

DRAFT**Table 3-7 Comparison of BCWMC Watershed Management Plan to the Phase 2 XPSWMM Model - Flood Elevations and Peak Discharges**

Location	Creek Distance above the Mississippi River (feet)	Normal Water Level (NAVD88)	BCWMC Watershed Management Plan ¹		BCWMC Phase 2 XP-SWMM Model - Atlas 14		Change in Flood Elevations and Flow Rates	
			100-yr		100-yr		XPSWMM - Plan	
			Flood Elevation	Flow Rate	Flood Elevation	Flow Rate	Flood Elevation	Flow Rate
			(NAVD88 feet)	(cfs)	(NAVD88 feet)	(cfs)	(feet)	(cfs)
BASSETT CREEK MAIN STEM								
Tunnel Inlet	8,000		807.3	1,220	811.0	1,370	3.7	150
Irving Avenue Bridge (DS)	9,800		808.6	1,135	811.2	1,370	2.6	235
Irving Avenue Bridge (US)	---		809.3	1,135	811.3	1,400	2.0	265
Cedar Lake Rd (Bridge)	10,900		812.9	945	813.4	1,400	0.5	455
MN&S RR Bridge	11,600		814.8	945	813.8	1,400	-1.0	455
Old Penn Ave Bridge (DS)	12,410		814.9	705	814.5	1,400	-0.4	695
Old Penn Ave Bridge (US)	---		815.2	705	814.6	1,400	-0.6	695
BN RR Bridge	12,670		815.3	705	814.5	1,400	-0.8	695
MN&S RR Bridge (DS)	13,930		816.2	465	815.7	1,400	-0.5	935
MN&S RR Bridge (US)	---		816.4	465	815.8	1,400	-0.6	935
Fruen Mill Dam (DS)	14,150		816.5	510	817.2	1,400	0.7	890
Fruen Mill Dam (US)	---		818.2	510	819.8	1,400	1.7	890
Glenwood Ave	14,855		820.3	680	822.2	1,310	1.9	630
Hwy 55 (DS)	16,500		821.7	680	823.4	1,160	1.7	480
Hwy 55 (US)	---		826.2	680	826.9	1,530	0.7	850
Golf Cart Bridge	---		826.2	680	826.9	1,560	0.7	880
MN&S RR Bridge	18,700		826.2	945	826.9	1,560	0.7	615
Plymouth Ave Bridge	19,500		826.2	680	827.0	1,590	0.8	910
Wirth Parkway (DS)	20,480		826.2	1,570	827.0	1,490	0.8	-80
Wirth Parkway (US) Bridge	---		826.5	1,570	827.0	1,490	0.5	-80
Confluence w/ Sweeney Lake Branch	22,000		827.2	----	827.4	1,510	0.3	---
Golden Valley Road (DS)	23,800		827.4	790	828.3	1,400	0.9	610
Golden Valley Road (US)	23,800		830.2	680	834.0	1,400	3.9	720
Dresden Lane (DS)	25,900		830.5	680	834.3	1,400	3.8	720
Dresden Lane (US)	---		831.6	680	834.3	1,400	2.7	720
Bassett Creek Drive (DS)	---		832.2	665	834.6	1,350	2.4	685
Bassett Creek Drive (US)	---		832.9	665	837.3	1,350	4.4	685
Noble Lane (DS)	29,200		839.7	660	838.8	1,380	-0.8	720
Noble Lane (US)	---		839.7	660	839.9	1,360	0.2	700
Regent Avenue (DS)	30,800		---	660	---	1,360	---	700
Regent Avenue (US)	---		842.1	660	843.9	1,330	1.8	670
Minnaqua Avenue	31,650		842.7	---	844.2	1,320	1.5	---
Highway 100 (DS)	34,020		843.4	770	845.0	1,340	1.6	570
Highway 100 (US)	34,020		849.2	610	851.5	1,100 ²	2.3	490
DS Confluence N. Branch	34,400		849.2	495	851.5	1,100	2.3	605
Westbrook Road (DS)	37,000		857.3	940	859.1	890	1.8	-50
Westbrook Road (US)	---		858.3	940	861.0	890	2.7	-50

