

Appendix 3

Steering Committee Meeting Minutes



PROJECT: Little Calumet River Watershed
Management Plan

PROJECT NO.: 20067150.22

DATE: 1/11/2007

RE:

BY: Zig Resiak

Open 1:13p.m. ~ Doreen Cary opened with introductions:

Jill opened with brief update about the HUC (3) introducing the 11X17 drawing.

Jill recapped through a PowerPoint

Phil commented prior to the PowerPoint that outfalls will not be GPS'd as per IDEM.

Sky, from IDEM, stated that indeed GPS location of MS4 outfalls should not be done under this watershed management plan.

Phil stated that GPS'ing of "other" river geomorphology will occur.

Jenny Orsburn stated that her group is doing some stream bank sampling and would provide Phil with coordinate information instead of GIS.

Jill presented the PowerPoint.

Under draft mission, Jill asked if the group felt comfortable about the mission statement.

Some discussion amongst Ruth Mores and Charlotte Read about Indian Artifacts as a cultural resource was had.

Doreen Carey felt the term "Public Awareness" should be included in the Mission Statement.

Tom Anderson concurred that cultural, as it addresses history, should be inclusive of the Mission Statement.

The term "Public Awareness Solutions" was stricken and replaced with "Improve Public Access and Awareness".

Charlotte mentioned that marinas are a source of pollution & recreation.

Dan Gardner would like to see the wording changed to "Diversion to Illinois."

Doreen & Dan Vicari mentioned that the Chicago Water Reclamation District is interested in what this group is doing.

Doreen wants to see access to the river as an issue.

Herb would like to see the physical parameters being identified as an issue.

Jill had the participants break into groups to do an exercise turning issues into draft goals.

**Team building exercise

**New teams looking at previous goal statements

Group review of modified goal sheets public meeting discussion

A question was raised as to what is the goal of the public meeting

Jill responded 1.) to inform the public of the plan 2.) get their input

Sky stated that a draft of the plan is due in April

Doreen wanted the public meeting in mid-March to facilitate IDEM

Adjourn 3:30p.m.~

14:10

Opening remarks/introductions by Phil Gralik

Discussed March 1st meeting & Public comments

- Flooding
- Impact on Lake Michigan
- Watershed Education

Charlotte mentioned that flooding wasn't a part of the 319 Program.

Doreen suggested that we add a layer of the ACDE ponding areas.

The levees start at I65 in Marshalltown runs diagonally to 94 then west to Kennedy Ave.

Water Quantity is an issue and the group wishes to address that with the 319 Grant.

Jason talked about macroinvertebrates

Water Quality/Habitat Quality

Has anyone (DNR?) done a hydrographic survey, fishing survey, bottom survey?

What tests will be run? Jason

Bob has river data from sampling for TMDL'S

Zig, what about SRCERS/what about CSO Communities

Lots of discussion & confusion on sampling

We should;

- Recap objective of 319
- State what sampling is to accomplish
- What can 319 money do
- What is the approach and why

Charlotte asked if we should sample for cyanide. Steve said no.

Steve asked why we are chasing nutrients

Answer; yes because of fertilizers, etc.

Monroe/Portage Planning

Next meeting; Wednesday, April 25th Lake Shore, May 2nd 1:00pm @ NIRPC

Bob 219-680-7803

PROJECT: Little Calumet River Watershed
Management Plan
DATE: July 17, 2007
RE: Strategy Planning Meeting
BY: Nicole Sanders

PROJECT NO.: 20067150.16

- Meeting Date: July 17, 2007 at 2:00 pm
- Meeting Location: Northern Indiana Regional Planning Commission
- Attendees:

Phil Gralik
Constance Clay
Joe Exl
Kathy Luther
Steve West
Kevin Breitzke
Bob Theodora
Sky Schelle
Doreen Carey
Spencer Cartwright
Maurice Joiner
Lisa
Jill Hoffman
Elizabeth McCloskey
Dan Gossman
Gregory White

R.W. Armstrong
Save the Dunes Council
Lake Michigan Coastal Program
Northern IN Regional Planning Commission
IN Department of Environmental Management
Porter County
United Water
IN Department of Environmental Management
Gary Department of Environmental Affairs
Indiana University Northwest
United Water
Empower Results
Empower Results
U.S. Fish & Wildlife Service
Lake County Surveyor's Office
Lake County Surveyor's Office

- Phil Gralik of R.W. Armstrong opened the meeting and stated the purpose, and then everyone around the table introduced themselves.
- Jill Hoffman of Empower Results began discussing the current status of the project by explaining the change in sampling techniques. There will be “grab” samples taken at 40 sites to help determine possible “hot spots.”
- Jill Hoffman continued explanation of the project referencing the map displaying the entire watershed area. The pink stars were identified as locations that would be tested for all nutrients and the black plus signs were locations that only e-coli would

be tested.

- The 40 “grab” sites will each be tested once a month for the next 3 months. The exact locations of these sites will be dependent on the outfalls. The exact location of the test sites that will be tested for all nutrients will be determined by Greg Bright.
- It was reported that there had been no change in the budget. In order to maximize the budget it was determined that the macros would not be done. With the lack of wildlife present this testing method would not provide the largest amount of information.
- Constance Clay of the Save the Dunes Council asked if the e-coli presence would be used to determine the health of the water.
- Jill Hoffman responded by saying that it would allow them to know more about the conditions of the water and any possible hot spots of pollution.
- Spencer Cartwright of Indiana University Northwest asked if any sample sites would test the water as it flows back into the river from a wetland.
- Jill Hoffman stated that in order for that to be effective you would also need an upstream sample to compare the results to.
- Doreen Carey of the Gary Department of Environmental Affairs asked about the pipe and ditch locations.
- Phil Gralik stated that the pipe locations were based on information contained in city files except for the pipe locations in Hobart were determined by the completion of a GIS survey.
- Doreen Carey stated that the ditch Mr. Cartwright referenced to test the water before it flowed back into the river would need back source tracking.
- Spencer Cartwright said that there was no urban area in the ditch. The water simply ran in and out.
- Phil Gralik turned the direction of conversation back to the map of the land use inventory. The majority of the maps displayed residential area and there were no hot spots identified. He then asked if there were any questions or corrections to what the map indicated.
- Joe Exl of the Lake Michigan Coastal Program asked what all land types were considered to be opened on the inventory map.

- The open areas were stated to include agricultural and natural (uncultivated) land. Phil Gralik then asked if there were any categories that would be beneficial to add to the inventory map.
- Joe Exl suggested that the agricultural land be separated from the open land category.
- Elizabeth McCloskey stated that a majority of the agricultural land was owned by the Little Calumet River Basin Development Commission (LCRBDC) and that the land was rented to farmers. She also stated that the area over by Chase Street was designated for mitigation.
- Joe Exl then asked about the long-term planning for the areas designated as open on the inventory map.
- Elizabeth McCloskey said that she was not sure who owned the area by Interstate-65.
- Doreen Carey referenced the inventory map saying that it needed to be more specific in designating areas; that wetlands should not be included in the open area. Joe Exl agreed with this statement.
- Doreen Carey believed that the areas designated for a certain use need to be noted as such on the inventory map. The areas that are designated as mitigation for the Little Calumet River need to be noted.
- Spencer Cartwright noted that the areas of agriculture could be delineated in the open areas on the inventory map as it stands at this point.
- Doreen Carey stated that the location of levees should be marked on the inventory map. She also stated that the floodplains should be outlined on the map but noted that they will change once the construction of the levees is completed.
- Jill Hoffman noted that wetlands can also be considered wooded areas and that specifying too much becomes difficult.
- Doreen Carey stated that the Green Lake Plan inventoried land use effectively and suggested that plan be checked and compared to the current inventory map in place for this project.
- Kathy Luther of Northern Indiana Regional Planning Commission (NIRPC) said that NIRPC was currently working on a land use plan and that future questions about it could be directed to her.

- Doreen Carey stated the concern for the wetlands and agricultural land to be marked separately.
- Phil Gralik agreed that the levee system needs to be noted on the inventory map and stated that that information would be passed on.
- Joe Exl inquired about putting the MS4 boundaries on the inventory map as a reference point.
- Jill Hoffman stated that the entire watershed area was within the MS4 boundaries and asked if he meant the individual MS4 segment boundaries or the MS4 group as a whole.
- Kevin Breitzke pointed out that the area outside of Portage to the south and east was not included in the MS4 boundaries.
- Elizabeth McCloskey noted that this area will be developed before the completion of the study. She has already reviewed plans for subdivisions in the area.
- Jill Hoffman then focused the meeting back onto the subject of potential hotspots in the area.
- Elizabeth McCloskey stated her concern with the dumpsites over by Chase Street. She was not sure as to the actions taken by the Army Corp of Engineers. In particular the areas of Lyell's Dump and the area north of Chase Street Auto where water pooling was occurring. She pointed out that the auto salvage was built on fill. The location of the auto salvage can be found west of Gary just north of the Little Calumet River.
- Jill Hoffman noted that there will be a list of haz mat sites and areas where questionable practices have been observed.
- Kevin Breitzke noted that the fill under Chase Street Auto was built up 80/90 years ago and everything was used in order to build up the land.
- Elizabeth McCloskey also noted that truck stops were an area of concern for hot spots.
- Doreen Carey noted that the Grant Street problem was outside levee and could possibly be eliminated once the levee system was completed.
- Kathy Luther inquired about marking truck stops and the auto salvage location on the

inventory map for possible hot spots.

- Jill Hoffman stated that it would be easy to add the sites that were registered with IDEM but others would be challenging.
- Doreen Carey asked about a list to show the percentages in the area.
- Phil Gralik stated that a percentage list could be created that noted the land use of the Little Calumet River Watershed Management Plan.
- Kevin Breitzke stated that he supported the levee project but wondered what the effect would be on the surrounding land usage once it was completed.
- Elizabeth McCloskey noted that the levee system was completed all the way to Kennedy Avenue.
- Kevin Breitzke added that while the levee system is almost completed they haven't completed much of the vegetation.
- Phil Gralik added that the flood plains and levee lines could be added but that the levee should remove the flood plain.
- Doreen Carey noted that the flood plain and flood way should be delineated separately.
- Joe Exl noted that the flooding issue should be presented at a public meeting.
- Jill Hoffman agreed but stated that it was not final and that it needed to wait until it was completed.
- Joe Exl commented that the blue stream line needs to be brought to the top layer so as to not lose it under the land use types.
- Phil Gralik answered the concern stating that it was only a draft map and that all issues could be relayed on to him through email or by a phone call.
- Doreen Carey asked about the green area that was noted in the legend as being a golf course; stating that she believed that it was not all golf courses.
- Phil Gralik noted that the golf course area would be verified with the land use registry.
- Elizabeth McCloskey noted that the green area west of Highland consisted of Cabelas

to the north and a park to the south.

- Doreen Carey then pointed out that there should be a separation between golf course lands and parks.
- Doreen Carey stated that she was not sure as to the ditch system in place for the farms located inside of the levee system.
- Elizabeth McCloskey noted that the ditch system in place was not like the one established on the Kankakee River. She also pointed out that upstream there was too much water but she was not sure about the downstream portion.
- Doreen Carey noted that the gardens on Martin Luther King Boulevard could be using river water, which would give a better idea as to the supply.
- At this point in the meeting Phil Gralik steered the direction away from the land use maps and onto the Strategy Development. He began by reviewing what had been covered in the last Steering Committee Meeting.
- Jill Hoffman went through a short PowerPoint presentation where she highlighted the balance between being a people and technical piece. As well as the structure of having a mission, identifying issues, creating goals, and establishing strategies to accomplish goals.
- Jill Hoffman then reviewed a 3-page handout she had provided everyone as well as summarizing the workings of 319.
- The general goals outlined on page 2 of the handout were covered and the direction of the targets was noted as needing to be more refined. An example of reduced loads with a specific target was given. It was noted that three (3) goals had been completed and there were a 12 +/- to go.
- Constance Clay inquired as to the importance of the measurement to determine the goal and strategy. She wondered if the number was something that would be provided to the group or if the group was to establish and provide the number.
- Jill Hoffman noted that due to IDEM requirements there were needed measurements along the way to establish progress. An example was given using filter strips and writing the plan today and measurements of success established later.
- Constance Clay asked how the goals and strategies would be measured if they were so broad. She also inquired into the difference between a strategy and an objective.

