



Upper White River Watershed Alliance, Inc.
September 20, 2007

The meeting was called to order at 2:08 PM Thursday, September 20, 2007. Those present were as follows: Mr. Robert Thompson, Hamilton County Surveyor's Office; Ms. Jill Hoffman, Empower Results; Lisa Bihl, Empower Results; Stephen Goodman, City of Anderson; Trent Pell, McCog; Mr. John South, Hamilton County Soil & Water; George Peregrim, SAMCO; Pat Comer, Town of Cicero; Brian Neilson, EMH& T; Bette Conway, Morgan County Stormwater Coordinator; Sheila McKinley, Christopher Burke; Ron Lauster, Marion County Soil & Water; Heather Williams, AMEC; and Amanda Foley, City of Carmel.

Review of Minutes of July 26, 2007:

There were no changes made; the minutes were approved.

LARE Grant Update:

Hoffman stated that this Technical Committee looked at the scope for the LARE Grant and made recommendations to narrow the scope down. One suggestion was contacting all the GIS coordinators for the Upper White to find information that was already available. We received that information and met with IDNR and reworked the scope. The money came from IDNR Division of Fish and Wildlife's Lake and River Enhancement Program. This project will go out in early October with a request for proposal for different teams to work on this project. We realize that there is a lot of water quality information out there, but none of us really know how it fits together and where within that larger Upper White Watershed the water quality priorities are. Where do we have missing pieces of information? There are a lot of agencies collecting lots of data, but nobody is really synthesizing the data to tell us what we found out over time. The project will look at several of those data sources and also look at specific parameters that we're concerned about (nutrients, E.Coli, total suspended solids, atrazine, macro-invertebrate and chemical or biologic parameters). The next task was to look at the hot spots and figure out if there are risk factors; any rapidly changing land use; what are some of the buffer widths throughout the larger watershed; where are we seeing a lot of requests for construction in a floodway or lots of building permits; where are some of our sub-watersheds at risk for future development faster than others. The third step is to take a look at some of the planning tools and enforcement mechanisms that might help us better understand why there are hotspots, why some areas are vulnerable or at risk; this will take looking at entities comprehensive plans; take everyone's individual comprehensive plan and laying them out to see whose zoning is pushing development into surrounding areas; looking at where the MS4 boundaries match up or areas where Stormwater is not being managed or regulated; all the social programs that are in place to help us evaluate land use and water quality; how they all fit together across this larger watershed. Half the money for this project will be spent in data synthesis. We had been planning to do this idea of comprehensive planning and MS4 boundaries with GIS, but found out that this is a large technical undertaking to create layers that would cross over for this information so we've scaled the project back to have the contractor look at all of these different things and making summary maps of where they believe areas are at risk, growing faster or other issues. The idea of this project is when we are at the end we can talk to communities about why things are changing so rapidly or where we're seeing problems and then make recommendations to them about how they

could potentially adjust their comprehensive plan and/or decide certain areas are sensitive. This Committee talked about a mitigation clearinghouse as one of our large projects, but we realized that we really needed to focus on restoration if we were going to target mitigation areas; this project may help figure out which areas need restoration more than others. We would like the recommendations to come in at the eleven digit watershed scale. We have seventeen eleven digits in the Upper White and 178 fourteen digits. If we can get a handle on the eleven digit scale we can start working with the counties inside those sub-watersheds. Public meetings will be part of this project and a summary watershed planning document that will have some summary maps that will help us talk to local entities about what water quality is like upstream and downstream of your location so you understand how you fit into the big water quality picture and then a public information brochure.

Pell asked Hoffman, when she sent out the inventory list for all the counties, what she learned from that.

Hoffman stated that a lot of people had zoning. We found some commonalities and some things they found a couple of entities had that no one else had. On three to four of the different layers of information we had enough across all the counties and it was hit or miss on a lot of other things. It seemed that it would be a huge effort to fill in those gaps, which is why we stopped trying to make this into an enormous project.

Thompson stated that the Upper White had done an inventory of GIS capabilities four or five years ago when we took on the Upper White GIS webpage. It was a large undertaking and a lot of loose ends that never got tied up. There are some counties around here that have got private firms doing their own counties GIS websites on a contract basis, which we never got access to.

Hoffman stated that the other issue was proprietary in some way and/or people were concerned about releasing it. It seemed better if the contractor would have a chance to look at all of that data and draw, based on their experience, about watershed planning; what are the big issues and make those conclusions themselves.

