

455 HAYWARD AVE N OAKDALE, MN 55128

651.330.8220 X26 [PHONE] 651.330.7747 [FAX] WWW.BCWD.ORG

REGULAR MEETING OF THE BOARD OF MANAGERS

Wednesday, October 9, 2024 Manager recognition 5:30-6:30 PM Regular meeting at 6:30 PM

NOTE MEETING LOCATION

Regular Board Meeting will be held at Family Means 1875 Northwestern Ave, Stillwater, MN 55082

- 1) 5:30-6:30 PM Ceremony for Manager Johnson for 20+ years of service on BCWD Board
- 2) Call Regular Meeting to order 6:30 PM
- 3) Approve Regular Meeting Agenda and Discussion Agenda -Board Action
- 4) Public Comments
- 5) Consent Agenda **Board Action** (all items listed under the consent agenda are considered to be routine by the Board of Managers and will be enacted by one motion. There will be no separate discussion on these items unless a Manager removes an item from the consent agenda for discussion or there is a request to remove the item from the consent agenda, in which event the board will consider whether to remove the item from the consent agenda and consider it separately.)
 - a) Approve Board Meeting Minutes of the September 11, 2024 Regular Meeting
 - b) Accept Permit Fee Statement
- 6) Treasurer's Report
 - a) Review Authorized Funds Spreadsheet
 - b) Current Items Payable-Board Action (Roll Call Vote)
- 7) Permitting
 - a) BCWD Permit 23-19 Liberty Classical Academy Board Action
 - b) BCWD Permit 24-09 CSAH 5 Phase 3 Board Action
 - c) BCWD Permit 24-07 Elliot Crossing project overview discussion
- 8) New Business
 - a) Regulatory Review Scope Board Action
 - b) Diversion drainage subwatershed water quality analysis scope **Board Action**
 - c) Hydrologic and Hydraulic Model Update Phase 3 **Board Action**
 - d) East Metro Water Resources Education Program agreement 2025-2027 **Board Action**
 - e) Family Means Waiver Board Action

Managers:

- 9) Discussion Agenda No Action Required
 - a) Updates
 - (1) Administrator
 - (2) Legal
 - (3) Engineer
 - (a) Permit Inspections
 - (4) Managers
 - b) November 2024 Regular Meeting BCWD Board Agenda: Oath of Office Celia Wirth & Larry Odebrecht
- 10) Adjournment

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DRAFT Minutes of the regular meeting of the Brown's Creek Watershed District Board of Managers, Wednesday September 11, 2024

ROLL CALL

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Managers Present:	Others Present:
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Klayton Eckles, President	Karen Kill, BCWD administrator
Celia Wirth, Vice President	Camilla Correll, EOR, BCWD engineer
Charles LeRoux, 2 nd Vice President	Michael Welch, Smith Partners, BCWD counsel
Gerald Johnson, Treasurer	Cameron Blake, BCWD staff
Debra Sahulka, Secretary	Paul Nation, EOR, BCWD engineer
	Andrew Giesen, Washington County engineer
	Ron Leaf, Kimley-Horn
	Kathy Vollmer, resident

1) Call Regular Meeting to Order

Manager Eckles called the regular meeting to order at 6:01 p.m.

2) Approve Agenda

Manager Wirth moved, seconded by Manager Johnson, to approve the agenda as presented. Motion carried, vote 5/0.

3) Public Comments

Kathy Vollmer, 1281 Amundson Circle, Stillwater, who was responsible for construction oversight for the earthwork being completed for the Brown's Creek restoration project. She expressed concern about the amount of disturbance and exposure of the soils around the creek. Manager Klay Eckles explained that the project is a significant change, but will restore a portion of the creek both structurally and through vegetation improvements. Administrator Karen Kill explained that the district is overseeing the project, and that the disturbed soils have been stabilized by hydromulch and seeding. Ms. Kill said project information can be found on the district website, and on signs along the Brown's Creek State Trail and around the project site. Ms. Kill invited Ms. Vollmer to attend the district's September 21 community event on to learn more about the project.

4) Consent Agenda

Manager Johnson moved, seconded by Manager LeRoux, to approve the consent agenda:

a) Approve Board Meeting Minutes of the August 14, 2024 Regular Meeting

b) Accept Permit Fee Statement

c) Geomorphic Restoration pay application #3 in the amount of \$142,849.66 Motion carried 5/0.

5) Treasurer's Report

a) Review Authorized Funds Spreadsheet

Manager Johnson moved, seconded by Manager Wirth, to accept the authorized funds spreadsheet as presented. Motion carried 5/0.

b) Current Items Payable

Ms. Kill corrected an error in the current items payable report. The total payment for Geomorphic Restoration Inc is \$142,849.66 for pay application number 3, not \$73,534.99 which was the total last month for pay application number 2. This makes the total for the month \$317,890.33 rather than the \$248,575.66 shown in the report.

Manager Wirth moved, seconded by Manager Johnson, to authorize payment of bills as presented in the total amount of \$317,890.33.

	Yea	Nay	Abstain	Absent
Manager Eckles	X			
Manager Johnson	X			
Manager LeRoux	X			
Manager Wirth	X			
Manager Sahulka	X			
Motion carried 5/0.				

6) Permitting

a) Rule Review Facilitation Agreement

Michael Welch said that the agreement with Beth Carreño to facilitate a rule-review effort presented last month is still for a not-to-exceed amount of \$9,800. The contract will be with Ms. Carreño as an individual and the insurance required by the draft agreement in the packet is standard liability and comprehensive automobile insurance coverage only. Mr. Welch said that he doesn't recommend reducing BCWD's standard insurance requirements, but in this case, where the work being done is facilitation of meetings and reporting, he cannot say the risk is significant.

Manager Wirth moved, seconded by Manager Sahulka, to authorize the administrator to execute the regulatory outreach facilitation agreement with Beth Carreño as presented. Motion carried 5/0.

b) BCWD Permit 24-09 CSAH 5 Phase 3 – Project overview

Paul Nation explained that Washington County has been working through the permitting process for a linear project on County State Aid Highway 5 and will be requesting variances from district rules when the permit comes to the board next month for approval. Ron Leaf, who is working with the county, explained that one of the issue areas identified in this project was historic high water levels around Johnson Pond. One variance will be to increase the discharge rates leaving this pond. The

permit plan includes lowering the culvert to help manage water levels from the pond and direct water into the infiltration basin. He discussed with the managers the challenges of stormwater treatment for linear projects, and how this applies to this permit in which the one proposed basin will accomplish much of the overall goal with some discrepancies at certain discharge points. Mr. Leaf explained this was a complex corridor with many challenges for the project.

The managers thanked the permit applicants for attending the meeting and indicated they understood the variances being requested.

7) 2025 Budget

a) Public Hearing

Ms. Kill explained that staff proposes a budget calling for a levy increase of 2.3 percent, which is below the management plan's proposed increase of 3 percent annually. At last month's budget workshop the board reviewed the draft budget and no changes were made to the budget or levy. Manager Eckles opened the public hearing at 6:41 p.m. The managers discussed the two different funding sources based in state statute (103B.241 and 103D.905) and the structure the district uses for the budget (general fund vs. management planning fund). The average tax burden per household in the district is around \$200 a year.

No member of the public was in attendance to comment on the proposed budget and levy.

b) Resolution 24-01: 2025 Budget and Levy

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Manager Eckles noted that there will be another opportunity for public comment at the December board meeting.

Manager LeRoux moved, seconded by Manager Wirth, to adopt resolution 24-01, adopting an operating and capital budget totaling \$2,088,911, including \$1,860,022 for management plan implementation and \$228,889 for operations; with 2024 carryover and certain non-levy revenues totaling \$881,380, resulting in a levy of \$1,207,531 including \$228,889 for the general fund as provided by Minnesota Statutes section 103D.905 and \$978,642 for the management planning fund as provided by the Minnesota Statutes section 103B.241.

Nav

Abstain

Absent

	Yea
Manager Eckles	X
Manager Johnson	X
Manager LeRoux	X
Manager Wirth	X
Manager Sahulka	X
Motion carried 5/0.	

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8) Planning

a) Management Plan Update

Camilla Correll shared information from a recent University of Minnesota presentation on emerging policy issues that may influence future stormwater management efforts. The presentation identified contaminants of emerging concern, climate change and social vulnerability, and an upcoming requirement for the state to use best available data (e.g., projected rainfall) instead of historical data in the next Municipal Separate Storm Sewer System general permit. Manager Eckles noted the contaminant issue of polycyclic aromatic hydrocarbons, which were once used in driveway sealant among other applications. This can accumulate in stormwater basin sediment and requires expensive disposal past a certain threshold. Ms. Correll said EOR will present more information about various contaminants of emerging concern at upcoming board meetings.

(1) Education, Outreach & Stewardship

The Citizen Advisory Committee provided input for this subject at their last meeting. New language was added based on these discussions. The board requested language that the issue statement be more concise (i.e. fewer examples). Much of this effort has come from the district's partnership with the East Metro Water Resource Education Program. The board discussed challenges reaching people who are directly impacted by an issue (i.e., residents five blocks away from Long Lake), identifying new opportunities to interface with the public and stakeholders and leveraging opportunities to engage with K-12 students without creating new curriculum.

(2) Recreation

The CAC identified a goal of creating access to the environment without impacting the resource negatively. The board stated they want to encourage projects that create access to the environment and be flexible in considering their benefits in relation to their potential adherence to district rules. The board would also like to emphasize the importance of signage to promote awareness of district projects especially in relation to public trails.

(3) Stormwater Runoff Management

Ms. Correll noted the purpose of this stage of the planning process was to identify issues and needs, with prioritization based on budgetary constraints would come in later. The board discussed the role of best management practices and their ongoing maintenance and operation needs. Continuing the work of engaging with Homeowner Associations and their stormwater feature maintenance obligations was a high priority. Other topics of discussion included retrofit opportunities (to address aging infrastructure) and other strategic opportunities to partner with cities on projects, how to get more comprehensive water management into municipal land use decision-making, how to get communities to think about climate resilience and the basis for existing pollutant load reduction goals.

(4) Stream Management

Managers had questions about the aquatic life impairment and asked to revisit the implementation activity for a beaver management policy at a future date.

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3	9)	Discussion Agenda
4		a) Updates
5		(1) Administrator
6		Ms. Kill extended the valid period for BCWD Permit 17-04 Lakes of Stillwater to
7		December 31, 2025, and authorized a 60-day permit review extension permit for
8		BCWD Permit 24-09 CSAH 5.
9		Ms. Kill noted that the next board meeting will be Manager Jerry Johnson's last
10		and Washington County Commissioner Gary Kriesel will attend.
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12		(2) Legal
13		Mr. Welch requested direction regarding the BCWD board authorization of legal
14		counsel work on chloride limited-liability legislation. Nine Mile Watershed
15		District drafted a resolution for Minnesota Watersheds for a regulatory approach
16		to reducing chloride use. The managers indicated support for legal counsel
17		pursuing a regulatory approach to reduce chloride use.
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19		Adjournment
20		ager Sahulka moved, seconded by Manager LeRoux, to adjourn the regular meeting at
21	<u>9:49</u>	p.m. Motion carried 5/0.
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23	-	ectfully submitted by
24	Cam	eron Blake, BCWD Staff and Debra Sahulka, Recording Secretary
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APPLICANT/PERMIT NO.	PERMIT DATE	Status/Notes	2	3	4	5	6	7	Dec omp actio n	GOV	SF RES	RES DEV	СОМ	EXEMPT	AMT DUE
Bergmann Development/Sanctuary Permit No. 05-12	10/14/2005		Х	X	X			X				Х		\$	-
Stillwater Medical Center Parking Permit 13-26		need to verify infiltration with monitoring data	Х	Х				Х					х		\$3,039.10
Brown's Creek Cove Permit 15-07		received as-builts and not built as approved -needs correction	Х	Х	Х			Х				х			\$8,238.52
Heifort Hills Permit 16-03		need as-builts	Х	X	X	X		X				X			\$1,327.34
Farms of Grant/White Oaks Savannah Permit 17-01			X	X	X			X				X			\$19,234.52
The Lakes of Stillwater Permit 17-04	Extended to 12/31/2025	received as-builts and not built as approved -needs correction	Х	Х	х			Х					х		\$4,147.53
West Ridge Permit 17-17			X	X	X			X	X			X			\$1,082.93
Heifort Hills Estates Permit 18-02			X	X	X			X	X			X			\$41,206.46
Boutwell Farms Permit 18-04A			X	X	X			X	X			X			\$381.44
Hazel Place/Hertiage Ridge Permit 18-05 (Was 17-09)		lots to go	X	Х	X			X	X			X			(\$2,445.17)
Nottingham Village Permit 18-06		approved (overflow too	X	X	X			Х				X			\$650.03
Ridgecrest Permit 18-11		done - one raingardian follow up spring 2024	X	Х				Х	X				х		\$16.68
St Croix Valley Recreation Center Expansion Permit 18-14		up 2021		X				X	Х	X				\$6,970.28	
Central Commons Permit 19-05	11/11/2025	Declaration still	Х	X	Х			X	X				Х		(\$5,000.00)
Neal Ave Road Reconstruction Permit 20-05	6/1/2020	contact Reabar	X	X						Х				\$19,088.31	
CSAH 15-36 Interchange Permit 20-08	3/24/2021 3 year approval	waiting for as-builts		Х			X	X		Х				\$19,495.85	
White Pine Ridge Permit 20-12	6/7/2021 surety redution request 1/12/23			X					X			X			(\$631.32)
Maryland Gateway Addition Permit 21-13	9/29/2021	four lots left to build	х	х				х				х			(\$776.26)
Schwartz Residence Permit 21-15	5/6/2021 erosion control only	amendment requested for 2.0	х	х							х				(\$319.38)
Millbrook Park- City of Stillwater Permit 21-21	8/25/2021	Retrofit complete/planting spring 2024	х	х	х					х				\$6,970.18	
Fahey Permit 21-34	11/4/2021			х							х				(\$743.78)
Norell Ave N Improvements	(Fall 2022 BMP still needs to be finalized fall 2023)	waiting on maintnance agreement	х	х				х		х				\$10,458.63	

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APPLICANT/PERMIT NO.	PERMIT DATE	Status/Notes	2	3	4	5	6	7	Dec omp actio n	GOV	SF 1 RES 1	RES DEV CO	ОМ	ЕХЕМРТ	AMT DUE
Permit 21-45															
Gonyea (8 lots)- White Pine Ridge Permit 22-02				х								х			(\$407.85)
Wetridge (12 lots) - Sharkey/GreenHalo Permit 22-03 (Transferred 21-30 and 21-31)	3/25/2022			х								х			(\$442.71)
13290 Boutwell Road N - Sharkey/GreenHalo Permit 22-05	3/25/2022			х								х			(\$590.51)
7125 Lone Oak Trail (WOS L106)-weichman Permit 22-11	9/25/2022 need to amend declaration			х							x				\$7,650.88
Stillwater Oaks Permit 22-18	conditional approval		х	х								х			\$11,158.50
Popeyes OPH Permit 22-20	11/9/2022			х									х		(\$189.62)
Wash Co. CSAH 57 culverts Permit 22-31	2/2/2023			х						х				\$0.00	
Cty Rd 61 Re-alignment Permit 23-01	4/12/2023 not yet closable		х	х						х				\$8,147.40	
WOS L114 - Cates (7211 Lone Oak Trail Tweden) Permit 23-02	9/26/2023 submittal			х	х			х			х				\$8,399.43
Boutwell Farm Lot 1 (2545 Boutwell Farm Rd) Permit 23-03	5/3/2023 NOPV Board Order Items			х							х				\$3,569.86
Westridge B1L4 (986 Creekside) Permit 23-04	5/3/2023			х							х				(\$656.02)
Rocket Carwash Permit 23-05	conditional approval 4/12/2023		х	х									х		\$4,824.00
7239 Lone Oak Trail (WOS L118) Permit 23-07	5/3/2023			х							х				\$689.54
72nd St Road and Trail Improvements Permit 23-08	5/26/2023									х				\$3,438.36	
Curio Dance Studio Permit 23-10	10/2/2023	prior to closure	х	х									х		\$6,036.16
7273 Lone Oak Trail- WOS Lot 122 - Freiroy Residence	Conditions not met but started	Need LOC-submitted but		х							x				\$1,058.25
Permit 23-11 The Lakes - Phase III/Sandhill Shores	construction 7/27/2023	not acceptable		x								x			\$474.08
Permit 23-13												A .			
Wiskow Berm Permit 23-14	6/28/2023			х							х				(\$614.40)
7085 Lone Oak Trail- WOS L102- Mensah Res/Cates Permit 23-15	App recieved 7/10 John reviewing/conditions 7/27/2023			х							х				\$1,267.11
Sundance Townhomes Permit 23-17	conditional approval		х	х	х			х					х		\$6,982.75
7285 Lone Oak Trl- WOS L124 Permit 23-18	erosion control revisions needed			х							x				\$244.88
Liberty Classical Academy Expansion Permit 23-19	Plans submitted 6-12-2024 Fee received 12-21-2023		х	х	х			х					х		\$35,538.48
Take 5 Oil Change Permit 24-01	8/23/2024		х	х				х					х		(\$2,933.15)

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APPLICANT/PERMIT NO.	PERMIT DATE	Status/Notes	2	3	4		6	7	Dec omp actio n	GOV	SF	DEC	сом	EXEMPT	AMT DUE
Schuster Residence- 122nd St N Permit 24-02	3/12/2024			х							х				\$780.83
WOS L120- 7255 Lone Oak- Hilgert Permit 24-03	3/18/2024			х							х				\$1,968.18
Swager Residence Permit 24-05	3/7/2024			х							х				\$ (683.52)
Rutherford Elementary Permit 24-06	8/29/2024		х	х				х		х				\$ 8,379.06	
Elliot Crossing Permit 24-07	8/2/2024 submittal complete		х	х	х			х				x			\$ 25,320.99
Altendorfer Residence - 13075 Lynch Rd Permit 24-08	5/8/2024			х							х				\$ (853.75)
Washington County CSAH 5 - Trails and Bridge Permit 24-09	8/6/2024 submittal complete 60 day extension administrative		х	х			х	х		х					\$ 17,864.25
Boutwell Farms lot 1 -Conlin - 2545 Boutwell Farm Rd Permit 24-10	application incomplete 8/29/2024			х							х				\$ (866.91)
7300 Lone Oak Trail - WOS Lot 127 Karr Residence (Cates) Permit 24-11	8/29/2024			х							х				\$ 433.25
7338 Lone Oak Trail- WOS Lot 130-Carlson Residence Permit 24-12	pre-application - lowest floor alteration request App recived 9/24/2024										х				\$ (1,200.50)
8413 Marylane Permit 24-13	application recieved 8/30 incomplete			х							х				\$ (1,000.00)
Pratt Homes - 105th and Jamaca - Wick Residence Permit 24-14	application recieved 8/15 ready to issue			х							х				\$ (959.26)
Lornston Permit 24-15	App received 9/26/24														\$ (4,000.00)
TOTAL NON-EXEMPT DUE BCWD:			90	326	34	15	27	160	l	71	153	13	119		\$209,585.97
Total due back to applicants if closed:															(\$215,787.41)

Brown's Creek Watershed District 2024 Approved Budget- Final Certified Levy 10-9-2024

