Attendance: Amy Mackey (RCP), Natalie Kruse (RCP), Mary Ann Borch (ODNR-DMRM), Mike McAvoy (ODNR-DMRM), Regan Welch (ODNR-DMRM), Jen Bowman (Ohio University), Sarah Landers (RCP), Kara Walton (RCP), Brian Blair (RCP), Constance White (ODNR-Division of Soil & Water), Kaabe Shaw (ODNR-DMRM)

The meeting was called to order at 9:05am.

Minutes from the previous TAC were approved with no additions.

Agenda Item #1: Coordinator Updates

Amy Mackey reported that the Pierce Run, pre-construction MAIS samples have been identified and will be entered into NPS. Also, identification of the 2010 collected MAIS samples has begun and should be completed by year's end.

Sub-Issue: Fish Sampling

Fish sampling for 2010 has gone well, however, due to Kelly Capuzzi's illness, boat sites were unable to be sampled this year.

Jen Bowman asked how many fish sampling sites remained to be done due to lack of boat availability. Amy Mackey replied that she believed there were 3-4 sites remaining. Jen then suggested that MBI might be an option for procuring a boat for these sites. Mitch Farley said that this may be a lease option and then added that ODNR had an old backpack shocking unit that may be able to be repaired to fulfill this year's sampling. Amy Mackey said that this would be a good option, however time was running short to get additional 2010 sampling done.

-End Fish Sampling Discussion-

Returning to general updates, in fulfillment of a STEM grant received by Ohio University, RCP spent two days hosting field trips for Vinton County High School students where they learned biological sampling techniques for macroinvertebrates and fish.

A reminder was given that Pete Thompson with the Ohio EPA is still looking to clean up tire dump sites in the area if anyone knows where any can be found. Mitch Farley suggested the Trimble Township Community Forest, where a large number had been collected. Amy reminded everyone that 100 tires in a location is the key number to getting EPA to come collect them.

Mitch Farley interjected to ask if the East Branch Ph. III grant was being administered through Ohio Valley RC&D because he wanted to make sure the proper agreements had been sent. Amy Mackey confirmed that OVR&D were administering this grant.

Sub-Issue: Lake Milton

Amy Mackey reported on the results from her recon of the Lake Milton slag bed from the previous day. The pH from Hothouse Lake was still in an acceptable range, however the flow was extremely low. Mitch Farley commented that as

Lake Milton is a small watershed, the need to husband water was crucial to maintaining a consistent discharge from the treatment system. Mike McAvoy confirmed that this was considered a priority when the fall rains begin.

Mitch Farley added that RCP should keep a close eye on the pH coming out of Hothouse Lake & Little Raccoon Creek so that a temporary fix can be instituted if necessary until slag bed flow can be regulated.

Mike McAvoy added that the installation of a permanent wier for measuring flow at the sediment pond is also part of upcoming maintenance plans for Lake Milton.

Kaabe Shaw state that he would be keeping an eye on pH through the system and will be ready to move with a hydrated lime dispersal into the stream if necessary. Mitch Farley asked the group if a purchase order should be prepared in advance for this plan. Mike McAvoy suggested that this would be advisable since significant precipitation would result in an acid slug into Hothouse Lake that the slag bed would not be prepared to treat.

Mitch Farley agreed and advised Kaabe Shaw to move ahead with cutting the purchase order for lime.

Mary Ann Borch asked about the possibility of using an alkaline briquette rather than the hydrated lime. Natalie Kruse discussed a situation where she had observed the use of briquettes for this manner of treatment and that they had performed poorly for such an application.

Kaabe Shaw added that Ben McCament (ODNR-DMRM) and Regan Welch had suggested a course of action which included shutting down the valve exiting the slag bed along with possibly capping the outflow from Lake Milton. This would retain some water in the slag bed as well as allow the water levels in Lake Milton to rise. Kaabe is planning a trip to Lake Milton to attempt to close the broken valve exiting Lake Milton and will assess the possibility for further action while on site.

-End Lake Milton discussion-

Returning to general updates, Mitch Farley asked about the quality of the recent NAAMLN conference attended by Jen and Natalie. They reported that there were some interesting presentations and that papers from the conference were available on a CD they brought back with them if anyone is interested.