- Jill Hoffman clarified saying that strategies and objectives were similar and that you should have accomplished strategies as well as ones to accomplish.
- Jill Hoffman stated that the goals should be the driving force in how things will be planned now and in the future.
- Doreen Carey presented an example using linear feet of filter strips now and to be in place in the future to ensure her understanding and the understanding of the other attendees.
- After the example was confirmed as being the right idea of actions to be taken and the steps necessary Doreen Carey stated her belief that the measurable goals can be used. Such as miles of river bank to be restored or buffer to be placed.
- Jill Hoffman stated that it needed to be a guideline as to how to get what they wanted.
- Doreen Carey stated that it needed to be a way to prioritize the budget so they could get more effect for their money.
- Jill Hoffman wondered if more specifics were needed in the goals and strategies.
- Doreen Carey felt that more specifics were needed.
- Steve West of the Indiana Department of Environmental Management (IDEM) stated that they need to wait and see the test results and find the critical areas before buffers were placed.
- Doreen Carey inquired into the point that she believed that buffers were a good idea to have everywhere.
- Steve West agreed that they were a bonus to have but felt they needed to put everything down and prioritize based on what will give them the biggest bang for their dollar.
- Kevin Breitzke gave an example using the fact that NCRS creates buffers with farmers agreeing because they believe it is best. The buffer established may not be the best solution or location but is what can be done. He then inquired into the establishment of timelines as to when things should be completed.
- Jill Hoffman noted that once the strategies were set they could prioritize and determine who should handle what parts of the goals.
- Once the idea and process of establishing strategies to accomplish goals was

established Phil Gralik began reviewing the goals and strategies that were covered in the previous meeting.

- The first goal: Implement BMP's on land leading to waterways to reduce pollutant loads; had clarifications made to state that current meant existing BMPs and that the amount of impervious surfaces was a concern. Jill Hoffman also noted that the public education strategy was too general. What kind of public education would be needed; written, demonstration, reading material, etc?
- The second goal: Identify methods to restore water quality during low flow; had clarifications as to the watershed boundaries for entering and leaving and the statement that the water companies needed to be contacted for the source of inputs.
- The third goal: Promote BMP's to reduce negative impacts of altered hydrology; had no clarifications but Jill Hoffman asked how this was going to be done.
- Jill Hoffman then took control of the meeting once again asking about the public education strategies.
- Kathy Luther noted that people were complaining about water "ponding" in their backyards and that it needs to start basic with what can be expected.
- Kevin Breitzke suggested that the public needs to be informed as to better management practices such as rain gardens.
- Jill Hoffman summarized this saying that they needed to educate people on how to manage water and what are reasonable expectations.
- Kevin Breitzke commented on redevelopment and the need to encourage the use of new technologies in the process. That there may need to be pressure applied to policy makers as far as implementing new requirements.
- Doreen Carey stated a concern to reduce the amount of impervious surfaces.
- Jill Hoffman brought these to a strategy by asking what the mechanisms were to achieve these goals.
- Kevin Breitzke asked about the wells in the region that could be drawing down the groundwater table.
- Doreen Carey stated that the Indiana Department of Transportation (INDOT) had wells throughout the region.

- Joe Exl stated his belief that the wells had a very small negative impact and that they needed to find areas of infiltration.
- Kathy Luther noted that the groundwater table had been lowered but not through the use of wells.
- Phil Gralik stated that it was more a matter of the groundwater not being replenished as it is drawn out.
- Kevin Breitzke went into more depth with this statement saying that the water was moving laterally not vertically. The presence of the very impervious blue clay did not allow the ground water to follow the topography; instead it went where the clay was not located.
- Doreen Carey asked about the groundwater level as affected by everything.
- Kevin Breitzke stated that the top 6 to 8 feet is made up of air and water and that the ground water must flow through this and therefore cools before entering into the stream. As a result of this process the quality of the water entering is better. More downward and lateral movement would prevent flooding.
- Jill Hoffman presented goal 4: Promote BMP's to preserve or improve Riparian Corridors; it was quickly stated by Joe Exl that the "Promote BMP's to" should be removed from the goal statement.
- Kevin Breitzke commented that the education strategy needs to include everyone because you can not predict future developers.
- Kevin Breitzke noted that the target for education should be property owners instead of just developers.
- Jill Hoffman asked the question to the committee as to how to get to these people.
- Doreen Carey suggested the use of BMP presentations.
- Kathy Luther suggested reward programs for those who implement BMPs.
- Joe Exl pointed out that the positives need to be shown through case studies and cost benefit analysis.
- Kathy Luther mentioned the Porter County property overly.

- Kevin Breitzke suggested that by showing everyone the benefits of BMPs there would be greater benefits.
- Spencer Cartwright brought up the area that composes the dyke system. He pointed out that not everyone can access the area because of the land designation.
- Kevin Breitzke asked how many farmers were approximately along the Little Calumet River.
- Elizabeth McCloskey noted that 190 acres of the land by the river was to go fallow soon.
- Joe Exl suggested a guidance document to Jill Hoffman as a strategy for the goal.
- Spencer Cartwright pointed out that the area inside of the levee can have things done to it because you will not be affecting the public at large when completing them.
- Jill Hoffman then reviewed the goal and the strategies established to accomplish the goal.
- Doreen Carey inquired as to if they were going to specify types of BMPs.
- Joe Exl noted that BMPs will vary so much between uses and regions that the list would be too long.
- Doreen Carey noted her concern that when explaining to the public something needed to be shown so they knew what they were and would understand.
- Sky Schelle of IDEM believed that there needed to be recommended BMPs. He believed that you couldn't tell them exactly but you could provide a list of suggested ones.
- Goal five: Develop and implement plan to protect existing floodplains & wetlands & restore when possible; was presented and was quickly determined that similar ideas should be combined.
- Joe Exl noted the Ducks Unlimited updated their Northwest Indiana website and that it should be referenced for information.
- Kevin Breitzke noted that the ADA completed a survey as well and could also be consulted.

- Spencer Cartwright identified that some of the wetlands that were identified were not currently working properly. He believes that the problem needs to be identified. He also stated his concern with the fact that there were farms inside the dykes.
- Kevin Breitzke pointed out that before actions were taken the effects on the residents needed to be identified in each case.
- Elizabeth McCloskey stated that actions taken inside the levee system should not harm anyone. The location of 190+ acres that would flood with the 2 year flood was abandoned by the Army Corps of Engineers and has been taken over by the Hulbert Marsh was identified.
- Doreen Carey noted that the Corp refused it but it should be looked at as a reasonable area to create a natural transition. It would provide habitat and help with the water quality.
- Joe Exl added that all of the various stakeholders involved needed to be informed as to the actions to be taken and their long term benefits.
- Goal 6: Accelerate replacement of malfunctioning septic with sewers; was presented by Jill Hoffman.
- Elizabeth McCloskey noted that the cities of Gary and Hammond have been replacing their septic.
- Phil Gralik added in the TMDL reported septic systems as being a major source of e-coli.
- Kathy Luther inquired as to if it was established by test of e-coli or through an elimination process.
- Phil Gralik added that a 2003 study showed many areas as not being sewerred and that Hobart still had many septic systems presently.
- Joe Exl inquired about the possible use of e-coli tracking.
- Jill Hoffman noted that while there have been technological advances in the area it was still very expensive.
- Goal 6: Promote understanding/awareness of water quality & natural resource values of river; was presented by Jill Hoffman.

- Doreen Carey commented on outdoor activities that would show the river.
- Elizabeth McCloskey stated that the corps built areas to access the river but the practicality of their use was a question.
- Jill Hoffman inquired about the message that the group wanted to get to the people.
- Doreen Carey stated that people fish in the river and some even kayak.
- Jill Hoffman wondered about the positives of living along the river such as potentially increased property values.
- Doreen Carey noted that the promotion would be tough because many things would have to be stated such that “X is great if not for Y”.
- Kathy Luther questioned if there were areas that weren’t so bad and could be seen as all positives.
- Doreen Carey noted that Chicago did no clean-up before presenting the river as a recreational use.
- Kevin Breitzke corrected the statement and said that the storm water was diverted elsewhere.
- Constance Clay suggested that the public be made aware of the actions that were taking place to improve the river water quality and appearance.
- Elizabeth McCloskey suggested that steps be taken to incorporate the river back into the everyday lives of people instead of just the river wall.
- Spencer Cartwright pointed out that maps could be placed at well utilized parks showing the way to the levee systems.
- Elizabeth McCloskey pointed out that some organizations were already taking steps to utilize the levees such as the bicycle organization that would have rides on them.
- Doreen Carey suggested that signage be placed instructing residents as to the proper use of the river. Has seen this done in other places and seems to work and promote the use of the recreational areas.

- Goal 7: Foster local participation through regular communication and coordination of educational resources; was presented by Jill Hoffman.
- Kevin Breitzke pointed out that that was one of NIRPC functions. It consists of 52 representatives from 3 counties.
- Doreen Carey suggested a webpage link for the sharing of information and said that the MS 4 group could share information at regional meetings.
- Kevin Breitzke pointed out that not all local communities were active in the MS4 group.
- Kathy Luther stated that one of her goals for the year through NIRPC was to have a meeting of these people to coordinate plans.
- Joe Exl suggested the use of the Indiana Dunes Environmental Learning Center for educational purposes.
- Doreen Carey said there was a good network of people providing information to the public but that many were providing the same knowledge and suggested meetings, such as this one, be used to share the knowledge that everyone was presenting.
- Goal 8: Create sustainable river alliance that can be single point of contact; was presented by Jill Hoffman.
- Doreen Carey said that some kind of organizational body needed to be used. Not just the people that were in the room, but it needed to be part of a larger body.
- Goal 9: Identify way of sharing upcoming development initiatives; was presented by Jill Hoffman.
- Kevin Breitzke said that development was dictated by developers not officials.
- Elizabeth McCloskey made reference to the communities that would be coming in south of Portage.
- Kathy Luther suggested that all counties, cities, etc. share information for development in one place.
- Kevin Breitzke spoke of the City of Valparaiso annexing stuff that the mayor did not know about development of beforehand.

- Jill Hoffman said that they need to find a way to engage the city and county planners in these actions.
- Doreen Carey said that NIRPC must keep tabs on everything until a separate system can be formed.
- Kevin Breitzke spoke of how it might not work because the communities are in competition with one another.
- Jill Hoffman kept the meeting rolling by previewing the remaining goals.
- Kevin Breitzke was concerned with the communities sharing information because within just Porter County there are 13 different government agencies.
- Goal 12: Integrate other watershed plans/projects & water quality programs; was presented by Jill Hoffman.
- Doreen Carey suggested that plans need to be put together and easy to look at and understand in order to effectively communicate with the public.
- Joe Exl said that they need to provide access and recreational opportunities on river as part of the strategy. This would help accomplish other goal of getting people out onto the river.
- Doreen Carey at this point took over the meeting and began discussion on the river watch testing. She commented that she wanted Joe Exl to be part of the program.
- A discussion on the program to be run by Joe Exl continued and it was established that he would hold a program and teach 10 to 12 people about the information and they would actually learn how to perform the test. They could then conduct the testing while people were riding by on the bike trail.
- Jill Hoffman suggested they have different stations set up to allow people to see different things along the trail.
- Doreen Carey then discussed some of the more interesting trail aspects such as the birds along Chase Street but thought that might be too long of a ride.
- The date for the program was determined to be the 22nd of September, 2007.
- The next meeting for the steering committee was then determined to be held on Thursday, September 27, 2007 at 2:00 pm.