ı	2024 Аррго)-9-2024	00,1,,,,,,,	,							
•		Car	evised 2023 cry Forward r Approval	2024 Grants		2024 Levy	В	2024 Total audget (For approval)	A	Allocated		Available
100-2910	Designated Funds - Management Plan Projects	\$	992,580				\$	992,580			\$	992,580
		╢					\$	-			\$	-
Revenue	T	-			-		\$	-			\$	-
100-3700 100-3601	Interest Income Metropolitan Council Outlet Monitoring Grant	╢		\$ 5,000			\$	5,000			\$ \$	5,000
100-3630	Washington County Cost-share Applewood Reuse	\$	66,800				\$	66,800			\$	66,800
100-3631 100-3100	MPCA Small Watershed Grant 2023-2026 Tax Levy	\$	320,706		\$	1,180,803	\$	320,706 1,180,803			\$	320,706 1,180,803
TOTAL, EST	FIMATED Sources of Funding	s	1,380,086	\$ 5,000	\$	1,180,803	\$	2,565,889			\$	2,565,889
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ACCT.#	General Expenses	Car	evised 2023 rry Forward r Approval	2024 Grants		2024 Levy	В	2024 Total sudget (For approval)		Allocated		Available
200-4000 200-4001	Manager Per Diem and Expense Manager Communications/Tablets	\$	4,350		\$	10,000	\$ \$	10,000 4,350	\$	10,000 4,350	_	-
200-4220	Secretarial Services	\$	4,000		\$	(4,000)	\$	-		·	\$	-
200-4250 200-4270	Dues & Subscriptions (MAWD 6500 and LMCIT 2500) Bonding & Insurance				\$	9,000 6,000	\$	9,000 6,000	\$ \$	9,000 6,000	\$	-
200-4280	Postage & Delivery				\$		\$	1,000	φ	0,000	\$	1,000
200-4290 200-4330	Printing & Notices				\$		\$ \$	1,000	•	4.560	\$	1,000
200-4330	Accounting Audit				\$	4,560 10,300	\$	4,560 10,300	\$	4,560 10,300	\$	-
200-4949	Misc., Other Expense				\$	2,000	\$	2,000	\$	1,000	\$	1,000
200-4320 200-4265	Wash. Conservation DistrictAdmin Admin Conference Registrations	$\{ -$			\$	58,670 2,000	\$ \$	58,670 2,000	\$	58,670	\$	2,000
200-4410	Legal Fees - General				\$	25,800	\$	25,800	\$		\$	-
200-4500	Staff Engineer Diversity, Equity and Inclusion Training				\$ \$	28,445 5,000	\$ \$	28,445 5,000	\$	28,445	\$ \$	5,000
	Contingency Reserve	\$	30,824		\$	5,000	\$	30,824			\$	30,824
TOTAL GE	NERAL FUND EXPENSES:	\$	39,174	\$ -	\$	159,775	\$	198,948	\$	158,125	\$	40,823
ACCT.#	MANAGEMENT PLAN EXPENSES	Car	evised 2023 rry Forward r Approval	2024 Grants		2024 Levy	В	2024 Total udget (For approval)		Allocated		Available
300-4320 300-4410	Wash. Conservation DistrictAdministrator Legal Fees - Mgmt Plan	\$	15,000		\$	176,005 60,000	\$	191,005 60,000	\$	191,005	\$	60,000
300-4410	Staff Engineer				\$	90,474	\$	90,474	\$	90,474	\$	00,000
300-4702	Permitting, Legal Review				\$	15,000	\$	15,000			\$	15,000
300-4703 300-4704	Permitting, Engineering Review Permitting, Inspection Database				\$	55,000 1,000	\$	55,000 1,000			\$	55,000 1,000
300-4710-1	Baseline Monitoring	\$	518	\$ 5,000	\$	136,420	\$	141,938	\$	141,938	\$	-
300-4640 300-4810	Equip. Maint. and Upgrades	\$	15,000		\$ \$	10,000	\$ \$	25,000	\$	7,400	\$ \$	17,600
300-4810	Shared Educator Position Management Plan Implementation -future projects				\$	20,500	\$	20,500	\$	20,500	\$	-
903-0001	Trout Habitat Preservation Project: Monitoring,				\$	6,500	\$	6,500	\$	6,490	\$	10
909-0000 909-0001	Rules Review/Evaluation Groundwater Dep Nat Resource Inventory update	\$	27,000 10,000		\$	3,000 (10,000)	\$	30,000			\$	30,000
909-0002	Permitting Program Internal Procedure updates	\$	25,000		Ψ	(10,000)	\$	25,000			\$	25,000
910-0000 911-0000	Education & Outreach Volunteer Stream Monitoring				\$ \$	15,000 4,045	\$ \$	15,000 4,045	\$ \$	14,948 4,045	\$	52
912-0000	Grant Preparation	\$	-		Þ	4,043	\$	- 4,043	Ф	4,043	\$	-
914-0000	Homeowner BMP Program				\$	50,000	\$	50,000			\$	50,000
922-0000 923-0000	Plan Reviews - LGU/LWMP H & H Model Maintenance	\$	3,800		\$	130,824	\$ \$	134,624	\$	26,370	\$	108,254
923-0002	Flood Risk Assessment	\$	89,316		\$	(63,360)	\$	25,956	\$	25,956	\$	-
927-0000	Management Plan Update	\$	127,000		\$	90,000	\$	217,000	\$	204,634	\$	12,366
929-0000 929-0010	Long Lake Plan Implementation-shoreline management Long Lake -Implementation - regional treatment	\$	75,000		\$	(75,000)	\$	<u> </u>			\$	
929-0011	Long Lake - 62nd Street Pond Retrofit Feasibility	\$	15,000				\$	15,000	\$	15,000	\$	-
929-0012 931-0001	Long Lake - Marketplace Reuse Feasibility Benz Lake Management Plan Implementation	\$	164,900 15,500		\$	60,220 (15,500)	\$	225,120			\$	225,120
935-0000	Land Conservation Program	\$	100,000		\$	50,000	\$	150,000			\$	150,000
935-0002 935-0003	110th Street Property Implementation Develop Land Conservation Priorities	\$	45,000 20,000		\$	25,000	\$	70,000 20,000			\$	70,000
940-0000	BMP Program – LGU/Community Demonstration Projects	\$	10,000				\$	10,000	\$	10,000	\$	-
942-0004	Measuring Trends in GW Elevations & Flow	\$	3,960				\$ \$	3,960	\$	3,960	\$	9.060
942-0007 942-0011	Groundwater - Browns Creek piezometers Groundwater - Coordination with users	\$	8,960 40		\$	24,000	\$	8,960 24,040	\$	24,036	_	8,960 4
942-0012	Groundwater - Install Monitoring Wells	\$	58,000		\$	(58,000)	\$	-			\$	-
942-0013 947-0017	Groundwater - Pump Test Brown's Creek Implementation - Ecoli site visits/cost-share	\$	15,000		\$	(15,000)	\$	10,000			\$	10,000
947-0018	Brown's Creek - Biological Survey (Macroinvert & Fish)	\$	4,000		L		\$	4,000	\$	3,776	\$	224
947-0022 947-0023	Brown's Creek - Buffer and Stream Restoration Brown's Creek - Golf Course Reuse - Oak Glen	\$	330,000		\$	133,000	\$	463,000	\$	364,244	\$	98,757
947-0026	Brown's Creek - Brown's Creek Cove Reach				\$	20,000	\$	20,000			\$	20,000
948-0000 950-0001	CIP Maintenance South School Curly Leaf Treatment	\$ \$	35,418 1,000		\$ \$	135,000 (1,000)	\$ \$	170,418	\$	52,218	\$ \$	118,199
951-0001	Woodpile Lake Management Plan Implementation	\$	10,000		\$	(10,000)	\$	-	L		\$	-
953-0000	Fen Management Plan Implementation	\$	4,000		Φ.	2.500	\$	4,000	\$	4,000	\$	-
957-0000 959-0001	Weather Station Resource Assessment - upstream 110th/Drone flight	$\ -$			\$	3,700 4,700	\$	3,700 4,700	\$	3,642 4,700	-	- 58
959-0002	Resource Assessment - Diversion Tribs - Head cut Repairs	\$	60,000		\$	(60,000)	\$	-	Ĺ	,. 50	\$	-
959-0003 960-0000	Resource Assessment - Brown's Creek Gorge Bluff St Croix Phosphorus Reduction	\$	10,000		+		\$	10,000	\vdash		\$	10,000
961-0000	Mendel Wetland Restoration Feasiblity	\$	20,000		\$	15,000	\$	35,000			\$	35,000
962-0000	District-Wide Pond Management Planning/Implementation	0	10.000		\$	4,500	\$	4,500	\$	4,500	\$	-
963-0000 964-0000	District-Wide Vegetation Surveys District-Wide Chloride Source Assessment	\$	2,500		\$	(10,000)	\$	2,500	\vdash		\$	2,500
	NAGEMENT PLAN PROJECT EXPENSES:	\$	1,340,912	\$ 5,000	\$	1,021,028	\$	2,366,940	F		\$	1,143,104
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TOTAL OP	ERATING EXP. & MGMT. PLAN PROJECTS:	\$	1,380,086	\$ 5,000	e	1,180,803	\$	2,565,888			\$	1,183,927

BROWN'S CREEK WATERSHED DI 10/9/2024 CURRENT ITEMS PAYABLE-PAGE 1		ECKLES JOHNSON LEROUX	YES	NO	ABSTAIN	ABSENT
		WIRTH SAHULKA				
VENDOR		ACCOUNT #	ITEMS	TOTAL	CK NO	
Emmons & Olivier Resources, Inc.	Invoices September 2024					
	Inv. 41-0000-226 Retainer	300-4500	\$ 7,078.50			
	Inv. 41-0000-226 Retainer	200-4500	\$ 2,359.50			
	Inv. 41-0001-229 General Permitting	300-4703	\$ 6,888.07			
	Inv. 41-0307-90 Permits 2017					
	Permitting #17-01 Grant Holdings Subd	300-4703	\$ 346.50			
	Permitting #17-04 Stillwater Senior Living	300-4703	\$ 36.95			
	Inv. 41-0384-35 Permits 2021					
	Permitting #21-13 Marylane Gateway	300-4703	\$ 40.74			
	Inv. 41-0402-31 Permits 2022					
	Permitting #22-15 13199 Dellwood Rd	300-4703	\$ 36.95			
	Permitting #22-25 WOS L113	300-4703	\$ 36.95			
	Permitting #22-30 CSAH 5 Ph2	300-4703	\$ 36.95			
	Inv. 41-0420-21 Permits 2023					
	Permitting #23-01 CR 61	300-4703	\$ 36.95			
	Permitting #23-07 WOS Lot 118	300-4703	\$ 36.95			
	Permitting #23-08 72nd Street	300-4703	\$ 36.95			
	Permitting #23-11 WOS L122	300-4703	\$ 36.95			
	Permitting #23-13 Sandhill Shores	300-4703	\$ 129.32			
	Permitting #23-14 Wiskow Berm	300-4703	\$ 40.74			
	Permitting #23-15 WOS Lot 102	300-4703	\$ 36.95			
	Permitting #23-17 Sundance Stillwater	300-4703	\$ 294.00			
	Permitting #23-18 WOS L124	300-4703	\$ 36.95			
	Permitting #23-19 Liberty Classical Academy Expansion	300-4703	\$ 1,757.25			
	Inv. 41-0438-09 Permits 2024					
	Permitting #24-01 Take 5 Oil Change	300-4703	\$ 129.32			
	Permitting #24-03 WOS L120- Hilgert Residence	300-4703	\$ 36.95			
	Permitting #24-04 Wash Co CSAH 5	300-4703	\$ 36.95			
	Permitting #24-05 Swager Residence	300-4703	\$ 36.95			
	Permitting #24-07 Elliot Crossing	300-4703	\$ 9,325.50			
	Permitting #24-09 CSAH 5 Phase 3	300-4703	\$ 1,287.75			
	Permitting #24-12 WOS Lot 130 Carlson	300-4703	\$ 49.50			
	Permitting #24-14 Wick Residence	300-4703	\$ 40.74			
	Inv. 41-0205-83 CIP Operation and Maintenance	948-4500	\$ 1,729.50			
	Inv. 41-0284-32 BCWD Education and Outreach	910-0000	\$ 420.12			
	Inv. 41-0418-22 Brown's Ck Pk Restoration	947-0022	\$ 1,828.80			
	Inv. 41-0451-2 BCWD 2024 Bio Survey	947-0018	\$ 971.32			
	Inv. 41-0447-6 BCWD 2024 WMP Update	927-0000	\$ 8,975.00			

910-0000 \$

241.50

Inv. 41-0443-5 Rare Aquatic Plant Outreach

EOR Cont.	Inv. 41-0433-8 2024 H&H Model Update	923-0000	\$ 7,995.75	
	Inv. 41-0434-4 Mendel Wetland Landowner Engagement	961-0000	\$ 256.50	
	Inv. 41-0437-7 2024 OGGC Reuse Maintenance and Monitoring	948-0000	\$ 643.50	
	Inv. 41-0450-4 Coordinating WQ Improvements with Member	962-0000	\$ 2,155.50	
	Inv. 41-0453-4 IESF OM 2024	948-4500	\$ 260.00	
	Inv. 41-0455-2 Wetland Inventory and Assessment Update	948-4500	\$ 10,827.19	
	Inv. 41-0445-3 BCWD Baseline Survey	927-0000	\$ 86.50	
	Inv. 41-0446-5 Masterman Long Woodpile Lake Plans	923-0002	\$ 4,405.25	\$ 71,044.21
	in the control of the		,	,
Xcel Energy	Inv. 895046844- Iron Enhanced Sand Filter pump operation	948-4500	\$ 63.94	\$ 63.94
Washington Conservation District	Inv. 6669 August 2024- Water Monitoring			
	Baseline Water Monitoring- labor	300-4710	\$ 10,441.25	
	Baseline Water Monitoring- equipment	300-4640	\$ 120.10	
	Metropolitan Council- Lab	300-4710	\$ 5,222.00	
	Inv. 6674 August 2024- BMP Program	914-0000	\$ 1,963.50	\$ 17,746.85
Smith Partners	September 2024 Invoices			
	Inv. 45209 Retainer - Meetings, Preparation	200-4410	\$ 2,186.27	
	Inv. 45210 General Legal Services	300-4410	\$ 167.40	
	Inv. 45211 Planning	300-4410	\$ 869.31	
	Inv. 45212 Contracts	300-4410	\$ 334.80	
	Inv. 45213 Rule Making	300-4410	\$ 334.80	
	Inv. 45214 Permits	300-4703	\$ 4,104.45	
	Inv. 45215 Lake McKusick Iron-Sand Infiltration	300-4410	\$ 167.40	
	Inv. 45216 Oak Glen Golf Course Project	300-4410	\$ 1,041.58	
	Inv. 45217 Capital Project Development	300-4410	\$ 502.20	\$ 9,708.21
Dave McCord	Inv. 4411 August 2024 Accounting Services	200-4330	\$ 380.00	\$ 380.00
ECM Publishers Inc	Inv. 1418805 2024 Budget PH Notice	200-4290	\$ 42.50	\$ 42.50
Press Publications	Inv.815467 2024 Budget PH Notice	200-4290	\$ 160.94	\$ 160.94
League of Minnesota Cities	Inv. 411800 2025 Membership Dues	200-4270	\$ 786.00	\$ 786.00
Dena Hinkle	Stewardship Grant Reimbursement 2024-04	914-0000	\$ 500.00	\$ 500.00
Jerry Lopez	Stewardship Grant Reimbursement 2024-12	914-0000	\$ 500.00	\$ 500.00
Manager Wirth	Quarter III 2024 Per Diem	200-4000	\$ 700.00	\$ 700.00
Manager Johnson	Quarter III 2024 Per Diem	200-4000	\$ 200.00	\$ 200.00
Manager Eckles	Quarter III 2024 Per Diem	200-4000	\$ 600.00	\$ 600.00
Manager LeRoux	Quarter III 2024 Per Diem	200-4000	\$ 300.00	\$ 300.00

 Manager Sahulka
 Quarter III 2024 Per Diem
 200-4000
 \$ 600.00
 \$ 600.00

Total Amount Disbursed \$ 103,332.65

BROWN'S CREEK WATERSHED DISTRICT

10/9/2024

MONTHLY ITEMS DEPOSITED - Page 1 of 1

VENDOR	INVOICE/DESCRIPTION	ACCOUNT #	CK NO	DEPOSIT DATI	Ξ	TOTAL
Red Stone Builders, LLC	#24-12 Permit Deposit	300-4703	11602	10/1/2024	\$	1,250.00
Pratt Homes	#24-14 Permit Deposit	300-4703	124880	9/11/2024	\$	1,000.00
N C Lorntson	#24-14 Permit Deposit	300-4703	3006	9/25/2024	\$	4,000.00
4M Fund	Dividend	100-3700	Direct Deposit	9/30/2024	\$	4,334.17
TOTAL AMOUNT DEP	OSITED:				\$	10,584.17

Brown's Creek Watershed District Treasurer's Report 10/9/24

Total	Bank	Balance
-------	------	---------

4M Fund USBank		\$ 878,014.63 -
Less Accounts Payable		(103,332.65)
Plus Unrecorded Deposits since	09/30/2024	1,250.00
Total Balance		\$ 775,931.98



455 HAYWARD AVE N OAKDALE, MN 55128

651.330.8220

WWW.BCWD.ORG

MEMORANDUM

TO: Brown's Creek Watershed District Board

FROM: Karen Kill

RE: Public Comments regarding Liberty Classical Academy

DATE: October 8, 2024

Attached comments have been received from the public regarding the proposed permit application for Liberty Classical Academy.

Karen Kill

From: Bob/Marcia Dornfeld <dornie@usfamily.net>

Sent: Tuesday, October 8, 2024 10:17 AM

To: Karen Kill

Subject: Liberty Classical Academy permit

Greetings Karen,

This is a note in support of approving a permit for Liberty Classical Academy. Since the engineer's report shows approval of a permit being issued and the Academy meets all the BCWD codes, I would assume that the permit would be approved.

Our property is adjacent to the east of the school. This land has been in my family for over 100 years. So keeping it clean and pristine is important to us. Reports indicate that this will happen.

We welcome a neighbor like Liberty Classical Academy.

Thank you,

Marcia Dornfeld 10580 122nd St N Hugo, MN 55038

Karen Kill

From: Deanna Herold <deannaherold@comcast.net>
Sent: Saturday, September 21, 2024 9:15 PM

To: Karen Kill

Subject: Re: Letter To Board Regarding Liberty Classical Academy Expanision Permit 23-19

Dear BCWD Board Members,

I am writing to encourage you to please support the expansion that Liberty Classical Academy has applied for via permit 23-19. Specifically, the school wishes to construct stormwater facilities on the property that the Academy owns in May Township, which is adjacent to the school located in Hugo. It is my understanding, as well as the school's understanding, that the permit fully complies with the requirements of the watershed district and that opposition from neighbors is not something that would allow the permit to be denied. Therefore, we expect the watershed district to follow its own rules and approve the permit without further delay or unreasonable conditions.

I am confident that Liberty Classical Academy will continue to be an excellent neighbor and conscientious member of the community in which it resides.

Thank you for your attention to this matter.

Sincerely,

Deanna Herold Grant, Minnesota

Karen Kill

From: Dianne Miller <diannedmiller@gmail.com>

Sent: Tuesday, October 8, 2024 1:06 PM

To: Karen Kill

Subject: Liberty Classical Academy

Karen: I am contacting you as the District Administrator to the Brown's Creek Watershed District on behalf of Liberty Classical Academy.

I am a wife of 46 years, a mother for 44 years, a public school volunteer for 20 years, grandmother for 11 years, a high school youth group leader for 7 years, and a school board candidate campaign organizer for 3 years. Never have my eyes been so opened to the drastic decline of our public school system than during these last four years. As I dug into school board meetings and curriculum, I realized that our education system is failing our children, which not only affects our children, but also our community.

Liberty Classical Academy is the ray of hope we need to build children into critical thinking men and women, filled with character, commitment and perseverance. To impede the development of this school is to impede the achievement of our children and community.

God never intended for His church to be hidden in a corner. We occupy this space until He comes; and we do that by standing in the gap to provide the best possible outcome for families, children, cities, towns, neighborhoods. Liberty Classical Academy is the means to that end. It must be allowed to continue its expansion project to completion. I ask for your support in helping the school to accomplish this mission.

Respectfully,

Dianne Miller

Dear Brown's Creek Watershed District (BCWD) Manager,

Liberty Classical Academy has applied for a permit to construct stormwater facilities on the property the school owns in May Township adjacent to the school building it owns in Hugo. We understand that the permit fully complies with the requirements of the watershed district. We understand that a watershed district must base their decision if the application meets the watershed requirements for a permit. If the application does not meet the watershed district requirements for a permit, then we understand a permit may be denied. As a manager of Brown's Creek Watershed District, we understand that the decision for approval or denial needs to be based on the facts within the application and equally apply the standard to all applications.

Many residents of the community support the school and the plans to expand. We are residents from the City of White Bear Lake and would like to share a brief summary of our story and how Liberty Classical Academy impacts the future of our community and our state.

We are the Heikkinen family and our children have been attending Liberty Classical Academy since the Fall of 2016. Our oldest daughter Hannah started preschool the fall of 2016 and began 7th grade fall of 2024. Our second daughter Elizabeth started preschool a few years later and began 4th grade this fall. A small school like Liberty Classical Academy relies on parents volunteering. Our family enjoys partnering with others to serve both the school and around the community. Liberty Classical Academy and the surrounding community remind us of the small-town rural public schools of Minnesota we grew up attending when we were in K-12 school.

We learned about Liberty Classical Academy in 2012, a few months after our first daughter was born. At that time, we had not considered private school for our children but there was something about Liberty Classical Academy that stood out. I was accepted into graduate school in the fall of 2012 after serving in the Army, so our family moved to Duluth for four years. After graduating, our hope was to get a job close to White Bear Lake so we could send our daughters to Liberty Classical Academy. I began a career in Minneapolis and we moved to White Bear Lake and became first-time homeowners one mile away from the school. We never intended to send our children to private school since my wife and I both are proud graduates of small-town rural public schools of Minnesota. We would never consider any other private school. Therefore, moving to White Bear Lake was because of Liberty Classical Academy.

Liberty Classical Academy used to be in two locations, both Woodbury and Maplewood before they were able to unite the entire school together at the White Bear Lake location. Families have moved to where the school was located and neighborhoods have been significantly impacted. Now the school desires to unite the students in one physical location in Hugo and May Township. The school will become an asset for the communities within the Brown's Creek Watershed District, as well as the surrounding communities for decades into the future. Liberty Classical Academy is educating the future leaders of Minnesota business, industry, healthcare and education and the graduates will shape the future of Minnesota. Working families with school age children like ours value education and we are raising the next generation of Minnesota workers, and more importantly, fathers and mothers who will have families. The family is the basic building block for our community, state, and nation. Our state will be best served supporting a Pre-K to 12th grade education institution like Liberty Classical Academy.

Unfortunately, over the past four years, working families with young children have fled our neighborhood in White Bear Lake, families that would have sent their children to public school. Many families have moved to other public schools while others have chosen homeschool or private school. Some families have moved out of the state altogether. Each family that has moved out of the city of White Bear Lake and the state of Minnesota have done so to provide education opportunities for their children. Zero young families have moved into our neighborhood. Now, the only young families that live in our neighborhood attend Liberty Classical Academy. One of our neighbors, just one block down the street, moved from the state of Washington to White Bear Lake, Minnesota eight-years ago so their daughters could attend Liberty Classical Academy.

We decided to send our children to Liberty Classical Academy because it is uniquely Christian and uniquely Classical. We would not be sending our children to any other private school. There is no other education option like this school. It is not like choosing another private school or public school. Liberty Classical Academy is a unique program. There are other classical schools and there are other Christian schools, but there are no schools like Liberty Classical Academy in our state or surrounding states.

Each family of Liberty Classical Academy impacts their community. Liberty Classical Academy is more than the children and staff, it includes the grandparents and great-grand parents and other extended family and friends. Those family members live in other Minnesota communities and benefit from children in their family attending Liberty Classical Academy. Liberty Classical Academy is built with families like ours who make significant sacrifices so our children can attend the school. The values of Liberty Classical Academy and the stories within our school embody the values and reflect the stories of rural Minnesota.

Our family has been supported by the Liberty Classical Academy family in more ways than educating our children. When our family endured a significant trial, the Liberty Classical Academy community supported us through that storm, reminding us of the spirit and resolve of the Minnesota rural communities my wife and I grew up in western and northern Minnesota.

We may not live in Brown's Creek Watershed District, but decisions made in other communities impact the surrounding communities. Education opportunity impacts where young families live and the decisions made about Liberty Classical Academy will have long-term ramifications on the future trajectory of the state of Minnesota. The decisions made by the Brown's Creek Watershed District also impact the surrounding cities and counties, as well as the entire state of Minnesota. I also believe the impact of Liberty Classical Academy will reach even further, influence the future direction of our country nationally and impact the world globally.

Thank you for your thoughtful consideration and humbly ask that you support the BCWD Permit 23-19 for Liberty Classical Academy Expansion without any further delays or denials of permitting.

Thank you, Michael and Andrea Heikkinen 3715 Prairie Road White Bear Lake, MN 55110 612-581-2214 October 4, 2024

Brown's Creek Watershed District 455 Hayward Ave N Oakdale, MN 55128

Dear BCWD:

This letter is in support of the proposed school expansion project of the Liberty Classical Academy at the Hugo site. I first became aware of the school four years ago through a friend who had two grandsons attending the Academy and have since graduated.

