



Upper White River Watershed Alliance, Inc.

November 15, 2007

The meeting was called to order at 2:08 PM Thursday, November 15, 2007. Those present were as follows: Mr. Kenton Ward, Hamilton County Surveyor; Mr. Robert Thompson, Hamilton County Surveyor's Office; Mr. Greg Hoyes, Hamilton County Surveyor's Office; Ms. Jill Hoffman, Empower Results; Mr. Trent Pell, McCog; Ron Lauster, Marion County Soil & Water; Heather Williams, AMEC; Mr. John South, Hamilton County Soil & Water; Mr. Angelo Dattilo, Williams Creek; Mr. Jason Armour, Town of Fishers, Mr. Zach Windling; Mr. Eric Beiker, Town of Westfield; Mr. George Peregrin, SAMCO; Mr. Jerry Bridges, McCog; Ms. Summer O'Brien, R. W. Armstrong; Mr. Jim Farr, Davey Resource Group; and Mr. Kevin Tungesnik, Spencer Restoration Nursery.

Review of Minutes of September 29, 2007:

There were no changes made; the minutes were approved.

BMP Toolbox:

Hoffman stated that the Technical Committee is working on what was originally called a BMP Toolbox. It's more than a toolbox now and is now the Stormwater Resource Center because I would like the website to take off in that way. I sent an email out asking for photos and received a big response on finding locations where BMPs are successfully on the ground or growing and plants that look good and are working for water quality. How does this Committee foresee these things coming out on the website? Is it a matrix table with addresses or a map with locations or photos linked to locations or just photos by BMP where you want to see a full picture library of rain garden photos? How can we put the locations up? Do we have privacy issues with that? Are most of the locations on public properties? How would this physically work on the website? What picture would you want it to take?

Thompson stated that if you're describing a BMP and what it is, a photo of what it looked like installed and functioning would go along with that.

Hoffman asked if Thompson was referring to a photo library just by BMP? Click on the BMP and get 20 pictures of a layout?

Bridges stated that you should have a fact sheet on each practice. Install them and lay them out the same; some graphics may force you to do it. There are specific things here like volume reduction, cold water stream discharge, etc. If you could put a fact box along with that on the sheet it may be that you have to have more than one sheet for some of them. We've done some things that are different, but we would be talking about the same type of situation where you have multiple things you're trying to display and staying with a consistent format so a user gets used to it. Include your links on those fact sheets and if it's digital it's a live link as a rule, if not they can still go to it, but if you can put it all on one or two sheets along with some narrative and pictures; maybe you have two pages in the back side that have examples with where they're at. If you see something you really like and the only pictures we had in our photo catalog were from

Connecticut and somebody plans a trip to Connecticut and will be within 20 miles of this place and plans to drive out and see it; they may get their own photos for their own purposes.

Hoffman stated that one suggestion was one pagers and I pushed that off a little bit because we have the State manual out now which has some BMP information. It wasn't very user friendly so people wanted some tear away sheets that would have that similar structure. Part of that was getting some of these good local photo examples that people could see which would be quicker than working on the actual sheets that have all those different parameters. Having live links back to the pictures is a good idea. Some suggest organizing by type of BMP and having it available on the website; how about the locations of those BMPs. Those of you that build them, are you willing to provide locations of good examples of BMPs?

Wendling asked how many examples Hoffman anticipated putting into this webpage.

Hoffman stated that she is not sure.

Wendling stated that from a presentation point of view Google map has an application where you bring up watersheds that have flags everywhere and color code those flags depending on what type of BMP.

South stated that this would allow you to pick two or three in one area and go out to look at them versus not knowing if they were already there.

Thompson asked if we would link these to Yahoo Map or Google Map because we don't have an Upper White mapping system. Some of the County's do have GIS at each site.

Wendling stated that it would probably be quicker to use the Google Maps and it would be less support in terms of keeping it up to date because if you have a GIS site there's a lot more behind the scenes.

Hoffman stated that she would like as many examples as she can get from Randolph County to Morgan County.

Peregrim stated that it may not be possible at first, but you're looking for the best one. Along those same lines it may not be a bad idea to get a construction phase, finish phase and potentially even some examples of what not to do or ones that haven't worked to the extent that you want to go that far because problem areas and installing some of these or maintaining some of these; what to avoid and what not to do. It may not be the first thing you come out with, but may be something you scroll through.

Thompson stated that in our fact sheets we talked about advantages and disadvantages of each BMP and that could be identified there.

Hoffman stated that she needed this Committee's help collecting good photos and local examples. Please send me any pictures you believe to be good examples and a wide range of examples.

Bridges stated that you have known locations in some of the counties to the east of us; at least get us to them and I'll volunteer to get a camera out and photograph them. I have pictures that are not accessible to the public, but would be valuable to have as examples; you would have to have private listed on them though.