- The meeting concluded at 4:05 pm.

PROJECT: Little Calumet River Watershed
Management Plan
DATE: October 11, 2007
RE: Strategy Planning Meeting
BY: Nicole Sanders

PROJECT NO.: 20067150.16

- Meeting Date: October 11, 2007 at 2:00 pm
- Meeting Location: Genesis Convention Center
- Attendees:

Phil Gralik
Nicole Sanders
Steve West
Sky Schelle
Spencer Cartwright
Elizabeth McCloskey
Tom Anderson
Erin Crofton
Charlotte Read
John Bach
Carolyn Marsh
Debra Hammonds
Luci Horton
Joe Eberts
Dan Gardner
Jill Hoffman
Doreen Carey

R.W. Armstrong
R.W. Armstrong
IN Department of Environmental Management
IN Department of Environmental Management
Indiana University Northwest
U.S. Fish & Wildlife Service
Save the Dunes
Save the Dunes
Save the Dunes
Town of Highland
Sandy Ridge Audubon Society
Golden Recognition, Inc.
GSD/GSWMD
Lake County Parks
NIRPC/Little Calumet River Comm.
Empower Results
Gary Dept of Environmental Affairs

- Jill Hoffman (Empower Results) started the meeting off with an explanation of the landuse layer and the changes that were made as a result of the last meeting. It was explained that the landuse was generated by IUPUI through the use of an aerial photograph. Explained the maps and what the symbols stood for.
- The map showing the entire watershed was explained as containing:
 - 7 sites – full suite of water quality parameters
 - 5 subwater sheds

- Site 3 is to see what is coming in
- The coordination of the entire watershed map and the 5 individual watershed maps was explained:
 - Explain coordination of smaller maps w/landuse
 - Green stars = outfalls
 - Black dots = sample locations –e coli only
- The excel spreadsheet showing the water quality data was explained by Jill and where they matched up to the landuse maps:
 - Dissolved oxygen (DO) standard = 5 mg/L
 - Check great lakes system: Tom concerned they have different standard
 - 3 areas below 5 mg/L – cant sustain fish life (sites 2, 4 &5)
 - E-coli standard is 235 cfu/100 ml
 - Pollutant highlighted top 2 or 3 highlighted sites meant they were in top 2 or 3 for pollutant loads: cause for concern
 - Nitrate (NO₃) has state standard
 - No Phosphorus (P) standards
 - DO & P are important as well as e-coli
 - Sites 1, 2, 4 & 7 present base flow concerns
 - Sites 1, 4 & 7 present storm flow concerns
 - Both flows show 1, 4 & 7 as being poor
- Jill explained that site 3 was included because the 14 digit watershed below was in the same 11-digit watershed as the study area
- Site 4 is bad partly because of Site 3 problems
- Charlotte Read (Save the Dunes) Asked about the sampling technique
- Phil Gralik (RWA) explained that grab samples were taken instead of long term testing techniques in order to conform to IDEM.
- Elizabeth McCloskey (US Fish and Wildlife Service) asked why site 3 was worse than site 4
- Jill Hoffman (Empower Results) gave a brief explanation why.
- Tom Anderson (Save the Dunes) stated that he thought there were more outfalls than mapped
- Jill Hoffman stated they didn't have the info for all the communities

- Jill Hoffman stated that IDEM wanted grab samples – 2 BF & 2 SF but nothing measuring long term e-coli loads
 - Bigger storm event – Chasing storm upstream. Could be seeing flashes of CSO
 - Locations 1-5 Watershed 6
 - Locations 6-10 Watershed 7
 - Locations 11-19 Watershed 5
 - Locations 20-29 Watershed 4
 - Locations 30 Watershed 5
 - Locations 31-42 Watershed 1
- Jill Hoffman explained the 42 sampling locations on the excel spreadsheet for
 - Dry weather the gray box represents locations that exceed 235 standard (235 cfu/100 ml)
 - On the excel spreadsheet for wet weather the gray box represent 2000 cfu/100ml
- Doreen Carey (Gary Dept of Environmental Affairs) Commented that locations 1-16 e-coli levels were exceeded & locations 1-15 wet weather levels are lower than base flow levels
- Jill Hoffman stated that the 2nd storm event was somewhat like base flow – different level of storm event @ ends of watershed. E-coli does not spread evenly
- Tom Anderson asked if the Gary & Whiting model was reviewed?
 - Standards don't make sense
 - No Standard can be made w/o sequence
 - Dry weather of 1 or 2 cfu/ml makes no sense
- Erin Crofton (Save the Dunes) thought that there was a potential pollutant killing e-coli because upstream does not grow in cfu/ml
- Tom Anderson stated that chlorine discharge kills e-coli
- Jill Hoffman said there were no insects so there was no good measure to test growth and see consistent data
- Charlotte Read asked where the dyke was
- Tom Anderson states the Dyke was @ Martin Luther King west of Kennedy to about site 1
 - Site 1 is right next to Hart Ditch coming from Dyer & IL & has lots of drainage

points

- Elizabeth McClosky asked about August storm flow
- John Bach (Town of Highland) stated the invert flows east until high point west of Hart Ditch between Munster & Dyer site 1 flows east of Hart Ditch is gen. line.
- Jill Hoffman stated that base flow in this area seems more like a pond
- Jill Hoffman stated that low flow is a big concern because when pollutant sits it creates a big mass
- Doreen Carey asked if Hammond outfalls were creating eastern flow?
- Tom Anderson stated that Site 1 high because of stagnant base flow creates high phosphorous levels
 - Plum Creek input because Phosphorous baseflow is too high
- Jill Hoffman stated that algae begin to bloom when phosphorous reaches 0.03
 - 4.3 is way high
 - Site 1 to site 2
- Dan Gardner asked what drives Phosphorous levels?
- Jill Hoffman answered everything being all organic sources
- Joe Eberts stated 2 golf courses by site 1
- John Bach stated that there were high money developments spending money on fertilizer
- Dan Gardner said site 1 is about the east/west flow point
 - Flat topography
- John Bach said there was no peak just flat
 - Restriction @ state line
- Doreen Carey said contributions cause east flow
- Dan Gardner said that the inputs were complicated
- Doreen Carey asked about the Hammond outfalls
 - Where is east flow line

- Site 1 pollutants are coming from elsewhere (from west)
- Watershed is pollutant but west contributes
- Elizabeth McClosky asked if the Dyer treatment plant drains into Hart Ditch and is ultimately going into site 1?
- John Bach said there were no outfalls given
- Tom Anderson suggested that the flow direction (-,+) be shown
 - Site 1 assuming east flow?
- Jill Hoffman pointed out that locations 26, 29, 27&28 were bad areas and asked about reasons for this
 - Watershed; 5 locations 15 & 16 are bad
- Spencer Cartwright (IUN) said 15 & 16 seem to not match description, (Phil will check into location)
- Phil Gralik said in watershed locations 8&9 are worse than others
- Dan Gardner said location 9 is @ the mitigation bank
- Elizabeth McClosky stated that the ditch should have been closed
- Joe Eberts said that location 9 maybe flowing into wetlands
- Dan Gardner is checking into Lake Station unsewered areas
- Doreen Carey asked who CSO #13 belonged to?
- Phil Gralik said there was no info for Lake Station CSO locations
- Phil Gralik said Site 6 is primarily Portage runoff
 - Locations 2, 4 & 5 were bad for the wet weather flow w/2 being bad in dry flow also
 - Location 1 is fine after collecting agriculture 1 and it is the city use that contaminates it
- Charlotte Read said no CSOs, they must have SSOs possible marinas contributing
- Phil Gralik said only sanitary info was collected
- Spencer Cartwright asked about lawn fertilizers

- Jill Hoffman said points 11 & 12 were truly 15 & 16
- Tom Anderson said there were trout lines as far as Martin Luther King
- Spencer Cartwright stated that the trend seemed to be that locations 1-15 get lower
 - Spike @ the CSOs and the water cleans itself again. When looking at only in channel numbers
- Dan Gardner said during high flow Deep River flows 3 times that of the Little Calumet River and therefore brings high amounts of pollutants into the Little Calumet
- Jill Hoffman said the raw concentration does not tell story alone
- Dan Gardner said that the Martin Luther King railroad has 2 large culverts forcing water this way and that additional modifications to prevent wetland drainage and yet not cause Gary to flood were needed
- Phil Gralik said that the TMDL report stated e-coli comes from everywhere and that low flow must be reduced 90%
- Tom Anderson asked about septic system contributions?
- Phil Gralik said no one has comprehensive data
- Jill Hoffman asked the committee to communicate info to Phil or Doreen about areas there were septic systems
- Jill Hoffman continued the meeting by stating the 4 problem statements
 - Each problem statement has goals & actions with it
 - Summarized they are:
 - Little Calumet River & tributaries exceed daily maximum of 235 raising health concerns
 - NPS pollution elevate to levels increasing health risk
 - Stormwater hydrology changed wetlands & such
 - Single POC across boundaries
- Dan Gardner said that Ditch flooded Wicker Park golf course
 - Causing large amounts of sediment
 - Lake County Surveyors Office has money for drainage improvement projects
- Jill Hoffman stated:

- tributaries have significant load bearing
- Public Education Day to connect people to river will be held from 12 to 4 on Saturday
- Carolyn Marsh (Sand Ridge Audubon Society) stated her concerns that Highland pulled a study grant
 - Gray Heron changed app because of levee
 - 110 Gray Heron are nesting in area that was rezoned residential
 - The area is Cline Street to Griffith Golf Course
 - It was Zone Commercial wooded area (levee did not disturb)
 - Open space rezoned (wetlands old)
 - Taking out more to west
 - Afraid this will wipe out the Heron
 - Try to protect wetlands (open space) or not
 - People are rezoning
 - Cabelas flooded and re direction of water flow
 - Open area wanting to be redeveloped
 - Indianapolis site 1 only and already disclosing Gray Heron
 - Must protect community of Great Blue Heron
 - Must stop developing
 - Griffith DNR buy property and create wetland
 - Community rezoned in order to sale & get more \$
 - Recognize that we don't want to lose this
- Dan Gardner Golf course not wetland – rezoning will accept additional water gain towards wetlands
 - Net benefit to public of basin (natural for recreation)
 - 60% natural
 - Developer is going to have site retention
- Tom Anderson asked that the flood control & levees be shown because some things can not be done because of levee system
- Doreen Carey said that everything must be restored naturally inside levee but that not everything inside levee system is off limits
- Dan Gardner said that there would be 250 acres returned to wetlands
- Jill Hoffman asked Sky Schelle about BMP that are not MS4 related
- The next meeting was set to be Wednesday November 28th @ 1:00

PROJECT: Little Calumet River Watershed
Management Plan
DATE: November 28, 2007
RE: Strategy Planning Meeting
BY: Nicole Sanders

PROJECT NO.: 20067150.16

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- Meeting Date: November 28, 2007 @ 1:00 pm
 - Meeting Location: Gary Sanitary District
 - Attendees:

Phil Gralik
John Bach
Sky Schelle
Spencer Cartwright
Dorreen Carey
Elizabeth McCloskey
Erin Crofton
Charlotte Read
Joe Exl
Greg Bright
Mark Gordish
Debi Hammonds
Jill Hoffman

R.W. Armstrong
Town of Highland
IN Department of Environmental Management
Indiana University Northwest
Gary Department of Environmental Affairs
U.S. Fish & Wildlife Service
Save the Dunes
Save the Dunes
Department of Natural Resources
Biomonitoring
City of Hammond
Empower Results

- Phil Gralik of RW Armstrong opened the meeting and asked for an overview of how the Stream Reach Survey went.
- Dorreen Carey with the City of Gary updated the committee on the success of the Stream Reach Survey that was held on Saturday, October 13, 2007 along the Little Calumet River in the City of Gary. She stated that there were a number of younger participants and that the activities included a nature walk along the river that allowed the participants to identify different plant and animal species. The list of species to identify was created by Spencer Cartwright with IU Northwest. Other activities included water testing with Joe Exl of Department of Natural Resources and a bike ride along the river.



