

**LAKE COUNTY WETLAND RESTORATION AND PRESERVATION PLAN (WRAPP)
TECHNICAL ADVISORY GROUP MEETING #2-SUMMARY REPORT**

November 18, 2015 9:00 AM

**CENTRAL PERMIT FACILITY Main Conference Room-2ND Floor
500 W. Winchester Road, Libertyville, Illinois 60048**

MEETING GOALS: TAG consents to by-laws. TAG recommends the wetland functions for assessment in the WRAPP. TAG establishes working groups and begins development of preliminary functional assessment criteria.

TAG Members Present: Mike Murphy, Mike Adam, Dennis Dreher, Rich Knodel, Sue Elston, Vince Mosca, Jim Anderson, Leslie Berns, Mark Bramstedt, Maggie Cole, Tom Ganfield, Darren Olson, Dan Krill

TAG Members Absent: None

SMC Project Team Staff Present: Mike Prusila, Glenn Westman, Juli Crane, Jeff Laramy

Others Present: None (Patty Werner of SMC stepped in before the meeting was underway and said she would try to attend part of the meeting but did not return)

Meeting started at 9:08 a.m.

I. Introduction & Announcements (SMC Project Team & TAG members) – 5 min. (0908-0915)

Mike Prusila asked if those present would go around the room and introduce themselves. Attendees went around the room and introduced themselves to the group by stating their background, areas of expertise.

Mark Bramstedt asked Mike Prusila to send a new list of TAG participants out to the group.

Mike Prusila concluded introductions with several housecleaning items (restrooms, phone use, food, etc.)

II. Accept Meeting #1 Report—5 min. (0915-0916)

Mike Prusila asked the group if they were OK with the Meeting #1 Summary. Mike Prusila mentioned he didn't include it in the materials beforehand but there were copies at the meeting. The TAG mentioned they were good with the summary. Report approved by consensus.

III. TAG By-Laws: Discussion, revisions (if needed), consent (SMC/TAG)—10 min. (0916-0918)

Mike asked if the TAG had any questions regarding the By-Laws.

Jim Anderson asked if this was a public meeting.

Mike Prusila mentioned the TAG is not a voting body and therefore not subject to the Opens Meetings Act.

The TAG mentioned they were fine with the By-Laws and didn't feel any further discussion was needed.

TAG approved of by-laws by consensus.

IV. Wetland Functions: TAG discussion and recommendation of revised list of proposed functions for inclusion in the WRAPP (SMC/TAG)—30 min. (0918-1020)

Mike Prusila opened up the discussion about wetland functions. General consensus by the TAG was to **include** the 10 highlighted functions (1-10 below).

1. Flood Protection/Floodwater storage/"Surface Water Detention"
2. Streamflow Maintenance
3. Nutrient retention/transformation
4. Sediment & other particulate retention
5. Shoreline stabilization
6. Fish habitat (& shellfish)
7. Waterfowl & water bird habitat
8. Shoreline Habitat
9. Amphibian Habitat
10. Carbon Sequestration/Storage (Air Quality)

11. Unique Wetland Resources
12. Great Lakes Coastal Wetlands
13. Coastal storm surge protection
14. Open wetlands and waters habitat
15. Stream shading
16. Riparian habitat
17. Influence of groundwater on stream recharge
18. Beach habitat
19. Invertebrate species habitat

Mike Prusila mentioned one of the goals of today's meeting would be to discuss functions 11-19 and ideally there should be 12-15 functions but some could be combined.

Juli Crane commented just because we don't include a function in the study, it doesn't mean it couldn't be added in a future study.

Mike Prusila commented that the Great Lakes Coastal Wetland (Function 12) could be included under many of the highlighted functions and this is more of a wetland type than a function. However, we should include these wetlands where appropriate under various functions.

Glenn Westman agreed that Great Lakes Coastal Wetland function (#12) fits more under a Unique Resource (#11) category.

Mike Adam asked if the Great Lakes Coastal Wetland function (#12) would be a stand-alone function or if it would fall under several other functional categories.

