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February 8, 2018

Mr. Timothy R. Asplund
Monitoring Section Chief
WDNR – Bureau of Water Quality
101 S. Webster Street
Madison, WI 53707-7921

Re: Water Quality Management Letter for Sewer Service Area Amendment Request #1707 –
CUSA - Madison

Dear Mr. Asplund,

On December 6, 2017, the City of Madison submitted a sewer service area amendment application to the Capital Area Regional Planning Commission requesting an expansion of the Central Urban Service Area. The proposed amendment includes the addition of approximately 312.8 acres of land. The proposed amendment area does not include any environmentally sensitive areas that would require inclusion in environmental corridors in accordance with the adopted environmental corridor policies and criteria of the *Dane County Water Quality Management Plan*. Non-riparian, steep, wooded slopes; the proposed stormwater management facilities; and planned park and open space have been included in environmental corridors. The environmental corridors total approximately 35.4 acres, for a net developable area of about 277.4 acres. A public hearing was held on the proposed amendment at the January 11, 2018 meeting of the Capital Area Regional Planning Commission. The City's application and the Commission staff's analysis report of the proposed amendment have been submitted to the Department's Surface Water Integrated Monitoring System.

It is the Capital Area Regional Planning Commission staff's opinion that the proposed amendment is consistent with water quality standards under Wis. Stat. § 281.15, with the conditions of approval identified below. Additional actions have also been recommended below to further improve water quality and environmental resource management.

At our February 8, 2018 meeting, the Capital Area Regional Planning Commission voted to recommend approval of this amendment to the Wisconsin Department of Natural Resources, based on the land uses and services proposed, and conditioned on the continued commitment of the City of Madison to pursue the following:

1. Submit a detailed stormwater management plan for Regional Planning Commission staff review and approval (in conjunction with DCL&WCD staff) prior to any land disturbing activities in the amendment area. The stormwater management plan shall include the following:

- a. Install stormwater and erosion control practices prior to other land disturbing activities. Protect infiltration practices from compaction and sedimentation during land disturbing activities.
 - b. Control peak rates of runoff for the 1-, 2-, 10-, and 100-year 24-hour design storms to pre-development levels, in accordance with the City of Madison Stormwater Ordinance.
 - c. Provide at least 80% sediment control for the amendment area based on the average annual rainfall, with a minimum of 60% of that control occurring prior to infiltration, in accordance with the City of Madison Stormwater Ordinance.
 - d. Maintain the post development stay-on volume to at least 90% of the pre-development stay-on volume for the average annual rainfall period, in accordance with the City of Madison Stormwater Ordinance.
 - e. Maintain pre-development groundwater recharge rates from the Wisconsin Geological and Natural History Survey's 2012 report, *Groundwater Recharge in Dane County, Wisconsin, Estimated by a GIS-Based Water-Balance Model* (a range of 9 to 10 inches/year for the amendment area) or by a site specific analysis, in accordance with the Dane County Stormwater Ordinance.
 - f. Include provisions and practices to reduce the temperature of runoff, in accordance with the City of Madison Stormwater Ordinance.
 - g. When development proceeds in an order such that the City does not have the right, such as an easement or ownership, to increase flows to a downstream channel, infiltration shall be required such that the runoff-volume pre-development to post-development is matched during a 10-year design event, to the extent allowed by state statutes.
2. Conduct a field verification for areas of the development site considered suitable for infiltration including a site assessment for karst features as required by the Wisconsin Department of Natural Resources Conservation Practice Standard 1002 - Site Evaluation for Stormwater Infiltration.
 3. Stormwater management facilities shall be placed in public outlots whenever feasible and designated as environmental corridor. Easements and perpetual legal maintenance agreements with the City, to allow the City to maintain stormwater management facilities if owners fail to do so, shall be provided for any facilities located on private property.
 4. Delineate environmental corridors to include parks and stormwater management areas to meet the Environmental Corridor Policies and Criteria adopted in the *Dane County Water Quality Plan*. Submit plats showing environmental corridors for Regional Planning Commission staff review and approval prior to recording.
 5. Continue to encourage the responsible use of deicers and water softeners as an active participant in the WI Salt Wise Partnership.

Mr. Timothy R. Asplund

February 8, 2018

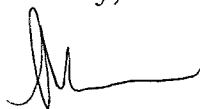
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It is also recommended that the City of Madison pursue the following:

1. Require an archaeological survey be performed by a qualified archaeologist for the amendment area as recommended by the Wisconsin Historical Society and take necessary protection measures if artifacts are found.
2. Request a formal Endangered Resources Review by the WDNR or one of their certified reviewers for potential impacts to endangered resources like rare plants, animals and natural communities and take necessary habitat protection measures if species are found.
3. Continue to participate in the Green Tier Clear Waters Initiative, which aims to reduce the sediment and nutrient delivery to Dane County's lakes and streams from construction activities, beyond the current state and local requirements.
4. Collaborate with watershed-wide efforts to examine and address the concern of higher water levels in Badger Mill Creek.
5. Consider a pilot project in the amendment area that would utilize bio-retention, trees, and ribbon curbs or curb cuts for stormwater management in the street terraces. Especially in the city – town transition area, since the larger lots here would allow for wider street terraces.
6. Continue to work with CARPC and the Dane County Lakes & Watershed Commission to implement the recommendations of the Stormwater Technical Advisory Committee, to the extent allowed by state statutes.
7. Update the XP -SWMM model for the watershed to reflect post -development conditions.
8. Conduct on-site soils investigations in areas with mapped seasonal high groundwater tables and somewhat poorly drained soils (the Elburn and Radford silt loam soils) to determine the actual extent of seasonal high groundwater and identify potential problem areas. The City should consider restrictions in confirmed problem areas such that the lowest level of any structure be built at least one foot above the seasonal high groundwater table to reduce the potential for groundwater induced flooding.

If you have any questions regarding this matter, please do not hesitate to contact Mike Rupiper, the Commission's Director of Environmental Resources Planning.

Sincerely,



Larry Palm
Executive Chairperson



Kris Hampton
Secretary

cc: Mr. Rick Roll, City of Madison Planning Division