- Jill Hoffman of EmPower Results gave more information about the Saturday activity by explaining the game played that allowed participants to roll a weighted die and make their way through an ecological environment. At each station they visited by a roll of the dice they would get a bead to add to the bracelet being created. The weighted die allowed people to see how hard it was to get out of some areas of the river.
- Joe Exl of the Department of Natural Resources updated the water testing portion of the activity saying that there was some life in the river which was good considering the time and location of the sampling.
- Jill Hoffman moved the meeting on by explaining the Habitat Assessment Study that was conducted by Lisa Bihl and Greg Bright. She explained that the RBP map handed out to everyone was color coded to show the locations where the lowest 35% of scores were found and the highest 35% of scores were found. She briefly explained that the scores were based on the Rapid Bioassessment Protocol and referred everyone to the handout they were given that was the scoring sheet. She then handed the meeting over to Greg XXXXX to comment more since he actually conducted the study.
- Greg Bright of Biomonitoring sound that he and Lisa Bihl had found the area to be very pretty and that there was great potential for it to be a great urban waterway. He explained that they canoed the portion of the River stretching fro Grant Street to Chase Street and explored the other sampling locations as much as was possible due to limited accessibility. Greg also said that they put the boat in at Hoxbo Park and found that there was habitat available. His other comments about the Rapid Bioassessment Study and the condition of the river included that some areas were deep to wade in and that portions of the river were ten yards wide while other would be as much as 80 yards wide. There was extreme variance throughout the river in the look and condition.
- Joe Exl of the Department of Natural Resources stated that the RBP was made only for wadeable areas and asked about the comparison to the QHCI. He wanted to put out that the RBP was only for wadeable areas and that that was a drawback but at the same time it would be his preferred method of assessment.
- Greg Bright stated that the study was specifically for non-gradient streams which is certainly the condition of the Little Calumet River in the study area.
- Jill Hoffman brought the committee back to the results of the study saying that the pictures were tagged in GIS and areas called out as positives and negatives so more specific information could be looked at concerning the condition of the river.



- Dorreen Carey of the City of Gary said that Greeley and Hanson had conducted a similar study previously and asked that it be passed on to Jill and Lisa of EmPower Results. The study looked at the habitat along the Little Calumet River within the district of Gary.
- Phil Gralik moved the meeting on to the next agenda item which was to look at Section 5 of the report being created: Development of Problem Statements and Goals.
- Under the list of concerns expressed for **Water Quality Concerns** Charlotte Reed of Save the Dunes asked that it be clarified that the west branch of the river in fact does flow east and effects Lake Michigan.
- As a result of this clarification a suggestions was made to change Problem Statement #1 to include “impacting downstream waters and Lake Michigan”.
- Charlotte Reed of Save the Dunes suggested to include the affect that the undiked areas would have on the riparian habitat in the “**Other**” **Natural Resource Concerns**.
- The list of concerns associated with **Public Involvement/Education Needs or Concerns** was left unchanged.
- The Problem Statement #4 associated with these concerns had discussion concerning the wording and the aim.
 - Charlotte Reed suggested that local leaders be added to the statement and not just residents.
 - Joe Exl believed that the word information needed to be added to the statement and suggested maybe the use of the word stakeholders with the addition of a definition in the beginning of the report.
 - Problem Statement #4 should read: The residents and local leaders (stakeholders) in the Little Calumet River Watershed need more information and education on their role in maintaining the overall quality of the watershed.
- The forth list of concerns detailing the **Local Coordination Needs or Concerns** had discussion for the details and examples given as to the extent of the need.
 - Charlotte Reed suggested that the “social” issues should be “economic” issues when talking about the septic systems.
 - Spencer Cartwright gave an example detailing the lack of the coordination and therefore the need of the local coordination by explaining that the IU Northwest parking lot flooded and the university was told it was strictly



storm water but Spencer believed it was outfall from a CSO. The university had a hard time finding out if it was in fact a CSO and students were walking through the flooded areas in sandals.

- Dorreen stated that there were storm sewers running down Broadway and that the flooding could be blamed on something else. It is her thought that you can not say it was a CSO and went on to say that there should be a map.
- The fifth and final list of concerns detailed **Resource Need or Concerns (data, financial, people)**. There were no suggestions for the list of concerns but the problem statement #6 associated with it had discussion.
 - Elizabeth McCloskey of the US Fish & Wildlife Service believed that instead of limited it should be stated as challenged for the river access.
 - Dorreen believed that the phrase highly developed was not correct.
 - Jill Hoffman made a comment that maybe physical and social needed to be added to reflect that the ownership changed as you went along the river.
 - Elizabeth McCloskey stated that the name of the project being conducted presently by the LCRBDC was named Flood Control and Recreation because of the cost/benefit ratio. Since this was part of the project that state of the river should be improving as far as navigating it is concerned.
 - Dorreen stated that it is simply the culverts that make it hard to navigate.
- The next section discussed with Section 8: Goals and Indicators which listed the goal and target for the six problem statements developed.
- After reading over the goals associated with Problem Statement #1 it was suggested by Phil Gralik that Goal 1b be moved to Problem Statement #6.
- The goals associated with Problem Statement #2 was discussed with the committee and suggestions included more specifics for Goal 2a and a clarification of the difference between source reduction strategies dealing with a reduction of the use that is contributing to pollutants and best management practices.
 - Sky Schelle of IDEM stated that typically you will have individual goals for sediments and nutrients but if Goal 2b had targets that were specific in the reduction of both that the goal could be combined.
- The goal 3c that coordinates with Problem Statement #3 had a large amount of discussion. The goal currently states: Create an avenue of coordination with the US Army Corps of Engineers.
 - Elizabeth McCloskey stated that the Army Corps would be gone in 2 years and that it would be up to local sponsors to be in coordination with each other regarding projects and improvements.



- Joe Exl believed that Goal 3c could be put into Goals 3a&b as an objective.
 - Charlotte Read commented that the LCRBDC was currently lending money to the state of Indiana and suggested that maybe in the repayment of this money it be outlined that it be used for coordination efforts along the Little Calumet River.
 - Phil Gralik said that the fate of the LCRBDC was uncertain and that something would need to be arranged that left someone or a committee in charge of signing off on the annual maintenance reports.
 - John Bach of the Town of Highland stated that he had been told that it would be up the towns and cities to maintain the levee systems in their districts. The required annual maintenance would have to be put into the local budgets.
 - Joe Exl asked that if the maintenance reports would only be concerned with the proper working of the levee systems or if they would also require the districts to keep the system working at a high quality.
 - Phil Gralik said that the reports would mostly be concerned with objects such as gate checks and recreational uses not with the quality of water that the system was providing.
 - Joe Exl again stated his belief that Goal 3c can be made part of Goals 3a&b.
 - Dorreen Carey commented that it wasn't just the Army Corps that the communities needed to have coordination with. There also needed to be coordination of the federal, state and local agencies.
 - Joe Exl said that the coordination needing to be on the federal, state, and local levels still did not make it a goal only an objective.
- Sky Schelle asked if what concerns with associated with goal 3b dealing with low flow conditions.
 - Phil Gralik said all of the above concerns stated in goal 3a were concerns with low flow because the water becomes stagnant.
 - Goal 4 associated with Problem Statement #4 brought about discussion as to the specifics.
 - Charlotte Read wanted agreement that the goal was basically creating a clearing house that all information would go through.
 - Joe Exl suggested that it also include develop and implement and not only share research.
 - Charlotte Read stated that someone must be responsible for the "clearing house"
 - When discussing goal 5 associated with Problem Statement #5 Sky Schelle suggested that it be combined with goal 4.
 - Joe Exl suggested that Goal 4 be an objective for Goal 5.



- Phil Gralik suggested that they keep Problem Statements 4 and 5 separate but that they have one goal, Goal 5, and have goal 4 be an objective. The committee agreed with this decision.
- Moving onto Problem Statement #6 brought up the discussion on the condition of public access along the river. The wording of Goal 6 was changed to “Increase public access and continuity along river sites and make the public aware of them” after the following discussion.
 - Dorreen stated that a canoe trip is divided up by many culverts as you move along the river.
 - Dorreen believed that a short term goal need to be created that dealt with the education as to where the longer portions of navigable river was located and a long term goal of making bridges along the river so that the culverts do not interrupt the flow of someone traveling down the river.
 - Charlotte Read said that access sites based on characteristics needed to be put on recreational maps.
 - Dorreen suggested that they needed public access and awareness
 - Phil Gralik said that the public awareness would be an objective of the overall goal of the river continuity.
 - Charlotte Read suggested that the increased public awareness be done using local sponsors.
- Section 9 of the report deals with the **Plan for Implementation and Evaluation**. This section takes each goal and breaks it down into the strategies/action items that can be associated with it.
- Goal 1a: Reduce E. coli loads to the Little Calumet River had action items that the committee felt should be added to it.
 - Joe Exl suggested that home inspection services be added to the point of sale. This would give the future planners a way of know where septic systems were and the condition that they were in.
 - Spencer Cartwright suggested that wetland development be used as a dual purpose for reducing E. coli.
- Goal 2b: Reduce sediment loads and nutrient loads by source reduction strategies had action items and discussion by the committee.
 - Sky Schelle asked if there was an educational component associated with this goal. As an example he used the fact that in the Indianapolis area it was found that a major source of nutrient loads were local homeowners. This knowledge was then presented to the public and ways to reduce the nutrient loads were presented.
 - Jill Hoffman stated that households are a large contributor in all watersheds.



- Joe Exl asked about showing areas with no Phosphorous around. This results in habitats that are safe.
 - Dorreen Carey asked about continual and expected sources of pollution.
 - Phil Gralik stated that based on the current landuse that the expected pollutant loads had been calculated.
 - Dorreen Carey asked if it would be possible to narrow down problem areas based on E.coli coming from X & Y and Phosphorous coming from X & Y. Coming up with some basis of knowing what the problem is in the watershed. More than point source vs. non-point source pollutants.
 - The last two action items for Goal 2b: Develop LID ordinances or policies to use in multiple jurisdictions and promote/incentivize low impact development(LID) or redevelopment strategies was considered to be too broad by Charlotte Read. She asked if these would be permit issues or exactly how they would be accomplished.
 - Phil Gralik stated that the intent was to work with local municipalities to issue permit requirements that would require certain things to be implemented before building could begin.
 - Charlotte Read then stated that the plan could not do that alone.
 - Joe Exl agreed but said they could create model ordinates to show the plan and work with the municipalities in implementing them.
- Goal 3a: Restore, improve, and/or protect floodplains, wetlands, and riparian corridors had discussion as to the intent of the goal.
 - Sky Schelle said that some specifics needed o be stated for target restoration
 - Dorreen Carey said that specific riparian areas within the levee system needed to be identified for restoration.
 - Charlotte Read asked if you could create habitat within the levee system.
 - Joe Exl responded saying that you could create habitat.
 - Elizabeth McCloskey said that the question would be what habitat to restore or create.
 - Joe Exl asked what restoration could happen and asked what the LCRBDC would find or implement.
 - Elizabeth McCloskey said that the argument is that there is constantly money falling into the areas to restore habitat unsuccessfully and that mitigation is not happening inside the levee system.
 - Joe Exl asked about the farm bill switching the area to wetlands.
 - Dorreen Carey felt that the areas inside and outside of the levee system should be separated for purposed of development.
 - Goal 3b: Improve low flow water quality conditions had suggestions for changes to the action items as well as discussion.



