Waubesa Wetlands Study Plan
Technical Advisory Committee

May 9, 2017 **City of Fitchburg Library** **1:00 p.m.**

Attendees: J. Balousek, T. Bernthal, C. DeWitt, S. Gatzke, T. Hovel, M. Kakuska, M. Parsen, M. Rupiper, E. Schmitz, J. Zedler,

1. Mike Kakuska welcomed everyone.

2. The minutes of the March 14, 2017 meeting was approved by the Committee.

3. Jeremy Balousek provided a brief update on the current standards for new development in Dane County, including:

- Six basic minimum performance standards:
    - Water runoff rate control, matching pre- equal post-development for the 1, 2, 10, and 100-yr storm events
    - Water quality runoff control, removing 80% total suspended solids which is about the limit of technical feasibility
    - Provide a non-erosive/stable outlet when converting sheet flow to a point discharge
    - Maintain 90% pre-development "stay-on" (as opposed to running off the site), accomplished through on site infiltration or evapotranspiration – a stormwater volume control
    - Oil and grease control, e.g., treating the first ½ inch of runoff from gas stations, parking lots,etc.
    - Thermal controls for development in watersheds draining to coldwater streams

- volume control is currently being looked at to potentially provide 100 percent stay-on along with a fee in lieu for mitigation offsite (the details are still being worked out by a joint CARPC/L&WC technical advisory committee)
- there is often a large (e.g., 2-10 times) safety factor built into specific designs depending on the actual soil characteristics
- potential problem areas in methodology being looked at include the practice of using synthetic storms for some sites or for series of storms. Recent advancements in computer technology may help address this
- while municipalities must meet or exceed the minimum standards, Dane Co. retains its enforcement capabilities. Some communities (including Fitchburg) contract with Dane Co. to conduct the reviews, inspections, and enforcement
- while Dane Co. does a pretty good job on the construction phase, there is an identified weakness with follow-up inspections of facilities after they have been installed. Dane Co. is looking into a program for long term inspection and maintenance

4. Mike Kakuska provided a brief overview on Minnesota's wetland standards, including:

- description of MN's Rapid Assessment Methodology and wetland management classification process based on highest function/value, and associated stormwater standards
- the standards include an overall management strategy, suggested water quality and quantity controls, and recommended buffer widths, which align with a wetland's susceptibility
- lacking this assessment in Dane County, Bedford and Zimmerman's Wetland Grouping methodology was used as a surrogate, updated by ecologist Jason Granberg, and focused in on the Waubesa Wetlands area
- note the MN buffer widths of between 25-100 feet represent water quality considerations only. They do not account for the aquatic and terrestrial full-life cycle requirements of semi-aquatic species, which serve as good umbrella or indicator species of biotic diversity and health
- leading biologists recommend wetland buffers which incorporate minimum "core habitat" distances of between 100 and 700 feet for Wisconsin wildlife species based on a wetland's quality (i.e., the Wetland Grouping map)
- from the Waubesa Wetlands map it appears that environmentally-friendly development and resource protection may be compatible, and that a lot of good can result from increased set-backs in terms of water quality and quantity protection, biodiversity, habitat restoration, aesthetics, and amenities, etc. given the room to do these things
- the wetland standards deal with stormwater impacts, they do not account for groundwater impacts
- discussion ensued about the effects of well water withdrawals, the cone of the depression, and possible actions to mitigate and possibly even reverse the impacts

5. Joy Zedler gave a brief presentation on "Line of Evidence," including:

- she quoted Griggs et. al. (2017) "waiting for scientific certainty is neither safe nor prudent"
- Lines of Evidence from multiple disciplines can provide a valid test of cause and effect where those cannot be tested directly, others explore lines of evidence from multiple disciplines (which leads to a way forward) including:
    - identifying the lines of evidence as they pertain to groundwater, water quality and quantity modeling, ecosystem services, biodiversity, climate change, invasive species, and cumulative impact analyses
    - identifying effects downstream using examples from the literature
    - finding ways to avoid negative effects using examples from the literature, and also local initiatives
    - exploring policy tools, their utility for Waubesa Wetlands, as well as shortcomings

- bottom line is that Lines of Evidence do provide a valid test of cause and effect
- as example, a 10-yr. study in Puget Sound could not detect the impacts before/after development, yet the same authors correlated downstream impacts with the degree of urbanization in the same region
- the authors were surprised by the inability of a 10-year monitoring program to detect before/after effects; they attributed it to slower-than-expected development in the watersheds being monitored
- lines of evidence in the afore-mentioned categories show evidence of impact on wetlands; this is just a brief chart; it can be augmented with further examples and literature citations. She said I think we know enough to focus on mechanisms to avoid the impacts –and where there is uncertainty, adopt the precautionary principle (i.e., no-impact development)
- we don't need 20 years of additional research to show development has impacts on wetlands; we can rely on existing literature and develop policy tools/options/recommendations to avoid negative impacts and promote beneficial ones
- thereby infusing new ideas and adaptive management and learning from our experiences

Committee discussion ensued:
- a comment was made this is exactly what we are envisioning for the Waubesa Wetlands to inform policy discussion and decision-making
- do we currently have sufficient information in all of these areas to make the necessary decisions? – the role of the committee is to review the state-of-the art and identify any gaps
- this is not about documenting the impacts
- do we understand enough about the system to make the right decisions, considering current management practices; what are the gaps?
- problem is the information is so scattered and fragmented, we should therefore compile this material, across disciplines, so that it is meaningful to folks

6. Committee discussion ensued on the Draft Wetlands Study Design:
- this effort is by no means meant to be regulatory in nature but, rather, to inform decisions and policies; what information do we have, what more do we need as part of the study?
- recommendations will likely come out of a subsequent plan, but we need to be careful to focus is on water quality, which is under the preview of the DNR, not noise, safety or land use
- DNR is driven by statutory authority, anything more and it will be challenged; therefore, the scope needs to be focused on the NEN decision document because that is where DNR's authority is based – water quality
- the problem is everything is currently so piecemeal, so it would be of great benefit for this study to pull all this information together
- Mike Kakuska began walking the committee through the draft design, compiled from previous meetings including topic areas, potential work elements, who might be involved, tools available, existing information, and existing guidance
- it was suggested the committee focus on the work elements, since that was the most important aspect
- we will continue working on this next meeting, in the meantime forward any comments, edits, or more detailed information to Mike

7. Next meeting:
Tentatively scheduled for June 14, 10:00 am -12:00 pm., Fitchburg Community Center, Prairie View Room

NOTE CHANGE IN MEETING LOCATION/TIME