Vince Mosca asked why we would be differentiating these wetlands (Great Lakes Coastal Wetlands) from all of the other functions.

Sue Elston asked how we would define a coastal wetland and Mike Prusila agreed that the TAG would need to define this.

Juli Crane commented on Function #11: Would the Great Lakes Coastal Wetlands fall under function #11? Key Point – Some of the listed wetland functions are clearly functions while others are community types. She asked the TAG, are we looking for functions or community types?

Mike Prusila commented on functions #18 (beach habitat), 16 (groundwater influence on stream recharge) and #14 (open wetlands and waters habitat) and mentioned these are more habitat specific but not sure if we have the appropriate data to analyze.

Jim Anderson saw Function #11 (Unique Wetland Resources) as a biodiversity function and Function #6 (fish habitat (& shellfish) could be included in Function #11. Jim commented that Coastal Storm Surge (Function #13) is an important function protecting coastal resources. Jim also mentioned that Function #17 (Influence of groundwater on stream recharge) is an important function and needs to be taken into account.

Sue Elston commented ground water recharge (#17) is a hard function to measure and wasn't sure we had the appropriate data.

Sue Elston asked if we wanted to use biodiversity as an umbrella category.

Mike Murphy mentioned we could include all habitat functions under a "biodiversity" Category.

Juli Crane commented that perhaps we could include all biodiversity-related functions (functions #6, fish/shellfish habitat; #7, waterfowl & water bird habitat; #8, shorebird habitat; #9, amphibian habitat; and #19, invertebrate species habitat) under a "biodiversity" heading.

Vince Mosca agreed that biodiversity should be included as an umbrella function and then all biodiversity items can be categorized under the biodiversity function.

Juli Crane envisioned coming up with a set of functions to be evaluated and then classifying/nesting the functions under larger functional category.

Mike Prusila asked if the TAG if we should think about watershed-specific criteria, and Juli Crane mentioned that maybe Storm Surge Protection (#13) could be included under a watershed-specific category.

Dennis Dreher asked if Function #5 (Shoreline Stabilization) included streambanks or just open water areas. Mike Prusila responded that it would cover both, unless the TAG decides otherwise; TAG needs to nail down the definition of shoreline.

Glenn mentioned the report by Tetra Tech in which case they included Function #5 (Shoreline Stabilization) and cited the definition of shoreline in the Tetra Tech report.

Mike Prusila reiterated that the purpose of this TAG is to define these functions as appropriate for Lake County.

Mike Prusila threw out the possibility of nesting function #11 (Unique Wetland Resources) under other categories.

Tom Ganfield thought the Unique Wetland Resources category (#11) is more of a function.

Sue Elston mentioned that anything viewed as a unique wetland resource should automatically rank as high.

Mike Prusila asked the TAG to address Jim Anderson's comments about Groundwater Recharge (#17).

Dan Krill mentioned combining Function #2 (Streamflow Maintenance) and Function #17 (Influence of Groundwater on Stream Recharge)

Dennis Dreher agreed with Dan Krill on combining functions #2 and #17.

Leslie Berns mentioned it really has more to do with discharge, regardless of whether it for is a stream or wetland.

Sue Elston commented that there is a difference the way wetlands and streams discharge.

Leslie Berns added that headwater streams will be more groundwater fed than surface water fed.

Juli Crane commented on aquifer recharge vs groundwater recharge and thought this might not be worth chasing due to our clay soils.

Mark Bramstedt mentioned Groundwater Recharge (#17) should include ground water, streams, and wetlands.

Jim Anderson mentioned the TAG should look at surface water recharge and groundwater recharge. He would like functions #6-9 assessed separately but they could be included under a broader "hydrology" function.

Mike Prusila asked if there was a good method for evaluating groundwater recharge.

Mark Bramstedt mentioned it is important to assess depressional (isolated) wetlands and not discount their contribution to a groundwater recharge function.

Sue Elston mentioned the importance to assess flood (#1) and nutrient retention (#3). Mike Prusila commented that working groups will be tasked to assess this.