- It was suggested that the “shading” be taken out of the action item to improve in-stream habitat aimed at shading and oxygenation.
 - The next item of determine watershed boundaries based on levee system was pointed out to need to look at the storm sewer and other things contributing to the movement of water.
 - Joe Exl suggested that the channeled areas of the river need to be undone so that the river can flow free again.
 - Charlotte Read said that hydrologic investigations needed to be done on reconnecting the meandering streams to the River.
 - Joe Exl said that direct mitigation into the levee would be required costing the area large amounts of money.
 - Elizabeth McCloskey said that the river could be constructed to meander however as long as it stayed within the levee system.
 - Dorreen Carey said that the area from Chase to Clark Streets created a bayou in the area.
 - Joe Exl said that a detail of what is there needs to be created.
- Goal 4 was suggested to be changed to Share, development and implement research, projects/experiences, ordinances, and education materials in a central location. This was all decided to be an objective of Goal 5. The action items associated with Goal 4 will become additional items in Goal 5.
 - The action items of Develop MOUs between jurisdictions, host regular meetings, and construct and maintain a website was suggested to be condensed to one item.
- Goal 6 was suggested to be changed to Increase public access and connectivity sites and make the public aware of them. There were suggestions of added action items as well as discussion with this goal.
 - Charlotte Read suggested that brochures be used to facilitate public awareness and to highlight the public access sites.
 - Dorreen Carey asked if the Blueways/Greenways staffed entity would be picked up by someone else when the LCRBDC completed their work.
 - Joe Exl asked if NIRPC would be taking over or if a co-connection with local ordinances would be the sponsor of the program.
 - Charlotte Read asked about the Marquette watershed plan.
 - Dorreen Carey said that the Marquette will not go beyond the planned time. Also that the 6217 group was to deal with all of the Little Calumet River.
 - Dorreen Carey suggested that maybe sometime the watershed group, the MS4 communities chair people and the 6217 group needed to meet at NIRPC. She also stated that NIRPC had a group that coordinated plans but no one to make sure they were implemented.



- Joe Exl said that there was a Public Access fund that could be looked at for possible funds to implement BMPs. He suggested that possible funding sources be identified in report so that it was known where to start.
- Phil Gralik next moved the meeting onto Item 5 on the agenda which was to go over the load graphs and identify critical problem areas.
- Greg Bright said that of 4 sampling sites that were above the load there was one that was consistently worse. The western most point was considered to be the worst by him. He said that as they went downstream the numbers seemed to lower. And that the far East end was always under the standards.
- Dorreen Carey said that since the east is always fine with the water sampling that it must not be the unsewered area causing the pollutants.
- Greg Bright said that Willow Creek always had high levels and that this went against what Dorreen just said.
- Mike Gordish with the City of Hammond said that the values could be manipulated based on when the sample was taken and what had recently happened. For example with the major storm event that one of the wet weather data pulls was taken with the City of Hammond discharged a large load because of flooding at the site of Cabelas. The discharge was monitored though and in complete regulations with the EPA.
- Spencer Cartwright said that the tributaries seem to lead to high number values for e.coli loads.
- Greg Bright said that was not always the case that you also had to look at previous events to see if that was the cause not the tributaries themselves.
- Phil Gralik brought the committee back to the subject of the maps and said that there seemed to be two hotspots: one at the far west side and one right after the inclusion of Deep River in the Portage-Burns Waterway.
- Jill Hoffman suggested that the CSO outputs be looked at as possible sources of the high values in those locations.
- Phil Gralik said that Hart Ditch was a problem and that water backed up and became a standing pond and would therefore result in high readings.
- Spencer Cartwright said that both dry and wet weather sampling had high points at the western edge and that this seemed to go against the fact that the ponding would be the issue.



- Phil Gralik explained that the ponding created high values in what did run through in the dry weather events and that when the wet weather came through all of the water was flushed out and that would explain the wet weather high values.
- Dorreen Carey said that the TMDL report showed that the septic areas were not a problem to be looked at.
- Charlotte Read asked if the storm sewer overflows could be looked at as a possible source of pollutants.
- Greg Bright said that storm sewer discharges do not seem to be very high loading factors.
- Joe Exl said that the critical areas identified by Phil Gralik seemed to be correct and warranted further investigation.
- Joe Exl suggested that other plans be looked at to obtain loads to aim for such as TSS equal to 25 mg/L. He also suggested looking at WATERS (sediments and streams).
- Phil Gralik said that research would be done and that standards would be set out.
- Joe Exl agreed that this would be a good plan and it was agreed that Phil Gralik would put them together and email them out to get input back from committee.
- Joe Exl said that both long term and short term load reduction targets should be set.
- Greg Bright suggested that 576 cfu/100mL be set as the target for e.coli because consistent readings of this with less than 10% exceedance would delist the Little Calumet River.
- Dorreen Carey asked about the Stream Reach Survey again and wondered if it looked at the entire stream or only at the area around the sampling locations. She stated that it was her understanding that the survey was to study the entire stream.
- Jill Hoffman said that the places looked at were those that they could get to but to study the entire area was challenging because of access problems.
- Joe Exl said that looking at everything is not possible that it is financially not capable of being done.



- Dorreen Carey asked that Phil share the Gary Reach project because they went all through Gary not just to the sampling locations. She then went on to verify that the only areas looked at were those that could be seen from the roads.
- Dorreen Carey asked about how the backsource tracking was going to be done if the entire stream was not going to be looked at. Greeley and Hansen had identified 30 + locations that backsource tracking needed to be completed on. These points would require the backsource tracking to be done by boat.
- It was then stated by the committee that illicit discharge tracking was not funded by 319 for MS4 locations.
- Dorreen Carey responded saying that they were not to sample the discharge but the sources that may be contributing to it. She said that previous work was contracted to find outfalls in Gary and that the backsource tracking was needed to find the source of the pollutants.
- Phil Gralik stated that the intent was to look at the landuse surrounding the area to find possible sources not to physically go and investigate the areas.
- Jill Hoffman said that it would not be funded for people to go out there and look into the sources.
- Phil Gralik moved the meeting along to talk of BMPs, public education and riparian areas. He said that it must be determined where and what to put in place to come up with a model for the watershed.
- Joe Exl said that the areas need to be determined and then the BMPs researched to reach the monitoring goals.
- Dorreen Carey said that CSOs and MS4 monitoring plans were in place and then maybe additional information could be added to those.
- Joe Exl said that IDEM required a 5 year monitoring program and that it would need to be more than just the information collected by the CSO and MS4 programs.
- Jill Hoffman said that IDEM would want the committee to establish monitoring programs separately from what was currently available.
- Dorreen Carey asked who would be identified to monitor the area in the future.



- Joe Exl said that that would be part of the program to be set up and said that there could be possible coordination with local schools and universities or some type of public/private partnership to do the testing.
- Dorreen Carey said that the NRCS has a plan and that could possibly be looked at for monitoring purposes. If nothing else they should be looked at as a possible partner to do the testing.
- Jill Hoffman said that they had to set up a monitoring program of their own.
- Joe Exl said it has to be in plan. That there must be a strategy in place as part of the plan being developed. Every group has to have monitoring plan as part of a Watershed Plan.
- Dorreen Carey said that they needed to know loads as percentages and said that that was something they couldn't create but that the consultants must.
- Joe Exl disagreed and said that the committee must come up with the monitoring program.
- Phil Gralik said that as the consultants they could only show guidance and that a monitoring plan would be looked at but that it was up to the committee to implement the program.
- Joe Exl direction the committee to look at a website that feature a program through the University of Minnesota, diluthstreams.org. He said that the funding was probably started through an old EPA grant and that it is being maintained by a new EPA grant. There was also possibly money being given to the program by the school or a public/private entity.
- Phil Gralik then concluded the meeting and a new meeting date was set for January 10 at 1:30. This meeting time was changed due to a conflict for the Save the Dunes people. The new meeting time is yet to be set.

PROJECT: Little Calumet River Watershed
Management Plan
DATE: January 17, 2008
RE: Strategy Planning Meeting
BY: Nicole Sanders

PROJECT NO.: 20067150.16

- Meeting Date: January 17, 2008 @ 1:00 pm
- Meeting Location: Gary Sanitary District
- Attendees:

Phil Gralik
Steve West
Dorreen Carey
Elizabeth McCloskey
John Bach
Bob Theodorou
Sky Schelle
Erin Crofton
Herb Read
Tom Anderson
Dan Vicari
Charlotte Read
Jill Hoffman
Mike
Bob Helmick
Dan Gardner
Spencer Cartwright
Joe Exl

R.W. Armstrong
IN Department of Environmental Management
Gary Department of Environmental Affairs
U.S. Fish & Wildlife Service
Town of Highland
GSD/United Water
IN Department of Environmental Management
Save the Dunes Council
Save the Dunes Council
Save the Dunes Council
CDM
Save the Dunes Council
Empower Results
Town of Griffith

Little Calumet River Dev. Committee
Indiana University Northwest
Department of Natural Resources

- Phil Gralik of RW Armstrong opened the meeting and introductions were given around the table.
- The meeting was started with the introduction of Section 8 Goal 1 of the report: **Reduce *E.coli* levels in the Little Calumet River by reducing loads to the River.**

- Joe Exl of the Department of Natural Resources asked if this meeting was considered to be the drop date for the changing of the goals.
- Dorreen Carey of the City of Gary made her intentions clear that she wanted to have another steering committee meeting before the February 5th IDEM submittal. It is also her intentions to have an additional public meeting after the submittal date to present the work to the public.
- Joe Exl then continued with the questions on the goal that was just introduced for discussion. He asked if the short and long term targets set would have the river meet the beneficial uses.
- Tom Anderson of the Save the Dunes Council asked if the Little Calumet River TMDL previously completed and pollutant targets outlined in it.
- Phil Gralik of RW Armstrong responded saying that they were no target numbers outlined just general percentage decreases with no given date. He also stated that the short term goal of 576 cfu/100mL listed is the standard for delisting the stream.
- Tom Anderson corrected the statement saying that the 576 cfu/100mL will meet the standards for full body contact uses but that in order to have the stream removed from the 303d list the 235 cfu/100mL standard is required.
- Phil Gralik acknowledged this fact and said that the short and long term goals were just numbers to look at dates for now that they can be changed.
- Dan Vicari of CDM noted that the long term control plans for the communities in the watershed have not been approved and that they will result in measures to help reduce the *E.coli* loads once they are approved by IDEM. He also asked if the *E.coli* short term goal was to include the CSO results, which will be affected the most by the long term control plans.
- Phil Gralik noted that the short term goal of the 576 cfu/100mL was only meant for non-point source reductions.
- Tom Anderson agreed with this because of possible future funding sources and the need to meet set goals in order to receive the funding.
- Phil Gralik noted that the base flows will be able to meet the short term standard outlined fairly easily.