Datillo stated that we may want to get universities such as Ball State involved. The students could take care of the BMPs and photograph practices.

Thompson stated that Ron Spangler at Ball State, LA Department has just in the last year started introducing his students to water quality BMPs. If nothing else he may be aware of some in the area. Municipal inspectors also are a good choice because they are inspecting the BMPs.

Hoffman stated that the Committee wanted a comprehensive glossary of terms. I will have this ready for our next meeting for your review of what to keep. This was to include technical and non-technical items and both technical language and rules. Customized or tailored plant lists are another item that this Committee would like to have. This went hand in hand with local suppliers, but this item may come later. The plant species list for different types of practices is what I would like to work on first.

Thompson stated that he uses the Spence website as a resource in that area.

Tungesvick stated that specific packages could be made up that may or may not be over a foot tall.

Thompson stated that the Great Lakes Nursery and a few other nursery catalogs usually have at the end categories; likes wet feet, perennial, annual, tree, shrub, etc. That is a place to start.

Bridges stated that Ron Spangler might be one to have students work on that; his thing is plants. Ron may have some information already or he might be willing to make it a student project, which would serve this Committee well and be a learning experience for the students as well.

Tungesvick stated that he has assembled some lists that were based on the hydrology of the rain garden for rain gardens that dry out within an hour of a rainfall event; for ones that hold water for up to 24 hours and for ones that are potentially wetter than that. It would be easy to put together some residential packages where you could recommend six species; two grasses and sedges and four showy, wild flowers that would be good for the average resident that has a rain garden and has typical Central Indiana soils. Another key is also blooming season; blooming in July and no color the rest of the season. It's easy to make a gardener friendly rain garden. A lot of our cultivated perennials were originally native plants anyway.

Hoffman asked if there are other things besides rain gardens?

South stated that there is common area coverage or if you're trying to do general storm water dispersal into a larger area. Prairie grasses are for common areas or large open areas. That could be broken out into tall, short, homogeneous mix versus something with grasses and flowers. From what I've seen that's a definite need.

Thompson stated that purpose is another issue; will it be used for temporary seeding at a construction site or is it going for permanent seeding; will it be used in a swale where you'll get a high velocity of water. There are a lot of purposes and plants appropriate for those conditions.

Tungesvick stated that he also has a list for vegetative swales and ones that are adaptable for flowing water situations. On vegetative swales you can put two or three species together and make a pretty nice cover that looks uniform, acceptable and pretty.

Peregrin stated that they have discovered in Marion County that the County Board of Health has got a rule that anything over 12 inches, if a neighbor complains, they can come in and mow it and charge the company. We had a lady with a wildflower garden that the inspector from the city and the Board of Health came out and said that her raspberries were thistles and were classified as a weed and issued a lawyer request to start the ignition. When we tried to talk to them they had no concept of the whole thing about green structure and trying to promote more of a native setting. They said Norway Rats would breed in the tall grass and that it was a haven for mosquitoes, so we did some research in the office on the Internet and we can't find any place that says mosquitoes breed in tall grass.

Tungesvick stated that mosquitoes don't breed in tall grass and Norway Rats specifically avoid tall grass; they're in structures and junk.

Thompson stated that we may need an area on the website on myths and water quality BMPs.

Bridges stated that if he wants to see an example of a particular type of BMP and I look at the picture I'd want to see a list of plants that I'm looking at.

Tungesvick stated that he does have individual pictures of a lot the species that are on these lists depending on how involved you want this to get.

Thompson stated that there are a lot of websites that have this information as well that we can link to; various universities have links.

Decision Making Tool – Hoffman stated that people have wanted this for a long time; Randy had done some research when he was working on the manual to find a good example. This would be a tool to help people in the selection process. Breaking down some barriers about alternatives other than a wet pond and when those other things would be more appropriate; a tool to help us decide when to use what. An article posted in October reported that faculty and researchers at Virginia Tech expect a software application that they are developing with funding from the US EPA that will help engineers, planners and others select the most efficient and site specific best management practice to control pollutants and receiving waters. The new BMP selection approach is called the Analytical Hierarchy Process. This will factor in dozens of site specific criteria such as soil types, land slopes, maintenance, accessibility, etc. to help people choose the optimal BMP for a location. I don't know how long it will take for this to come. How much do we want to invest in something that technical, but it seems like we could provide some sort of flow chart or dichotomous key. There are a fair number of these decision tools around with varying levels of sophistication and varying levels of things they put into them, but the most comprehensive by far that had a lot of environmental considerations is the color handout that came from California. Step one on the first page are things you have to think of first before you think of anything else; soil types, depth of ground water, drainage area sites, which are things you can't change. Are you discharging to a 303d listed stream; then adjust this so it aims to get out of the pollutants that most of our streams are impacted for. Are you discharging to a stream that is of exceptional use? Step two goes through soft gate criteria; it looks at different land uses for the site and pollutants of concern that might get treated by these BMPs. If you are aiming for pollution reduction you can choose BMPs that will help get the pollutant removal that is most important to you. There are also costs in the chart that we will have to look at; I'm not sure California's costs would be our costs. The criteria captured so many things we talk about in this group that we're concerned about in the environmental impacts and social acceptance; what people like and what are they aware of? Numbers are assigned and tells you by practice if any of those things are related to those BMPs. Does it have esthetic value? Can it be used for

