DANE COUNTY LAND&WATER RESOURCES DEPARTMENT

Laura M. Hicklin, Director

Administration • Dane County Parks • Lake Management • Land Conservation
Water Resource Engineering • Watersheds & Ecosystem Services

May 17, 2024

Wisconsin Department of Natural Resources
C/O Crystal Von Holdt
2984 Shawano Ave
Green Bay, WI 54313-6727
[*sent electronically*]

Dear Ms. Von Holdt:

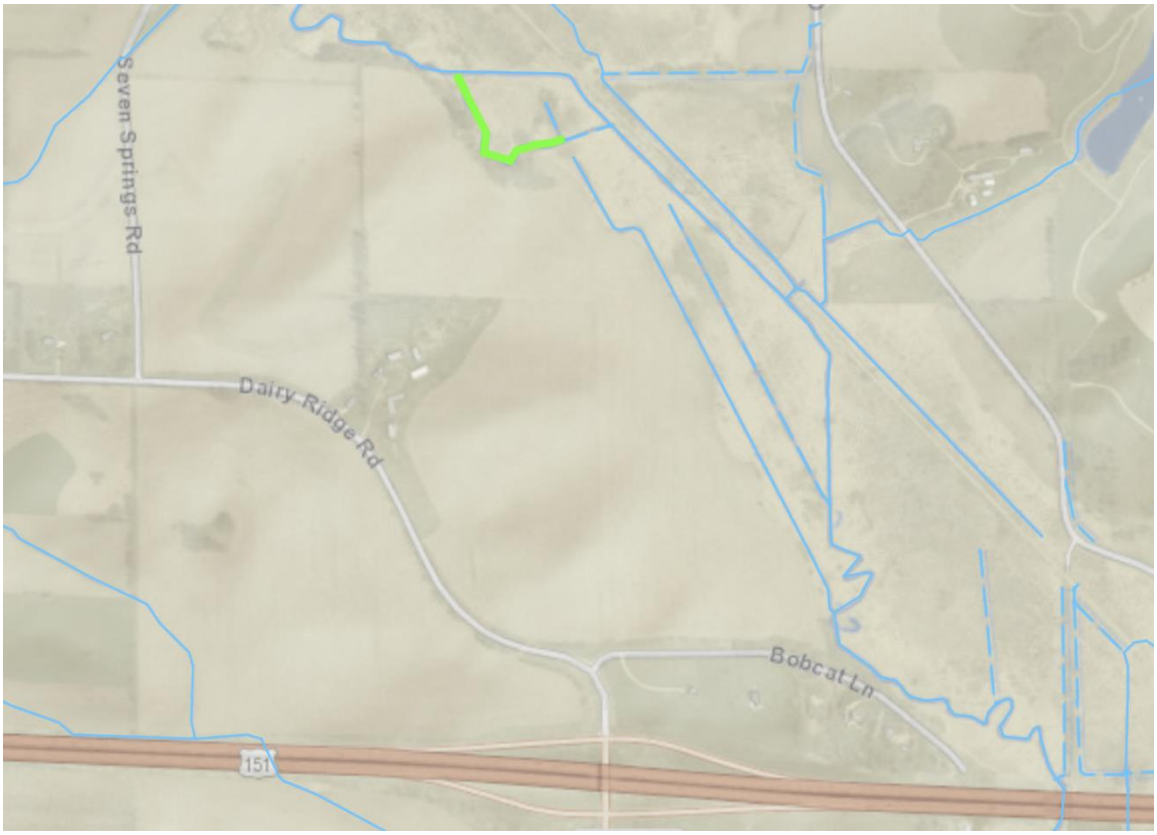
On behalf of the Dane County Land & Water Resources Department (LWRD), we appreciate the opportunity to provide comments on Epic System Corporation's proposed wetland fill for the West River Road project and restoration of the Upper Sugar River (IP-SC-2024-13-00581, 00582, and 00583). We acknowledge the Department's diligent review of the proposal and encourage strong consideration of the following. The recommendations stem from a cohort of local natural resource practitioners, including LWRD staff, who have been working collectively with the Upper Sugar River Watershed Association for many years to monitor and inform restoration throughout the watershed.