What I was particularly impressed with was the graduation requirement where each graduating student creates a white paper on a controversial subject. The student takes one side of the topic and argues for it. Then the student presents his view for ten minutes in front of a three-person panel who asks questions that force the student to defend the student's position. It was very impressive, and I have since given generously to the Academy because I believe in good quality education.

I believe that the Academy is worthy of support, and I think the expansion would be a good addition to the Hugo community. In fact, I think you could be proud of it.

Sincerely,

Kenneth Emde

Woodbury, Minnesota

ennets Ende

memo



Project Name | BCWD Permit 23-19, Liberty Academy Expansion Date | October 4, 2024

To / Contact info | BCWD Board of Managers

Cc / Contact info | Mike Brandt, PE / Kimley-Horn

Cc / Contact info | Rebekah Hagstrom / Liberty Classical Academy

Cc / Contact info | Karen Kill, Administrator / BCWD

From / Contact info | Ryan Fleming, PE; Paul Nation, PE; John Sarafolean / EOR

Regarding | Permit Application No. 23-19 Engineer's Report

The following review of the above-mentioned project located within the legal jurisdiction of the Brown's Creek Watershed District (BCWD) was conducted to determine compliance with the BCWD rules for purposes of the engineer's recommendation to the Board of Managers for its determination of the permit application.

Applicant: Liberty Classical Academy

Permit Application Submittal Date: June 12, 2024 Completeness Determination: June 21, 2024 Board Action Required By: October 10, 2024

Review based on BCWD Rules effective April 1, 2020

Recommendation: Approve with Conditions

BACKGROUND AND GENERAL COMMENTS

Liberty Classical Academy is requesting approval of both a regional stormwater-management plan and a permit for specific land-disturbing activities at its existing site, 10158 122nd Street North in Hugo. The currently proposed work involves expanding the school campus to the east into May Township. Hugo & May Township are each requiring a conditional use permit for the proposed project. The property includes three parcels owned by Liberty Classical Academy, totaling 82.6 acres. The site is bordered by Keller Avenue North on the west, by 122nd Street North on the south, by Goggins Lake on the east, and by farmsteads to the north. Under current conditions, there are 7.4 acres of impervious coverage on the site. This includes the existing school building, playgrounds, and parking lot, right-of-way along Keller Avenue and 122nd Street adjacent to the school property, and existing residential buildings. (The applicant must provide documentation of rights to work within the right of way along each roadway.)

The site will be redeveloped in phases, only the first of which is proposed as a land-disturbing activity for approval now. The applicant is at the same time requesting approval of a regional stormwater management plan under section 2.9 for the whole site.

The regional treatment plan includes a stormwater basin, irrigation using water from the basin on the green spaces on site, as well as smaller best management practices (BMPs) on the western and southern portions of the site.

The work the applicant proposes for construction now (phase 1 build-out) includes a new lower school building, a parking lot, a practice soccer field, a septic sewer system with five drain fields for

phase 1, a turn lane on Keller Avenue, BMPs on the western side of the site that drain to the southwest discharge location, and a stormwater basin. Phase 1 will add 12.0 acres of impervious surface to the site, for a total of 19.4 acres of impervious area and will utilize a portion of the stormwater-management capacity to be created under the regional plan.

At the July 10^{th} , 2024 BCWD board meeting, the BCWD board of managers approved a 60-day extension on the review of this permit. With the 60-day extension, board action is required by October 10^{th} , 2024.

Recommendation: The BCWD engineer recommends that the board approve the regional treatment plan and the phase 1 buildout permit application with the conditions outlined in the report.

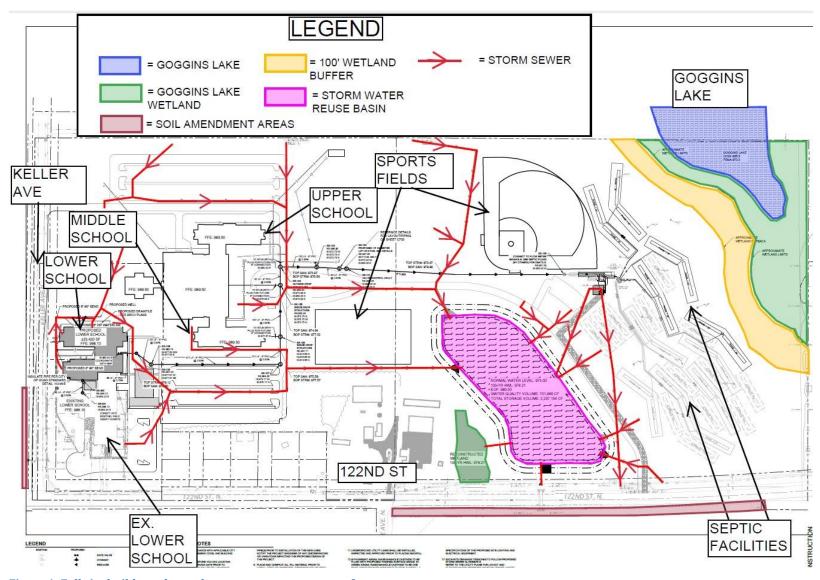


Figure 1: Full site buildout plan and stormwater management features.

REGIONAL TREATMENT STORMWATER MANAGEMENT ANALYSIS Rule 2.0—STORMWATER MANAGEMENT

The proposed regional plan provides for the addition of 23.3 acres of new impervious surface for a total of 30.7 acres of impervious surface on the site. The site is not within the Diversion Structure Subwatershed, so the stormwater criteria in subsection 2.4.1(a) apply.

Under section 2.9 Regional Treatment, an applicant may comply with applicable BCWD stormwater rate-control, volume-retention and water-quality standards by providing equal or greater peak rate control, volume control and phosphorus control through a regional or subwatershed plan approved by the District. A regional plan must provide for an annual accounting to the District of treatment capacity created and utilized by projects or land-altering activities within the drainage and treatment area to which the plan pertains. District approval of a regional or subwatershed plan will be based on a determination that:

- (a) the use of a regional facility in place of onsite stormwater management will not result in adverse impacts to local groundwater or natural resources located upstream of the regional facility, including, but not limited to, reduced water quality, altered wetland hydrology, changes to stream velocities or base flow, erosion, or reduced groundwater recharge; and
- (b) the plan incorporates onsite BMPs to mitigate impacts and provide local benefits not provided by the regional facility. The applicant, before commencing any land-altering activity, must demonstrate that downgradient stormwater conveyance structures and facilities will be adequate to handle proposed increased peak flow or flow volume from the site, it holds the legal rights necessary to discharge to the stormwater facility or facilities in the regional plan, and that the facility or facilities are subject to a maintenance document satisfying the requirements of paragraph 2.6.

The applicant requests approval of a regional treatment plan pursuant to section 2.9 to provide treatment for the currently proposed and future redevelopment of the site. The proposed drainage areas are shown in Figure 3 and the stormwater facilities proposed under the regional treatment plan are shown in Figure 1.

The following analysis pertains to the full buildout of the site to demonstrate compliance with the stormwater standards. A separate stormwater analysis of the presently proposed project is then provided to summarize the amount of the regional capacity that phase 1 will utilize.

As shown in Figure 2, there are currently two discharge points from the site:

- The southwest discharge point is located at the property boundary to the west of Keller Avenue where the ditch drains off Liberty Classical property. There are 11.6 acres draining to this location, including three offsite residential lots and the ditch adjacent to Keller Avenue. Stormwater discharges from this location to the south through a culvert under 122nd Street into offsite Wetland 1 south of the site, then travels east to a second offsite wetland (Wetland 2), and continuing west to the BCWD Trout Habitat Preservation Project (THPP).
- The south discharge point is located south of the Liberty Classical property boundary where two culverts discharge beneath 122nd Street. There are 90.7 acres draining to this location that includes privately owned farmsteads to the north, an onsite residential property, a 0.48-acre

onsite wetland, and the ditch adjacent to 122^{nd} Street. After crossing beneath 122^{nd} Street, runoff flows overland to Wetland 2, then to the THPP.

The site includes a small portion of Goggins Lake (which is a groundwater-dependent natural resource (GDNR)) and the Manage 1 wetland surrounding the lake. No disturbance is proposed for the portion of the site draining to this wetland or Goggins Lake.

Under proposed conditions, drainage areas within the site change size and shape from existing, however the discharge locations from the site remain the same (Figure 3). The drainage area to the southwest is reduced from 11.0 to 8.0 acres, and the drainage area to the proposed stormwater reuse basin, discharging to the south beneath 122^{nd} Street, increases from 88.8 to 91.8 acres. Drainage areas in the right-of-way will remain the same size, though the impervious surface will increase due to the addition of the proposed turn lanes (Keller Avenue in phase 1, 122^{nd} Street in a future phase). The rights-of-way area is included with "the site" for purposes of the regional plan analysis, but the applicant has yet to provide documentation of authority to work in the rights-of-way; for a permit for land-disturbing activity in right-of-way to issue, such documentation must be provided.

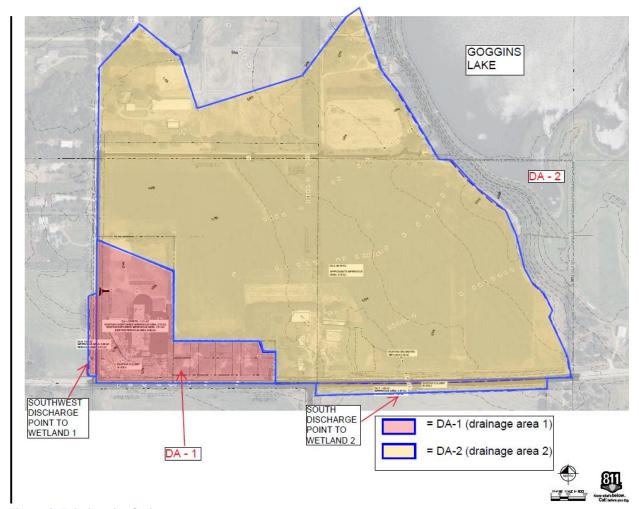


Figure 2: Existing site drainage.

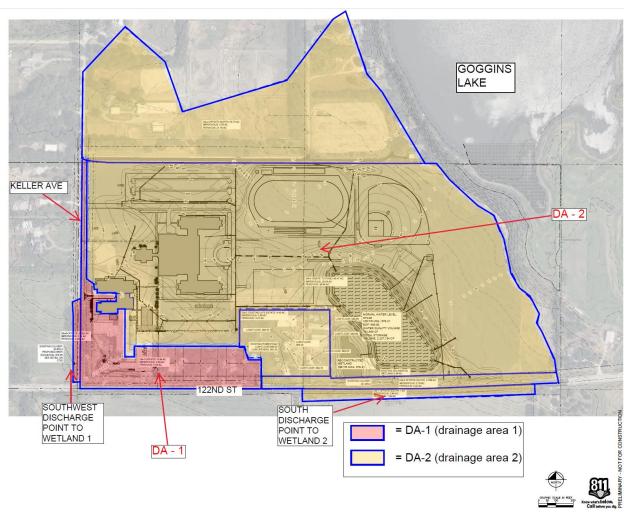


Figure 3: Proposed site drainage.

The proposed regional stormwater management plan includes:

- One stormwater management basin with a permanent pool of water to allow settling of pollutants and sediment. This basin will be used for irrigation of green spaces on the site.
- Pre-treatment sump storm structures on the storm sewers conveying runoff to the stormwater management basin.
- Soil amendment for the area receiving runoff from the new turn lanes on Keller Avenue and 122nd Street, designed to improve water holding capacity to reduce runoff volume and discharge rate. The Type C and Type D soil, having approximately 0.6 inches of rainfall retention in this area, will be amended with compost and topsoil to achieve the capacity of a Type B soil (1.5" rainfall retention).

The regional stormwater treatment plan provides for rate control for runoff from 30.7 impervious acres and land cover disturbance of 77 acres included in the proposed full build out plan. Given the various soil types across the site, impervious area alone cannot be used as a surrogate for BMP design capacity, i.e., converting Type A soil to pavement requires more stormwater treatment than conversion of a Type D soil to pavement. Therefore, a regional stormwater treatment capacity analysis based on the runoff volume generated from all proposed changes in land cover and grading

is required for volume and water quality. Discharge rate attenuation is a function of the storage size and the hydraulic structures used to convey and control water leaving the site, and therefore does not depend on the change in land cover or amount of impervious area in the drainage area. Because of this, rate control capacity of the regional plan does not need to be tracked.

Rate Control

According to BCWD Rule 2.4.1(a)(i), an applicant for a stormwater management permit must demonstrate to the District that the proposed land-altering activity will not increase peak stormwater flow from the site, as compared with the pre-settlement condition, for a 24-hour precipitation event with a return frequency of two, 10 or 100 years for all points where discharges leave a site.

□ Rule Requirement Met with Conditions

The stormwater management plan developed for the site was evaluated using a HydroCAD model of presettlement and post-development site conditions. A comparison of the modeled peak flow rate for the two discharge points is included in Table 1 and Table 2 summarizing the runoff rates for the full build out of the site.

For the south discharge point, the HydroCAD model initial condition begins storm events with the reuse basin at the normal water level (NWL=973.0 feet) which is below the outlet elevation of 978.5 feet. The applicant has proposed the pump operation to maintain the water level at the NWL either through irrigation of the green space, or by pumping down the basin to the northern ditch along 122nd Street until the NWL is reached prior to a storm if irrigation demand does not lower it to this level. The proposed pump discharge rate will not exceed the 2-year rate at less than 6 feet per second (non-erosive on vegetated surfaces) velocity into the existing ditch along 122nd Street.

Table 1 - Peak Discharge Rate – Southwest (Keller Avenue)

Event	Pre-settlement Runoff Rate (cfs)	Proposed Runoff Rate (cfs)
2-year (2.79")	7.5	6.7
10-year (4.16")	11.1	9.6
100-year (7.14")	50.3	23.3

Table 2 - Peak Discharge Rate – South (122nd Street)

Event	Pre-settlement Runoff Rate (cfs)	Proposed Runoff Rate (cfs)
2-year (2.79")	3.5	3.3
10-year (4.16")	13.4	5.9
100-year (7.14")	38.8	12.9

Volume Control

According to BCWD Rule 2.4.1(a)(ii), an applicant for a stormwater management permit must demonstrate to the District that the proposed land-altering activity will not increase stormwater flow volume from all points where discharge leaves the site, as compared with the pre-settlement

condition, for a 24-hour precipitation event with a return frequency of two years, or five years within a landlocked basin or a subwatershed draining to a landlocked basin.

☑ Rule Requirement Met

The stormwater management plan developed for the site was evaluated using a HydroCAD model of presettlement and post-development site conditions. A comparison of the modeled runoff volume for the full build out of the site is included in Table 3. The volume control analysis assumes that the stormwater basin starting water level is at the NWL of 973.0 feet (drawn down from irrigation). The applicant provided a stormwater harvest and reuse analysis using the Metropolitan Council Stormwater Reuse Guide 'Water Balance Tool Irrigation Constant Demand' spreadsheet as well as the Minimal Impact Design Standards calculator to demonstrate suitability of runoff volume supply, storage, and green space area to meet the volume control and pollutant loading standards. The reuse system is designed to irrigate 0.75 inches per week from the middle of May until the end of September and 0.90 inches per week during the month of July. This irrigation rate is reasonable for Type B and C soils with turf grass vegetation. The total area irrigated is 23.60 acres. The regional treatment capacity of the proposed BMPs is determined by comparing the proposed volume running off the landscape to the BMPs, to the pre-settlement discharge volume for the 2-year, 24-hour event at each discharge point.

Table 3 – 2-year, 24-hour Storm Discharge Volume

Discharge Point	Pre-settlement Discharge (Acre-ft)	Post-Development Runoff Volume (Acre-ft)	Post-Development Discharge (Acre-ft)	Regional Plan Design Capacity (Acre-ft)
Southwest	0.85	0.78	0.78	0*
South	1.35	7.51	0.20	7.31**

^{*} Achieved by diversion of drainage area away from the southwest discharge point to the stormwater basin and soil amendment in the ditch along Keller Avenue.

Pollutant Loading

According to BCWD Rule 2.4.1(a)(iii), an applicant for a stormwater management permit must demonstrate to the District that the proposed land-altering activity will not at the downgradient property boundary or to an onsite receiving waterbody or wetland, increase annual phosphorus loading as compared with the pre-development condition.

□ Rule Requirement Met

The permit applicant submitted MIDS modeling of phosphorus loading at both site discharge points, and at the onsite wetland to demonstrate compliance with Rule 2.4.1(a)(iii). Table 4 displays the results of the analysis.

^{**}Achieved by the stormwater basin for irrigation and soil amendment in the ditch along 122^{nd} Street.

The pollutant load to the southwest discharge point will be less than pre-development¹ due to reducing the area draining to that location.

The stormwater basin has been designed and sized to remove 45% of the total phosphorus load from the south discharge point, resulting in a reduction of 16.2 pounds of total phosphorus leaving this discharge point annually.

The pollutant loading to the onsite wetland will be less than pre-development¹ due to reducing the area draining to that location and changing the landcover from agricultural production to grass.

The average annual pollutant loading for the full site build out of the site to each discharge point are shown in Table 4.

Tubic 1 Thosphorus Bouting Summary					
Discharge Point	Pre-Development Phosphorus Loading (lbs/yr)	Proposed Phosphorus Loading (lbs/yr)	BMP Phosphorus Treatment Capacity (lbs/yr)		
Southwest	8.6	8.1	0.0*		
South	35.7	19.5	51.0		
Onsite Wetland (Upstream of South Discharge Point)	35.9	3.1	0.0*		

Table 4 - Phosphorus Loading Summary

Lake/Wetland Bounce

The wetland bounce analysis is provided as a measure of compliance with the local impact criterion to demonstrate that downgradient stormwater conveyance structures and facilities will be adequate to handle proposed increased peak flow or flow volume from the site. Analyzing the bounce and duration of inundation on the downstream system that results from design storm events directly relates to the proposed land alteration and is a measure of BMP effectiveness to mitigate adverse downstream impacts of the increase of stormwater runoff generated and treated on the site. Wetland bounce is a function of the rate and volume coming off the site, notably the volume that results for events greater than the 2-year, 24-hour event for which the volume control standard is based.

According to BCWD Rule 2.4.1(a)(iv), an applicant for a stormwater management permit must demonstrate to the District that the proposed land-altering activity will not increase the bounce in water level or duration of inundation, for a 24-hour precipitation event with a return frequency of

Emmons & Olivier Resources, Inc.

^{*}Compliance is achieved through diversion of drainage area to the proposed stormwater basin routed to the South discharge point

¹ For this site, the existing condition is consistent with the pre-development condition, so reduction in drainage area or reduction in runoff due to vegetation changes is sufficient to demonstrate that phosphorus loading will not increase from the pre-development condition.

two, 10 or 100 years in the subwatershed in which the site is located, for any downstream lake or wetland beyond the limit specified in Appendix 2.1.

□ Rule Requirement Met

The applicant was provided with the BCWD Hydrologic & Hydraulic model to determine compliance with this criterion for the offsite wetlands. The applicant revised the model to reflect proposed conditions on the site. A comparison of the modeled wetland bounce is included in Table 5. Both wetlands meet the permitted bounce of pre-development plus 1.0 feet. Comparison of the hydrographs demonstrates that the period of inundation remains the same from existing to post-development conditions, thus meeting the standard.

The onsite Manage 3 wetland has no limit on bounce. The proposed plan reduces the drainage area to this wetland which results in less water reaching it, therefore the period of inundation to this wetland will be less than existing and meets the standard of existing plus seven and twenty-one days for the two-year and ten-year or greater events, respectively.

Table 3 - Downstream Wedana Dounce Analysis (10)							
		2-year		10-year		100-year	
Waterbody	Management Category	Existing	Proposed	Existing	Proposed	Existing	Proposed
Offsite Wetland 1	Manage 2	4.16	4.11	5.65	5.64	6.73	6.37
Offsite Wetland 2	Manage 2	2.95	2.44	4.01	3.55	7.23	6.87

Table 5 - Downstream Wetland Bounce Analysis (ft)

The proposed regional treatment plan will not result in adverse impacts to the following, consistent with BCWD Rule 2.9(a):

- Local groundwater The proposed reuse system will support local groundwater by returning runoff from impervious surfaces back into the soil for plant uptake and groundwater recharge and by reducing groundwater use for irrigation.
- Natural resources upstream of the regional facility A culvert connecting the reuse basin to the
 onsite reconstructed wetland will allow stormwater to overflow into the wetland when water
 levels are high. This connection will maintain the wetland hydrology provided by greater runoff
 volumes in existing conditions.

In addition to the reuse basin, the project includes pre-treatment sump structures and soil amendment for the new turn lanes, satisfying BCWD Rule 2.9(b).

Therefore, the proposed regional treatment plan meets the requirements of BCWD Rule 2.9 Regional Treatment.

Regional plan approval, if granted, will provide for future utilization of the stormwater-management capacity as described above to meet BCWD stormwater requirements only if future construction proposed is materially consistent with the grading and stormwater-treatment design shown in the plans submitted to support the application. Any material changes to the grading plan or stormwater-

management design will need to be the subject of a request for a permit modification, and may affect the treatment capacity available for future development or redevelopment of the site.

Recommended conditions of regional-plan approval:

1. Provide the District with a maintenance declaration that includes annual pumping volume differentiating volume used for irrigation and volume dewatered to draw the basin down in preparation for forecasted storm events. The stormwater declaration must provide for an annual accounting report of treatment capacity utilized by future projects or land altering activities within the area to which the plan pertains and reporting to BCWD.

PHASE 1 STORMWATER MANAGEMENT ANALYSIS

In conjunction with the request for approval of the regional plan, Liberty Academy is requesting approval of a permit for an expansion project that will utilize a portion of the capacity of the regional stormwater-management system to meet applicable BCWD requirements. Phase 1 includes a new lower school building, a parking lot, a practice soccer field, the septic sewer system for phase 1, a turn lane on Keller Avenue, and a stormwater basin (Figure 4).

Stormwater will be managed by the stormwater basin, irrigation using water from the basin on the green spaces on site, as well as BMPs on the western portion of the site.

Phase 1 includes 19.4 acres of impervious surface (7.4 acres existing, 12.0 acres new).