irrigation? Are you capturing water to use for irrigation? Both positive and negative affects show up on the chart for environmental issues. When you're evaluating a BMP you not only get the extras that are good, but some of the extras that are not so good like release of nutrients during the non-growing season; wetlands become their own nutrient source during the non-growing season. The chart then takes you to climate consideration, construction consideration; are materials locally sourced; are we using renewable resources, can materials be reused or in a maintenance way, are they recyclable or compostable? Colors are more subjective. This concept is as complete a concept as I can find for what I feel people are looking to do. I believe we would have to adjust the actual numbers in some of these columns because some of these function differently in a Midwestern landscape than they do in California. Is this something we want to work on to have available for us? Do you think people would use it? Is it too complicated for people to use?

Thompson stated that he would like to give this to some engineers he knows in selecting their post construction BMPs. I do think a couple of things that stand out to me are definitions, catch basin inserts; that means different things to different people. In our manual it refers to the structural storm water BMPs. Some people consider it to mean those fabric inserts that go in a storm drain. We need to clarify what those are. The other issue is that it lumps all the manufactured products into one category and in an urbanized area in much of Hamilton County some of the green BMPs are not practical due to space. I think giving a structural BMP, the manufactured products, a little more definition and separating them out in types versus filtration units that actually filter the pollutants; there are some that just swirl it around and settle it; there are different techniques and they all vary in effectiveness.

Hoffman asked what the Committee thought of this. Is this something we would like to have around Central Indiana? Is this helpful?

The Committee agreed that this is helpful and gives a lot of information.

Hoffman stated that the Stormwater Resource Manager Center, a link from the Center for Watershed Protection, has a selection matrix that they use which takes you through seven steps and then you end up with charts.

Datillo stated that if he was someone who lived in a watershed and had ten acres and heard of something that someone else was doing, bio-retention and wanted to look at doing something like that, my eyes would glaze over if I saw this. There is no way that this is user friendly to the public in my opinion. If it was highly simplified it could be really useful.

Thompson stated that it depends on who your user group is. From our standpoint it's the engineer from an MS4 standpoint, but for a backyard conservation program this would be mind boggling.

Bridges stated that if the fact sheets are done right they can serve both audiences. This chart is for a more technical audience, but you can still incorporate this information on each one of those fact sheets and then that individual if they hear about bio-retention or a rain garden, can look at that specifically and see what the sheet says. They may or may not care about this other information. Technical people would care about the other information, but I believe you need to serve both audiences because you want people to accept it too.

Hoffman stated that her first thought is a flow chart that would almost be cartoon like, but my guess is that there are people in California like this doing that and what you realize is that they share so many traits that you end up repeating the same characteristics for many of those things.

Peregrim stated that if you had a wizard on the website you may not have to go down to fifteen levels; you may only have to go down to two or three and that gives you the ingredients that are available at that level. Eliminate half of what you need to look at by going down one level.

Hoffman stated that the Department of Defense has a tool they use for selecting Stormwater BMPs. They have a couple of blanks you fill in; you enter your drainage area, soil type, slope, depth to bedrock, depth to water table, etc. then it narrows it for you.

Bridges stated that you can make queries on certain things you want and filter them out, but it would take some programming.

Hoffman stated that she believes this group could work to adapt this paper version in a meeting. Should we be aiming for a more interactive wizard with querying; I need to work on some funding sources to work in that direction.

Peregrim stated that it would be more important to work on the paper version first.

Hoffman asked if there were any ideas on funding this program or researches we could tap into.

Bridges stated that Purdue might be able to get a funding source to do the programming part.

Thompson stated that Purdue does have a BMP testing facility, but I'm not sure what they're doing. Since this is public education could we justify some funding through our Committee in Hamilton County?

Hoffman stated that she and Ron have looked at going after some grants to do some of these products on the list. Homeowners come into the Soil & Water District and want information on how to build a rain garden. There is no good resource for Soil & Water to help people design urban storm water practices at that local free engineering kind of level. We are looking at going after some funding sources for a small scale project handbook for residential areas.

Thompson stated that Soil & Water has a backyard conservation program and we provided funding for their literature for these practices.