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Location	Creek Distance above the Mississippi River (feet)	Normal Water Level (NAVD88)	BCWMC Watershed Management Plan ¹		BCWMC Phase 2 XP-SWMM Model - Atlas 14		Change in Flood Elevations and Flow Rates	
			100-yr		100-yr		XPSWMM - Plan	
			Flood Elevation	Flow Rate	Flood Elevation	Flow Rate	Flood Elevation	Flow Rate
			(NAVD88 feet)	(cfs)	(NAVD88 feet)	(cfs)	(feet)	(cfs)
Duluth Street (DS)	38,400		861.5	850	862.0	870	0.5	20
Duluth Street (US)	---		862.0	850	862.7	850	0.7	0
St. Croix Avenue (DS)	39,800		863.2	850	864.6	850	1.4	0
St. Croix Avenue (US)	---		864.3	850	864.7	820	0.4	-30
MN&S RR (DS)	41,660		869.7	760	870.4	720	0.7	-40
MN&S RR (US)	---		869.7	760	870.6	710	0.9	-50
Douglas Drive (DS)	42,130		870.4	670	871.0	710	0.7	40
Douglas Drive (US)	---		871.2	670	871.9	710	0.7	40
Florida Avenue (DS)	42,820		871.8	670	872.7	710	0.9	40
Florida Avenue (US)	---		872.5	670	873.1	710	0.6	40
Hampshire Ave (DS)	43,410		872.7	630	873.4	710	0.7	80
Hampshire Ave (US)	---		873.2	630	874.0	680	0.9	50
GV Country Club (DS)	44,320		874.6	365	876.1	670	1.5	305
GV Country Club (US)	---		878.6	405	880.7	670	2.1	265
Pennsylvania Avenue (DS)	46,500		879.5	380	881.7	670	2.2	290
Pennsylvania Avenue(US)	---		880.7	375	883.1	570	2.4	195
C&NW RR (DS)	47,200		881.9	375	884.4	590	2.5	215
C&NW RR (US)	---		883.1	375	884.9	470	1.8	95
Winnetka Ave (DS)	48,000		883.5	360	885.0	450	1.5	90
Winnetka Ave (US)	---		883.7	360	885.3	440	1.6	80
Wisconsin Ave (DS)	49,750		884.9	360	886.0	440	1.1	80
Wisconsin Ave (US)	50,100		888.2	340	887.7	360	-0.5	20
Golden Valley Road (DS)	---		888.2	290	887.8	330	-0.4	40
Golden Valley Road (US)	---		888.2	290	887.8	330	-0.4	40
Westbound Hwy 55 (DS)	51,250		888.2	290	887.8	330	-0.4	40
Eastbound Hwy 55 (US)	---		888.3	290	887.8	400	-0.4	110
Boone Ave (DS)	---		888.4	280	887.9	320	-0.5	40
Boone Ave (US)	---		888.5	280	888.0	220	-0.5	-60
Hwy 169 (DS)	56,500		888.6	255	888.3	300	-0.2	45
Hwy 169 (US)	---		888.7	250	888.4	240	-0.3	-10
Hwy 55 Ramp (DS)	58,300		888.7	235	888.4	210	-0.3	-25
Hwy 55 Ramp (US)	---		888.7	235	888.4	210	-0.2	-25
Hwy 55 Eastbound (DS)	58,500		888.7	235	888.4	210	-0.2	-25
Hwy 55 Eastbound (US)	---		888.7	235	888.5	210	-0.2	-25
Hwy 55 Westbound (DS)	---		888.7	235	888.5	210	-0.2	-25
Hwy 55 Westbound (US)	---		889.0	235	888.5	210	-0.5	-25
Hwy 169 ramp to W 55 (DS)	58,750		889.0	235	888.5	210	-0.5	-25
Hwy 169 ramp to W 55 (US)	---		889.0	235	888.5	210	-0.5	-25
Hwy 55 N Frontage Rd (DS)	58,850		889.2	235	888.5	210	-0.7	-25