- Charlotte Read of the Save the Dunes Council asked if she short term target of 576 cfu/100mL would conflict with any existing uses set out for the river.
- Dan Vicari asked if this standard was meant for the wet weather flow, the base flow or the average of the flows.
- Phil Gralik noted that the 576 cfu/100mL was meant to be a short term goal for dry weather flow.
- Dan Vicari commented on the writing of the goal to have a 10% exceedance factor of samples to be thrown out.
- Phil Gralik moved onto ways that this standard to be accomplished noting that ultraviolet sanitation be added to pipes letting water into the river through the levee system.
- Jill Hoffman of Empower Results noted the standard ponding and sanitation removal issues.
- John Bach of the Town of Highland noted that the water ponds but that it is continually pumped during a storm event.
- Elizabeth McCloskey of the Save the Dunes Council noted that along the levee the pumps could be retrofitted to help preserve the water quality.
- Phil Gralik said that the gatewells would carry the ultraviolet sanitation devices and that the water would be cleaned in the discharge.
- Jill Hoffman also noted the addition of “soft procedures” to be practiced.
- Phil Gralik commented saying that brochures or public education about how to lower the *E.coli* levels could be added as measurable steps taken to accomplish the goal.
- Tom Anderson asked about how this would be integrated into the MS4 procedures to take place as far as funding goes.
- Joe Exl gave the example of the sewerred and unsewered areas being identified as an overlap of the two and how they would be beneficial to both.
- Sky Schelle of the IDEM said that the soft procedures should be kept to educational because the specifics raise more funding issues as far as the public goes but that ordinances to be enacted needed to remain specific.

- The short and long term target goals was brought to the attention of the committee again and the final agreement was to the short term goal be a standard of 235 cfu/100mL for dry weather. This would be accomplished in 10 years and only for the non-point sources pollutants. The long term goal would be a geometric mean of 125 cfu/100mL. This was acknowledged by Sky Schelle as a good goal because of the delisting requirements.
- Phil Gralik then noted that the specifics for best management practices to be enacted would be outlined later but that it would be expensive.
- The second goal of section 8 of the report was then discussed. The goal states: **Reduce sediment loads by source reduction strategies and, in priority subwatersheds, through the use of Best Management Practices (BMPs).**
- Joe Exl immediately asked about the target levels for the short and long term.
- Phil Gralik said that it was hard to find any information as to reasonable short term goals and what other watershed plans have tried to establish.
- Joe Exl then noted that he felt that 5 year time frame for the short term goals was perhaps to short of a time.
- Elizabeth McCloskey noted that areas for LID practice to be used were dwindling.
- Joe Exl didn't necessarily agree with that because of the fact that LID practices could be used for roads, bridges, highways and other various construction and not just housing developments and commercial areas.
- Sky Shelle added in that retrofitting areas is also part of LID practices.
- Dan Gardner noted that Wicker Park in Lake County had large sediment deposits during the large storms that occurred in August of 2007. Lake County had some information on this because they had to look at the sediment since it had overloaded the storm system.
- Joe Exl noted that on the LID practices specifics should probably not be noted because of potential of waste management practices along Hart Ditch.
- Herb Read of the Save the Dunes Council noted that in the levee system began being looked at in the 1960s and then asked which areas still needed to be purchased.

- Dan Gardner noted that wider areas east of Cline Avenue still needed to be purchased by the Corps and a few more ponding areas needed to be as well but that was the only land to still be required.
- At this point there was further discussion as to the change in the placement of the levees from the time when the levee system was initially discussed.
- Once the meeting was brought back to the present topic of the sediment loads Dorreen Carey asked if dredging the river was to be included as part of program.
- Sky Shelle said that IDEM couldn't pay for the river to be dredged but that it could still be included in the report and an outside funding source could be used.
- Joe Exl said that maybe that should be an objective and also that the short term goal could perhaps be measured based on ordinances.
- Jill Hoffman suggested that incentive programs be used as an indicator.
- Charlotte Read asked about the inclusion of buffers along the river.
- Phil Gralik said that vegetated swales inside and outside of the levee system would be beneficial to the water quality.
- Joe Exl noted that they would be both beneficial and overlap with MS4s which would add to the funding sources.
- Dorreen Carey said that things are being done to improve the water quality without ordinances so she didn't want the number of ordinances to be only measurable device for short term goal.
- Sky Shelle noted that the indicator listed as item "g" was actually a measurement and not an indicator as to the quality.
- Joe Exl asked about 25mg/L TSS being used as the target since it had been used in past plans. He was curious as to if this standard would be from a single grab sample during high flow or low flow, in general how would the standard be met. He also noted that maybe just a certain % reduction because it is hard to reach set numbers with recently developed sites.
- The third goal and its associated targets and indicators was then presented to the steering committee by Phil Gralik; **Reduce nutrient loads by source reduction strategies and, in priority subwatersheds, through the use of Best Management Practices (BMPs).**

- Phil Gralik continued to explain that the goal was parallel with previous goal only dealing with the reduction of nutrients in the water instead of sediments.
- Joe Exl stated that his only concern would be about the phosphorous because it is so hard to kill once it is present in the water.
- Sky Shelle said that the language needed to worded such that it was acknowledged the goal was to put the nutrients back into the ground.
- Sky Shelle also suggested that in order to be uniform in the goals if the short and long term target set for goal 2 are changed to percentage reductions that goal 3 needs to match that format.
- Jill Hoffman agreed with the fact that goal 3 should be changed to percentage reductions as goal 2 will be because the numbers themselves mean nothing to the public. They will be able to understand percentage reductions and see improvements that way.
- Jill Hoffman also asked about the 20 year goal being something that would create an ideal water quality environment or if they wanted it to be something that was attainable given the current state of water.
- Tom Anderson commented on this saying that numbers might be a good goal to have because they are aggressive.
- Once it was decided that the format of goal 3 would match that of goal 2 the meeting continued with discussion of goal 4 :**Restore, improve, and/or protect floodplains, wetlands, natural areas, and riparian corridors.**
- Dan Gardner stated that the area east of I-65 is critical area and that the farmland inside the levee system is going to be restored to natuarl state. The exact acreage was not known but would probably be in the 200 to 300 acre range.
- Herb Read asked a question as to the area upstream of the levee system, not restrictive to the corps area.
- Mike Gulley of the Town of Griffith asked where the long term target goal of 500 acres was coming from. He said that they were currently in negotiations to restore approximately 350 acres to natural areas.
- Joe Exl stated the acreage that would be needed for the sediment reduction targets should be the long term target for this goal.

- Dan Gardner said that the area inside the levee system will be restored to nice wetlands. They do not want natural areas to develop on their own because of the vegetation that grows naturally, phragmites and cattails.
- **Goal 5: Improve public awareness/knowledge of pollutant loads and sources, especially *E.coli*, and the impacts and risks associated with them.**
- Joe Exl asked if having seven goals was too many. He asked with this goal because of the fact that is it covered by others.
- Elizabeth McCloskey felt that the public awareness factor that is explicit with this goal was covered by the other goals for each of the individual concerns.
- Joe Exl felt that this goal was stuck in because of overlap with awareness of nutrients.
- Jill Hoffman said the only reason to have this be a separate goal is if the intention for the targets is something separate from load reduction.
- Jill Hoffman felt that as long as the intention is only load reduction that the indicators and targets can be listed elsewhere and this goal can be eliminated.
- Dorreen Carey asked about the incorporation of the flooding concerns.
- Dan Gardner made the point that the levee system being built by the corp will only take care of what gets to the water body inside the levee system.
- Herb Read mentioned LID practice upstream is what will ultimately help clean the waters within the levee system.
- Joe Exl said that objectives could be to show types of upstream requirements.
- Jill Hoffman asked if the goal of education was only for pollution reduction or if it was also about risk and ecological education.
- Joe Exl said that he felt that even if there was a risk and ecological education aspect that goals 4 and 7 could easily pick up those points.
- Phil Gralik asked for a final decision about keeping goal 5 and just have the redundancy or expelling the goal for a total of 6 goals.

- The general concensus was to keep the goal and leave the redundancy because there was no real difference between 6 and 7 goals and there could be other aspects and funding sources as a result of it being a separate goal.
- The introduction of goal 6: **Create an active watershed alliance or conservancy district that implements and facilitates information sharing, including ordinances projects/experiences, and educational materials in a central location.**
- Dorreen Carey asked if the alliance was to facilitate information because everything is under local control and ordinances.
- Phil Gralik mentioned a taxing body such as a conservancy district that is formed by a committee such as the LCRBDC.
- Joe Exl brought up the website of Duluthstreams.org that is a common entity that shows everything within the website covered by the organization. It includes information on ordinances, municipalities and MS4 communities via website links.
- Sky Shelle noted that the indicator would have to be the establishment of the group/entity.
- Phil Gralik acknowledged that but said that what he was going by was how it was to be established that the group/entity had actually been created.
- Joe Exl felt that possible indicators could be watersheds participating or communities involved.
- Dorreen Carey asked about the funding mechanism that would support this entity.
- There was no real answer given for this question posed to the committee it was noted that another taxing body in the districts would not be well received and would have a hard time in the public view.
- Goal 7 was the final goal discussed. **Increase river connectivity and public access sites and make the public aware of them.**
- Joe Exl noted that two years may be too short of a term for the accomplishment of the short term target for the public access sites. At the same time though he noted the benefit that had already been started due to the inclusion of the corps projects and the recreational features being added by that.

- Herb Read noted the fact that the area has to be attractive for people to look at and want to use other wise no amount of public knowledge will change the attitudes held towards the river system.
- Dorreen Carey pointed out the Blueways Greenways plan mapping out access points that are currently along the Little Calumet River.
- Herb Read asked if the public would recognize what was intended by connectivity wondered if it should maybe be corridor connections.
- Phil Gralik pointed out that is was more than just the corridor that they are looking to connect. It is the river system as a whole and the surrounding land.
- Herb Read suggested that maybe it be changed to say connect to have continuous river corridor.
- Dorreen Carey felt that river or waterway connectivity would be a better phrase.
- Phil Gralik suggested it be changed to say “**increase waterway and navigable connectivity**”
- Herb Ready noted that the the target dates were good because the sooner they were identified and given to the public the better.
- Phil Gralik suggested that maybe the short term goal should be 5 years, 2013, because the committee would be established until 2010 and then they need time to put something in motion.
- Dorreen Carey thought the 2010 goal would be better so that those whose number one concern was flooding would see progress quickly.
- Once the discussion of the goals, indicators and targets was completed the next agenda item began being discussed.
- Mike Gulley asked about the wetlands area creating *E.coli* loads because of the large number of birds and other habitat present.
- Jill Hoffman responded to this saying that it was not the wetlands that created the high loading rates but the fact that when not properly established the rapid in and out of the water in some areas while water is ponding in others draws the birds because of the natural habitat and then their droppings create the high pollutant loads such as *E.coli* loading rates.

- The next item on the agenda to be discussed with the proposed location of the critical areas throughout the watershed study area.
- Sky Schelle noted that the Deep River area has large critical areas.
- Phil Gralik noted that it was because the area along Deep River and Willow Creek are largely natural and those areas were identified because of the need to preserve them.
- Herb Read noted that the area along Deep River from the Hobart Damn to the confluence with the Little Calumet River needed to be critical area because it was a nice habitat.
- Jill Hoffman noted that it was important that the committee decide if they want to identify the critical areas as those that they want to restore or those they want to protect.
- Sky Schelle noted that they could both be included in the critical areas section and be eligible to receive IDEM funding.
- Joe Exl pointed out to everyone on the committee that the critical areas identified are the only areas where IDEM money can be spent at as part of the grant.
- Jill Hoffman said that the critical areas were where funding could go but you also want them to be areas where fundable BMPs could be incorporated.
- Sky Schelle also wanted to point out that the funding could be used to prevent future pollutant loading problems.
- Tom Anderson used an example to clarify what can be included using a 100 acre wetlands and the ability to protect it.
- Herb Read said that Lake Station and New Chicago both have good wetlands that need to be included so that they can be protected. Also felt that it was very important that the natural area along Deep River be included in the critical areas so that it could be protected.
- Jill Hoffman pointed out that it was in good condition so the critical area would actually be that land area that is adjacent to it because that it what will actually harm the the quality of the wetlands.
- Joe Exl asked a question about the Willow Creek watershed and the condition of the natural areas/wetlands along it.