Sub-Issue: Harble-Griffith

Amy Mackey reported that pre-construction sampling has begun for the Harble-Griffith project and that the project QAPP has been submitted to the Ohio EPA for approval.

When asked about the timeline to begin construction on site, Mike McAvoy reported that unfortunately no clay or quality cohesive soils had yet been found on site. This could create a situation where the coal spoil on site could be covered but would not sheet water well enough to prevent AMD seepage from the site. If no cohesive soils can be found on site, the use of costly FGD solutions or the addition of treatment systems on site may be necessary.

Kaabe Shaw added that the historic soil survey of the area does not show evidence of cohesive soils or clay in the area, however exploratory drilling is still underway to search for acceptable soils. Decisions regarding further planning for the project will depend on the outcome of this drilling.

-End Harble-Griffith Discussion-

Returning to general updates, Mitch Farley asked if a map was available of the upper portion of West Branch as he was interested in adding a sample site to the area north of Illesboro to make sure a previous project was performing

adequately. No one could recall the location or name of the project, it was agreed that Brian Blair would locate a map of the area so that an investigation of this project could move forward.

Agenda Item #2: Mulga Run AML Enhancement

Kaabe Shaw reported that, with the assistance of RCP, reconnaissance and low flow sampling had been completed for the possible AML enhancement in the Mulga Run sub-watershed. Once high flow samples can be collected, an analysis of the area will be completed to determine if an AML Enhancement is appropriate for this location.

Mitch Farley asked if loadings would be examined before sampling is complete. Kaabe Shaw replied that this would be done adding that late November early December 2010 looked likely for completion of sampling on this project.

On the subject of Mulga Run, Constance White remarked that the wetland enhancement at the existing Mulga Run project site was working very well as a sequestration site for metals.

Sub-Issue: Flint Run East

Replying to Constance's observation regarding Mulga Run, Mitch Farley suggested that the wetland there could serve as a good example for possible wetland installation being investigated at Flint Run East. He also suggested that the benefit of a wetland at Flint Run East should be reexamined with an eye toward the benefit, or possible lack of benefit, that Little Raccoon Creek would receive should a wetland enhancement move forward. Kaabe Shaw agreed and added that a meeting regarding this issue is being planned within ODNR-DMRM.

Jen Bowman added that the overall discharge of the Flint Run East project is still being monitored at site FR0126 and this data is available through NPS. She continued, noting that acid load reduction from the project has been in decline for the past several years. Mitch Farley proposed that the slag bed may be in decline.

Mick McAvoy suggested the possibility of replacing the Flint Run slag and depositing the used slag into Hothouse Lake to use up its remaining alkalinity.

Regan Welch further proposed the need to pipe the steel slag bed discharge down to the receiving stream rather than having it discharge into a limestone channel as it does now. This would prevent the alkalinity from the slag bed from being wasted before entering the receiving stream.

Mitch Farley asserted that there was a need for an analysis of the Flint Run East system to determine where the project is performing below expectations. Mike McAvoy added that if such an analysis is done quickly, its findings could be incorporated into the 2011 maintenance plan. Brian Blair agreed to carry out the analysis with all possible haste.

Regarding overall project maintenance, Amy Mackey discussed her findings over the past year regarding flushing the slag bed valves for the site. The valves were last flushed six months apart and no material was observed to have built up during that period. Amy proposed that in the future, the slag bed only be flushed once yearly due to lack of need and to prevent unnecessary exposure of the system to outside air which can cause the pipes to clog.

Agenda Item #3 – Carbondale

The issue of the accidental loss of treatment from the Carbondale doser this past Summer was revisited with an eye toward preventing future incidents.

Kaabe Shaw summarized the situation as a four to seven day gap in treatment when the doser ran out of alkaline material. This resulted in a significant decline during biological assessment of Hewett Fork for 2010. The floor was opened to the committee for suggestions on prevention.