Peregrim stated that when you start giving recommendations for people to start something in their yard and you don't have a statement in there to make sure you check where your utilities are; the first thing you think about when something happens is that Soil & Water gave this to me and told me do it and I did it so I'm going to sue them because they didn't tell me all this stuff.

Thompson stated that these things are included in the brochures we put together.

Tongesvick stated that Indiana Native Plant and Wildflower Society has some money and they may be able to help a little bit if your talking primarily about using native plants in some of the BMPs especially on the homeowners side.

Hoffman stated that we are in agreement that a decision tool would be good for us for use by engineers and homeowners; a technical version for engineers and simplified version with maybe colors of flowers or whatever homeowners would deem the most important feature; commercial or residential buttons.

Success Stories – There was interest in having some success stories on BMPs that are working well or those that are lower maintenance than people expected or those that saved them a lot of money.

Ward stated that we'll have more of the success stories as time goes on as more of these get put in the ground.

Dattilo stated that the last project listed, small scale project handbook residential 2009, it seems like that those two projects are more linked after what I've just heard. I'm not recommending that they be combined, but it's possible that this could be moved up.

Thompson stated that on the small scale project handbook we might want to review the backyard conservation literature.

Hoffman stated that she pushed this project back because she thought it may be dependent on grant money. I thought we needed more tangible guidance.

Material Supplier List – This is something they wanted for everything; where do you get the materials you need for specific soils; where can you get liners, plants, phosphorus free fertilizer, etc.

Tools or Strategies for Permit Reviewers – This is more complex than we can hit in the first year, but people who review these things are being asked to consider whether they can give detention credits, which is a complex topic, but is coming up nationally. Can you get carbon credits for some of the thick plantings, can you get detention credits for some of the infiltration practices. Some guidance or help on how to review this or promote this project.

Thompson stated that we might be covering some of this in our Stormwater seminar to be announced.

Standard Comprehensive Inspection Forms and Training Programs – We have BMPs on the post construction site, which is where this group spends most of their energy, but there are a few items that came up on the construction BMP side during development. Some people have standard forms for reviewing sites. People who have Burke Ordinances seem to have the same form and others don't have forms; sometimes home developers are hiring consultants and others are making up their own forms. The Alliance might be able to promote one form that would be a good solid inspection and then offer some training on how to do good site inspection.

Ward asked if that would be for the local MS4s or would that be for the construction superintendent himself.

Hoffman stated that she put contractors, MS4s, educators and inspectors. Reviewing ordinances and removing obstacles to LID and coordinating across boundaries. Some of the ordinances have very different release rates in adjacent communities. People are seeing impacts from other people's storm water choices in their ordinances.

User Friendly Marketing Graphics for the Communication of how to do these things on a landscape – Hoffman stated that she has a set of plans that she uses for education in a cartoon like way that people can relate to. This may be where we use Ball State students to develop several or show landscape concepts that educators could use.

One Page Summaries – These would be consistent using the same verbiage and same symbols for different things.

Land Use Planning as a BMP – Putting together a land use guide or directory for people.

Bridges stated that this item probably needs to be placed in the 2009 category because in the end whether it's the Surveyor's Office that is reviewing or Stormwater MS4, somewhere along the line the ordinance will end up in a planning office. Indiana Planning Association might be able to help with this. Jamie Palmer with IUPUI would probably know.

Armour stated that in Hamilton County we have a lot of discussion about adding a low impact development chapter to a lot of our ordinances and technical standards. That may be something that the rest of the region may end up doing and that would at least make that portion of our ordinance similar.

Bridges stated that IPA always have a spring and fall conference with pretty good attendance, so if you think you might want to approach that audience it may be worth while trying to get on their agenda. They're always looking for new things. The ones that stay up with the literature are interested in change. The real problem is that some are very busy so even though they want a change, when would they have time?

Project Award and Recognition – I don't know what it would mean to get an award from the Upper White River Alliance, but it would be a way to recognize good projects on our website or promote them.

Tungesvick stated that one place you could have an award is the ASLA, Indiana Chapter has their annual awards banquet every year.

Bridges stated that you might be able to get something from IACT; I'm sure IACT would participate.

Stormwater Workshop

Hoffman stated that the Upper White is getting involved with the workshop this year. The date for this workshop is March 12, 2008 at the Holiday Inn at the Pyramids. A flier will come out soon.

Thompson stated that it used to be John South's contractor workshop and now it's continuing to evolve into something a little bit bigger; instead of exploring just erosion control, now its post construction BMPs and LID.

Next Meeting Date:

The next meeting was set for Thursday, January 17, 2008 at 2:00 p.m. in Noblesville.

Kenton C. Ward, CFM
Hamilton County Surveyor

Attest: _____
Executive Secretary