BMP Toolbox:

Thompson stated that a few years ago McKinley, who was then with Ratio Architects and now with Christopher Burke, and Cindy Fort, whose with American Structure Point, worked on a Stormwater Best Management Practice Toolbox. He asked McKinley to give the group a summary of how this got started and what her thoughts were at the time this got put together.

McKinley stated that the Committee had a similar conversation about what BMPs are out there and in particular structural and non-structural. That's why there is a section about zoning, planning and ordinances as well as wet ponds and sand filters. We looked at what type of BMP it was, a description of it, advantages and disadvantages; do any of these BMPs exist in Indiana, specific examples and references of those. This was a resource of people working with BMPs, both structural and non-structural to refer to.

Thompson stated that in eight years things have really changed. A lot of these are still applicable, but technology has changed, procedures and ways of addressing these pollutants have changed. This covered a lot of ground from septic all the way to planning. Now that we've been involved with Phase II it's probably time to look at this and see what we can do better, are there better ways to communicate these options or should we look at multiple approaches. We believe the Upper White would be an ideal way to start looking at ways to convey BMP information; when to use it, how to use it, how to install it, what's it good for, what's it not good for, etc. Maybe this needs updating, but maybe there are other ways to convey information. There are a series of BMPs that can be downloaded.

Hoffman stated that the Upper White did some strategic planning at the end of last year when we decided to put the Alliance back together. One issue we talked about is what our members need, what do the MS4s need, what do the cities need, what do counties need, etc. How does our professional community interact with them and what can we do as an Alliance to give people information that they want, that they may typically have to pay someone else to explain to them or catch them up to speed. One item that came out of this was a need for Stormwater BMP information. This is one of the projects that we would like the Technical Committee to take on. Part of this came out of the fact that the State has been working on a Stormwater BMP Manual for the last 4 ½ years. For various reasons, including administrative changes and all of them moving from IDNR to IDEM; it's been lagging and people are waiting on this information from Indiana. I met with Randy Braun at IDEM to figure out where the State stood in terms of them coming out with leadership on this issue and where could the Upper White supplement, help or give some of our members more information that they need that may not come out when the manual does come out. Education needs to be done on BMPs and we need some useful material about BMPs that communicates better to people. I hope this group can get a handle on what the problem is; what information as a local entity you'd like to have. I saw a draft copy of the Manual from Randy Braun so I have a sense of what is in the manual. There is good information in what was done previously as part of the Upper White and one of the easiest to understand manuals I've ever seen is the one out of Connecticut. Connecticut's manual includes on every page a statistics box. The manual has a consistent header for each BMP, which branches off with advantages and limitations. The manual also has site considerations, how much drainage area the practice can accommodate, what types of soils it can be used in, what site slopes you should have to make the BMP work, can it be handled in flood prone zones, etc. Connecticut has set up a practical standardized way to look at every element of the different BMPs. Will this be a useful guide for us in Indiana, is it complete enough? If it's not are there other items we need to have. I've heard from some MS4s that they would like educational pieces on Stormwater that are less technical and more communicative. Indiana did look at Connecticut's manual and at Georgia's, which is design heavy and used parts of those as well as data from the Center for Watershed Protection and data from Schuller's book with cross sections. The manual was organized by whether they were filtration, infiltration, settling, and all the mechanisms that are being used. There is no consistent format in the manual that will come out. Several Masters Students contributed to it from Purdue and several Stormwater specialists worked on different pieces. I don't know that this Committee wants to reinvent and/or step over the State's efforts, but I don't know that the needs of our members are going to be met with the pending State Manual. The State's manual might be watered down or missing some data that people really need because it's so general. There are no formulas or engineering calculations, so if that is something the MS4s are struggling with, that will not be in the manual. The cost notes in the manual are fairly general; no tangible costs or real material specifics. The State would do updates via the web so there isn't a delay as things evolved. Randy is already anticipating a revisions committee. There may be ways that our discussion or the efforts of this Committee could be tied into that manual by a link to the Upper White site.

Thompson stated that any engineer can look at Connecticut's manual and design a BMP based on this information. I believe a developer could look at and understand it quite well; a lay person could look at it and get a lot out of it. Connecticut's manual meets a lot of needs from a lot of different technical backgrounds.