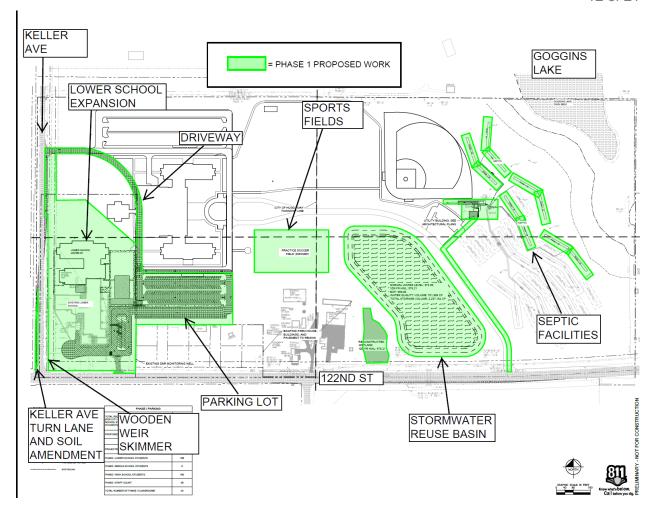


Figure 4: Phase 1 proposed construction.

The phase 1 work proposed to be completed under this permit triggers the application of Rule 2.0 Stormwater Management because the project involves creation of 12.0 acres of new impervious surface which exceeds the 10,000 square foot threshold in section 2.2(b). 1.6 acres of existing impervious will be disturbed, which is less than 50 percent of the existing 7.4 acres of impervious. Therefore, the stormwater management standards apply only to the disturbed portions of the project site. The site is not within the Diversion Structure Subwatershed, so the stormwater criteria in subsection 2.4.1(a) apply.

Phase 1 activities will drain to both the southwest and south discharge points. Planned grading will shift the drainage areas, directing less area to the southwest discharge point, and more area to the stormwater treatment basin that discharges to the south discharge point as described in the regional treatment plan analysis above and shown in Figure 2 and Figure 3.

The stormwater management plan for phase 1 includes:

 One stormwater management basin with a permanent pool of water to allow settling of pollutants and sediment. This basin will be used for irrigation of green spaces on the project site.

- Pre-treatment sump storm structures on the storm sewers conveying runoff to the stormwater management basin.
- Soil amendment for the area receiving runoff from the new turn lane on Keller Avenue, designed to improve water holding capacity to reduce runoff volume and discharge rate. The type C and Type D soil, having approximately 0.6 inches of rainfall retention in this area, will be amended with compost and topsoil to achieve the capacity of a Type B soil (1.5" rainfall retention).

Rate Control

According to BCWD Rule 2.4.1(a)(i), an applicant for a stormwater management permit must demonstrate to the District that the proposed land-altering activity will not increase peak stormwater flow from the site, as compared with the pre-settlement condition, for a 24-hour precipitation event with a return frequency of two, 10 or 100 years for all points where discharges leave a site.

□ Rule Requirement Met with Conditions

The stormwater management plan developed for the site was evaluated using a HydroCAD model of pre-settlement and post-development site conditions. A comparison of the pre-settlement and Phase 1 modeled peak flow rate is included in Table 6 and

Table 7, which demonstrates that phase 1 is in compliance with the BCWD rules and the regional treatment plan.

 Event
 Pre-settlement Runoff Rate (cfs)
 Proposed Runoff Rate (cfs)

 2-year (2.79")
 7.5
 6.9

 10-year (4.16")
 11.1
 9.6

 100-year (7.14")
 50.3
 23.3

Table 6 - Phase 1 Peak Discharge Rate - Southwest (Keller Avenue)

Table 7 - Phase 1 Peak Discharge Rate - South (122nd Street)

Event	Pre-settlement Runoff Rate (cfs)	Proposed Runoff Rate (cfs)
2-year (2.79")	3.5	3.5
10-year (4.16")	13.4	6.5
100-year (7.14")	38.8	14.2

Volume Control

According to BCWD Rule 2.4.1(a)(ii), an applicant for a stormwater management permit must demonstrate to the District that the proposed land-altering activity will not increase stormwater flow volume from all points where discharge leaves the site, as compared with the pre-settlement condition, for a 24-hour precipitation event with a return frequency of two years, or five years within a landlocked basin or a subwatershed draining to a landlocked basin.

□ Rule Requirement Met

The stormwater management plan developed for the site was evaluated using a HydroCAD model of presettlement and post-development site conditions. A comparison of the modeled runoff volume is included in Table 8. The volume control analysis assumes that the stormwater basin starting water level is at the NWL. The applicant provided a stormwater harvest and reuse analysis using the Metropolitan Council Stormwater Reuse Guide 'Water Balance Tool Irrigation Constant Demand' spreadsheet as well as the MIDS calculator to demonstrate suitability of runoff volume supply, storage, and green space area to meet the volume control and pollutant loading standards.

The applicant will utilize the reuse system to irrigate 0.75 inches per week from the middle of May until the end of September and 0.90 inches per week during the month of July. The total area irrigated in phase 1 is 3.0 acres. The regional treatment capacity used for phase 1 is determined by comparing the proposed volume running off the landscape to the BMPs, to the regional treatment plan design capacity for the 2-year, 24-hour event at each discharge point.

	Table 8 - Phase 1	Two-year, 24-hour Stor	m Discharge Volume	
Point	Pre-settlement	Proposed Runoff	Regional Plan	Phase
	Runoff Volume	Volume (acre-ft)	Design Capacity	Volume

Discharge Point	Pre-settlement Runoff Volume (acre-ft)	Proposed Runoff Volume (acre-ft)	Regional Plan Design Capacity (acre-ft)	Phase 1 Runoff Volume Retained (acre-ft)
Southwest	0.85	0.78	0	0 (100%)
South	1.35	0.19	7.31	5.68 (78%)

Pollutant Loading

According to BCWD Rule 2.4.1(a)(iii), an applicant for a stormwater management permit must demonstrate to the District that the proposed land-altering activity will not at the downgradient property boundary or to an onsite receiving waterbody or wetland, increase annual phosphorus loading as compared with the pre-development condition.

□ Rule Requirement Met

The permit applicant submitted MIDS modeling of phosphorus loading at both site discharge points, and the onsite wetland to demonstrate compliance with Rule 2.4.1(a)(iii).

The average annual pollutant loading to each discharge point is shown in Table 9 with the amount of the regional treatment plan capacity utilized by Phase 1 included in the far right column.

Discharge Point	Pre-Development Phosphorus Loading (lbs/yr)	Proposed Phosphorus Loading (lbs/yr)	Regional Plan BMP Treatment Capacity (Amount retained) (lbs/yr)	Phase 1 BMP Phosphorus Retained (lbs/yr)
Southwest	8.6	8.1	0.0*	8.1 (100%)
South	35.7	24.7	51.0	29.2 (57%)
Onsite Wetland	35.9	3.1	0.0*	3.1 (100%)

Table 9 - Phase 1 Phosphorus Loading Summary

*Compliance is achieved through diversion of drainage area to the proposed stormwater basin routed to the South discharge point

Lake/Wetland Bounce

According to BCWD Rule 2.4.1(a)(iv), an applicant for a stormwater management permit must demonstrate to the District that the proposed land-altering activity will not increase the bounce in water level or duration of inundation, for a 24-hour precipitation event with a return frequency of two, 10 or 100 years in the subwatershed in which the site is located, for any downstream lake or wetland beyond the limit specified in Appendix 2.1.

□ Rule Requirement Met

The applicant was provided with the BCWD H&H model to determine compliance with this criterion for the offsite wetlands. The applicant revised the model to reflect proposed conditions on the project site. A comparison of the modeled wetland bounce is included in Table 10. Both wetlands meet the permitted bounce of pre-development plus 1.0 feet. Comparison of the hydrographs demonstrates that the period of inundation remains the same from existing to post-development conditions, thus meeting the standard.

The onsite Manage 3 wetland has no limit on bounce. The proposed plan reduces the drainage area to this wetland which results in less water reaching it, therefore the period of inundation to this wetland will be less than existing and meets the standard of existing plus seven and twenty-one days for the two-year and ten-year or greater events, respectively.

		2-year		10-year		100-year	
Waterbody	Management Category	Existing	Proposed	Existing	Proposed	Existing	Proposed
Offsite Wetland 1	Manage 2	4.16	4.11	5.65	5.64	6.73	6.37
Offsite Wetland 2	Manage 2	2.95	2.44	4.01	3.55	7.23	6.87

Table 10 - Downstream Wetland Bounce Analysis (ft)

Rule 2.0 Conditions:

- 2-1. Provide BCWD with the final civil plan set prior to start of construction for review and approval including relocating the pump discharge pipe outlet in the ditch north of 122nd Street. (BCWD Rule 2.7.9)
- 2-2. Provide BCWD with the topsoil and compost soil amendment specification demonstrating 1.5 inches or more of rainfall retention for review and approval.
- 2-3. Provide a draft stormwater facility maintenance declaration for BCWD approval, then, after approval, provide proof of recordation with Washington County. A template is available under the permit section of the District's website. The maintenance declaration must include the following:

- Protection of all vegetated areas that must be preserved for irrigation use on the property,
- Annual documentation of the weekly depth of water to be used for irrigation along with the dates during which the irrigation system will be active, and
- Annual documentation of the dates and volumes of dewatering pump operation.

(The stormwater facility maintenance declaration recorded for the regional plan can provide all of the maintenance required for phase 1. I.e., a single comprehensive stormwater-maintenance declaration can fulfill the applicable condition on approval for each of the regional plan and the phase 1 work.)

2-4. Provide documentation as to the status of a National Pollutant Discharge Elimination System stormwater permit for the project from the Minnesota pollution Control Agency and provide the Storm Water Pollution Prevention Plan (SWPPP) as it becomes available (BCWD Rule 2.7.15).

If application 23-19 is approved, <u>only the work described for the regional stormwater management and phase 1 land-disturbing activities will be approved. Future land-disturbing activities – whether they utilize the treatment capacity in the regional stormwater-management system or not – will need to be the subject of one or more future permit applications.</u>

Rule 3.0—EROSION CONTROL

According to BCWD Rule 3.2, all persons undertaking any grading, filling, or other land-altering activities which involve movement of more than 50 cubic yards of earth or removal of vegetative cover on 5,000 square feet or more of land must submit an erosion control plan to the District, and secure a permit from the District approving the erosion control plan. The proposed project triggers the application of Rule 3.0 Erosion Control because the proposed project disturbs over 5,000 square feet of vegetation and movement of more than 50 cubic yards of earth.

□ Rule Requirement Met with Conditions

The erosion and sediment control plan includes the following:

- Perimeter control (silt fence) along downstream edge of disturbed areas
- Rock construction entrances
- *Inlet protection for existing catch basins*
- Biologs
- Safety Fence
- Temporary sedimentation basin
- Construction sequencing notes
- Permanent erosion control (seed or sod)

The following conditions must be addressed in the erosion and sediment control plan to comply with the District's requirements:

Rule 3.0 Conditions:

3-1. Provide the contact information for the erosion and sediment control responsible party during construction once a contractor is selected. Provide the District with contact

information for the Erosion Control Supervisor and the construction schedule when available (BCWD Rule 3.3.2).

Rule 4.0—LAKE, STREAM, AND WETLAND BUFFER REQUIREMENTS

According to BCWD Rule 4.2.1, Rule 4.0 applies to land that is (a) adjacent to Brown's Creek; a tributary of Brown's Creek designated as a public water pursuant to Minnesota Statutes section 103G.005, subdivision 15; a lake, as defined in these rules; a wetland one acre or larger; or a groundwater-dependent natural resource; and (b) that has been either (i) subdivided or (ii) subject to a new primary use for which a necessary rezoning, conditional use permit, special-use permit or variance has been approved on or after April 9, 2007, (for wetlands and groundwater-dependent natural resources other than public waters) or January 1, 2000 (for other waters).

⊠ Rule Requirement Met with Conditions

Rule 4.0 applies to the site because it is adjacent to Goggins Lake, which is both a wetland larger than one acre and a GDNR, and Hugo & May Township are requiring a conditional use permit for the proposed project. The classification of Goggins Lake as a GDNR requires a 100-foot buffer zone. According to Rule 4.3.3, the buffer zone is to extend to the top of the steep slope present on the east side of the site.

Buffer monumentation locations are shown on the plan. The design and signage text were not included in the plan set and therefore must be provided for BCWD review and approval.

Under Rule 4.4.1, at the time a buffer is created under Rule 4.0, the District may require a planting or landscaping plan to establish adequate native vegetative cover for area that (a) has vegetation composed of more than 30 percent of undesirable plant species (including, but not limited to reed canary grass, common buckthorn, purple loosestrife, leafy spurge, bull thistle, or other noxious weeds); or (b) consists more than 10 percent of bare or disturbed soil or turf grass.

The current vegetative condition in the proposed buffer has not been assessed, although review of aerial imagery indicates some portions of the buffer are existing agricultural field. As a condition of permit approval, the buffer vegetation needs to be analyzed and the project landscaping plan must be modified and approved by BCWD as needed to provide native vegetation cover compliant with subsection 4.4.1.

Rule 4.0 Conditions:

- 4-1. Provide a draft buffer maintenance declaration for BCWD approval, then, after approval, proof of recordation with Washington County. A template is available under the permit section of the District's website.
- 4-2. Provide a buffer monumentation plan for free-standing markers with a design and text approved by District staff in writing. A marker must be placed at each lot line, with additional markers at an interval of no more than 200 feet. (BCWD Rule 4.2.3)
- 4-3. Conduct an assessment of the proposed buffer area to determine the vegetative composition of undesirable plant species, bare, disturbed soil or turf grass and provide BCWD with a buffer establishment plan for review and approval.

Rule 5.0—SHORELINE AND STREAMBANK ALTERATIONS

According to BCWD Rule 5.2, no person may disturb the natural shoreline or streambank partially or wholly below the ordinary high water mark of a waterbody, without first securing a permit from the District.

□ Rule Requirement Met with Conditions

Rule 5.0 applies to the site because the onsite wetland will be excavated, which will disturb the natural shoreline below the ordinary high water mark of the waterbody located to the west of the proposed stormwater reuse basin.

The applicant provided construction and restoration plans for adequate structural stability by minimizing riparian slopes (5.3.1) with a maximum steepness of 6:1, and that include native vegetation (5.3.2). A long term maintenance plan to ensure erosion is corrected and native plants are successful has not been submitted for this component of the project.

Rule 5.0 Conditions:

5-1. Include a long-term maintenance plan that will ensure erosion is corrected and native plant materials are successful (5.3.3).

Rule 6.0—WATERCOURSE AND BASIN CROSSINGS

According to Rule 6.2, no person may use the beds of any waterbody within the District for the placement of roads, highways and utilities without first securing a permit from the District.

□ Rule Not Applicable to Permit. *There are no proposed watercourse or basin crossings.*

Rule 7.0—FLOODPLAIN AND DRAINAGE ALTERATIONS

According to Rule 7.2, no person may alter or fill land below the 100-year flood elevation of any waterbody, wetland, or stormwater management basin, or place fill in a landlocked basin, without first obtaining a permit from the District. No person may alter stormwater flows at a property boundary by changing land contours, diverting or obstructing surface or channel flow, or creating a basin outlet, without first obtaining a permit from the District.

Rule 7.0 applies to the site because there are proposed alterations below the 100-year flood elevation of the onsite wetland located to the west of the proposed stormwater basin.

According to BCWD Rule 7.3.1, floodplain filling must be accompanied by a replacement of flood volume between the ordinary water level and the 100-year flood elevation.

The applicant is not proposing any fill in the floodplain.

According to BCWD rule 7.3.2(c), all new and reconstructed buildings must be constructed such that the lowest floor is at least two feet above the 100-year high water elevation or one foot above the emergency overflow of a constructed basin.

In addition, no stormwater management facility may be constructed at an elevation that brings an adjacent permanent building into noncompliance with a standard in this subsection 7.3.2.

□ Rule Requirement Met

The existing residential buildings are adjacent to both the onsite wetland and the proposed stormwater basin. Table 11 displays the high-water levels (HWLs) and building elevations. For this analysis, water levels from full buildout conditions were used as they result in a higher 100-year HWL.

The initial water level included in the applicant's building freeboard analysis relies on mechanical pumps to manage a water level 5.5 feet below the basin overflow elevation. The freeboard rule policy is to protect property investments; given the risk of immediate catastrophic loss to a structure and the contents when flooding occurs, assuming the starting water level of the basin at the outlet elevation of 978.50 feet is industry standard. This results in a 100-year HWL of 982.08 feet which allows the lowest floor elevation of 984.08 feet. As shown in Table 11, the freeboard requirement is met. The removals plan has been updated to remove two existing sheds with low floors below the allowable elevation.

Table 11 - Freeboard Requirement Summary

Basin	100-Year HWL	Allowable Lowest Floor	Lowest Proposed/ (Adjacent existing) Building Floor
Onsite Wetland	982.08	984.08	988.10 / (984.4)
Stormwater Reuse Basin	982.08	984.08	988.10 / (984.4)

According to BCWD Rule 7.3.5, the District will issue a permit to alter surface flows under paragraph 7.2 only on a finding that the alteration will not have an unreasonable impact on an upstream or downstream landowner and will not adversely affect flood risk, basin or channel stability, groundwater hydrology, stream baseflow, water quality or aquatic or riparian habitat.

The proposed work does not create a tailwater condition on site that would impact upstream landowners. The proposed reuse pond reduces runoff rate and volume for all storm events, reducing flood risk for downstream landowners.

Rule 8.0—FEES

Fees for this project as outlined below:

TOTAL FEES		\$7,000
4.	Floodplain and drainage alterations fee	\$500
3.	Shoreland alterations fee	\$1,500
2.	Erosion control fee for grading	\$2,000
1.	Stormwater management fee	\$3,000

Rule 9.0—FINANCIAL ASSURANCES

Financial assurances for this project are as outlined below:

1.	Grading or Alteration (77.9 acres dis	turbed x \$2,000/acre) \$155,800
2.	Stormwater Management Facilities (125% of facility cost)	\$3,266,720

 TOTAL FINANCIAL ASSURANCES (\$5,000 Minimum Performance Financial Assurance)

\$3,422,520

Rule 10.0—VARIANCES

According to BCWD Rule 10.0, the Board of Managers may hear requests for variances from the literal provisions of these rules in instances where their strict enforcement would cause undue hardship because of circumstances unique to the property under consideration. The Board of Managers may grant variances where it is demonstrated that such action will be in keeping with the spirit and intent of these rules. Variance approval may be conditioned on an applicant's preventing or mitigating adverse impacts from the activity.

□ Rule Not Applicable to Permit. *There are no requested variances.*

RECOMMENDED CONDITIONS OF THE PERMIT:

The following is a summary of the remaining tasks necessary to bring the regional stormwater-management plan and presently proposed land-disturbing activities into compliance with the BCWD Rules in all respects other than where variances are requested as discussed above:

- 1. Provide the District with documentation that the applicant has authorization to complete work within the right of way of Keller Avenue North and 122nd Street North.
- 2. Provide the District with a maintenance declaration that includes annual pumping volume differentiating volume used for irrigation and volume dewatered to draw the basin down in preparation for forecasted storm events.
- 3. Demonstrate that the plan has received preliminary plat approval (BCWD Rule 1.3a).
- 4. Address all stormwater management requirements (Conditions 2-1 to 2-4).
- 5. Address all erosion control requirements (Condition 3-1).
- 6. Address all buffer requirements (Conditions 4-1 to 4-3).
- 7. Add all shoreland requirements (Condition 5-1).
- 8. Replenish the Permit fee deposit to \$7,000 (BCWD Rule 8.0). BCWD has reviewed thirteen revisions of the permit application materials and has an outstanding permit deposit fee of \$33,780. If the permit fee deposit is not replenished within 60 days of receiving notice that such deposit is due, the permit application or permit shall be deemed abandoned and all prior approvals shall be revoked and collection proceedings shall begin on unpaid balances.
- 9. Provide the required financial assurances (BCWD Rule 9.0):
 - a. Total grading or alteration assurance 77.9 acres (\$155,800).
 - b. Stormwater management facilities assurance (\$3,266,720).

If the application is approved as proposed, only the regional plan and work proposed for phase 1 will be authorized. Future land-disturbing activities on the site will need to be the subject of separate permit applications to BCWD.

STIPULATIONS OF APPROVAL:

1. Note that the permit, if issued, will require that the applicant notify the District in writing at least three business days prior to commencing land disturbance. (BCWD Rule 3.3.1)



Emmons & Olivier Resources, Inc.

memo



October 3, 2024

Project Name | BCWD Permit 24-09 CSAH 5 Phase 3 Improvements Date

To / Contact info | BCWD Board of Managers

Cc / Contact info | Ron leaf, PE / Kimley-Horn

Cc / Contact info | Karen Kill, Administrator / BCWD

From / Contact info | John Sarafolean; Paul Nation, PE / EOR

John Garanolean, Fadi Nation, FE / EON

Regarding | Permit Application No. 24-09 Engineer's Report

The following review of the above mentioned project located within the legal jurisdiction of the Brown's Creek Watershed District (BCWD) was conducted to determine compliance with the BCWD rules for purposes of the engineer's recommendation to the Board of Managers for its determination of the permit application.

Applicant: Washington County

Permit Submittal Date: August 6, 2024

Completeness Determination: August 14, 2024 Board Action Required By: December 4, 2024

Review based on BCWD Rules effective April 1, 2020

Recommendation: Consider Variance Request and otherwise Approve with Conditions

GENERAL COMMENTS

Washington County is proposing to improve Stonebridge Trail North (County State Aid Highway 5) from Sycamore Street West to Dellwood Road in Stillwater. The existing conditions of the linear project site consist of a bituminous roadway, bituminous trail, and a bridge crossing over Brown's Creek. The CSAH 5 roadway is a rural section using turf ditches to convey the stormwater. On the southern part of the project, runoff from CSAH 5 drains to a depression then through a west to east culvert to a Manage 3 wetland adjacent to the Stillwater Country Club golf course. This wetland is an open water pond located on Washington County property and is part of the site. The middle portion of the project, from 300 feet south of Sycamore Street to the south edge of the bridge crossing Brown's Creek, drains west to a Manage 1 wetland. This wetland is also a stormwater pond owned by the City of Stillwater, called Johnson Pond. Johnson Pond overflows to the east overland to the Stillwater Country Club. Runoff from the bridge crossing Brown's Creek drains by storm sewer discharging on the east side of the bridge, sheet flowing overland to Brown's Creek. Runoff from CSAH 5 north of the bridge drains to the east and west through the ditch and overland to Brown's Creek.