- Phil Gralik asked if critical area #3 should be the entire watershed draining to sampling site #2 or if it should just be the area along the river within the levees.
- Jill Hoffman said that they needed to look at where the flood-plains were to be located.
- Phil Gralik said that identifying the entire watershed as the critical area, speaking of watershed # 0712003030050, would allow for all of the areas that need to be converted to wetlands as well as those areas that needed to be protected to ensure the quality of the wetlands.
- Sky Schelle pointed out that an entire 14-digit watershed can not be the critical area. That smaller scale areas needed to be identified by the committee as places to focus funding.
- Phil Gralik suggested that the levee system and then the ponding areas around the levee system be the critical area.
- Dorreen Carey pointed out the existence of one of these ponding areas located north of IUN at Harrison and Broadway.
- The Willow Creek Watershed, # 04040001040030, was next discussed for the critical area locations.
- Phil Gralik asked the committee what they felt needed to be shown as critical areas in this watershed.
- Sky Shelle said that the census showed the southern part was going and would continue to grow and that therefore that was a major area.
- Herb Read confirmed with Sky and the rest of the committee that he was talking about the unincorporated portion in Porter county.
- At this point a break was taken and the three aerial shots of the watersheds were looked at by the committee. Each was able to share their knowledge of the area and what was happening at the time that would either be a cause of pollutants or what might be helping to improve the water quality.
- After the break Jill Hoffman brought the committee back to the present task at hand by pointing out that they must decide what they want to be the critical areas. If they wanted to identify lands that were in bad shape and needed to be remediated or if they wanted to identify lands that were currently in a very natural state and maintain the quality of those lands.

- Phil Gralik confirmed with the group that the critical area in the western most watershed was to be the area inside the levee system because it can be restored.
- Dorreen Carey pointed out that the area east of Martin Luther King also needed to be included in the critical area because it was outside of the levee system but still before the confluence point.
- There was other discussion at this point about houses that would be inside of the line and those that would be right outside of the line. The committee went astray as to what the task at hand really was.
- Jill Hoffman brought the committee back by asking everyone why they were discussing areas and projects that the money from the 319 grant could not be used on.
- Dorreen Carey said that they needed to find preservation areas along stream that other money could be used for as well. And asked if the word critical area was only to refer to those areas that could have BMPs placed that would be a direct result of 319 money.
- Jill Hoffman agreed and said that the first thing was to decide what you wanted to spend that money on. If it was to preserve or to repair areas.
- Phil Gralik went back to the actual locations of the critical areas at once it was decided that they would be areas to be restored. He suggested one be the area between Union and Martin Luther King.
- Dorreen Carey asked why the area was to be so big.
- Elizabeth McCloskey pointed out the impact that high areas could have on the watershed.
- Steve West from IDEM spoke up at this point and said that they could have different names for the different areas so that all areas to be protected and restored could be identified but the only critical areas would be those designated for the IDEM money.
- Jill Hoffman made sure everyone knew that the critical areas name was the only area that the 319 grant from IDEM could fund.
- Dan Gardner said that they pump stations should be included in critical areas so that the IDEM fundable BMPs could be implemented at them.

- Elizabeth McCloskey asked if the ponding areas were included inside the levee system.
- Dan Gardner answered by saying that they are not inside of the levee system but that the BDC owns easements on the land so that is included.
- The final thought on the western most watershed was to include the levee system and the easement areas.
- The critical areas to be covered in the other watersheds was not discussed at length due to time constraints but ideas were given during the break to look at the aerial photographs.

PROJECT: Little Calumet River Watershed
Management Plan
DATE: January 30, 2008
RE: Strategy Planning Meeting
BY: Nicole Sanders

PROJECT NO.: 20067150.16

- Meeting Date: January 30, 2008 @ 1:00 pm
- Meeting Location: Gary Sanitary District
- Attendees:

Phil Gralik	R.W. Armstrong
Bob Theodorou	GSD/United Water
Jenny Orsburn	IN Dept. of Natural Resources
Debi Hammonds	Golden Recognition
Kass Stone	The Times
Dorreen Carey	City of Gary Environmental Affairs
Sky Schelle	IN Department of Env. Management
Jeff Jones	Portage Parks
Jill Hoffman	Empower Results
Lisa Bihl	Empower Results
Bob Helmick	RC & D
Dan Gardner	LCR Development Committee
Erik Potter	Post-Tribune
Kathy Luther	NIRPC
Spencer Cortwright	IU Northwest

- Phil Gralik of RW Armstrong opened the meeting and introductions were given around the table.
- The first item on the agenda was to review the critical areas map that was produced as a result of the information given at the January 17, 2008 meeting.
- Phil Gralik reviewed the critical areas locations and how they were delineated, what areas were covered and the distances used. He also reviewed with the committee that 36% of the watershed land area was currently covered by the critical areas mapped.

- Sky Schelle responded to being asked about percentages allowed to be considered critical areas saying that it depended on what Area 5 felt was appropriate, there was no state standard.
- Phil Gralik added that area outside of the levee system needed to be included in the critical areas listed in order to reduce the loads before they entered the levee system where there were limited practices that could be conducted to reduce the loads.
- Jill Hoffman asked if the critical areas map given as a handout and consequently the 36% of land area number included area outside of the levee system and give enough land to construct wetlands and reduce the loads the necessary amount.
- Phil Gralik said the exact amount of land outside of the levee system was not determined but that it would be used to create detention basin and constructed wetlands so that the water may sit and allow time for the sediments to settle.
- Dorreen Carey asked why the detention ponds and constructed wetlands needed to be outside of the levee system.
- Phil Gralik responded saying that is was due to the fact that there are some things that will not be allowed to be done inside of the levee system due to ACOE restrictions. With this in mind the committee needed to realize that they must treat the water before it enters the levee system.
- Jill Hoffman clarified to everyone, due to some confusion, that what was being said was that the levee system was the delivery method of the pollutants to the water system not the cause of the pollutants.
- Dorreen Carey asked about the critical areas along the tributaries to the Little Calumet River.
- Phil Gralik reminded the steering committee about the conversations from the previous meeting in which it was decided that the tributaries were going to have their natural buffers outlined as restorative or preservation areas and not critical areas. This is due to the funding issues created if everything is called critical with the 319 grant.
- Dorreen Carey wanted to make sure that those areas would be mapped out on the critical areas map but have a different name. Wanted to make sure they were not forgotten.
- Phil Gralik went back to the subject of the levee system and BMPs being placed outside of them adding that an additional reason for the structural BMPs to be placed

outside of the levee system was that the lifetime of the structures would hopefully be greater. If they are placed inside the levee system a large flood could damage them due to the water sitting for an extended period of time inside of the levee system.

- Dorreen Carey asked if ponds were being proposed between the pump stations and if so noted that the exact locations of the pump stations would be needed and then the areas where ponds could be constructed would have to be identified.
- Bill Helmick of RD &C noted that the National Resources Conservation Services has incentives for the creation of restorative wetlands.
- Dorreen Carey noted that the placement of the intended detention basins and wetlands needed to be researched because as a result of the levee system being built there are areas that are intended to be used for an economic corridor.
- Phil Gralik noted that all of the communities inside of the watershed study area are also MS4 communities and therefore some issues were being addressed by those committees.
- Dorreen Carey asked if the restorative wetlands and detention basins being intended for use as pollutant load reduces in the MS4 communities would be eligible for 319 grant money.
- Sky Schelle noted that it would depend on the features that were to be included in the detention basins and restorative wetlands.
- Phil Gralik confirmed with Sky Schelle that if the features were intended to improve water quality that it would be eligible for 319 grant money.
- Dorreen Carey noted with this confirmation that those should be the only areas and features that should be looked at for this study and the BMPs recommended due to the economic features of the local communities.
- Phil Gralik moved the meeting along to talk about the load reductions that would be the targets for the plan.
- Phil Gralik introduced the pollutant load tables that had the concentrations sampled converted to yearly loads along with the expected yearly loads based on land use. He noted that previously the concentration of 25mg/L was noted as being the target for Total Suspended Solids but that last meeting that had discussed changing the parameters to percentage load reductions.

- Jill Hoffman noted that the committee needed to decide if they were going to use percentage load reductions or have ideal concentration targets but that either way it needed to be uniform throughout the plan.
- Phil Gralik said that at the last meeting the plan had ideal concentration targets but that the committee had looked at using load reductions but nothing final had been decided.
- Sky Schelle said that IDEM prefers there to be load reductions but concentrations can be the plans target goal and those can be converted to yearly loads.
- Jill Hoffman noted that it was more complex to have concentrations and convert those to yearly loads because you have to look at flows and how much each tributary contributes to change them to load reductions and that is more confusing for the public to grasp.
- Phil Gralik noted that he believe a 30% reduction would be possible using natural vegetation and restoration methods.
- Dorreen Carey asked about the time frame to see the 30% reduction.
- Phil Gralik noted that it would probably be in the 15 to 20 year range for the 30% reduction if that was listed as the long term target percentage.
- Sky Schelle said that in terms of percentage reductions and target years it was just a judgement call that had to be made when the committee asked for confirmation of the time and percentage from him.
- Phil Gralik confirmed with the group then that the long term goal would be a 30% reduction in TSS over a 15 year time frame and that the nutrients would be treated with the same target percentage and time frame.
- Jill Hoffman wanted to confirm that this would be a realistic goal that would be accomplishable and not just a good goal to have to improve the water quality.
- Phil Gralik noted that the calculations had not been completed yet but that they would be completed and if the goal and time frame was not reasonable then they would be changed accordingly.
- Dorreen Carey asked how the public impact would be checked for the reduction percentage that their education would have.

- Sky Schelle responded saying that you can't count on the public during things that will reduce the loads being delivered to the river. You can't count of the general public to reduce loads being generated.
- Dorreen Carey disagreed and said that you had to give them the sense that what they were doing was contributing to the bettering of the stream. They must believe that what they do matters or they will not do anything.
- Sky Schelle said that IDEM would not hold the watershed plan to the goals set out for the load reductions that the education of people would have. That anything they do will only help with the reductions but they would only count of structural BMPs to measure the progress.
- Jill Hoffman noted that a Burnsville Harbor plan had showed the reductions that LID practices could have on the runoff being generated and that it could be passed on so that an idea could be made as to what to outline for the public and the reductions expected.
- At this point the meeting was turned over to Jill Hoffman of Empower Results so that the next agenda item could be covered. It was the review of the implementation plan and the responsible parties.
- Jill Hoffman explained the handout that she had that listed the Goals that the committee had previously established along with the objectives, or action items, of how to reach those goals. The goals the committee had established were highlighted in blue and those that she had added based on past experience were left white. The handout included boxed as to the priority to establish for each objective and the responsible party for each one.
- The first task set out by Jill Hoffman was to establish what the "Now", "Soon", "Later" and "Never" meant for the priority.
- Bill Helmick felt that the "Now" should mean within one year of the plan being implemented.
- Dorreen Carey commented that the action items don't necessarily have to wait to be started until the plan is approved. That some of the items listed as objectives were currently being done by other committees.
- Jill Hoffman suggested to combine these and say that the "NOW" meant within one year

- Jenny Orsburn of IN Department of Natural Resources noted that it takes a year to get anything going and thought that maybe there should be year ranges and nothing within the first year.
- Jill Hoffman used this and suggested that the “SOON” be in the 2 to 5 year range and that “LATER” cover anything past the 5 year range.
- It was then established that the “Later” would actually be 5 to 20 years since nothing in the targets went past 20 years.
- A break was taken at this point so that each person could individually go over the spreadsheet and give each objective a priority rating and start thinking about the responsible party aspect of each of them as well.
- Jenny Orsburn asked if it was a good idea to include action items under the goals that are technically the responsibility of the MS4 communities and therefore not eligible for any 319 grant money.
- Sky Schelle responded by saying that it was a good idea because it showed everything that needed to be done in one document and it also let IDEM know that the committee was aware of all of the problems within the watershed study area.