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			100-yr		100-yr		XPSWMM - Plan	
			Flood Elevation	Flow Rate	Flood Elevation	Flow Rate	Flood Elevation	Flow Rate
			(NAVD88 feet)	(cfs)	(NAVD88 feet)	(cfs)	(feet)	(cfs)
Hwy 55 N Frontage Rd (US)	---		889.2	235	888.5	210	-0.7	-25
10th Ave (DS)	---		889.2	---	889.0	210	-0.2	---
10th Ave (US)	---		889.2	---	889.1	210 ²	-0.1	---
C&NW RR Bridge (DS)	63,450		889.2	200	889.1	210 ²	-0.1	10
C&NW RR Bridge (US)	---		889.6	200	889.1	210	-0.5	10
South Shore Drive (DS)	63,800		889.6	190	889.3	210	-0.3	20
South Shore Drive (US)	---		890.5	190	889.3	210 ²	-1.2	20
Medicine Lake Weir (DS)	63,960		890.5	190	889.3	210	-1.2	20

Inundation Areas

Theodore Wirth Park (Area upstream of Highway 55 Control Structure)	---	815.7	826.2	---	826.9	---	0.7	---
South Rice Pond	---		831.7	---	834.5	---	2.8	---
North Rice Pond	---	832.5	838.2	---	836.4	---	-1.7	---
Grimes Avenue Pond	---	832.5	838.2	---	836.5	---	-1.7	---
Golden Valley Country Club	---		878.6	---	880.7	---	2.1	---
Brookview Golf Course	---		888.3	---	887.8	---	-0.4	---
Westwood Lake	---	887.6 ³	889.2	---	890.0	---	0.8	---
Medicine Lake	---	887.9	890.5	---	890.3	---	-0.2	---

NORTH BRANCH

Hwy 100 Control (US)	---		849.2	610	851.5	1,100	2.3	490
Confluence w/Main Stem	---		849.2	---	851.5	1,800 ²	2.3	---
29th Avenue (DS)	200		849.2	1,515	851.5	1,800 ²	2.3	285
29th Avenue (US)	---		849.7	1,515	851.5	1,460 ²	1.8	-55
32nd Avenue (DS)	2,600		849.8	1,175	852.2	1,460 ²	2.4	285
32nd Avenue (US)	---		854.2	1,175	852.7	560 ²	-1.5	-615
Brunswick Avenue (DS)	3,000		854.9	1,175	852.7	560 ²	-2.2	-615
Brunswick Avenue (US)	---		856.1	1,175	856.7	510	0.6	-665
34th Culvert (DS)	4,200		863.0	700	865.4	520	2.4	-180
34th Culvert (US)	---		866.3	430	867.1	500	0.8	70
Douglas Drive (DS)	5,250		870.2	670	869.3	560 ²	-0.8	-110
Douglas Drive (US)	---		870.3	670	870.4	350 ²	0.1	-320
Edgewood Emb (DS)	5,600		870.9	430	871.0	350 ²	0.1	-80
Edgewood Emb (US)	---		878.4	340	880.4	330	2.0	-10

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			100-yr		100-yr		XPSWMM - Plan	
			Flood Elevation	Flow Rate	Flood Elevation	Flow Rate	Flood Elevation	Flow Rate
			(NAVD88 feet)	(cfs)	(NAVD88 feet)	(cfs)	(feet)	(cfs)
Georgia Avenue (DS)	6,250		878.4	305	880.4	450	2.0	145
Georgia Avenue (US)	---		878.6	305	880.7	500 ²	2.1	195
36th & Hampshire (DS)	6,800		878.6	260	880.7	460 ²	2.1	200
36th & Hampshire (US)	6,980		879.2	260	881.2	290 ²	2.0	30
Louisiana Ave. (DS) (Street Elevation Approx. 882.4)	8,000		881.2	---	883.3	500 ²	2.1	---
Maryland Ave. (Street Elevation Approx. 885.7)	8,500		---	---	886.0	270 ²	---	---
Oregon Ave. (Street Elevation Approx. 885.4)	9,000		---	---	888.9	90 ²	---	---
MN & S RR (Street Elevation Approx. 889.1)	9,300		---	---	889.8	90 ²	---	---
Inlet of 42" CMP (East Winnetka Pond)	9,500		888.2	---	891.0	100 ²	2.8	---
Service Road (West Winnetka Pond)	10,000		888.2	---	891.2	190 ²	3.1	---
Winnetka Ave. (DS)	10,600		888.2	---	891.3	240 ²	3.1	---
Winnetka Ave. (US)	---		889.2	---	891.4	280	2.2	---
Boone Ave. (DS)	13,500		889.5	---	891.4	680 ²	1.9	---
Boone Ave. (US)	---		889.7	---	891.4	270 ²	1.7	---
Northwood Lake	---		889.7	---	891.4	270 ²	1.7	---
TH 169 (DS)	16,850		889.7	---	893.0	270 ²	3.4	---
TH 169(US)	---		890.7	---	893.1	760 ²	2.4	---
Rockford Road (DS)	18,350		890.7	---	893.1	760 ²	2.4	---
Rockford Road (US)	---		898.7	---	901.4	20 ²	2.8	---