Neilson stated that Philadelphia took their ordinances and their technical manual directly from the State, but it does the same fact sheet, but updated it with a few pictures. They tend to go technical on their soils issues and Philadelphia goes into their own sub-watersheds and BMP applicability.

Hoffman stated that she wanted help from the Technical Committee on defining the problem or figuring out how the Upper White can interface with coming out from the State and if we can do anything to serve our members better and give them some information or create some resources.

McKinley asked about identifying BMPs that are specific are work really well in the Upper White area. In addition to that a selection criteria or a matrices to help through the selection process; there could be hundreds or thousands of BMPs you could choose from; how do you decide?

Neilson stated that this may be the place where some of the applicability of the BMP; your own entity versus the entire watershed. A lot of things are based on soils and groundwater locations over just about anything else.

Thompson stated that each MS4 or each entity requiring developers to utilize these BMPs; it would be ideal to have a series or smorgasbord of these pieces of information so they can pick and choose what they would like to emphasize in their jurisdiction.

Nielson stated that the Stenson Drain Study in Valparaiso went with an entire BMP toolbox, both for construction and post-construction and then took their mapping by soils stating that you could use 1, 5, 10, 22-25 in this area; others are not applicable in this area; the intent being all the tools were there and began the identification of what made sense in what areas on what gross level or defined level geographically. Hydric Soils tend not to infiltrate or groundwater recharge. Higher soil specific types you can use bio-retention with the expectation of groundwater recharge. If you know where your groundwater depths are through your well ____ etc. it's constantly looking for three to four foot differential between the bottom of your infiltration chamber and the top of the ground water for protection. I don't know that anyone has anything in Indiana that specific other than a design criterion tends to be 'don't use infiltration practices where you're interacting with groundwater'.

Hoffman stated that at the same time we want to encourage infiltration because we have a volume issue coming into our urban streams

Nielson stated that this may be the difference between infiltration and filtration. We can still use filtration and then have the water sub-drain out, eliminating the pollutants and peak, taking that out and mimicking on a different level the infiltration where you're not going to be able to get infiltration.

Hoffman stated that those types of ideas aren't in the manual, so if our communities are struggling with those types of things we won't get that type of guidance. I don't know that it's common lingo to talk about filtration and infiltration; how both could potentially reduce your volume in your streams.

Thompson stated that we are seeing a little bit of overlap with LID and post construction BMPs, especially on pervious pavements and pavers.

Nielson stated that he did not believe that there is much differentiation other than by function. The terminology is almost a place to start where you're defining what you want something to be. LID is sustainable conservation design in affect is the same thing and I don't believe everyone has gotten there yet.

Thompson stated that most of our manuals in Hamilton County have a standard set of post construction BMP requirements and some of us are starting to look towards some LID for that added mix.

Nielson stated that he would go with LID as a subset of post construction BMPs depending on how you want to define LID.

Hoffman stated that it's important to figure out who our audience members are. I only hear bits and pieces when I talk to individual members about what more they would like to know.

Conway stated that she has a lot of small contractors that really don't understand what BMPs are and how they can be useful to them. I'm putting on a Rule 5 workshop and I want to incorporate infiltration practices and make the contractors understand that they should be an active part of the process. I'm trying to get them to focus on the fact that they can have an active role in developing their own site and coming up with things that work for them. The engineer isn't there to dictate to you specific things. Maybe the engineer doesn't know what specific things you need out of your own site.

South stated that you have an entire gamut of audience from contractors to agency staff to engineering staff to landscapers, etc.

Conway stated that even farmers in her area would be an audience. I had a wetlands project going in that is a mitigation site and I got dozens of calls.

Nielson stated that one of the strengths of this type of document is getting everyone on the same verbiage; everyone is looking at the same picture, same words, etc. It's a consistency across utilities and boundaries.

Thompson stated that planners and zoning people are also an audience. They're used to looking at how a sign is or how wide the street is or how many parking spaces; they haven't, up to now, been too involved with water quality post construction or otherwise.

Hoffman stated that she talks to those groups a lot and I don't know that something like the manual, even the States pending manual, isn't going to be intimidating. I don't know how I would get any sort of zoning authority to pick that up and internalize all the messages that are varied on every page. We have a lot of resources tied up in the Upper White in terms of people that do this work all the time. That's the power of giving our members some benefits; communities that can't necessarily have that big vision of what they come across and make a resource for them. Are there other groups that could benefit?