As shown in Figure 1, Washington County proposes improvements to CSAH 5 consisting of bituminous street resurfacing, resurfacing of the bituminous trail along the east side of the roadway, an addition of a bituminous trail along the west side of the roadway, widening of the roadway for a turn lane, replacement of the vehicle and pedestrian bridge crossing over Brown's Creek, culvert and storm sewer improvements, and installation of an infiltration basin to treat storm water from the project. The project improvements will result in an increase of 0.98 acres of new impervious surface with 0.44 acres of fully reconstructed impervious, totaling 1.42 acres of new/fully reconstructed impervious surface on the 23.4-acre site. (The proposed resurfacing is exempt from the stormwater

management requirements because it is excluded from the BCWD definition of "reconstruction.") As addressed in detail below, the applicant is seeking approval of variances from BCWD's stormwater rate, volume and water-quality criteria for several of the project discharge points.

The project site is located within a Drinking Water Supply Management Area that has been classified as having high vulnerability in the City of Stillwater's Wellhead Protection Plan. The site is not within an Emergency Response Area. Washington County completed a higher level review that was approved by the City of Stillwater to allow infiltration for this project.

The BCWD administrator extended the review period for the application on September 6, 2024. With the 60-day extension, board action is required by December 4, 2024.

Recommendation: The BCWD engineer recommends that the Board consider the applicant's variance request in light of the analysis provided below and otherwise approve the application with the conditions outlined in the report.





Figure 1

Rule 2.0—STORMWATER MANAGEMENT

Under the definitions and subsection 2.2(c) of the rules, the proposed project triggers the application of Rule 2.0 Stormwater Management because it creates 1.42 acres of new and/or reconstructed impervious surface (i.e., more than 6,000 square feet) within the surface water contributing area of a groundwater-dependent natural resource (Brown's Creek) for roadway and trails within right-of-way and is not a component of a larger development or redevelopment. The site is not within the Diversion Structure Subwatershed, so the stormwater criteria in subsection 2.4.2(a) apply.

The stormwater management plan for the project includes;

• One infiltration basin to treat for stormwater volume, rate, and water quality.

Under current conditions, runoff leaves the site at the following discharge points:

- Discharge Point A This discharge point includes sheet flow from CSAH 5 south of the bridge, discharging into an adjacent depression on private property. From there, runoff flows through a culvert under CSAH 5 into the downstream Manage 3 wetland. The existing size of the drainage area flowing to discharge point A is 9.10 acres with 3.26 acres of impervious surface. Under proposed conditions, the drainage area size will remain the same with the impervious surface area increasing to 3.39 acres.
- Discharge Point B This discharge point was removed from the analysis because it is discharge onto the site (from the adjacent depression) into the onsite Manage 3 wetland.
- Discharge Point C This discharge point is the outlet of the Manage 3 wetland onto Stillwater Country Club property. From there, runoff flows through the golf course before reaching Brown's Creek. The existing size of the drainage area flowing to discharge point C is 34.73 acres with 4.83 acres of impervious surface. Under proposed conditions, the drainage area size will remain the same with the impervious surface area increasing to 4.96 acres.
- Discharge Point D This discharge point includes flow from the CSAH 5 ditch southwest of the bridge, discharging into Johnson Pond. From there, runoff overflows CSAH 5 to the east under existing conditions. Under proposed conditions, a culvert outlet to Johnson Pond will be added, discharging under CSAH 5 into the proposed infiltration basin. The existing size of the drainage area flowing to discharge point D is 38.89 acres with 10.13 acres of impervious surface. Under proposed conditions, the drainage area size will remain the same with the impervious surface area increasing to 10.63 acres.
- Discharge Point E This discharge point is the outlet of the proposed infiltration basin onto Stillwater Country Club property. From there, runoff flows through the golf course before reaching Brown's Creek. The existing size of the drainage area flowing to discharge point E is 45.18 acres with 12.26 acres of impervious surface. Under proposed conditions, the drainage area size will remain the same with the impervious surface area increasing to 13.05 acres.
- Discharge Point F This discharge point is flow from CSAH 5 northwest of the bridge, discharging from the road ditch directly to Brown's Creek. The existing size of the drainage area flowing to discharge point F is 5.19 acres with 0.41 acres of impervious surface. Under proposed conditions, the drainage area size will remain the same with impervious surface increasing to 0.42 acres.
- Discharge Point G This discharge point includes flow from the bridge deck and CSAH 5
 northeast of the bridge, discharging from a roadside culvert onto private property. From there,

runoff flows down a vegetated slope before reaching Brown's Creek. The existing size of the drainage area flowing to discharge point G is 0.63 acres with 0.27 acres of impervious surface. Under proposed conditions, the drainage area remains the same with the impervious surface area increasing to 0.40 acres.

- Discharge Point H This discharge point includes sheet flow from CSAH 5 northeast of discharge point G, discharging onto private property. From there runoff flows down a vegetated slope before reaching Brown's Creek. The existing size of the drainage area flowing to discharge point H is 0.38 acres with 0.24 acres of impervious surface. Under proposed conditions, the drainage area remains the same while the impervious surface area decreases very slightly, by 130 sf.
- Discharge Point I This discharge point includes flow from CSAH 5 northeast of discharge point H, discharging from a roadside culvert into the Dellwood Road ditch. From there runoff flows east through the ditch and eventually south into Brown's Creek. The existing size of the drainage area flowing to discharge point I is 1.15 acres with 0.26 acres of impervious surface. Under proposed conditions, the drainage area remains the same while the impervious surface area decreases very slightly, by 305 sf.

Rate Control

According to BCWD Rule 2.4.1(a)(i), an applicant for a stormwater management permit must demonstrate to the District that the proposed land-altering activity will not increase peak stormwater flow from the site, as compared with the pre-settlement condition, for a 24-hour precipitation event with a return frequency of two, 10 or 100 years for all points where discharges leave a site.

☐ Rule Requirement Not Met – *See section 10.0 Variances*

The stormwater management plan developed for the site was evaluated using a HydroCAD model of presettlement and post-development site conditions. A comparison of the modeled peak flow rate is included in Table 1. Offsite discharge rates that exceed the pre-settlement rate are bolded. See section 10.0 for further analysis and discussion of this variance request.

Table 1: Peak Discharge Rates

Discharge	Pre-Settle	ement Runoff	Rate (cfs)	Propos	sed Runoff Ra	te (cfs)
Discharge Point	2-year (2.81")	10-year (4.17")	100-year (7.23")	2-year (2.81")	10-year (4.17")	100-year (7.23")
A	11.2	20.9	44.3	11.9	22.0	43.8
С	0.0	0.0	3.8	0.0	0.0	4.2
D	25.1	45.2	94.0	29.4	49.8	98.9
E	0.0	0.0	9.8	0.0	0.0	8.7
F	1.2	5.6	19.9	1.2	4.7	21.3
G	1.0	1.8	3.9	1.4	2.4	4.6
Н	0.9	1.4	2.9	1.1	1.8	3.4
I	1.0	2.3	6.0	1.2	2.6	6.4

Volume Control

According to BCWD Rule 2.4.2(a)(ii), outside the diversion structure subwatershed an applicant for a linear project must provide retention of the larger of the following: (i) 100 percent of the required volume per 2.4.1(a)(ii) from the net additional impervious surface; or (ii) 50 percent of the required volume per 2.4.1(a)(ii) from all new and reconstructed impervious surfaces.

☐ Rule Requirement Not Met - see section 10.0 variances

The proposed project improvements create 1.42 acres of new and fully reconstructed impervious surfaces (0.98 acres of net new impervious). A summary of the required and proposed stormwater runoff volume retention is provided in Table 2. Discharge points where volume retention values are not met are bolded. See Section 10.0 for further analysis and discussion of this variance request.

Table 2 – Retention of Discharge Volumes

Discharge Point	Volume Retention Required (cf)	Volume Retention Provided (cf)
A	4,124	0
С	C 138	
D	4,586	0
Е	1,998	25,823
F	82	0
G	1,506	0
Н	100	0
I	44	0

Pollutant Loading

According to BCWD Rule 2.4.1(a)(iii), an applicant for a stormwater management permit must demonstrate to the District that the proposed land-altering activity will not at the downgradient property boundary or to an onsite receiving waterbody or wetland, increase annual phosphorus loading as compared with the pre-development condition.

☐ Rule Requirement Not Met - see section 10 Variances

The permit applicant submitted Minimal Impact Design Standards modeling demonstrating compliance with Rule 2.4.1(a)(iii). The pollutant loading requirement is not met as demonstrated by the results in Table 3. Proposed phosphorus loading values that exceed the pre-development phosphorus loading values are bolded

Phosphorus loading to discharge points H and I was not modeled as the impervious area to these two discharge points decreases, resulting in a lower phosphorus loading for proposed conditions. There is no phosphorus loading from discharge point E in either pre-development or proposed conditions. The existing depression retains all phosphorus for pre-development conditions and the proposed infiltration basin will retain all phosphorus for proposed conditions.

Table 3 - Offsite Phosphorus Loading

Discharge Point	Pre-Development Annual Phosphorus Loading (lbs)	Proposed Annual Phosphorus Loading (lbs)
A	8.5	8.7
С	0.0	0.0
D (Wetland P-1)	31.0	32.0
E	0.0	0.0
F	1.3	1.1
G	0.3	0.5
Wetland PE-3	12.4	12.4

Infiltration Pretreatment

According to BCWD Rule 2.5.2 surface flows to infiltration facilities must be pretreated for long-term removal of at least 50 percent of sediment loads.

□ Rule Requirement Met

The project includes an infiltration basin to meet the stormwater requirements (rate, volume and water quality). Therefore, pretreatment is required for runoff directed to this facility.

All runoff being routed to the infiltration basin will first be directed to vegetated swales on the east side of CSAH 5 or to Pond P-1 on the west side of CSAH 5. The Permit Applicant submitted Minimal Impact Design Standards modeling demonstrating compliance with Rule 2.5.2. The pretreatment requirement is met as demonstrated by the results in Table 4.

 Table 4 - Infiltration Basin Pretreatment

Practice	TSS Inflow Loading (lb/yr)	TSS Outflow Loading (lb/yr)	TSS Reduction (%)
Swale	1,078	284	74
Pond P-1	5,805	8	100

Lake/Wetland Bounce

According to BCWD Rule 2.4.1(a)(iv), an applicant for a stormwater management permit must demonstrate to the District that the proposed land-altering activity will not increase the bounce in water level or duration of inundation, for a 24-hour precipitation event with a return frequency of two, 10 or 100 years in the subwatershed in which the site is located, for any downstream lake or wetland beyond the limit specified in Appendix 2.1.

□ Rule Requirement Met

As mentioned previously, this site discharges to a Manage 1 onsite wetland and a Manage 3 offsite wetland. A HydroCAD model was provided to demonstrate compliance with Rule 2.4.1(a)(iv). Table 5 indicates that the wetland bounce requirements are met. Table 6 indicates that the wetland inundation requirement is met for wetland PE-3. For Johnson Pond (P-1), the inundation period will decrease for all storm events due to the culvert outlet added to the pond.

Comparison of the hydrographs demonstrates that the period of inundation remains the same from existing to post-development conditions as well.

Table 5 - Downstream Wetland High-Water Levels (ft)

		2-year		10-year		100-year	
Waterbody	Management Category	Pre- development	Proposed	Pre- development	Proposed	Pre- development	Proposed
PE-3	3	897.7	897.7	898.3	898.3	899.4	899.4
P-1	1	858.1	858.0	861.2	860.5	863.1	862.1

Table 6 - Downstream Wetland Inundation Increase (days)

Waterbody	2-year	10-year	100-year
PE-3	0.0	1.1	0.9

Basins in Contributing Area to Groundwater-Dependent Natural Resources

According to BCWD Rule 2.5.3, a stormwater basin within the surface contributing area to a groundwater-dependent natural resource must contain and infiltrate the volume generated by a two-year, 24-hour storm event, if feasible.

☑ Rule Requirement Met.

The proposed infiltration basin contains and infiltrates the entire volume of the two-year, 24-hour storm event satisfying this requirement.

Rule 2.0 Conditions:

- 2-1. Provide BCWD with the final Civil Plan Set prior to start of construction. (BCWD 2.7.9)
- 2-2. The stormwater management facilities to be constructed for the project must be added to the inventory of those maintained under the May 20, 2008, programmatic maintenance agreement between the county and BCWD (BCWD Rule 2.6).
- 2-3. Provide documentation as to the status of a National Pollutant Discharge Elimination System stormwater permit for the project from the Minnesota Pollution Control Agency and provide the Storm Water Pollution Prevention Plan as it becomes available (BCWD Rule 2.7.15).

Rule 3.0—EROSION CONTROL

According to BCWD Rule 3.2, all persons undertaking any grading, filling, or other land-altering activities which involve movement of more than fifty (50) cubic yards of earth or removal of vegetative cover on five thousand (5,000) square feet or more of land shall submit an erosion control plan to the District, and secure a permit from the District approving the erosion control plan. The proposed project triggers the application of Rule 3.0 Erosion Control because of the movement of more than fifty cubic yards of earth and removal of vegetative cover on more than five thousand square feet of land.

□ Rule Requirements Met with Conditions

The erosion and sediment control plan includes:

- Silt Fence
- Sediment Control Logs
- Rip Rap Flared End Sections
- Temporary Seeding
- Erosion Control Blanket

The following conditions must be addressed in the erosion and sediment control plan to comply with the District's requirements:

Rule 3.0 Conditions:

3-1. Provide the contact information for the erosion and sediment control responsible party during construction once a contractor is selected. Provide the District with contact information for the Erosion Control Supervisor and the construction schedule when available (BCWD 3.3.2).

Rule 4.0—LAKE, STREAM, AND WETLAND BUFFER REQUIREMENTS

According to BCWD Rule 4.2.1, Rule 4.0 applies to land that is (a) adjacent to Brown's Creek; a tributary of Brown's Creek designated as a public water pursuant to Minnesota Statutes section 103G.005, subdivision 15; a lake, as defined in these rules; a wetland one acre or larger; or a groundwater-dependent natural resource; and (b) that has been either (i) subdivided or (ii) subject to a new primary use for which a necessary rezoning, conditional use permit, special-use permit or variance has been approved on or after April 9, 2007, (for wetlands and groundwater-dependent natural resources other than public waters) or January 1, 2000 (for other waters).

□ Rule Not Applicable to Permit. The project does not include any subdivision or use change of any land.

Rule 5.0—SHORELINE AND STREAMBANK ALTERATIONS

According to BCWD Rule 5.2, no person may disturb the natural shoreline or streambank partially or wholly below the ordinary high-water mark of a waterbody, without first securing a permit from the District and posting a financial assurance. Disturbance of a streambank wholly above the ordinary high water mark of a waterbody may require a permit under Rule 7.0. A permit will issue only on a demonstration that erosion is occurring or likely to occur.

□ Rule Requirements Met

Rule 5.0 applies to the site because of the bridge replacement work over Brown's Creek, which will disturb the natural shoreline below the ordinary high water mark of the waterbody due to the removal of the existing bridge pier.

The BCWD engineer finds that erosion is likely to occur if the area disturbed by the pier removal is not stabilized. Due to the steepness of the slope (2:1) at this location, bioengineering is not a feasible option. Instead, riprap will be placed along the slope down to the location of the existing pier. The proposed design slope will be greater than 3:1, and so is analyzed as a retaining wall, per BCWD Rule 5.4.2.

The proposed design does not increase floodplain encroachment beyond that required by technically sound and accepted repair/reconstruction methods, thereby meeting BCWD Rule 5.5.2.

A certified as-built survey of the riprap will be required as a stipulation of permit approval per BCWD Rule 5.5.3.

Rule 6.0—WATERCOURSE AND BASIN CROSSINGS

According to Rule 6.2, no person may use the beds of any waterbody within the District for the placement of roads, highways and utilities without first securing a permit from the District.

□ Rule Not Applicable to Permit. *The proposed bridge design places the new abutments above the ordinary high water line of Brown's Creek and, therefore, does not use the bed of the creek for placement of the bridge.*

Rule 7.0—FLOODPLAIN AND DRAINAGE ALTERATIONS

According to Rule 7.2, no person may alter or fill land below the 100-year flood elevation of any waterbody, wetland, or stormwater management basin, or place fill in a landlocked basin, without first obtaining a permit from the District. No person may alter stormwater flows at a property boundary by changing land contours, diverting or obstructing surface or channel flow, or creating a basin outlet, without first obtaining a permit from the District.

□ Rule Requirements Met

Bridge pier removal and rip rap installation within the floodplain of Brown's Creek are alterations below the 100-year flood elevation of the creek but will result in no net fill due to the removal of the pier.

Because there are no buildings adjacent to the proposed infiltration basin, subsection 7.3.2 imposes no requirements on the project.

The addition of a culvert outlet to Johnson Pond constitutes an alteration of stormwater flow at a property boundary and requires analysis under 7.3.5. As discussed under the stormwater rule, the outlet results in lower peak water levels and a shorter duration of inundation for the pond which will decrease flood risk for upstream landowners. The new outlet will drain the pond into the proposed infiltration basin, which will retain all runoff for small storms and reduce runoff rates below pre-settlement conditions for all storms. The increase in runoff volume during the 100-year storm event (9%) will be conveyed over the golf course before reaching the creek and does not increase flood risk for any golf course structures. The velocity of this runoff is sufficiently low that it will not have an adverse effect on

channel stability of the creek, especially considering the energy dissipation that will occur over the 1,000 path to reach the creek.

Rule 8.0—FEES

As a government entity, Washington County is exempt from permit fees.

Rule 9.0—FINANCIAL ASSURANCES

As a government entity, Washington County is exempt from financial assurances.

Rule 10.0—VARIANCES

According to BCWD Rule 10.0, the Board of Managers may hear requests for variances from the literal provisions of the rules in instances where their strict enforcement would cause undue hardship because of the circumstances unique to the property under consideration. The Board of Managers may grant variances where it is demonstrated that such action will be keeping with the spirit and intent of these rules. Variance approval may be conditioned on an applicant's preventing or mitigating adverse impacts from the activity.

The Permit Applicant has submitted a request for a variance from the following rule provisions:

- 1. BCWD Rule 2.4.1(a)(i) states, "an applicant for a stormwater management permit must demonstrate to the District that the proposed land-altering activity will not: (i) Increase peak stormwater flow from the site, as compared with the pre-settlement condition, for a 24-hour precipitation event with a return frequency of two, 10 or 100 years for all points where discharges leave a site."
- 2. BCWD Rule 2.4.1(a)(iii) states, "an applicant for a stormwater management permit must demonstrate to the District that the proposed land-altering activity will not: (iii) At the downgradient property boundary or to an onsite receiving waterbody or wetland, increase annual phosphorus loading as compared with the pre-development condition."
- 3. BCWD Rule 2.4.2(a) states, "an applicant must... provide retention of larger of the following:
 - (i) 100 percent of the required volume per 2.4.1(a)(ii) from the net additional impervious surface; or
 - (ii) 50 percent of the required volume per 2.4.1(a)(ii) from all new and reconstructed impervious surfaces."

These three rule provisions will be discussed together for each discharge point.

The applicant asserts the following constitute an undue hardship, supporting its variance application.

- Limited right-of-way restricting the available opportunities for stormwater management
- Discharge points that go directly from the road surface to the receiving water body
- A need for improved pedestrian safety at the bridge crossing

Although the volume control criterion applies at each site discharge point, the applicant examined the impact of the increase in volume on creek temperature collectively for all discharge points draining to Brown's Creek to support a determination that the variance from the BCWD volume standard does not significantly negatively affect the creek. The applicant considered the impact of increased impervious surface on creek temperature, due to the increased runoff volume from the net

new impervious surface. The applicant's engineers used a conservative approach to estimate the increase in temperature by weighting the runoff temperature with the volume of runoff relative to the flow volume and temperature of the creek. For a 2-year storm, the runoff volume from the new impervious draining to the creek is 0.006% of the flow within the creek. If the runoff temperature from this impervious is assumed to be 22.5° C (the maximum observed runoff temperature from impervious draining to the rock crib project at Brown's Creek Park) and the creek temperature is assumed to be 18° C (the minimum threat level for trout), then the creek temperature under proposed conditions would increase from 18°C to 18.003°C. This indicates that the project does not have a measurable impact on creek temperature. Individual volume control shortfalls will be discussed further for each discharge point.

Discharge Point A

The runoff rate into the offsite depression increases by 0.7 cfs and by 1.1 cfs for the 2 and 10-year storm events, respectively, due to the proposed new trail. The volume control shortfall at this discharge point is 4,124 CF. Phosphorus loading increases by 0.2 lbs from pre-development conditions.

There are minimal opportunities for rate control for this discharge point as the trail drains off site directly down a slope into this depression. The peak flow velocities down this slope are sufficiently low that they won't cause erosion. Changes to the culvert draining this depression result in lower high water levels for all storm events, providing improved flood protection for the adjacent homes. The increased flow volume from this discharge point drains back onsite to Pond PE-3 which will be discussed under discharge point C. Since the increased flow volume drains back onto the site and high water levels in the offsite depression are reduced, the increase in flow volume doesn't cause any adverse impacts. Likewise, the additional phosphorus loading from this discharge point is retained in discharge point C which meets the phosphorus loading requirement. The offsite depression does not have standing water that would be negatively impacted by the increase in phosphorus loading.

The applicant considered the following alternatives as options for meeting the rate, volume control, and phosphorus loading requirements.

• Increase the live storage of Pond DW-3 – This option would require substantial clearing and grubbing, including grading on properties outside the right-of-way, and would not provide any volume control.

Discharge Point C

The runoff rate for the 100-year event increases by 0.2 cfs. The volume control shortfall at this discharge point is 138 CF. The phosphorus loading criterion is met.

The 100-year HWL for Pond PE-3 does not change from pre-settlement to proposed conditions, indicating that the 0.2 cfs increase in rate is a computational rounding change, not a real, observable increase in runoff rate. Discharge from Pond PE-3 has a flow path of 2,200 feet, through golf course vegetation before reaching Brown's Creek. The peak velocity of 1.1 ft/sec does not pose a risk of erosion due to the grasses on the golf course stabilizing the soil (vegetated surfaces can withstand velocities up to roughly 6 ft/sec). There is no discharge from the pond for the 2 or 10-year storm events. Therefore, providing the required volume control would only reduce runoff volumes during

storm events larger than the 10-year event. Since the volume control standard is determined for the 2-year event, the storage provided by Pond PE-3 meets the intent of the rule by retaining the entire runoff volume from the 2-year event onsite.