Suggestions included:

- A.) Have a minimum of one (1) truckload of material in the doser silo at all times.
- B.) Nate Schlater should keep in contact with Amy Mackey regarding his ordering schedule in order to provide back-up if needed.
- C.) Do not completely clean residual material from mixing channel around doser, this could provide additional buffering in the event of doser inoperability.
- D.) Deploy a permanent sonde in the area to record irregular pH readings
- E.) Install a back-up liquid drip system that would activate if treatment stopped.

After considerable discussion of the feasibility, cost effectiveness, and necessity of all suggestions it was decided that the best course of action would be to adopt A & B because, as Mitch Farley commented “If you never allow less than one load of material in the doser, such problems will not happen.”

Kaabe Shaw added that the installation of a permanent flow measurement device for the doser discharge was forthcoming with more information to come in 2011.

Sub-Issue: Trace Run

The possibility of installing a second, smaller doser to treat Trace Run, near Carbondale, was discussed. Ben McCament had performed an analysis of the impact of Trace Run on Hewett Fork and reported a significant acid load increase coming from Trace Run.

Jen Bowman added that the acid load from Trace Run has a direct correlation with flow rates, high flows measuring alkaline and low flows measuring acidic.

Mitch Farley offered an assessment of the situation commenting that limited funding makes it necessary to examine the original intent behind the Carbondale project, which was to prevent Hewett Fork from negatively impacting Raccoon Creek. With this goal already achieved, the state may not be willing to take on perpetual responsibility for a second doser on Trace Run with the new goal of remediating longer stretches of Hewett Fork.

Mike McAvoy offered an alternative plan by proposing the installation of passive systems to increase the retention time of water in Hewett Fork (limestone berms, etc.). This would be an easy way to offer some additional treatment to Hewett Fork without excessive cost.

Agenda Item #4 – Current Projects

Sub-Issue: Pierce Run (Piersky)

Barb Flowers reported that the project was officially done and the contractor was finished working at the site. The access road into the site has been lowered to return the creek to its natural flow patterns.

Addressing the functionality of the project, she added that the freshwater storage pond does not hold water preventing to project from working. As feared, the soils on site, even when mixed with lime kiln dust, are insufficient to create an impermeable dam. As a result, most water is sinking into the ground and passing under the dam.

The present plan to fix this problem is to install a Bentonite slurry wall in front of the dam in 2011. This will prevent the water from seeping under the dam and trap it in the holding pond.

Barb Flowers added that we may see some water in the holding pond over winter but barring an unexpected and unlikely turn of events, the slurry wall will need to be installed or the project will not work.

Mike McAvoy informed the group that bids on the slurry wall will be gathered over the next six months and design work will include addressing the pond side-wall permeability as well.

Amy Mackey reported on the Ohio EPA 319 grant, which funded the project, recalling that the grant had been allowed two extensions, but was denied a third. The grant included post construction monitoring and a post construction tour.

Since the project is not currently functional, post construction sampling is impossible, however Ohio EPA will allow the post construction tour as outlined in the grant. The funds allotted for post construction monitoring will have to be returned to the Ohio EPA.

Jen Bowman added that a meeting, later today, with Mike Finney of the Voinovich School is scheduled to determine the exact amount to be returned to the Ohio EPA and to make arrangements for doing so.

Sub-Issue: East Branch Phase II

Barb Flowers reported that some valve issues have been cropping up at the recently completed slag beds that comprise the East Branch Phase II project. Mike McAvoy explained that a valve at the "Forest" slag bed had failed under only four feet (4') of head. He explained that a new valve was being installed and that this was an unusual situation, further failures are not expected.

Amy Mackey expressed concern that some valves were too deep in the ground to be reached by human arms. Mike McAvoy replied that a special handle would be supplied for the sites that would enable proper valve access.

It was further reported that East Branch Phase II was nearing completion and it was expected that all three slag beds would be fully operational by the end of the year.

Amy Mackey requested that the discharge pipe for the Kern Hollow slag bed be extended as it currently does not reach the tributary it should discharge into, falling several feet short. This poses a risk of the loss of alkaline treatment/benefit from the system. Mike McAvoy responded that this would be done.

Sub-Issue: East Branch Phase III

Barb Flowers reported that Phase III was nearing completion with the last major hurdle being the installation of the slag bed liner. Mike McAvoy informed the group that the necessary data has been acquired to begin the installation of the liner and drainage pipes. The liner will be a 20ml PVC material to help prevent drainage from escaping through permeable soils at the site.