This section of the Sugar River valley is a well-known, long-monitored and publicly-important natural resource area in terms of the river itself and surrounding wetlands. The Upper Sugar River has been and continues to be a cold-water success story with respect to the rebounded fishery and water quality. The reach from Valley Rd up to Bobcat Ln houses the best trout fishery in the entire system according to data from a 2021 DNR Fisheries report in terms of natural reproduction and angler-preferred sized fish. There have been multiple documented occurrences of endangered/threatened/special concern flora and fauna, such as the Blanding's turtle (*Emydoidea blandingii*). Despite historic development from the railroad and ongoing expansion of the Epic campus, areas of high-quality sedge meadow/fen remnants remain in that part of the river valley.

While LWRD shares concerns about the potential forecasted and unforeseen environmental, aesthetic and public use impacts from the proposed road/bridge, we understand DNR's limited authority and duty to follow rules in applicable statutes and administrative code. Cognizant of those limitations and for the reasons highlighted above, in addition to the project being adjacent to the Sugar River Wildlife Area (owned and managed by Dane County), LWRD focuses advisement on the following protective measures to be incorporated into the plans or as conditions of any issued permits:

> **Stormwater Controls.** Do not allow drains/culverts through the bike trail bed that convey water from north to south. The trail bed has been protecting (for 170 years) the few remaining high-quality wetlands on the southwest side of the trail from sediment/nutrient laden runoff from uplands to the north, while the river intercepts agricultural runoff from the south and west.

Utilize Relic River Channel. Subsurface exploration performed by Fish Creek Restoration in 2021 revealed the abandoned river channel highlighted in green below as the only section of the valley with firm, coarse substrate (gravel) from the river's historic flow paths. The channel realignment should reactivate this section of river to re-expose this native channel material. Coarse substrate provides ideal spawning and egg incubation habitat for trout, as well as being the preferred conditions for macroinvertebrate production, which are important for ecological health of a river system and the primary food source for trout. There are also substantial springs/groundwater discharge points along the western edge of the valley at that location. Shifting the proposed channel realignment into this historic meander would reintroduce a nearly direct input of groundwater to the river to help buffer rising water temperatures that pose a threat to water quality and life cycles of trout and other cold-water species.



Optimize Natural Materials and Natural, Dynamic Features. Lunker structures as proposed undoubtedly provide overhead cover for adult trout, but haven't been used in Wisconsin stream restorations for many years after observing equal or better success with alternative large wood practices like root wads. In addition to fish habitat, root wads also provide better bank stability and erosion control with a large portion of the structure being keyed into the bank. Replacing lunker structures with alternative large wood practices is recommended.

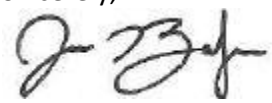
In an effort to mimic natural processes in this section of the river, based on downstream reference reaches, meanders could be tightened at some locations and sinuosity increased to induce undercut banks, another preferred holding area for trout. The well-connected floodplain and dense vegetation/root structure in riparian wetlands allows undercut banks to form and stay in place, and would add habitat diversity.

Off-Channel Wetlands and Channel Form Diversity. Inclusion of adjacent wetland features like scrapes and ephemeral ponds with large wood or micro-topography aid flood abatement, provide refugia for aquatic species during overbank flows and serve as habitat for amphibians, waterfowl and migratory birds. These features should be strategically integrated into the restoration with these ecosystem services in mind, and can be constructed in areas of invasive/undesirable vegetation to improve floristic quality. Opportunities also exist to expand diversity of the channel in terms of pool depth, width depth ratio, riffle characteristics, pool-to-pool spacing and other physical attributes to promote robust river evolution.

Woody Vegetation Control. While some portions of the wetlands within and adjacent to the river corridor slated for restoration have a natural tree/shrub component, areas such as the sedge meadow remnant immediately southwest of the Military Ridge Trail would benefit from removal of undesirable trees/shrubs and recurring use of prescribed fire.

In closing, LWRD commends Epic for the voluntary addition of the river restoration as part of mitigating impacts from the proposed roadway infrastructure, but feels more can be done to maximize the environmental and public benefits from the overall project.

Sincerely,



James Brodzeller
Watershed Coordinator