Dennis Dreher asked if Lake County had ground water recharge mapping data.

Jim Anderson mentioned the USGS did do a study and he will check with Ken Klick to see if Lake County has the data.

Glenn Westman asked if we were going to consider a groundwater/aquifer recharge function and a separate influence of groundwater on streamflow maintenance (base flow) function. Or, are we going to groups these? Mike Murphy responded that he thought the idea was to group these under a broader "hydrology" category.

Glenn asked is it was a good thing to lump these into a "hydrology" category or would it be better to keep these separate. Who is our audience? Would lumping these together confuse the end user?

Mike Prusila suggested perhaps combining functions #2 (streamflow maintenance) and # 17 (influence of groundwater on stream recharge) and include base flow maintenance but mentioned we would still be running analysis for each function (i.e., base flow and aquifer/groundwater recharge).

Mike asked the group if we should combine functions #2 and #17. The group responded yes (mainly Mike Murphy and Jim Anderson).

Regarding the discussion on adding Groundwater Recharge to the list of functions to be assessed, the group generally decided to add it to the list of functions but let the working group figure out how to address and document that function.

Mike Murphy mentioned we should have clear "high-level" groupings. Simple at the higher level with more subcategories (e.g., groundwater group and a surface water group under the "hydrology" umbrella) and to resolve some of the issues we've been discussing in the subgroups. Dan Krill agreed with this approach.

Dennis Dreher, specifically addressing function #2 (Streamflow maintenance), stated that we shouldn't try to resolve these issues now. This should be the task of the working groups.

Mike Prusila regarding function #15-Stream Shading. Mike asked if we had the data to assess this and mentioned that it has been in several studies.

Vince Mosca mentioned that this might be more of a western stream function.

Sue Elston disagreed with Vince and commented that shading in an herbaceous system, specifically regarding heat and dissolved oxygen, is applicable to Lake County.

Dan Krill agreed that shading is applicable to Lake County, especially as it related to temperature.

Dennis Dreher also commented that with the presence of Box Elder and other trees and shrubs, shading is applicable in Lake County.

Glenn Westman cited the Tetra Tech report where headwater wetlands provide significant functions important for amphibian habitat.

Mike Murphy asked if function #15 (Stream Shading) could go under a biodiversity heading.

Sue Elston mention Stream Shading could go into several groups.

Jim Anderson asked what the SMC stream assessments/inventories include. He asked if these inventories include land cover and habitat.

Mike Prusila mentioned the SMC Stream Inventories are based on the Ohio assessment method for wadeable streams.

Juli Crane regarding Water Quality, Hydrology, Biodiversity/Habitat. Juli asked if we should assign individual functions to one group rather than several groups.

Mike Prusila commented that stream shading should be easy to assess.

Dennis Dreher mentioned that stream shading is more a measure of a healthy or unhealthy system and thought shading should go under a Water Quality and Habitat category.

Juli Crane asked the TAG if Stream Shading (#15) is a function or a measure. Juli thought it is more of a measure. The TAG agreed that Stream Shading is a measure and needs to be assessed.

Mike Prusila brought up discussion regarding functions #14 (open wetlands and waters habitat), #16 (riparian habitat), and #18 (beach habitat).

Mike Murphy commented that perhaps we should put functions 14, 16, 18, 19, 6, 7, 8, and 9 (i.e., open wtl/waters habitat, riparian habitat, beach habitat, invertebrate species habitat, fish/shellfish habitat, waterfowl/water bird habitat, shorebird habitat, and amphibian habitat) all under the "Biodiversity" heading. Dan Krill agreed that the above functions should go under a "Biodiversity" category.

Mike Prusila regarding function #14 (open wetland/waters habitat) referenced the TNC report where they used waterfowl as an indicator and suggested we should perhaps look at combining these.

"Biodiversity" is the umbrella category, and habitat functions fall under the biodiversity umbrella.