Amy Mackey asked about a possible future tree planting at the site as numerous volunteers have expressed interest in such activities recently. Barb Flowers advised waiting until all contractor obligations are complete on site as a tree planting could void contractor responsibility in the event of project problems, even if proven unrelated to any planting.

Mike McAvoy added a suggestion to plant evergreens as deciduous trees can fill slag beds with potentially clogging leaf litter. Mitch Farley also suggested moving any planting fifty feet (50') from slag beds to avoid these problems as well.

Agenda Item #5 – Upcoming Projects

OSM Grants

Amy Mackey asked Mitch Farley if it would be advisable to apply for additional Office of Surface Mining (OSM) grants at this time. Mitch replied that the current OSM grant for East Branch Ph III should be completed first, then another grant could be applied for. It was agreed that the upcoming in 2011 Harble-Griffith project would be a good candidate for an OSM grant once the designs are ready.

Middleton Run

A project in Middleton Run is in the beginning stages, with MSES student Kim Brewster working on it as her leadership project for her Master's degree. Currently waiting on rain to gather more preliminary data as the main stem of the stream is currently dry.

Mitch Farley commented that Middleton Run is currently the biggest remaining source of impairment to Little Raccoon Creek. He added that most possible projects in the Middleton Run sub-watershed would consist of surface mine reclamation and that funding 2-3 projects in the area would be feasible.

Natalie Kruse commented that Kim Brewster is looking at a number of strip pits for potential reclamation. Mitch Farley replied that it would be good to pick one and get moving on mapping, drilling, and getting going on it ASAP. He added that he would like to see RCP working in Middleton Run as its next priority. Amy Mackey replied that Middleton Run and Harble Griffith Phase II were considered top priorities for future projects.

Orland Gob

Kaabe Shaw reported that reclamation of the Orland Gob Pile was moving along smoothly and was set for the 2011 calendar year.

Harble Griffith Phase I – Landowner Concern

Kaabe Shaw mentioned that Dempsey Bailey, one of the landowners in the upcoming Harble-Griffith Phase I project, needed pulpy wood/trees removed from his property prior to construction next year. However, he is having trouble

locating anyone to purchase them from him. Mitch Farley advised contacting a local forester and Mary Ann Borch suggested the Pine Tree Co-Op.

Lake Latrobe

Kaabe Shaw reported that Lake Latrobe was being evaluated for a possible AML Enhancement project dependent on whether sufficient coal is found in the area to make it worth re-mining to the local coal company. ODNR-DMRM has volunteered to perform the necessary drilling to assess coal deposits in the area.

Mike McAvoy added that removal of the spoil dam that creates Lake Latrobe may be able to be done relatively soon. Mitch advised Kaabe Shaw and Barb Flowers to stay on top of any developments with Lake Latrobe taking special note that once the dam is removed will there still be any need for additional treatment.

East Branch Phase I

Mike McAvoy said that maintenance on Phase I systems would be performed where needed and some underperforming systems may be abandoned. Minor work to improve performance would be done on Phase I in 2011 and then, after Phase II has had time to take effect, East Branch as a whole would be reassessed to determine if additional maintenance would even be necessary. Regan Welch added that the plans for Phase I maintenance were ready to go.

Agenda Item #6 – AEP Updates

Jen Bowman reported that she was continuing her work on a biological restoration study with the partnership of AEP. The ultimate goal for this project is to create a model by which the recovery potential of a stream could be assessed.

This study consists of 14 stations which are sampled for a number of criteria. (for a detailed list see appendix A, "Table 2").

Natalie Kruse added that auto-samplers were being deployed to the Waterloo and HF039 sites along Hewett Fork to continually gather data with emphasis on time periods 24-48 hours after a rainfall event. Jen Bowman continued by explaining that sediment data and soil moisture studies were also underway as part of the study. The sediment samples had been collected over the summer but there was difficulty in finding a lab to analyze them. Mitch Farley suggested the ODNR lab in Cambridge, however Natalie Kruse expressed concern that the detection levels for that equipment may not be low enough to satisfy the parameters of the study. The search for an acceptable lab continues.