The applicant considered the following alternatives as options for meeting the rate and volume control requirements.

• Increase the live storage of Pond PE-3 – This option would require substantial clearing and grubbing which would cause greater negative impacts than the 0.2 cfs increase in rate.

Discharge Point D

The runoff rate increases by 4.3, 4.6, and 4.9 cfs for the 2, 10, and 100-year events, respectively, at this discharge point. The volume control shortfall at this discharge point is 4,586 CF. Phosphorus loading increases by 1.0 lbs from pre-development conditions.

The increases in flow rate, volume, and phosphorus loading are due to the location of the discharge point upstream of Johnson Pond, which provides treatment. Since the pond is located on city property, it is downstream of the discharge point. However, the city has provided authorization to Washington County to continue to use the pond for stormwater treatment. The new outlet for Johnson Pond functions to lower high-water levels, protecting the adjacent homes from the potential harm (increased risk of flooding) potentially caused by the failure to meet the volume control requirement. The 3% increase in phosphorus loading to the pond may result in lowered water quality. While this pond was built to treat stormwater, it is also a Manage 1 wetland. The Manage 1 wetland classification is due to high stormwater sensitivity and medium vegetative diversity. The lowered water quality in this wetland may decrease the value of the vegetative diversity in this wetland. Discharge from the pond flows into the proposed infiltration basin which provides treatment meeting rate, volume, and phosphorus loading requirements at discharge point E.

The applicant considered the following alternatives as options for meeting the rate, volume control, and phosphorus loading requirements.

• Increase the live storage of Pond P-1 – This option would require substantial clearing and grubbing, including grading on properties outside the right-of-way, and would not provide any volume control.

Discharge Point F

The runoff rate increases by 1.4 cfs for the 100-year storm event at this discharge point. The volume control shortfall at this discharge point is 82 CF. The phosphorus loading criterion is met.

The runoff rate increase is due to disturbed areas on the road shoulder being modeled with presettlement curve numbers (HSG B soils, 57) under pre-settlement conditions and modeled with grass land cover and one soil type higher to represent compaction (HSG C soils, 74). These soils are likely already compacted from when the road was built, so runoff rates are not expected to be greater than existing conditions. However, the rate control standard is pre-settlement conditions and the proposed 100-year rate represents a 7% increase in peak rate from pre-settlement conditions. Bank erosion has not been identified at this location during past stream assessments.

The required volume represents 0.005% of total flow in Brown's Creek for the 2-year storm. The design includes "micro-grading" in this area which promotes slight pooling of water within the ditch to increase infiltration. Although not modeled, this design will provide a small amount of volume control to offset the shortfall from required volume control. The potential harm from increased runoff volume is that Brown's Creek flows at bankfull conditions for a longer period of time during the 2-year storm, resulting in more risk of erosion of streambanks. The 0.005% increase in flow is unlikely to cause a measurable change in time at bankfull conditions by itself, but in combination with other projects increasing runoff to the creek, may have a cumulative negative impact on stream stability.

The applicant considered the following alternatives as options for meeting the rate and volume control requirements.

• Constructing a volume control facility (infiltration basin) within right-of-way – This option would require substantial clearing and grubbing down the slope toward Brown's Creek. This disturbance would pose a risk of erosion and sediment deposition within the creek and reduce shading of the creek provided by mature trees in this area.

Discharge Point G

The runoff rate increases by 0.4, 0.6, and 0.7 cfs for the 2, 10, and 100-year storm events, respectively, at this discharge point. The volume control shortfall at this discharge point is 1,506 CF. Phosphorus loading increases by 0.2 lbs from pre-development conditions.

Flow from this discharge point does not immediately enter Brown's Creek, but instead flows through a densely wooded lot before reaching the creek. While this lot will provide significant treatment, reducing runoff rates and removing particulate phosphorus, since it is outside of the applicant's control, it can't be assumed that it will always remain in the current wooded condition.

The required volume represents 0.08% of total flow in Brown's Creek for the 2-year storm. The design includes "micro-grading" in this area which promotes slight pooling of water within the ditch to increase infiltration. Although not modeled, this design will provide a small amount of volume control to offset the shortfall from required volume control. The potential harm from increased runoff volume is that Brown's Creek flows at bankfull conditions for a longer period of time during the 2-year storm, resulting in more risk of erosion of streambanks. The 0.08% increase in flow is unlikely to cause a measurable change in time at bankfull conditions by itself, but in combination with other projects increasing runoff to the creek, may have a cumulative negative impact on stream stability.

While overtreating from one discharge point does not make up for a shortfall at another (i.e., the water-quality criterion is not applied on a site-aggregate basis), the increase in phosphorus loading for this discharge point is balanced out by the reduction in phosphorus loading at discharge point F. The total phosphorus loading to Brown's Creek from the project is unchanged from pre-development to proposed conditions.

The applicant considered the following alternatives as options for meeting the rate, volume control, and phosphorus loading requirements.

- Underground storage This option would require extensive earthwork, along with clearing
 of tree cover.
- Downsizing culvert This option could increase ponding depths causing additional sheet flow onto the adjacent property and wasn't pursued further.
- Porous pavement for new trail This option would have minimal impact on reducing runoff rates, which are primarily due to the widened bridge.
- Constructing a volume control facility (infiltration basin) within right-of-way This option would require substantial clearing and grubbing due to the elevations within the right-of-way being significantly lower than the roadway elevation. To tie in to existing elevations, clearing and grubbing would have to occur down the slope toward the creek on private property. This disturbance would pose a risk of erosion and sediment deposition within the creek and reduce shading provided by mature trees in this area.

Discharge Point H

The runoff rate increases by 0.2, 0,4, and 0.5 cfs for the 2, 10, and 100-year storm events, respectively, at this discharge point. The volume control shortfall at this discharge point is 100 CF. The phosphorus loading criterion is met.

Increases in runoff rate and required volume control are due to a small portion of reconstructed impervious surface, which is modeled using pre-settlement curve numbers. Flow from this discharge point does not immediately enter Brown's Creek, but instead flows through a densely wooded lot before reaching the creek. While this lot will provide significant rate attenuation, since it is outside of the applicant's control, it can't be assumed that it will always remain in the current wooded condition.

As discussed above under discharge points F and G, the required volume control represents a very small percentage (0.005%) of total flow within the creek, but may have a negative effect on stream stability in combination with increases from other projects. For this discharge point, runoff volume will be less than existing conditions due to a reduction in total impervious surface, but would not be reduced down to pre-settlement conditions to improve any existing stream stability issues.

The applicant considered the following alternatives as options for meeting the rate and volume control requirements.

- Minor grading to create a ditch within the right-of-way This option would require substantial clearing and grubbing and reduce shading provided by mature trees in this area.
- Porous pavement for new trail This option would have expensive maintenance that outweighs the benefits provided in rate reduction.
- Constructing a volume control facility (infiltration basin) within right-of-way This option would require substantial clearing and grubbing onto private property and reduce shading provided by mature trees in this area.

Discharge Point I

The runoff rate increases by 0.2, 0,3, and 0.4 cfs for the 2, 10, and 100-year storm events, respectively, at this discharge point. The volume control shortfall at this discharge point is 44 CF. The phosphorus loading criterion is met.

Increases in runoff rate and required volume control are due to a small portion of reconstructed impervious surface, which is modeled using pre-settlement curve numbers. Flow from this discharge point does not immediately enter Brown's Creek, but instead flows through a densely wooded lot before reaching the creek. While this lot will provide significant rate attenuation, since it is outside of the applicant's control, it can't be assumed that it will always remain in the current wooded condition.

As discussed above under discharge points F and G, the required volume control represents a very small percentage (0.002%) of total flow within the creek, but may have a negative effect on stream stability in combination with increases from other projects. For this discharge point, runoff volume will be less than existing conditions due to a reduction in total impervious surface, but would not be reduced down to pre-settlement conditions to improve any existing stream stability issues.

The applicant considered the following alternatives as options for meeting the rate and volume control requirements.

• Constructing a volume control facility (infiltration basin) within right-of-way – This option would require substantial clearing and grubbing onto private property and reduce shading provided by mature trees in this area.

The BCWD engineer finds that sufficient evidence has been provided to support the board's grant of the requested variances for all the above-mentioned discharge points.

RECOMMENDED CONDITIONS OF THE PERMIT:

The following is a summary of the remaining tasks necessary to bring the project into compliance with the BCWD Rules in all respects other than where variances are requested as discussed above:

- 1. Address all stormwater management requirements (Conditions 2-1 to 2-3).
- 2. Address all erosion control requirements (Condition 3-1).

STIPULATIONS OF APPROVAL:

- 1. Note that the permit, if issued, will require that the applicant notify the District in writing at least three business days prior to commencing land disturbance. (BCWD Rule 3.3.1)
- 2. To ensure that construction is carried out according to the approved plan, provide verification that construction standards have been met for all infiltration basins and pretreatment swales. This includes but is not limited to confirmation that infiltration basin sub-cut reaches soil material reflected in the geotechnical report and that the vegetation establishment procedures have been followed per the landscaping/restoration plan. This can be achieved by scheduling a BCWD inspection during the excavation of the basins, independent geotechnical engineer observation and note of confirmation, or well-documented photographic evidence by the onsite engineer along with collected survey elevations of the basins.
- 3. Provide the District with As-built record drawings showing that the completed grading and stormwater facilities conform to the grading plan.
- 4. Provide a certificate of survey prepared by a registered land surveyor locating the finished wall (riprap). (BCWD Rule 5.5.3)

BCWD – REGULATORY PROGRAM REVIEW FACILITATION

Date | 10/02/2024

To / Contact info | BCWD Board of Managers; Karen Kill, District Administrator

From / Contact info | Camilla Correll, PE

Regarding | Rule Revisions Facilitation – EOR Support

Background

At the August 2024 Board meeting, the BCWD Board of Managers approved a scope of work from Beth Carreno to facilitate a review of the District's Regulatory Program and the need to make revisions to the rules. This scope of work includes two facilitated, in-person workshops with stakeholders and a workshop with the Board of Managers. The goal for this effort is to revisit how the regulatory program is working and explore changes to the rules and/or the permitting process.

This scope of work includes the time it will take for EOR to support the rule revisions facilitation effort.

Scope of Work

The following table describes the role EOR will play in supporting Beth Carreno in stakeholder engagement and in providing updates to the BCWD Board of Managers.

Community Resilience EOR's Role in Task		Estimated Hours	Estimated Cost
Scoping the Level of Effort and Project Kick-Off Meeting	Participation in a project kick-off meeting with Beth Carreno and District Staff.	5	\$1,135.00
Facilitated Workshop #1	Planning for the 2-hour workshop. Preparing content for meeting (i.e., PowerPoint slides). Attending workshop (includes EOR Permitting Team). Reviewing and providing feedback on meeting summary.	30	\$6,023.60
BCWD Board Workshop	Planning for and developing content for a Workshop with the Board to share findings from Workshop #1 and discuss next steps for the Regulatory Program review process.	7	\$1,542.40
Facilitated Workshop #2	Planning for the 2-hour workshop. Preparing content for meeting (i.e., PowerPoint slides). Attending workshop (includes EOR Permitting Team). Reviewing and providing feedback on meeting summary.	26	\$5,355.60
Totals		68	\$14,056.60

Requested Action

1. Approve this scope of work for EOR's involvement in the Rule Revisions Facilitation effort in the amount of \$14,056.60 from account number 909-0000.

memo



Project Name | BCWD Diversion Water Quality Date | 10/07/2024

To / Contact info | BCWD Board of Managers

Cc / Contact info | Karen Kill, District Administrator

From / Contact info | Camilla Correll, PE and Anne Wilkinson, PhD

Regarding | Lake McKusick and Brown's Creek Diversion Water Quality Assessment Update

Background

The BCWD's current Watershed Management plan includes the following water quality goal: *Achieve the [total phosphorus] load reduction goal of 148 pounds per year. established at the Diversion Structure as identified in the McKusick Lake and Lily Lake Management Plan.* The implementation activity included to address this goal was to "Re-assess water quality data collected in the contributing drainage area to Diversion Structure to evaluate pollutant loading and identify sources." The outcome or deliverable of this work would be a report summarizing watershed loading from this area and a map prioritizing load reduction practices.

This implementation activity has not been conducted to date. To better inform the WMP Update, District Staff is recommending that this implementation activity be addressed so that the findings can inform the goal and corresponding implementation activities. This scope of services identifies the tasks and estimated cost of analyzing water quality data collected since 2006 in the contributing drainage area to Diversion Structure to evaluate pollutant loading and identify sources to Lake McKusick.

The Diversion Structure was installed by the City of Stillwater in 2003. It is located approximately 600 feet west of Neal Avenue on the south side of the Brown's Creek State Trail in Stillwater. The Diversion Structure was an important component of the Stillwater Alternative Urban Areawide Review (AUAR) Mitigation Plan, which was completed in July 1997. The AUAR specifies measures or procedures that will be used to protect the environment and natural resources from the potential impacts of development in the Annexation Area, which corresponds to the drainage area to the Diversion Structure. The cornerstone of the mitigation plan was the diversion of stormwater flowing from Long Lake and other portions of the Annexation Area to McKusick Lake and from there through a constructed outlet to the St. Croix River. The goals of the McKusick Lake Diversion were to: (1) preserve and enhance the integrity of Brown's Creek, (2) improve the water quality and quantity conditions in Long Lake, and (3) allow the City of Stillwater to proceed with the development as proposed in the City's Comprehensive Plan. The total area draining to the Diversion Structure is 2,793.33 acres (see Figure 1).

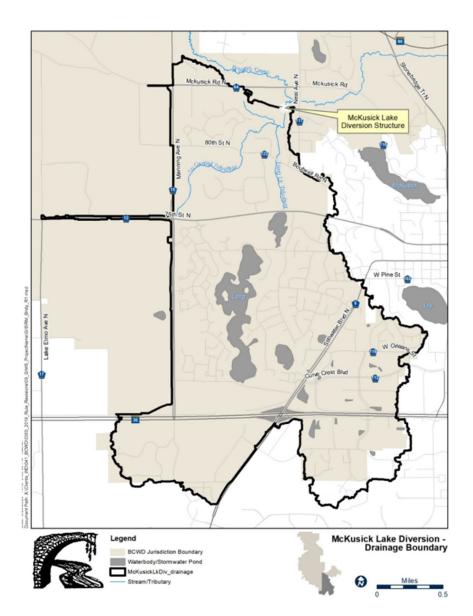


Figure 1. Drainage Area to the Diversion Structure

Scope of Services

Task 1: Data Compilation & Kick off meeting

The Washington Conservation District has biannual visual inspections and automated flow-weighted sampling (May through September) at the Diversion Structure since 2006 to measure what is going into McKusick Lake. A BCWD water quality database was created as part of the Long Lake 2020 trend analysis. This task will update the database with additional years of data, parameters (i.e. heavy metals), and monitoring stations that were not originally included. EOR will identify any data gaps make additional monitoring recommendations if necessary. This task will also include a meeting with District staff to review the project approach, make sure there is alignment on the data analysis, and select possible hot spots for investigation.

Task 2: Data Analysis

EOR is not proposing to recreate information already provided in the Washington Conservation District's Annual Water Monitoring Summary and the Long Lake 2020 Trend Analysis. Rather, EOR will provide an update to the analysis to specifically evaluate short- and long-term trends and identify pollutant loading at the diversion structure, analyzing annual average levels, flow-weighted mean concentrations and annual loads. Finally, EOR will summarize and compile the load reductions that have been achieved in the drainage area to date and report the progress to date toward the 148 lbs/yr reduction goal identified in the 2017-2026 Watershed Management plan.

Task 3: Source Identification

Specific sources of heavy metals have yet to be found and are not consistent with current land-use practices. EOR will do a desktop analysis to evaluate possible sources of pollutant loading, including erosion from old dump sites, wetlands, Long Lake, old farm foundations and development of old farms in the watershed. EOR will provide recommendations for monitoring within the watershed to confirm potential sources.

Additionally, budget is included for wetland sediment coring and laboratory analysis at the University of Minnesota Soil Testing Lab for 5 wetlands within the drainage area to determine phosphorus hot spots.

Task 4: Technical Report

As this scope of services indicates, EOR will present this information in a technical report for the Board of Managers, CAC, communities and other stakeholders to review as part of the Watershed Management Plan update process.

Fee Summary

Table 1 summarizes the labor, lab fees, and associated costs for the tasks described above.

Table 1. Scope of Services for Long Lake and Brown's Creek Water Quality Assessment and Trend Update

Task	Description	EOR Estimated Hours	Subcontractor fees	Estimated Cost
1	Data Compilation & Kick off Meeting	13	-	\$2,355
2	Data Analysis	24	-	\$3,736
3	Source Identification	20	-	\$3,380
	University of Minnesota Soil Testing	-	\$1,150	\$1,150
4	Technical Report	26	-	\$4,568
	Total	83	\$1,150	\$15,189

Requested Action

1. Approve this scope of services not to exceed \$15,189 from account 927-0000Management plan, of which \$1,150 will be subcontracted to University of Minnesota Soil Test Lab for sediment core lab analysis.

memo



Project Name | BCWD 2024 H&H Model Update Phase 3 Date | 10/3/2024

To / Contact info | BCWD Board of Managers

Cc / Contact info | Karen Kill / BCWD Administrator

From / Contact info | Ryan Fleming, PE, Paul Nation, PE, Bill Yu & Alec Olson

Regarding | Scope of Services for Phase 3 of the BCWD H&H Model Update

Background

The Brown's Creek Watershed District hydrologic and hydraulic (H&H) model has been maintained as a "living model" since 2004, meaning the model is updated when new information such as hydraulic structure survey and land altering development data becomes available. Since the last major update to the model in 2015, several changes within the watershed have occurred which require updating the model to provide the most accurate assessment of rainfall runoff characteristics and impacts in the watershed. These updates ensure the model contains the latest information available to assess existing conditions to provide technical assistance to communities and developers within the BCWD.

The 2024 budget recommendation memorandum (presented & reviewed in July 2023) included several tasks associated with updating the BCWD's H&H model to assist in planning and policy decisions toward drafting the next generation of the watershed management plan. Some of the proposed updates rely upon datasets for which the release date has been delayed. Due to the effort and duration required to update the model, a phased approach is required ahead of the data availability to keep in step with the watershed management plan timeline.

Phase 1 of the 2024 H&H Model update was approved by the Board in October of 2023, and completed earlier in 2024. It consisted of the following updates:

- 1. Update climatology and precipitation data:
 - a. Updated climatology and rainfall data library includes the growing season data collected at the BCWD's weather station, as well as recent complete year data at nearby bias-corrected gauges using historical radar data to ready the model for continuous simulations.
- 2. Update model hydraulics:
 - a. Review of as-builts of thirty developments with significant changes and addition of these developments to the BCWD H&H model.
- 3. Drainage survey at 13015, 13093, and 13131 Keystone Ave N, Hugo, MN¹

¹ Task 3 of Phase 1 was not anticipated during the budget planning process in July 2023, though it is tangentially related to the model, as it may be used in a future model update, the primary objective was to understand the drainage in this area, the residents' concerns, and collaborate with Washington County.

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Phase 2 of the 2024 H&H Model update was approved by the Board in June 2024 and consisted of the following updates:

- 1. Updating the model with four recently completed permits.
- 2. Processing new LiDAR data published in 2024 to update subcatchment boundaries.
- 3. Updating waterbody storage, depressions, and overland channels based on new LiDAR data.
- 4. Processing the observed creek flow and MnDNR water level data as calibration inputs for the model.

Scope of Services

The Twin Cities Metro Area (TCMA) high resolution land classification data, anticipated to be published in the spring of 2024, has yet to become available². In the interest and need to finalize the updated model in time for assisting with the Watershed Management Plan, it is recommended to use the existing 2012 TCMA dataset (published 2015), supplemented with permitted impervious additions, e.g., White Pine Ridge development. Local and regional weather data will be utilized to select representative wet and dry years for the model's calibration and validation time periods. Daily precipitation intensity hydrographs will be analyzed to identify significant rainfall events during these periods for calibration and validation of model peak runoff events. The model will be calibrated at the 17 MnDNR waterbodies that have water level measurements, and at the three streamflow measurement locations. The calibrated model will then be used to simulate watershed hydrologic performance under various storm return periods, as well as future climate change scenarios, to assess the watershed's climate resilience.

The following is a scope of services to conduct Phase 3 of updating the BCWD H&H model.

1. Land Use Update

The 2014 BCWD H&H model impervious area was parameterized using Farm Service Agency 2008 aerial photography. This update will use the latest available land cover dataset to calculate hydrologic parameters that determine the volume, and rate that water runs off the landscape such as the imperviousness, surface roughness, and depression storage for each subcatchment. Models and plans from permit activity, as well as recent aerial imagery, will be reviewed and added to the model so that recent developments are accurately represented and ensure that land cover data captures all relevant information.

² If the 2024 update of the TCMA land cover data becomes available during this scope, the effort to incorporate it into the model will be assessed and EOR will determine whether its use can remain within this budget estimate, whether additional budget will need to be requested, or if it is recommended for a future model update.

2. Model Calibration

Model calibration and validation is a process where model results are compared to observed data within the watershed and model parameters are adjusted to ensure the model predicts flows similar to observed conditions. Calibration is required with any major model update to correct for uncertainties inherent in the input data and in the model itself.

The process will involve sequential calibration, starting with the adjustment of subcatchment hydrologic parameters that derive the amount of water that is evaporated, infiltrated, retained in depressions, or runs off the landscape, to align the modeled runoff volume with observed lake level data. This stage of the model calibration will focus on a specific period, typically the growing seasons in a wet year. Following this, hydraulic parameters, including flow routing and timing, will be calibrated using flow monitoring data to ensure the model accurately reflects the flow response during significant rainfall events, or series of events. A custom calibration script will be developed to automate the parameter adjustments and analysis. Computer coded scripts are used because they ensure the process is documented, repeatable, and to allow flexibility in adjusting multiple parameters simultaneously, enabling efficient and precise calibration. This iterative process will refine the model's ability to simulate both the runoff volume and the timing of flow responses, to accurately represent the watershed's hydrologic behavior.