- At this point the committee used the cards that were handed out by Jill Hoffman to vote for their priority ranking for each action item. The members that were voting included Kathy Luther, Dan Gardner, Jenny Orsburn, Dorreen Carey, Bob Theodorou, Bob Helmick and Spencer Cartwright once he arrived.
- The results of the voting can be seen in the handout attached to these meeting minutes. There were a few strategies that had conversation when they were presented. They are listed below with the Goal and strategy they are associated with listed.
- Goal 2: Reduce sediment loads by source reduction strategies and, in priority subwatersheds, through the use of BMPs. Strategy: Use permitting process to control development and projects in sensitive areas.
 - Kathy Luther acquired as to what permitting process this strategy was referring to, if it was to be new permits or existing local permits.
 - Dorreen Carey noted that the point was to protect the adjacent land and that it would therefore be new permits.

- Phil Gralik said that he felt it would be existing permits that would be better utilized.
- Dorreen Carey stated her opinion that it was to go outside of current permits.
- Kathy Luther noted that there was a difference between using existing and creating new permits and that it needed to be specified.
- Dorreen Carey said that a new local process would be created for the localities to have stricter permitting policies than the state to protect the land.
- Goal 3: Reduce nutrient loads by source reduction strategies and, in priority subwatersheds, through the use of BMPs. Strategy: Promote/incentivize low impact development (LID) or redevelopment strategies.
 - Dan Gardner wanted to note that examples of how this can be done have been previously conducted and that they should be referenced to help the public see the difference.
- Goal 3. Strategy: Develop LID presentation that can travel -ID target audiences
 - Jill Hoffman noted that this was currently being done in Indy and that they were having a large amount of success and good responses with it.
- Goal 3. Strategy: Targeted communications toward municipal parks land and golf courses regarding nutrient management plan.
 - Jeff Jones of Portage Parks noted that the local park departments can't afford fertilizer to put on all of the local parks when prompted for a comment from Jenny Orsburn.
 - Bill Helmick noted though that due to the increase of corn production the amount of fertilizer is going up and that when asked to possibly change the mix to allow the corn to absorb more of the fertilizer and have less waste the fertilizer companies would not agree because they are currently being too successful with the current product and mix.
 - Jenny Orsburn was concerned as to why the committee was focusing on what she saw as being a very small thing because the number of golf courses, those that will actually use the fertilizer, that are in the watershed. She noted that Jeff had said that the parks departments were not using fertilizer because of budgetary reasons.

- Dorreen Carey said that maybe the locations of the golf courses could be looked at and then compared to the nutrient pollution.
- Jenny Orsburn suggested that maybe the autobon golf courses programs be presented to the local golf courses and encouraged for implementation but as far as identifying action items the load the golf courses contributes is too small.
- Goal 4: Restore, improve and/or protect floodplains, wetlands, natural areas, and riparian corridors. Strategy: Develop guidance document for land managers/owners.
 - Kathy Luther wanted to note that this already existed and that it just needed to be promoted. NIRPC had already created this document.
- Goal 4. Strategy: Engage in economic study of wetlands and floodplains.
 - Spencer Cartwright of IU Northwest noted that the studies that already existed needed to be exploited and that the development of a new one might not be necessary.
- Goal 5: Improve public awareness/knowledge of pollutant loads and sources, especially *E.coli*, and the impacts and risks associated with them. Strategy: Develop watershed signs about recreational assets and risk locations/times not to have contact.
 - Jenny Orsburn questioned if that was something that this group wanted to do. She felt that maybe the strategy needed to be changed to “Develop watershed signs about recreational assets.” Dropping off the risk locations/times part since the ultimate goal of the plan was to eliminate the risk.
 - Sky Schelle noted that the contact risk locations and times was something that was under the responsibilities of the health department.
 - Phil Gralik noted that if the public knew the risk better that they would want to improve the condition so they could get more recreational use of the water.
 - Kathy Luther questioned if they *E.coli* loads everything were high thus making it hard to pick certain locations that would be more risky.

- Jill Hoffman answered saying that in some locations the *E.coli* met the state standards and that those areas needed to be identified better so that the public could use those water bodies.
- Goal 5. Strategy: Develop campaign to include educational inserts in utility bills, etc.
 - Dorreen Carey noted that this was something that could be done by the MS4 communities.
 - Jill Hoffman noted that it was something that could be done now by giving limited direction.
 - Kathy Luther noted that the City of Valparaiso was currently doing a study to see if those notifications actually created any results and that that study could be used as a baseline.
- Goal 5. Strategy: Auto generated email alerts upon CSO discharges.
 - Jenny Orsburn noted that there was currently a list that residents could be put on to be notified as to when CSO discharge events took place.
 - Jill Hoffman suggested that maybe that fact be promoted more so that residents realized they could do that since some of the steering committee members didn't even know the list existed.
 - Dorreen Carey noted that she had saw signs in Portland, OR on the beaches that notified that visitors when a CSO event had taken place and that there was a threat of high *E.coli* concentrations as a result.
 - Kathy Luther suggested the implementation of a reverse 911 system similar to what was in place in the City of Valparaiso.
- Goal 7: Increase river connectivity and public access sites and make people aware of them. Strategy: Coordinate land use planning across planning jurisdictions.
 - Jenny Orsburn informed the committee that the LMCP in coordination with IN DNR was working on a public access map that would be completed in October of 2008.
- Goal 7. Strategy: Determine where there are gaps in public access to significant sections of the river.

- Jenny Orsburn noted that as part of the plan to identify the access points there would also be a gap analysis and a management plan will be written after the October 2008 deadline of the mapping.
- Goal 7. Strategy: Develop informative resources about where hazards are located, how long of a stretch between impediments, and key resources within a given stretch.
 - Dorreen Carey noted that although the Little Calumet River has *E.coli* problems it is still fun to canoe and that you can get in at Chase and go to past Lake Etta (Cline Avenue).
 - Bill Helmick asked if it was difficult to get through Portage.
 - Dorreen Carey responded saying they got out at Cline because of culverts preventing them from going any further and that it was pretty much impossible to cross Cline with a canoe to get back in the river.
- At this point the list of priority rankings had been completed and a few things were confirmed.
- Jill Hoffman clarified with the group that the strategies were in fact objectives of the goal. They were basically the action items as to how the goal would be accomplished.
- Sky Schelle noted that the committee had some unique stuff in the action items and that it should make a good plan as a result.
- At this point Jill Hoffman moved the group on to review the responsible parties list. She told the committee what she was thinking with each of the categories and opened it up to questions.
- Dorreen Carey noted first that you could not make a consultant the responsible party that someone else had to hire them and therefore be the responsible party.
- Sky Schelle noted that it would still be good to distinguish what more technical help would be needed with.
- Phil Gralik suggested that on the items where there would be more technical help they could double check the boxes to include who would hire the consultant.

- Kathy Luther noted that the other box was mostly local governments. That the steering committee could promote local ordinances but that it was the local governments that had to enforce and enact them.
- Dorreen Carey said that the entity could take stuff to state legislature and they could give them authority to pass the local ordinances.
- Kathy Luther noted that she could pass along the information as to what the MS4 communities were currently responsible for doing and what additional items they would be charged with the following year.
- Jenny Orsburn noted that some of the items were already currently being done by local sanitary districts.
- Bill Helmick noted that Goal 4 had a large amount of overlap with the soil conservation groups in the area.
- Dan Gardner suggested that the matrix just covered be sent to the communities within the study area that had participated to some extent and force them to give feedback as to what they were doing or would do within the plan.
- Jill Hoffman noted that the plan and some explanation information would be sent to the communities so that they would know what they were looking at.
- Jenny Orsburn suggested that the action items list created by Joe Exl in the matrix format could be sent along with the responsible party matrix.
- Dorreen Carey also wanted the draft report to be sent with the information.
- At this point Phil Gralik reminded the committee that the draft report with all of the checklist items included was due to IDEM on Feb. 5.
- Jill Hoffman noted that they could incorporate the Blueways and Greenways plan after that deadline because it was not a checklist item.
- Kathy Luther asked if the sub-committee listed as a responsible party existed already or if they would be created upon demand.
- Jill Hoffman noted that the intention was for them to be created to deal with each specific item as needed.
- Phil Gralik moved the meeting onto the next agenda item which was to create a monitoring plan.

- Phil Gralik noted that the intention was to monitor the 7 sampling sites with a couple additional locations to get a better baseline set of data. He felt that more baseline data was needed before plan implementation began.
- Bill Helmick asked if they were happy with the results received from the previously conducted sampling.
- Phil Gralik said that they were because it seemed to match the sampling results recorded by previous studies. He also noted that more backsource tracking could probably be used especially along Hart Ditch because with the completion of the flow structure by the ACOE the high flow will now all flow east through the watershed which is currently not the case.
- Sky Schelle noted that monitoring to show implementation should not be conducted before 18 months after start of program.
- Phil Gralik highlighted the point that completion of the flow structure by the ACOE would change the parameters. That this fact is why he would like to see sampling within 1 year of the flow structure completion because the baseline numbers used for measuring implementation will change.
- Sky Schelle noted that the delisting of a stream for *E.coli* was based on the geometric mean.
- Dan Gardner noted that the flow structure was to be completed in the 2008 construction season.
- Phil Gralik noted then that testing could be done in 2009 and then again in 2013 to show the soft practices results and the structural BMPs results.
- Bill Helmick asked why it would take so long for the wetlands to be constructed and begin seeing results, basically why a 5 year sampling and not sooner.
- Jill Hoffman noted that it would take a long time for the effectiveness of the wetlands to be fully reached.
- Dan Garner noted that there would be opportunities before levee system was completed for implementation strategies and once the levee system was completed some things could be done within the levees.
- Jenny Orsburn asked about native plantings and other similar features being conducted inside the levee system.

- Dan Gardner said that nothing will prohibit improvements to the corp structure.
- Phil Gralik brought the meeting back around to the sampling to be conducted by asking who would be responsible for it.
- Sky Schelle said that it was not fundable by the 319 grant but because of the unique situation with the change in baseline data something might be able to be done
- Jill Hoffman asked about contacting health departments and local sanitary districts for testing. She also noted that it was hard because without being able to show the change in baseline data as a result of the flow structure the committee would not be able to show implementation.
- Bill Helmick noted a grant that was available for storm water districts that was up to \$10,000 for testing or monitoring.
- Jenny Orsburn asked about a volunteer monitoring program to be included in the watershed management plan.
- Jill Hoffman estimated that it was about \$200 per site per sample for the water quality sampling.
- Dorreen Carey asked if it would be possible for the sanitary districts to test the water.
- Jenny Orsburn asked why they needed to be worried about a lab fee when they had labs located within the watershed study area.
- Jill Hoffman responded saying that the problem was the labs in the area were not equipped to test the water for all of the parameters.
- Phil Gralik noted that the implementation and monitoring plan needed to included the baseline data to be collected within one year of the flow structure completion and then testing to be conducted again in 2013. It was not established who would be responsible for testing the water or paying for the sample to be collected and analyzed.