Regarding biological data for the study, Dr. Kelly Johnson of Ohio University and her students are working on this aspect while Ben McCament prepared the QHEI for the study while still acting as watershed coordinator for Raccoon Creek.

Jen Bowman added that in addition to all of the new data being collected, old data was also being analyzed with an eye toward tolerance values and species diversity.

Chemical sampling is scheduled to continue until June 2011, at that time final results of the study will begin to take shape.

Agenda Item #7 – New Business

Constance White asked about the Raccoon Creek Partnership Board Member who was then announced as Helmut Paschold, a professor of Industrial Health at Ohio University.

Constance White also applauded the Partnership for the outstanding attendance at this year's annual dinner, a record setting crowd of at least 60 people. Jen Bowman and others agreed that a larger venue would be needed for next year's event as folks were spilling out into the parking lot at times.

On a more somber note, Constance White reported that although there were currently 11-12 watershed coordinator grants being reviewed, possible budget cuts could result in only 6-8 approved grants and deeper cuts to 319 programs in the future.

Mitch Farley added that the AMD set-aside program may have less money available than anticipated as well and that prioritizing projects to get the most from funding dollars is critical.

The Next Meeting of the Raccoon Creek Partnership Technical Advisory Committee was scheduled for January 12th, 2011 (Wednesday).

The meeting was adjourned at approx. 12:00pm.

Appendix A: AEP Study Sample Locations/Parameters

Table 2: Hewett Fork Case Study Sampling Locations – 2010

Sampling Site	Site ID	River Mile	Biological Sampling			Chemical Sampling					Physical Sampling					
			MAIS	IBI	ALGAE	LTM	TOX	TRAN	SONDE	AUTO	SUB	QHEI	SHIFT	GAUGE		
Hewett Fork mainstem, dst. of bridge at pulloff along Carbondale Rd.	HF137	RM 12.85	X	X	X	X	X						X			
HF directly upst. Carbondale II	HF129	RM 11.2			X	X	X						X			
Carbondale doser main discharge into HF	HF131	RM 0.1			X	X	X						X			
HF 100' dst. Carbondale II	HF130	RM 11			X	X	X						X			
Carbondale Creek @ mouth	HF120	RM 0.1			X	X	X						X			
HF @ SR. 56 bridge, upst. Trace Run	HF190	RM 10.4	X		X	X	X						X			
Trace Run at wetland discharge next to SR 56	HF110	RM 0.1			X	X	X						X			
HF dst. Hocking along SR 56	HF095	RM 9.8	X	X	X	X	X						X	X	X	
HF SR 356 @ waterloo bridge	HF090	RM 8.3	X	X	X	X	X	X			X		X	X	X	X
New! HF along SR356 btwn HF080 and HF070	HF075	7.2-7.4	X	X	X	X	X				X		X	X	X	
HF @ SR 356 upst. King Hollow Rd.	HF060	RM 6.4	X	X	X	X	X				X		X	X	X	
New! HF along old railroad bed dst. Mud Lick Run	HF045	RM 5.0	X	X	X	X	X				X		X	X	X	
HF at Rockcamp Road	HF039	RM 4.0	X	X	X	X	X				X		X	X	X	
HF at Mouth, Moonville RR bridge	HF010	RM 0.9	X	X	X	X	X				X		X	X	X	X

Biological Sampling

MAIS = family level macroinvertebrate sampling
 IBI = species level fish sampling and QHEI survey
 ALGAE = diatom, biofilm, enzyme sites

Physical Sampling

GAUGE = Rain Gauge station deployed for the duration of the study
 SUB = Substrate samples collect at least once for grain size analysis
 SHIFT = Quantity of shifting/moving sediment tracked for a 5 month period
 QHEI = Qualitative Habitat Evaluation Index survey conducted once

Chemical Sampling

LTM = chemical sampling monitored quarterly,
 TRAN = chemical sampling at transition zone sites monitored monthly
 AUTO = chemical analysis from auto-sampler sites monitored twice/yr
 SONDE = Datasonde will be deployed at these sites twice/yr for a 2 months
 TOX = Sediment samples collect at least once for toxic metal analysis