- Engineering groups could benefit.
- BZA and other decision makers
- Homeowner Associations
- Property Management Companies
- Educators
- Builders
- Parks
- Public Works Departments

Lauster stated that one of his concerns is when you start pulling these national handbooks your getting plant species that may or may not be adapted to Central Indiana so if we could have some plant resource people review some of these and make sure that the plant species fit in with Central Indiana climate. The other issue is invasive species. We need someone looking at the multiple uses of plants, whether it's really adaptable for many benefits rather than just erosion control or just rain garden needs.

Foley stated that the regional specific type information like soils, vegetation, climate, etc. is what her city is lacking the most. What will work in Hamilton County in Central Indiana?

Thompson stated that maintenance of the various BMPs will be needed.

South stated that based on some of the information provided earlier I believe a lot of people are still unsure about how some of these practices work, how they function, etc. If the Upper White could have a matrix of locations of various practices where people can go out and actually look at them would be very helpful. We're new enough that one community may get a decent bio-swale and want to show it off, but there are a lot of communities that never had one.

Thompson stated that the Upper White could have on their webpage examples and an actual location.

Conway stated that to the common layman acronyms are like a foreign language. It would be helpful to spell out those acronyms.

Lauster stated that the more we can do to make a consistent manual in all of Central Indiana that says it's a pretty good reference, then you start getting consistency so when a reviewer makes a suggestion they refer to the manual.

South stated that the State has its toolbox and we're going to supplement it, but we aren't really going to know how well to supplement it until we get to see the States toolbox.

Thompson stated that he saw the States draft manual a few years ago and even at that time it was lacking things I know we need. We need something that we can hand to an engineer to say this is an appropriate BMP for this site or a group of appropriate BMPs. You get with the developer and see what you can work out to implement these BMPs for this project.

Lauster stated that rather than go through a process that IDEM is going through and wait years to have a manual that is finally published and sent out, why not from the start build the skeleton that would go onto a website and start with basic components and then fill the details in over time; that way we're only working on small items at a time and it would be a lot easier to bite off.

Nielson stated that your handing this to a developer and engineer and from an engineering design site, how is it being approved as a curb number, how is it being modeled; it's nice to have it, but the engineering side says how do you implement it in an approval process in Stormwater management.

Foley stated that Carmel is getting questions on whether it will serve a detention purpose as well.

Nielson stated that your presenting a product that uses these BMPs, but there is no implementation aspect of connecting it to putting it on paper and selling it to the person doing the permit approval.

McKinley stated that we need to add land use planning as a BMP.

Thompson stated that a comment I've gotten in our office is that the bio-swale looks like a bunch of overgrown weeds.

Lauster stated that one of the problems with school projects is that we do an outdoor lab or a bio-swale then the janitor over the summer cleans it up and wipes out everything you just planted.

Hoffman stated that from an Upper White perspective, where do we spend our money in developing some of this information?

Thompson asked Hoffman if we were abandoning this toolbox or do we still want to update it, go towards another direction or create individual BMPs one or two at a time and start posting them.

Hoffman stated that she always likes to have a summary table as long as it's not overwhelming.

Nielson asked if the Committee sees this type of product being the basis for the consistent, all MS4 entity products where you're bringing that in; does everybody have the same product?

Thompson stated that we could also have a basket of products that each MS4 could choose what they want to implement.

Hoffman stated that the Upper White has talked about a toolbox for a long time and the needs have significantly changed since Phase II has come on and we have new entities having to handle this. The need is evolving all the time and we've all been waiting on the State's manual and I'm not sure when it comes out that it will serve this kind of information.

Thompson stated that some of the information that the Upper White is developing will be available for members only.

Hoffman stated that she will try to skeleton this project. This is the Technical Committees big project for a while. As pieces of the LARE Grant come in we'll bring that information in here.

General Meeting:

The next Upper White General Meeting is October 4, 2007 and for the first 30 minutes Rick Nielson from NRCS will be there talking about their digital soils mart and how to get hydric soils and calculations off of their new digital soil data.

Next Meeting Date:

The next meeting was set for Thursday, November 15, 2007 at 2:00 p.m. in Noblesville.

Kenton C. Ward, CFM
Hamilton County Surveyor

Attest: _____
Executive Secretary