Inundation Areas

Bassett Creek Park	---	840.6	849.7	---	851.5	---	1.8	---
Edgewood Avenue Pond	---		878.4	---	880.4	---	2.0	---
Winnetka Pond (DS of Winnetka Avenue)	---	879.8	888.2	---	891.0	---	2.8	---
Northwood Park	---		889.5	---	891.4	---	1.9	---
Northwood Lake	---	884.6	889.7	---	891.4	---	1.7	---

SWEENEY LAKE BRANCH

Confluence w/Main Stem	---		827.2	---	827.4	1,510	0.3	---
France Ave extension (DS)	700		827.2	---	827.8	170 ²	0.7	---
France Ave (US)	---		829.2	---	828.1	170 ²	-1.0	---
Courage Center & Hidden Lakes Parkway (DS)	900		829.2	---	830.7	170	1.5	---
Courage Center & Hidden Lakes Parkway (US)	---		831.2	---	832.0	170	0.9	---

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			100-yr		100-yr		XPSWMM - Plan	
			Flood Elevation	Flow Rate	Flood Elevation	Flow Rate	Flood Elevation	Flow Rate
			(NAVD88 feet)	(cfs)	(NAVD88 feet)	(cfs)	(feet)	(cfs)
Precast Concrete Dam (DS)	1,700		831.7	---	832.0	170	0.4	---
Sweeney Lake	---		831.7	---	832.0	170	0.4	---
Union Pacific RR (DS)	6,800		831.7	---	832.0	410	0.4	---
Union Pacific RR (US)	---		835.8	311	836.4	480 ²	0.6	169
Hwy 55 (DS)	8,150		835.8	680	836.9	870 ²	1.1	190
Hwy 55 (US)	---		836.9	680	838.5	320 ²	1.7	-360
MN & S RR (DS)	9,000		836.9	233	838.5	270	1.7	37
MN & S RR (US)	---		839.5	233	842.0	270	2.5	37
Breck Pond & Control Structure (US)	9,580		839.9	296	842.6	280 ²	2.7	-16
TH 100 (DS) (Breck Pond)	10,400		839.9	298	842.6	450 ²	2.7	152
TH 100 (US)	---		845.4	298	851.7	520 ²	6.3	222
Turners Crossroad (US)	10,950		854.9	241	857.2	450 ²	2.4	209
Glenwood Pond A	---		854.9	---	857.2	---	2.4	---
MN & S RR (DS)	11,550		854.9	233	857.2	450 ²	2.4	217
MN & S RR (US)	---		855.0	233	857.3	450 ²	2.3	217
Glenwood Pond B	---		855.0	---	857.3	---	2.3	---
Glenwood Ave (DS)	---		855.0	84	857.3	100 ²	2.3	16
Glenwood Ave (US)	---		855.0	84	857.3	100	2.3	16
Duck Pond	---		855.0	---	857.3	---	2.3	---
MN & S RR (DS)	---		855.0	233	857.3	570 ²	2.3	337
MN & S RR (US)	---		858.9	233	859.6	310 ²	0.7	77
Ravine Storage Area	---		858.9	---	859.6	90 ²	0.7	---
Courtawn Pond	---		873.1	---	873.6	120 ²	0.5	---
East Ring Pond	---		879.0	---	879.4	190 ²	0.5	---
78" RCP Equalizer	18,800		---	---	---	480 ²	---	---
West Ring Pond	---		879.0	---	879.4	---	0.5	---
Ravine Storage Area Overflow								
Glenwood Pond B	---		855.0	---	857.3	---	2.3	---
MN & S RR (DS)	---		855.0	---	857.3	---	2.3	---
MN & S RR (US)	---		857.3	---	859.6	---	2.3	---
Glenwood Ave (DS)	---		855.0	---	857.3	---	2.3	---
Glenwood Ave (US)	---		855.0	---	857.3	---	2.3	---
Inundation Areas								
Sweeney Lake	---	827.2 ⁴	831.7	---	832.0	---	0.4	---
Twin Lake	---	827.2 ⁴	831.7	---	832.0	---	0.4	---