Darren Olson asked where we would group function #12 (Great Lakes Coastal Wetlands). Mike Prusila mentioned function #12 could be group with Functions #1 (flood protection/storage/detention) and #5 (shoreline stabilization).

Tom Ganfield remarked that the TAG should consider socio-economic and cultural benefits as a wetland function. He mentioned activities such as social, athletics, hunting and fishing, and research and would like to see these put into a functional category but realizes that we don't have the time to assess this for the WRAPP.

Rich Knodel asked why we would need to consider socio-economic and cultural benefits.

Mike Prusila commented that he has been at several meetings and read studies where they try to assign a socio-economic value to everything.

Jim Anderson asked if we should include Economic Benefit functions and the TAG should think more about this.

Leslie Berns mentioned the Green infrastructure Vision and that a lot of these economic benefits have already been assigned.

Juli Crane commented that socio-economic/cultural benefits relate more to services provided by the wetlands rather than wetland functions.

Glenn Westman mentioned this discussion about socio-economic/cultural services came up in the first meeting. Glenn cited the Tetra Tech report where they presented a marketing/opportunities study. SMC staff did talk about this when they applied for the WRAPP, but staff agreed to focus on FUNCTIONAL ASSESSMENT in this study, not ecological services or benefits. That said, the WRAPP product/outcomes could be used as part of future studies to dovetail into ecological services and benefits.

Mike Prusila commented it is a good idea to keep the services and values (mentioned by Tom Ganfield) in mind and that these will be called out in the final report.

Jim Anderson mentioned wetland communities provide oxygen and air purification functions and suggested the TAG should investigate if this data exists as it relates to an "Air Quality" function, which would perhaps include carbon sequestration function.

BREAK 10:20 a.m.

TAG reconvened at 10:30 a.m.

V. Working Group overview & organization/tasks—20 min.

Mike Prusila opened the discussion of the Preliminary Assessment of Wetland Functions (PAWF) and mentioned it is basically a desktop GIS exercise.

SMC and the TAG will be using all of the national/Federal data as well as the Lake County data.

Mike Prusila went over the Michigan DEQ Study and the Tetra tech study for stream flow maintenance function.

Mike Prusila wanted to go through a group exercise before selecting working group members and asked TAG member to think of what kind of wetland characteristics and functions are applicable for Lake County.

Glenn Westman mentioned that other studies like the Sandusky Ohio study applied a regional approach but the TAG needs to focus more on a localized approach.

Dennis Dreher mentioned that the ADID study conducted in the mid-1990s was a similar study and some of the logic remains. Dennis recommended that the TAG pull all of the relevant data from the ADID study in the WRAPP analysis.

Sue Elston asked how the data was going to be used and if the WRAPP data would replace the ADID study. Mike Prusila, and others in the groups responded that the WRAPP would not replace the ADID study but could be used to identify gaps in the ADID study. The ADID GIS has 203 polygons and the LCWI-e has over 17,000.

Sue Elston asked where or how does the restoration component come into play?

Mike Prusila replied to Sue stating that we are looking at existing and historic wetlands to identify potential restoration sites throughout Lake County.

Dan Krill asked if SMC has been approached by watershed groups for this information.

Glenn Westman responding to Dan said yes. Some examples include park districts and communities looking for grant funding. The WRAPP study will in a sense, add more "teeth" to the data.

Sue Elston mentioned that everything we have talking about to date has been related to existing wetlands. She asked how these will translate into potential wetland restoration sites.

Mike Prusila replying to Sue commented that we are looking at both drained and existing hydric soils to identify historic wetlands.

Sue Elston asked how all this discussion about functions relates to subgroups evaluating wetlands.

Mark Bramstedt asked if we are looking at only identifying potential wetland restoration sites.

Mike Prusila replied that based on existing GIS data, we will be looking at apply functional categories to existing and historic wetlands and identifying potential restoration sites.

Glenn Westman commented that historic and existing classifications and functions can be applied for comparative purposes.

Juli Crane mentioned during the working group discussions, it can be decided whether or not the appropriate datasets are available to assess specific functions.