3. Model Validation & Simulation

The validation process will use data from both a dry year and an average year to assess the model's performance across varying hydrological conditions. For the dry year, validation will focus on low-flow events and minimal runoff, ensuring that the model accurately captures baseflow and slow runoff processes. In the average year, validation will encompass typical rainfall events and moderate runoff conditions, testing the model's ability to simulate more routine hydrologic responses. The validation will also compare simulated runoff volumes and flow timings to observed values, like the sequential process used in calibration. This ensures that the calibrated model performs well under a range of climatic conditions, verifying its robustness and reliability for future scenario simulations. In the end we will run the validated model to simulate various design storm events, including 2-year, 10-year, and 100-year, 24-hour design storm events using NOAA Atlas 14 rainfall data.

4. Future Extreme Precipitation Scenarios

The National Oceanic and Atmospheric Administration (NOAA) is the authoritative source for precipitation frequency data essential for engineering and floodplain management. In 2013, NOAA released Atlas 14, which offers updated precipitation estimates for storms ranging from 5 minutes to 60 days and frequency intervals from 1 to 1,000 years, replacing the 1961 Technical Paper-40 standard. Utilizing the upper bound of the 90% confidence level from Atlas 14 for future climate change precipitation projections is important for effective risk management and infrastructure planning, as it accounts for uncertainties in climate models and variability in precipitation patterns.

The validated model will be used to simulate future climate scenarios for 2-year, 10-year, and 100-year, 24-hour design storm events at the upper bound of the 90th percentile to simulate flooding and hydrologic performance in the watershed, allowing identification of higher flood risk areas in the watershed.

The BCWD has engaged in several discussions with the City of Stillwater regarding redevelopment, and individual building permits that exceed the impervious threshold allowed by zoning. Therefore, an additional scenario will be run to simulate a future condition in which the drainage areas in the watershed have the maximum allowable impervious coverage according to the zoning ordinances of the communities. Downstream effects from incremental changes will then be identified.

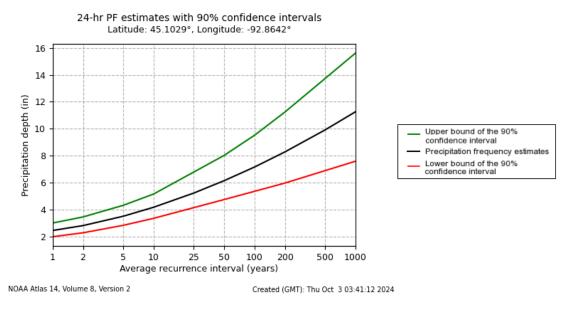


Figure 1: Precipitation frequency depth estimates with confidence intervals for BCWD

5. Final Deliverables

The final deliverables will include model packages and a comprehensive report. The report will detail the methodologies used for calibration and validation, followed by an analysis of floodplain areas within the watershed. It will also include comprehensive maps to illustrate the spatial extent of these areas. Additionally, the report will provide a summary of the floodplain analysis, along with recommendations for mitigation strategies and management planning.

Task and Cost Breakdown

Below is a summary of hours and costs for Phase 3 of the model update.

Table 1: Phase 3 Task and Cost Summary

Task	Description	Estimated Hours	Estimated Cost
1	Land Use Update (Add Impervious to the 2012 TCMA data)	20	\$3,000
2	Model Calibration	68	\$9,900
3	Model Validation & Simulation	63	\$9,200
4	Future Extreme Precipitation Scenarios	49	\$7,100
5	H&H Model Update Deliverables	91	\$12,100
Totals	3	291	\$43,300

Alignment with 2023 Budget Recommendations

When the H&H model update was proposed in 2023, it was under the assumption that all necessary data would be available prior to the initiation of the project. Consequently, a phased approach was not initially anticipated. However, as detailed in the Background section, circumstances necessitated the adoption of a phased approach. This has implications for budget tracking, as it deviates from the original budgetary recommendations. The phase 2 update scope provided a summary of how the phased budget has tracked, which concluded that \$31,200 remained for completion of the model update. There are two reasons driving the amount in Table 1 to exceed the previously estimated amount:

- Updating the 2012 land cover data to reflect developments that have occurred since it was published is a manual process, requiring more staff time than importing the data from a new dataset.
- 2. The above scope includes modeling future extreme precipitation scenarios which was originally listed as an optional task. Now, 1.5 years later, it has become customary to consider larger than standard rainfall events for planning purposes (green line on Figure 1 in addition to the black line). Therefore, including the analysis of impacts from modeling the upper bound of the Atlas 14 90th percentile precipitation depth is included in this scope.

Requested Action

Consider approval of scope of services for not to exceed cost of \$43,300, as outlined in Table 1 above, from account #923-0000.

Contract Number: 25-EMWREP

AGREEMENT BETWEEN WASHINGTON CONSERVATION DISTRICT AND MEMBERS OF THE 2025-2027 EAST METRO WATER EDUCATION PROGRAM (EMWREP)

A. PARTIES

This Agreement is made and entered into by Washington Conservation District, hereinafter referred to as HOST, and members of the East Metro Water Education Program (EMWREP), hereinafter referred to individually as a PARTNER. A PARTNER is defined as an entity that executes this agreement, and this Agreement provides for the withdrawal or addition of PARTNERS to EMWREP. Eligible PARTNERS include counties, watershed organizations, lake improvement districts, and municipalities within the Twin Cities East Metro and Lower St. Croix Watershed of Minnesota.

B. PURPOSE

WHEREAS, the PARTNER and the HOST have a common objective of educating the citizens of the East Metro and Lower St. Croix Watershed about water resource, stormwater, and groundwater management in order to improve water quality; and

WHEREAS, the PARTNER has identified a need for education assistance; and

WHEREAS, counties, watershed organizations, lake improvement districts, and municipalities within the East Metro and Lower St. Croix Watershed have education components in their respective watershed management plans; and

WHEREAS, 25 communities in Washington County and 5 communities within the Lower St. Croix portions of Anoka, Chisago and Isanti Counties are required to obtain a Municipal Separate Storm Sewer System (MS4) Permit from the Minnesota Pollution Control Agency, which requires nonpoint source pollution education; and

WHEREAS, the PARTNER agrees it is in its best interest to define its respective responsibilities and obligations; and

WHEREAS, the PARTNER agrees that collaborative efforts are needed to more effectively and efficiently deliver water resource education and meet MS4 permit education requirements; and

WHEREAS, the PARTNER requests assistance from the HOST to implement the policies specified in MINN. STAT. §§ 103A.206; and

WHEREAS, the HOST is authorized to enter agreements to provide such assistance pursuant to MINN. STAT. §§ 103C.331, SUBD. 3 and 7, and Host and Partner are authorized to enter this agreement by Minnesota Statutes section 471.59.

NOW, THEREFORE, the PARTNER agrees as follows:

C. TERM OF CONTRACT

The term of this agreement shall be from January 1, 2025 to December 31, 2027 unless extended or terminated earlier as provided herein.

D. MEMBERSHIP STRUCTURE

In accordance with the EMWREP goals of collaboration and partnership, entities may become a PARTNER by signing the signature page at the end of this Agreement. A new PARTNER shall apply to the HOST and sign a separate contract and its signature page shall be attached to the original document. The HOST will coordinate with each PARTNER, update the project budget, and distribute it to each PARTNER.

Each PARTNER will authorize a representative to the EMWREP Steering Committee. This Committee will assist the EMWREP Coordinator and HOST to prepare the Annual Workplan, Annual Budget, and Annual Report. A Membership Summary will be included in the Annual Report prepared by the HOST.

E. SCOPE OF SERVICES

The HOST will perform for the PARTNER the services and furnish and deliver work products generally described in Exhibit A, attached to and made part of this agreement. Services for a specific PARTNER will be defined in the Annual Workplan developed as described in Exhibit A. PARTNER-specific services will constitute approximately 15% of the total Annual Workplan. Eighty-five (85) percent of the total Annual Workplan will be committed to shared, multi-jurisdictional benefit educational activities.

F. COST

In full consideration for services under this agreement, the PARTNER shall provide its portion of the annual costs to the HOST in accordance with the executed signature page at the end of this Agreement. The total annual budget for the program is as shown in Exhibit B with contributions outlined in Paragraph G. If all PARTNER contributions total less than the Total Budget, educational material expenses not otherwise paid for will not be incurred by HOST. PARTNER's annual contribution may be increased from the amount stated in the signature page at the end of the Agreement only with approval of PARTNER's governing body.

G. FUNDING STRUCTURE

Each PARTNER is suggested to contribute annually in accordance with the following funding structure.

County or SWCD (Population > 100,000): \$16,300/year

County or SWCD (Population < 100,000): \$8,000/year

County or SWCD partially within the Lower St. Croix watershed: \$1,600/year Small Watershed Districts (Taxable Market Value < \$1 Billion): \$16,000/year

Medium Watershed Districts (TMV \$1-5 Billion): \$24,500/year

Large Watershed Districts (TMV >\$5 Billion): \$32,000/year

Watershed Management Organizations and Lake Improvement Districts: \$8,000/year

Large MS4 Cities (Population > 5,000): \$3,500/year Small MS4 Cities (Population > 5,000): \$900/year

In-kind matches from existing educational staff from within partner organizations are also encouraged. The WCD shall provide \$16,172.82 of in-kind match to the program per year. As shown in Exhibit B, PARTNER contributions will be reviewed and adjusted on an annual basis, as needed.

H. PAYMENTS

- 1. The services in Exhibit A provided by the HOST will be billed in accordance with Exhibit B. Invoices will be sent on a quarterly basis and will summarize the work performed. Invoices are payable within 60 days.
- 2. Office supplies, in-house reproduction expenses, and transportation are included in the overhead noted above. Contracted reproduction, special bulk mailings and other direct costs beyond the actual current budget as established in accordance with the Annual Workplan (the combined contributions of each PARTNER) noted in Paragraph F are to be reimbursed at actual cost with prior approval from the PARTNERs, though payments in each year will not exceed the annual total stated in the signature page below.

I. EQUAL EMPLOYMENT OPPORTUNITY- CIVIL RIGHTS

During the performance of this Agreement, the HOST agrees to the following: No person shall, on the grounds of race, color, religion, age, sex, disability, marital status, public assistance, criminal record, creed or national origin, be excluded from full employment rights in, be denied the benefits of, or be otherwise subjected to discrimination under any program, service, or activity under the provisions of and all applicable federal and state laws against discrimination including the Civil Rights Act of 1964.

J. STANDARDS

The HOST shall comply with all applicable Federal and State statutes and regulations as well as local ordinances now in effect or hereafter adopted. Failure to meet the requirements of the above may be cause for cancellation of this contract effective the date of receipt of the Notice of Cancellation.

K. DATA PRIVACY

All data collected, created, received, maintained, or disseminated, or used for any purpose in the course of the HOST's performance of the Agreement is governed by the Minnesota Government Data Practices Act, Minnesota Statutes chapter 13 and any other applicable state statutes and state rules adopted to implement the Act, as well as state statutes and federal regulations on data privacy. The HOST agrees to abide by these statutes, rules and regulations and as they may be amended.

L. AUDITS, REPORTS, AND MONITORING PROCEDURES

The HOST will:

- 1. Maintain records that reflect all revenues, cost incurred and services provided in the performance of the Agreement for at least six years.
- 2. Agree that the PARTNER, the State Auditor, or legislative authority, or any of their duly authorized representatives at any time during normal business hours, and as often as they may deem reasonably necessary, shall have access to the rights to examine audit, excerpt, and transcribe any books, documents, papers, records, etc., and accounting procedures and practices of the HOST which are relevant to the contract. The annual audit conducted for the Washington Conservation District will include EMWREP activities.

M. INDEMNITY

No party to this Agreement agrees to be responsible for the acts or omissions of another, its agents, officials, contractors or employees within the meaning of Minnesota Statutes section 471.59, subdivision 1a. Each PARTNER and HOST will hold harmless, defend and indemnify all other parties to this Agreement, their officers, board members, employees and agents for any and all damage, liability, cost or claim (including reasonable attorneys' fees) to the extent it is the result of its negligent act or of another action or inaction that is the basis for its liability in law or equity. The PARTNER agrees to provide proof of general liability insurance upon request. This paragraph does not constitute a waiver or otherwise diminish, any statutory or common law defense, immunity or limit on liability any PARTNER or HOST may enjoy as against any third party.

N. INDEPENDENT CONTRACTOR

It is agreed that nothing herein contained is intended or should be construed in any manner as creating or establishing the relationship of co-partners between the parties hereto or as constituting the HOST as the agent, representative, or employee of PARTNER organization for any purpose or in any manner whatsoever. The HOST is to be and shall remain an independent contractor with respect to all services performed under this Agreement.

The HOST represents that it has, or will secure at its own expense, all personnel required in performing services under this Agreement. Any and all personnel of the HOST or other person, while engaged in the performance of any work or services required by the HOST under this Agreement, shall have no contractual relationship with the PARTNER and shall not be considered employees of the PARTNER.

O. MODIFICATIONS

Any material alteration or variation shall be reduced to writing as an amendment and signed by the parties.

P. MERGER

It is understood and agreed that the entire agreement of the parties is contained here, and that this contract supersedes oral agreements and negotiations between the parties relating to this subject matter. All items referred to in this contract are incorporated or attached and deemed to be part of the contract.

Q. TERMINATION

This Agreement will commence when executed by HOST and all PARTNERS and will continue until terminated. The Agreement will commence with respect to each additional PARTNER on that PARTNER'S execution of a signature page acceding to the terms of the Agreement. This Agreement will terminate immediately upon completion of the activities enumerated herein and the program duration expires. Any party to this Agreement may withdraw participation on an agreement-year basis with 60 days written notice to HOST prior to the annual anniversary date of the Agreement, with the actual termination date falling on the anniversary date. Pro-rated contributions will be returned to the terminated or terminating PARTNER. The HOST will promptly notify all PARTNERS of any PARTNER's termination. Termination by any one PARTNER will not constitute the termination of this Agreement. If HOST determines that PARTNER termination has resulted in inadequate funds to deliver the work products generally described in Exhibit A, the HOST will terminate the Agreement effective the anniversary date unless adequate funds can be procured. Termination by the HOST will constitute termination of this Agreement in whole and pro-rated contributions will be returned to each PARTNER.

R. OWNERSHIP OF DOCUMENTS AND INTELLECTUAL PROPERTY

All property of the HOST or a PARTNER used, acquired or created in the performance of work under this Agreement, including documents and records of any kind, shall remain the joint property of the HOST and the PARTNER providing the property. The HOST and PARTNERS shall jointly own and each party has the right to use, sell, license, publish, or otherwise disseminate any product developed in whole or in part during the performance of work under this Agreement. Durable goods purchased by the HOST, such as office equipment and computers, shall remain the property of the HOST.

CONTRACT BETWEEN WASHINGTON CONSERVATION DISTRICT AND MEMBERS OF EMWREP

HOST: Washington Conservation District PARTNER: Brown's Creek Watershed District 2025 Payment: **\$24,500** 2026 Annual Payment: \$25,480 2027 Annual Payment: **\$26,499** Contract start date: January 1, 2025 IN TESTIMONY WHEREOF the parties have duly executed this agreement by their duly authorized officers. APPROVED: **HOST PARTNER** BY: BY: WCD Board Chair Date Name Title BY: BY: Name WCD Manager Date Title Approval as to form and execution: Date

EXHIBIT A

SCOPE OF SERVICES EMWREP

HOST responsibilities:

- 1. Hire, employ and supervise water resource educators that will successfully serve the education needs as prescribed herein.
- 2. Work in good faith to achieve the goals identified in this agreement.
- 3. Maintain a strict accounting of all financial transactions.
- 4. Develop and disseminate annual summaries of accomplishments and budgetary analysis to EMWREP partners.
- 5. Provide office space, office furniture, computer, transportation, and phone for water-resource educator. Equipment purchased by the HOST will remain the property of the HOST following the term of this agreement.

PARTNER responsibilities:

- 1. Authorize a representative to the EMWREP Steering Committee. This person shall actively participate in the Steering Committee and assist in employee selection, Annual Workplan Development, and other tasks as needed.
- 2. Provide funds for the EMWREP Program in accordance with the terms herein.
- 3. Provide appropriate and timely feedback to the HOST manager regarding the performance of the water-resource educators.
- 4. Share equipment, staff, and educational resources to facilitate Education Program planning and implementation.
- 5. As initiated by the HOST, discuss the progress of the water-resource educators and agree to take any action that is appropriate to ensure the successful fulfillment of project objectives.
- 6. Work with the water-resource educators to ensure that services are being used to address high priorities at the local level.

EMWREP staff responsibilities:

- 1. Prepare, coordinate, and revise EMWREP Work Plan annually with the EMWREP Steering Committee.
- 2. Review and advise PARTNERS annually on educational aspects relevant to their water plans.
- 3. Develop annual plan of work with the EMWREP Steering Committee. Workplan will reference MS4 education programs and PARTNERS water and education plans.
- 4. Implement annual work plan, including planning, implementing, evaluating, and reporting on such anticipated activities as presentations, workshops, in-field training, demonstration projects, and published materials.
- 5. Pursue grants and other funding sources to enhance the EMWREP Program.
- 6. Coordinate with "Watershed Partners" and other entities conducting water resource education efforts to minimize overlap and maximize effectiveness.
- 7. Maintain educational information share on website, social, media, and print communications.
- 8. Present papers as appropriate at professional meetings within Minnesota.
- 9. Prepare annual education report (which meets MS4 requirements) and conduct shared MS4 annual meetings for participating EMWREP members.

EXHIBIT B BUDGET

SHARED WATER RESOURCE EDUCATION PROGRAM ANNUAL BUDGET

Total	Materials	Staff Support and Overhead Expenses
\$247,000	\$15,000	\$232,000

MEMBERSHIP STRUCTURE AND FUNDING CONTRIBUTIONS

	Partner	Payment
	Brown's Creek Watershed District	\$24,500
Watershed Management Organizations	Carnelian-Marine-St. Croix Watershed District	\$16,000
	Chisago Lakes Improvement District	\$8,000
	Comfort Lake – Forest Lake Watershed District	\$24,500
	Middle St. Croix Watershed Management	\$8,000
	Organization	\$6,000
	Ramsey-Washington Metro Watershed District	\$16,000
	Rice Creek Watershed District	\$24,500
	South Washington Watershed District	\$32,000
	Valley Branch Watershed District	\$24,500
	Chisago County	\$8,000
Counties	Isanti County	\$1,600
	Washington County	\$16,300
Soil & Water Conservation Districts	Chisago Soil and Water Conservation District	\$8,000
Soil & Water Conservation Districts	Isanti Soil and Water Conservation District	\$1,600
	City of Afton	\$900
	City of Bayport	\$900
	City of Cottage Grove	\$3,500
	City of Dellwood	\$900
	City of Forest Lake	\$3,500
	City of Grant	\$900
	City of Hugo	\$3,500
	City of Lake Elmo	\$3,500
Cities & Townships	City of Newport	\$900
	City of Oak Park Heights	\$900
	City of Oakdale	\$3,500
	City of St. Paul Park	\$900
	City of Stillwater	\$3,500
	City of Willernie	\$900
	City of Woodbury	\$3,500
	City of Wyoming	\$900
	West Lakeland Township	\$900
	TOTAL	\$247,000

2025

WAIVER OF LIABILITY FOR USE OF FAMILYMEANS SPACE

In consideration of permission to use, today and on all future dates, the property, facilities, and equipment of FamilyMeans, I, for myself or assigns, do hereby release, waive, discharge, and covenant not to sue FamilyMeans, its directors, officers, employees, and agents from liability from any and all claims, including the negligence of FamilyMeans, its officers, employees, agents and directors, resulting in personal injury, accidents or illnesses (including death), and property loss arising from, but not limited to, participation in activities, classes, observation, and use of facilities, premises, or equipment.

I also agree to IDEMNIFY AND HOLD FamilyMeans, its directors, officers, employees and agents, HARMLESS from any and all claims, actions, suits, procedures, costs, expenses, damages and liabilities, including attorney's fees, brought as a result of my use of FamilyMeans space and to reimburse them for any such expenses incurred.

Severability: The undersigned further expressly agrees that the foregoing waiver and assumption of risks agreement is intended to be as broad and inclusive as is permitted by the law of the State of Minnesota and that if any portion thereof is held invalid, it is agreed that the balance shall, notwithstanding, continue in full legal force and effect.

Acknowledgement of Understanding: I have read this waiver of liability, assumption of risk, and indemnity agreement, fully understand its terms and understand that I am giving up substantial rights including my right to sue. I acknowledge that I am signing the agreement freely and voluntarily, and intend by my signature to be a complete and unconditional release of all liability to the greatest extend allowed by law.

My organization (responsible for:) renting/using the facility is
 Any damage to the building, equipment, and/or furnishings of event. Enforcing FamilyMeans alcohol-free, smoke-free and gun-free 	
I understand and agree to adhere to all of the above.	

