memo

Project Name |	Mendel Road Wetland Enhancement	**Date** |	10.24.2023
To / Contact info |	BCWD Board of Managers		
Cc / Contact info |	Karen Kill – BCWD Camilla Correll - EOR		
From / Contact info |	Kevin Biehn – EOR		
Regarding |	Scoping Next Engineering Phase		

BACKGROUND

The BCWD has recently explored the feasibility and suitability of restoring the 'Mendel Road Wetland' (see Figure 1 for location) to achieve numerous District goals. Via the 11.25.2020 – Floristic Inventory and Site Survey Findings memo (attached) the District has ascertained the following:

> *The wetland is a large bog and fresh meadow wetland complex that has been altered by an artificial drainage system. It has a mix of good quality and highly degraded plant communities. EOR staff investigated the vegetative communities, sampled soils to interpret effects of drainage and surveyed the outlet ditch. Although not readily verifiable it is our interpretation that this wetland historically drained to the west prior to the excavation of the ditch that exits the wetland in the southeast corner. Construction of the ditch drained a large portion of the wetland and caused the peat to degrade due to loss of hydrology. In areas where the peat was shallow, drainage was particularly effective and caused the peat to decay (humify) and subside in elevation. Subsidence (lower elevation) can be observed from the survey work conducted by EOR and by reviewing LiDAR elevation data. In areas where drainage was effective, EOR observed relatively low-quality plant communities.*

Figure 1 – General location of 'Mendel Road Wetland', which is NE of the Manning Avenue and Hwy 96 intersection

Hydrology restoration (removal or reduction of artificial drainage) coupled with invasive species management would enhance this wetland and would also likely reduce nutrient and thermal loading to Brown's Creek. The disabling of artificial drainage and resulting hydrology change would not noticeably impact the use/condition of most of the ~80-acre wetland, but it may impact (reduced forage and/or access) a portion of the ~15 acres currently grazed.

During the growing seasons of 2021 and 2022 the District monitored local groundwater to aid in the determination of impact(s) stemming from the potential project on grazing. The findings of the monitoring indicated that hydrology restoration as proposed would not degrade grazing of the ~15 acres currently grazed.

A matrix on how this potential project is thought to align with District goals is attached.

Per the positive feasibility findings thus far, District Administrator Kill has requested scope and fee to advance the project further and meet with landowners and stakeholders.

PROPOSED SCOPE

1. Assist District Staff in engaging landowners and stakeholders
    a. Subtask
        i. Assist the District in planning and coordinating engagement
        ii. Prepare simple graphics and author fact sheet(s) for the District to disseminate
        iii. Attendance of up to two meetings by two professional staff (likely project biologist and project hydrogeologist).
    b. Assumptions
        i. District staff to lead and coordinate engagement

PROPOSED FEE & EXPENSE

The following not to exceed charge is assumed for the work described herein.

1. Assist District Staff in engaging landowners and stakeholders	$6,800.00
TOTAL	$6,800.00

POTENTIAL NEXT STEPS

Should the District elect to carry this project forward the following next steps are assumed for the 1st half of 2024:

2. Complete basic existing and proposed conditions surface water model to address questions on how the potential project would impact land use. Should this project be carried out further, this model would aid in both future design and permitting steps. [$5,500]
    a. Subtask
        i. Utilizing existing data and models construction pre and proposed conditions surface water model
        ii. Articulate finding in a memo
    b. Assumptions
        i. None

3. Assist in the vetting of landowner agreements scenarios and articulation of associated project risk. [$3,500]

a. Subtask
    i. Articulate probable
        1. Construction access and limits
        2. Construction means and methods
        3. Operations and maintenance expectations
        4. Change in hydrology
b. Assumptions
    i. OWNER and OWNER's legal counsel to ultimately recommend what if any agreements are prudent.

4. District Board Presentation and Consultation [$2,500]
    a. Subtask
        i. Articulate all findings and recommendations in memo
        ii. Present findings to Board
    b. Assumptions
        i. None

BOARD ACTION

1. Consider approval of engineering budget (NTE $6,800) for *Assist District Staff in engaging landowners and stakeholders* from account XXXXXX.

QUALITATIVE ASSESSMENT OF HOW POTENTIAL MENDEL ROAD WETLAND RESTORATION PROJECT ALIGNS WITH DISTRICT GOALS

ISSUE	GOALS	ANTICIPATED PROJECT BENEFIT ● Meaningful/Measurable		
		VEG & HYDRO	VEG ONLY	HYDRO ONLY
Stormwater Runoff Management	Achieve the Revised TMDL Load Reduction for Phosphorous of 848 lb./yr. assigned to Brown's Creek in the Implementation Plan for the Lake St. Croix Nutrient TMDL (February 2013)	●		●
	Protect and maintain the quantity and quality of groundwater recharge	●		●
	Identify and implement rate control projects to reduce rate-related impacts to water bodies.	●		●
Stream Management	Manage the watershed to mimic natural (pre-settlement) hydrologic conditions	●		●
Wetland Management	Ensure no net loss of wetland functions and values within BCWD.			
	Enhance the functions and values of the District's degraded wetlands	●	●	●
	Increase the quality of buffers around the wetlands in the District.			
Groundwater Management	Work with state and other local partners to maintain or restore presettlement recharge conditions within the District.			

Ecological Health	TSS loads within the contributing drainage area need to be reduced by 74% on average in order to meet these loading limits. (Brown's Creek TMDL Implementation Plan, EOR, 2012)			
	Protect and maintain the quantity and quality of groundwater recharge	●		●
	Identify and implement methods to provide thermal protection to Brown's Creek to achieve the thermal loading reduction identified in the Brown's Creek TMDL Implementation Plan	●		●
	Reduce volume-related impacts to the watershed's water bodies (e.g., stormwater impacts such as wetland bounce and duration)	●		●
	Achieve a healthy and diverse community of native plants and animals (City of Stillwater Lake Management Plans, Wenck Associates INC, 2007)	●	●	
	Initiate and support terrestrial invasive species management projects on private and public lands where connected to water quality management			
Recreation	Enhance public knowledge and appreciation for the District's water resources through an increase in passive and active voluntary stewardship activities.			
Education, Outreach and Stewardship	Increase citizen awareness of surface water, groundwater, and natural resource protection, restoration, and stewardship.			
Land Conservation	Identify and pursue opportunities to preserve and restore land within the watershed based on the District's identified conservation priorities.	●	●	●