Jim Anderson recommended flooding all the drained hydric soils to identify the drained sites and come up with a depth in the drained hydric soils. Jim said this would make a difference in restoration and mitigation purposes/potential.

Dan Krill asked if we are just looking at identifying high quality wetlands.

Mike Murphy asked if we wanted a methodology to identify function.

Vince Mosca mentioned the current methodology isn't viable for identifying future, past, and present conditions.

Mike Prusila replied that the current methodology can be used to identify historic, current, and future restoration potential.

Glenn Westman mentioned that SMC is currently developing the LCWI-e which will include additional areas and exclude areas no longer in the LCWI. Glenn commented that all these existing wetlands fall within the LLWW categories and the LLWW can be applied to what the wetlands currently are and what they historically were.

Sue Elson mentioned that habitat functionality would have to be extrapolated.

Jim Anderson recommended we flood drained hydric soils.

Vince Mosca commented that the existing methodology can't be used to identify future, past, and present conditions.

Dennis Dreher mentioned the TAG should focus on existing wetlands and then apply criteria for potential wetland restoration sites.

At 11:09 a.m., Mike Prusila recommended that the TAG form the working groups. He asked members of the TAG to choose one of three functional categories they would be interested in researching.

The three functional categories and TAG members are as follows:

1. "Water Quality" Functional Category

Mark Bramstedt
Dennis Dreher
Sue Elston
Mike Adam
Mike Murphy

2. "Hydrologic" Functional Category

Darren Olson
Leslie Berns

Dan Krill
Rich Knodel

3. "Biodiversity" Functional Category

Jim Anderson
Vince Mosca
Maggie Cole
Tom Ganfield

Glenn Westman asked the TAG members to please think about scheduling the working group meetings between now and February and at the next TAG meeting, SMC would like to go over the status of the current GIS efforts.

Juli Crane commented that if the working groups need more than one meeting, please feel free to schedule as many as needed.

Jim Anderson suggested that SMC schedule the working groups meetings.

VI. TAG Working Group break-out sessions to discuss preliminary functional assessment—30 min.

Time was running out and these break-out sessions did not happen.

VII. Wrap-up & next meeting coordination (next meetings will be Working Group meetings during Dec./Jan.) —10 min.

Mike Prusila will send out a doodle poll to TAG members with a list of potential January and February meetings dates and times.

Meeting adjourned at 11:15 a.m.

COURTESY REMINDER: THIS IS A VOLUNTEER GROUP OF PROFESSIONALS, PLEASE BE RESPECTFUL OF EACH OTHER'S TIME AND SILENCE YOUR PHONES AND/OR STEP OUT OF THE MEETING TO HANDLE CALLS

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Project Website:

<http://www.lakecountyil.gov/Stormwater/FloodplainStormwaterRegulations/Wetlands/Pages/WRAPP.aspx>

GLOSSARY OF ACRONYMS

ADID Advanced Identification study of high-quality wetlands in Lake County (NIPC, USEPA, SMC, 1992)

GIS Geographic Information System

LCWI Lake County Wetlands Inventory (Lake County Department of Information Technology)

LCWI-e Enhanced existing wetland polygons based on LCWI (SMC)

LCWI-h Enhanced historic wetland polygons based on LCWI (SMC)

LLWFA Landscape Level Wetland Functional Assessment, very similar to W-PAWF (Michigan Dept. of Environmental Quality)

LLWW “Landscape position, Landform, Water flow path, & Waterbody type” hydrogeomorphic classification scheme developed by USFWS (Tiner) used in NWIPlus

NWI National Wetlands Inventory (USFWS) using ecological classification scheme developed by Cowardin, et. al.

NWIPlus See “LLWW”

PAWF See “W-PAWF”

SMC Lake County Stormwater Management Commission

TAG Technical Advisory Grop

W-PAWF Watershed-based Preliminary Assessment of Wetland Functions (GIS-based functional assessment method)

WRAPP Wetland Restoration and Preservation Plan (SMC)