Dated

Signature of Guest Representative

Project Name	BCWD Permit Program	Date	10/04/2024
To / Contact info	BCWD Board of Managers		
Cc / Contact info	Karen Kill, District Administrator		
From / Contact info	John Sarafolean, EOR		
Regarding	September Permit Inspection Update		

Background

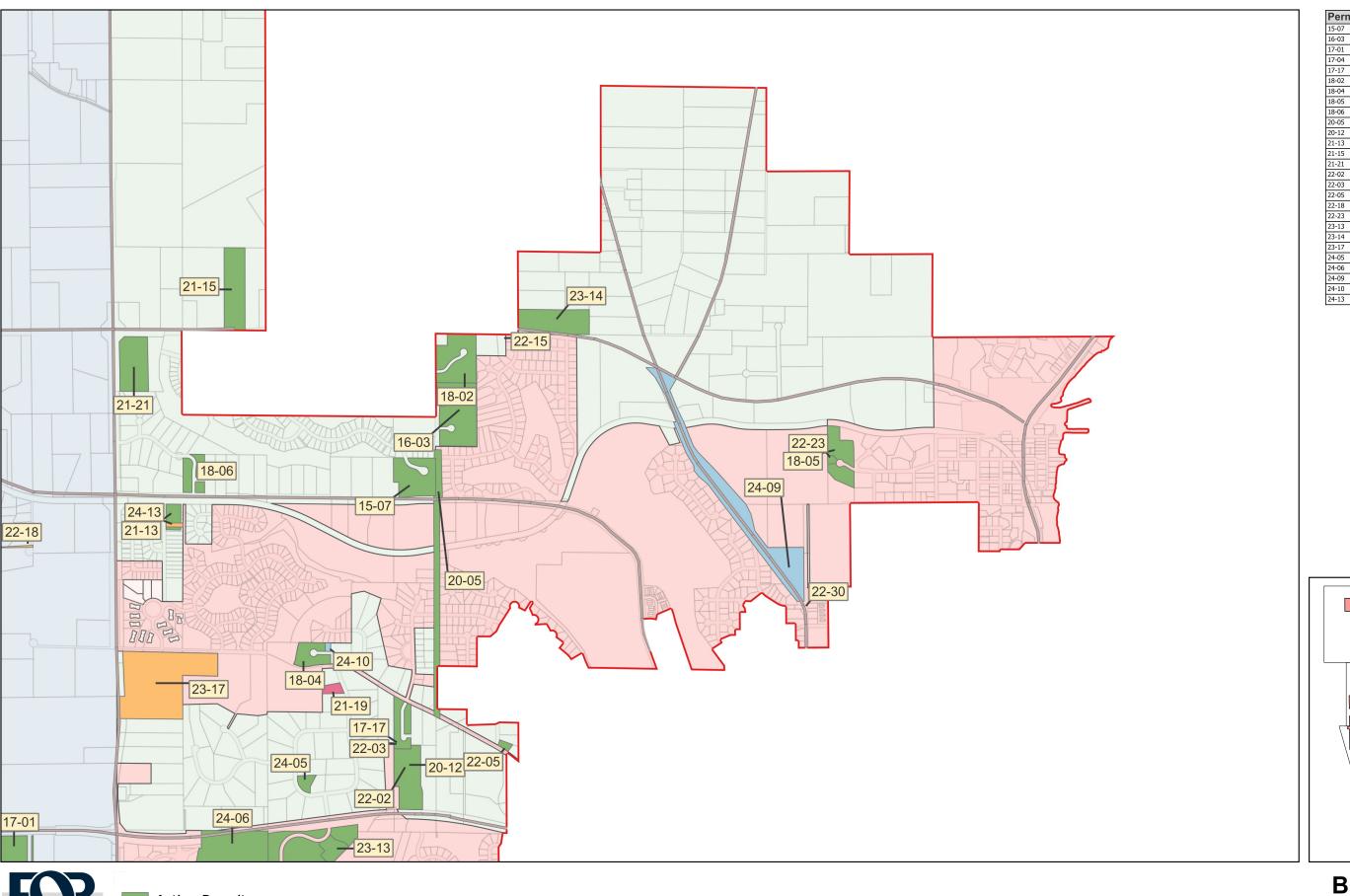
BCWD has an on-going permit review process in support of the District Rules. Developments within the District Jurisdictional Boundary are reviewed for compliance with the Rules and conditions of the permit. This memo documents inspections from 09/05/2024 through 10/04/2024.

Inspection of Existing Permits

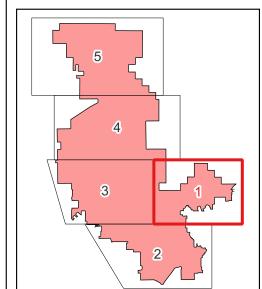
Project Name	Permit ID	Date	Grade
Lakes of Stillwater Trail	17-04	09/27/2024	А
Lukes of Stillwater Trail	17 04	10/02/2024	А
WOS Lot 122 Freiroy Residence	23-11	09/27/2024	А
Lakes at Stillwater Sandhill Shores		09/20/2024	В
Lakes at Stillwater Salidrill Shores	23-13	10/03/2024	В
Wiskow Berm	23-14	09/20/2024	С
WOS Lot 102 Mensah Residence	23-15	09/27/2024	А
WOS Lot 124 Penny-Lane	23-18	09/27/2024	А
Take 5 Oil Change		09/20/2024	А
Take 5 on change	24-01	10/02/2024	А
WOS Lot 120 Hilgert Residence	24-03	09/27/2024	В
Swager Residence	24-05	09/27/2024	С
WOS Lot 127 Karr Residence		09/20/2024	А
WOS LOC 127 Rail Residence	24-11	10/02/2024	А
Wick Residence		09/20/2024	А
WICK NESIGETICE	24-14	10/03/2024	В

Permit Closures:

- 22-15 13199 Dellwood Rd.
- 22-25 WOS Lot 113 Miller Duis Residence
- 22-30 CSAH 5 Phase 2
- 23-07 WOS Lot 118 Villa Rococo
- 23-12 CSAH 9 Culvert Replacement
- 24-04 CSAH 5 Resurfacing

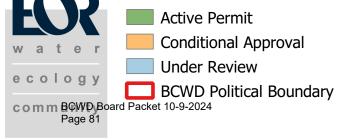


Permit No.	Applicant/Permit Name	Status
15-07	Brown's Creek Cove	Active
16-03	The Ponds at Heifort Hills	Active
17-01	White Oaks Savanna	Active
17-04	The Lakes of Stillwater	Active
17-17	Westridge	Active
18-02	Heifort Hills Estates	Active
18-04	Boutwell Farm	Active
18-05	Heritage Ridge	Active
18-06	Nottingham Village	Active
20-05	Neal Avenue Reconstruction	Active
20-12	White Pine Ridge	Active
21-13	Marylane Gateway	Active
21-15	Schwartz Residence	Active
21-21	Millbrook West Park	Active
22-02	White Pine Ridge, remaining lots	Active
22-03	Westridge, remaining lots	Active
22-05	13290 Boutwell Rd N	Active
22-18	Stillwater Oaks	Pending
22-23	Ferguson Residence (Heritage Ridge Lot 4)	Active
23-13	Sandhill Shores (Phase III of Lakes at Stillwater)	Active
23-14	Wiskow Berm	Active
23-17	Sundance Stillwater	Pending
24-05	Swager Residence	Active
24-06	Rutherford Elementary	Active
24-09	CSAH 5 Phase 3	Review
24-10	Boutwell Farms Lot 1	Review
24-13	8413 Marylane	Pending



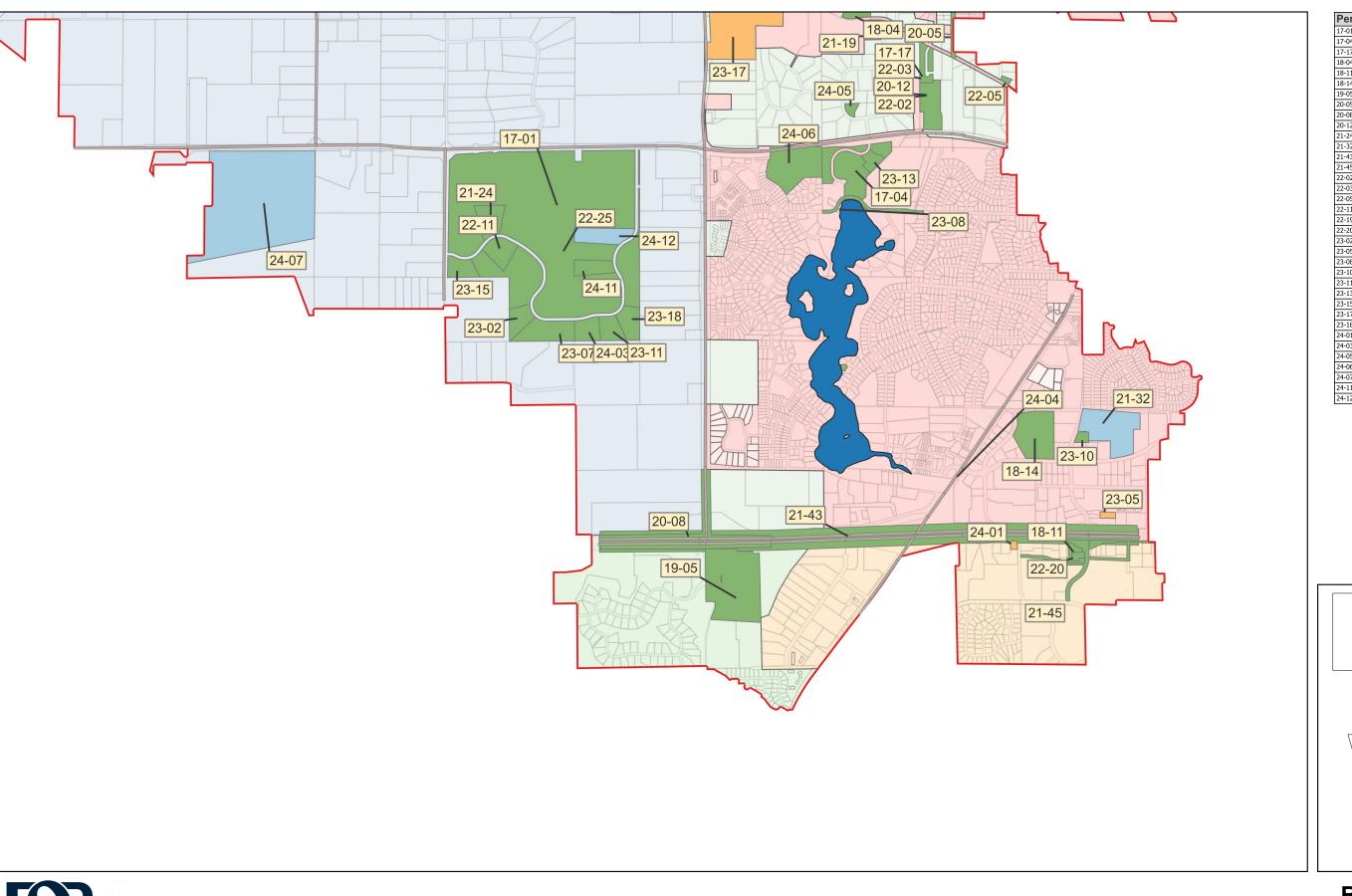


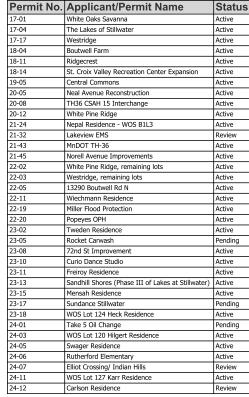


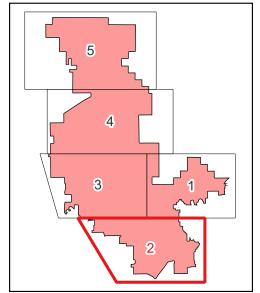


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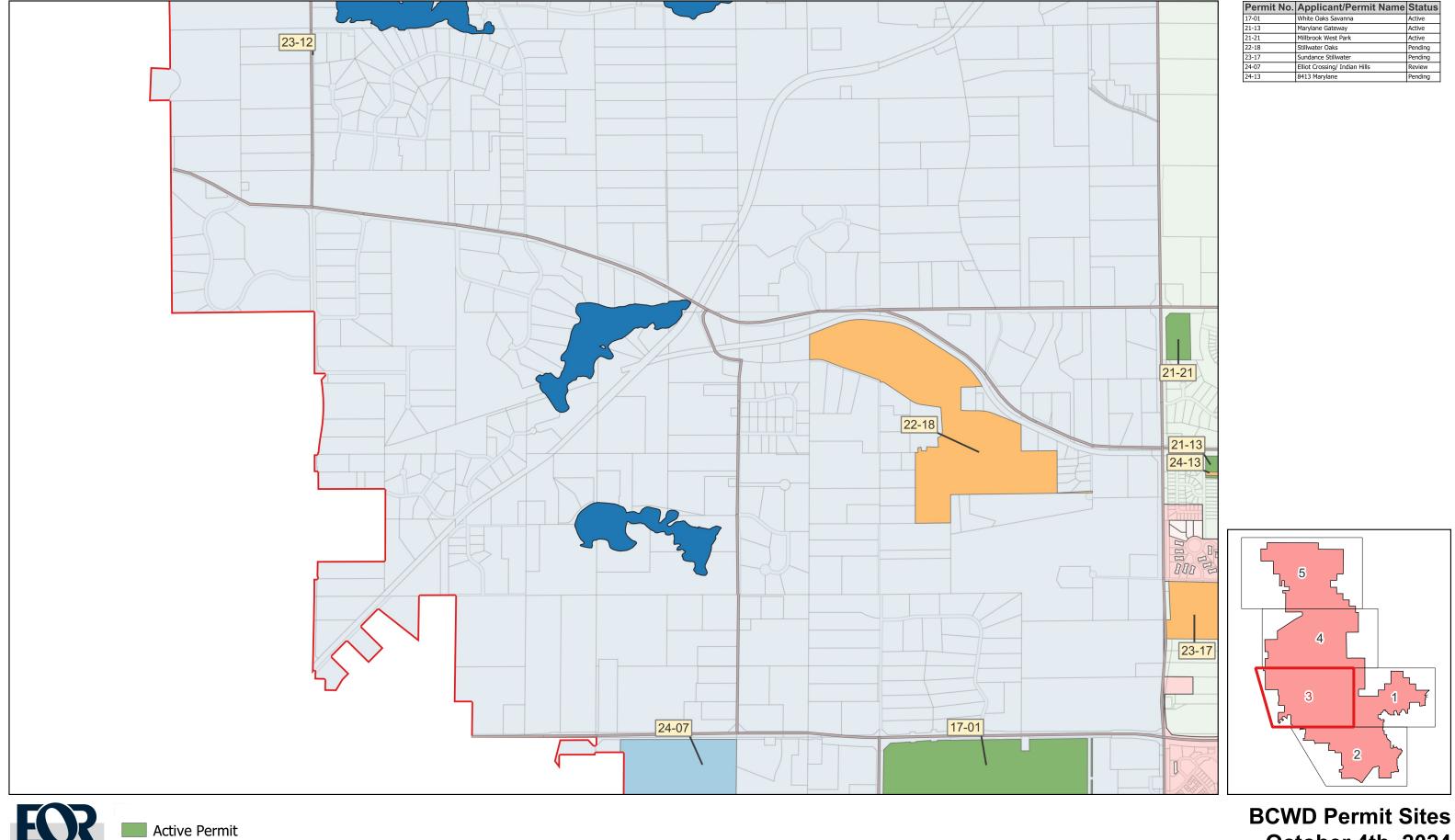


BCWD Permit Sites October 4th, 2024





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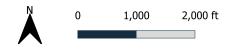
Conditional Approval

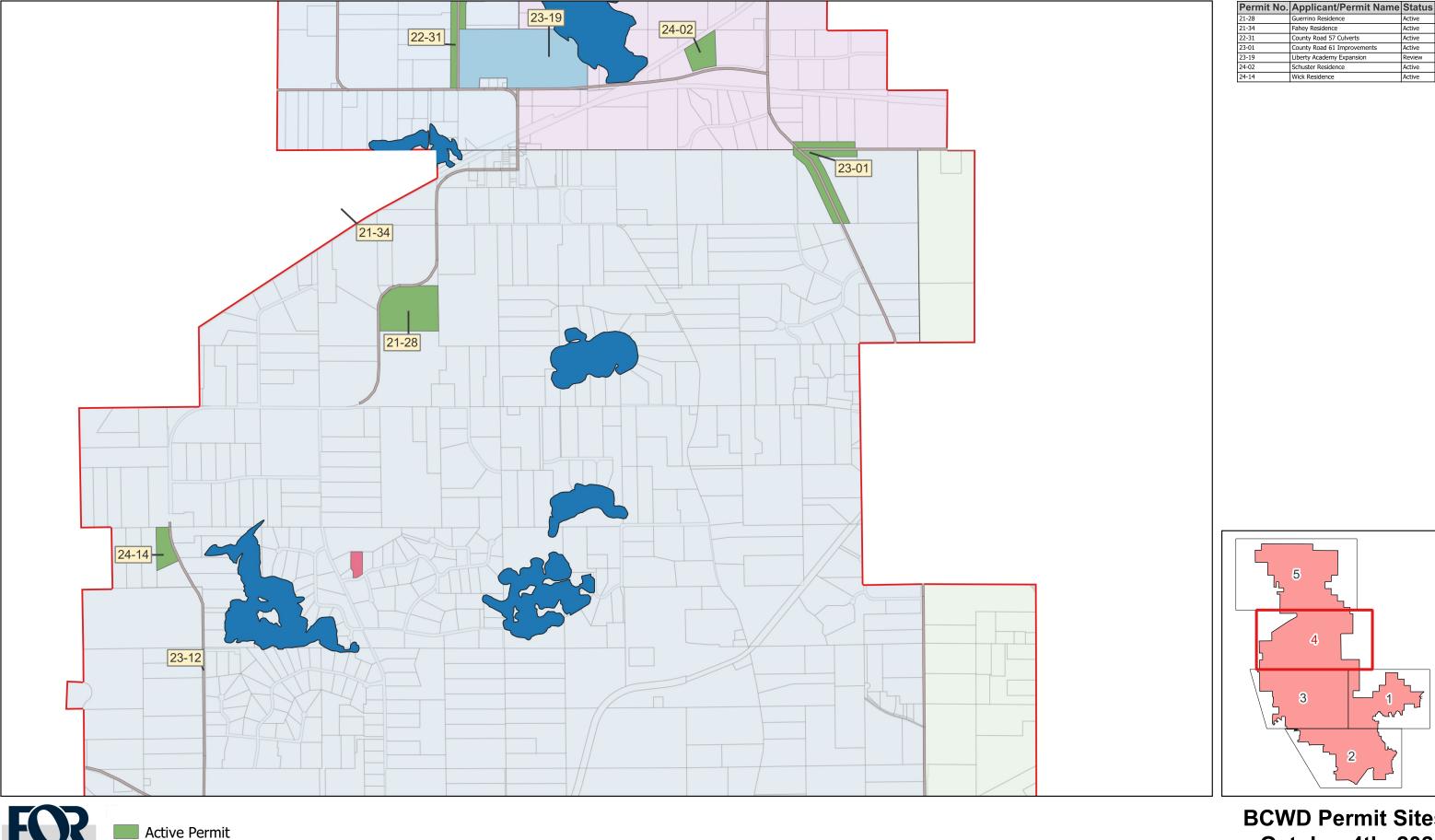
Under Review

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water

October 4th, 2024





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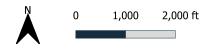
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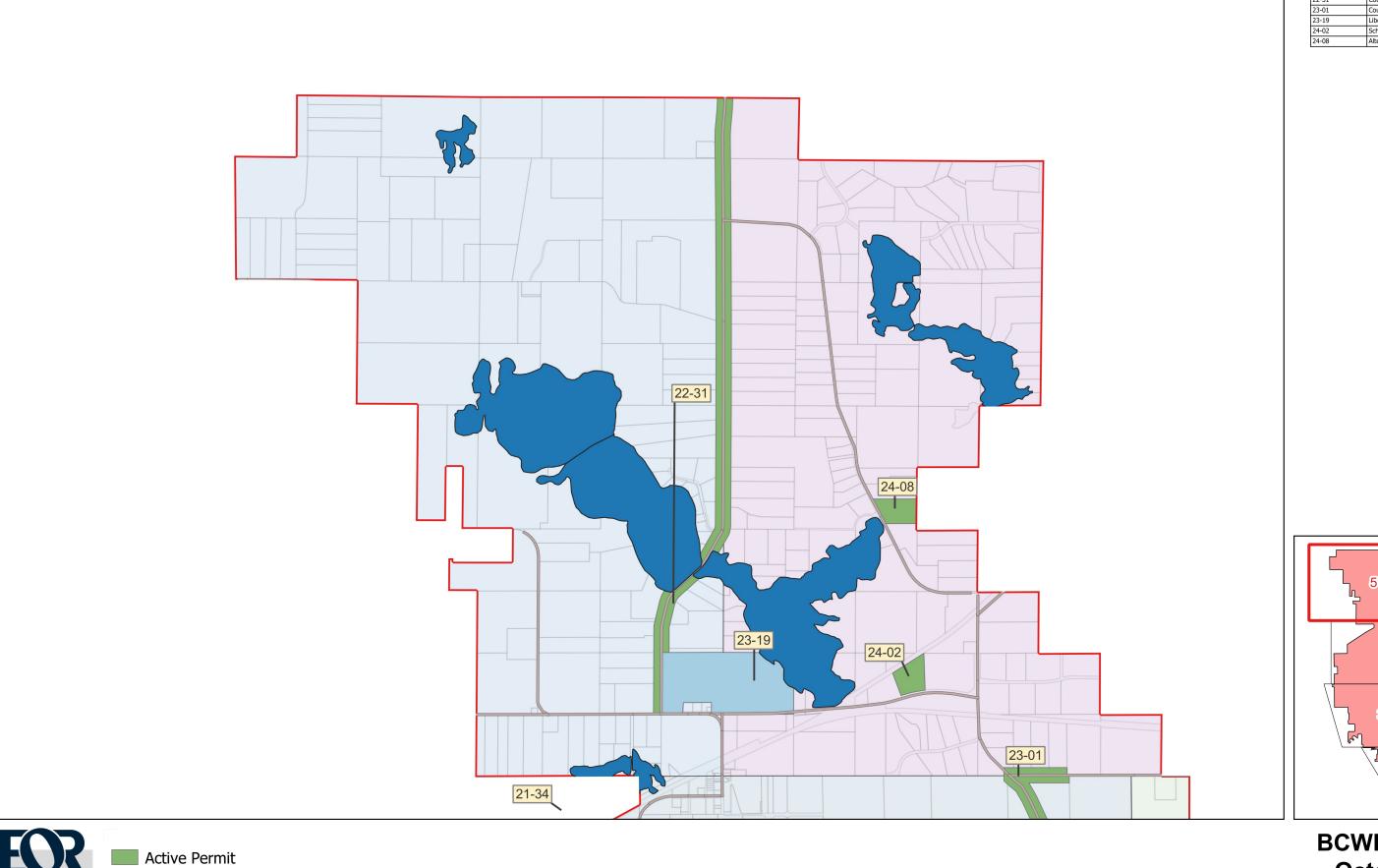
Conditional Approval

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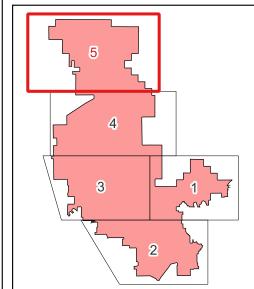
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Conditional Approval

Under Review

BCWD Political Boundary
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