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			100-yr		100-yr		XPSWMM - Plan	
			Flood Elevation	Flow Rate	Flood Elevation	Flow Rate	Flood Elevation	Flow Rate
			(NAVD88 feet)	(cfs)	(NAVD88 feet)	(cfs)	(feet)	(cfs)
Breck Pond	---	831.6	839.9	---	842.6	---	2.7	---
Courtawn Pond	---	870.1	873.1	---	873.6	---	0.5	---
East Ring Pond	---	874.1	879.0	---	879.4	---	0.5	---
West Ring Pond	---	874.1	879.0	---	879.4	---	0.5	---
MEDICINE LAKE BRANCH (PLYMOUTH CREEK)								
West Medicine Lake Drive (DS)	10,450		890.5	---	890.7	300	0.2	---
West Medicine Lake Drive (US)	---		891.7	---	893.6	700 ²	1.9	---
26th Avenue N. (DS)	16,500		925.2	---	924.4	230	-0.8	---
26th Avenue N. (US)	---		925.7	---	925.0	230	-0.7	---
28th Avenue N. Dike (DS)	---		928.2	---	929.9	230	1.7	---
28th Avenue N. Dike (US)	---		931.0	---	932.3	270 ²	1.3	---
County Road 61 (DS)	---		931.0	---	932.3	270	1.3	---
County Road 61 (US)	---		931.4	---	933.9	230	2.5	---
Xenium Lane (DS)	20,850		931.4	---	933.9	440	2.6	---
Xenium Lane (US)	---		931.7	---	934.3	470 ²	2.6	---
I-494 (DS)	22,500		935.2	---	938.1	440	2.9	---
I-494 (US)	---		938.7	---	939.0	410	0.3	---
Fernbrook Lane (DS)	25,000		947.2	---	946.6	260	-0.6	---
Fernbrook Lane (US)	---		948.2	---	946.7	260	-1.5	---
Central Park Pond Outlet Structure (DS)	---		949.2	---	949.7	260	0.5	---
Central Park Pond Outlet Structure (US)	---		953.2	---	954.8	690 ²	1.6	---
37th Avenue	28,900		956.2	---	954.9	690 ²	-1.3	---
County Road 9	30,450		959.2	---	955.0	400	-4.1	---
Vicksburg Lane (DS)	31,300		961.2	---	963.1	390	1.9	---
Vicksburg Lane (US)	---		962.2	---	963.8	290	1.6	---
Dunkirk Lane (DS)	---		979.2	---	979.4	80	0.2	---
Dunkirk Lane (US)	34,450		982.2	---	985.3	90	3.1	---
T.H. 55 (DS)	38,300		982.2	---	987.6	40	5.4	---
T.H. 55 (US)	---		982.7	---	987.6	---	4.9	---
Inundation Areas								
Xenium Lane	---		931.7	---	934.3	---	2.6	---
Central Park Pond	---	948.2	952.2	---	954.8	---	2.6	---
Turtle Lake	---	962.9 ⁵	964.2	---	967.0	---	2.8	---
Rockford Road	---		968.2	---	968.5	---	0.3	---
Dunkirk Lane	---		982.2	---	982.2	---	0.1	---

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			Flood Elevation	Flow Rate	Flood Elevation	Flow Rate	Flood Elevation	Flow Rate
			(NAVD88 feet)	(cfs)	(NAVD88 feet)	(cfs)	(feet)	(cfs)
Oak Knoll Pond	---	914.4	917.3	---	918.5	---	1.2	---
Crane Lake	---	917.3	920.7	---	920.2	---	-0.5	---

Notes

¹Historical reporting for the Bassett Plan were presented in NGVD29 (NAVD88=NGVD29+0.18ft)

²Multiple inflows to node. The reported peak inflow reflects the sum all inflow peaks.

³Barr study surveyed outlet of Westwood Lake and found the outlet ditch has filled with sediment to elevation 887.6ft. The outlet pipe invert elevation (historical normal water level) is at 886.18ft