

Table 3-14b Watershed Data, Hydrologic Modeling, and Water Quality Modeling Summary
City of Minnetonka, Water Resources Management Plan
Minnehaha Creek Watershed

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Minnehaha Creek Watershed

Subwatershed No.	Foot Notes ^A	Hydrologic Modeling																Water Quality Modeling						Subwatershed No.		
		Watershed Characteristics				Existing Conditions			Proposed Conditions									Historical Elevations ^C		PondNET Information						
		Total Area (Ac)	Water Area (Ac)	Impervious Area (Ac)	Turf Area (Ac)	Existing Outlet Elevation	Existing Outlet Size (in)	Land-Locked?	Proposed Normal Elevation	Proposed Outlet Size (in) Approx	Hydrologic Evaluation Method	1% Annual Exceedance Probability Storm (100-yr) Flood Elevation	Storage (Ac-ft)	Average Discharge (cfs)	Peak Discharge (cfs)	Critical Storm Duration (hrs)	Comments	Normal Elevation	Flood Elevation	Total Direct Watershed Area (Ac)	Pond Area (Ac)	Mean Depth (ft)	Runoff Coefficient		Total Phosphorus Removal (%) Pond	Total Phosphorus Removal (%) Watershed
Williston Road North																										
1	1	60.1	0.5	14.9	44.7	961.4	OC	N	950.0	12	Hydrograph	958.0	11.4		6.0	3.0		946.7	958	60.1	0.48	3.0	0.18	42.4	42.4	1
2	1	9.3	0.2	2.2	6.8	970.5	OC	N	966.1	12	Hydrograph	969.7	1.8		3.0	1.0		965.7	968	9.3	0.21	0.5	0.18	20.6	20.6	2
3	1	49.7	0.5	12.3	36.9	960.7	OC	HFP	941.7	42	Hydrograph	946.5	5.8		37.0	1.0		940.1	946.5	49.7	0.48	2.4	0.19	26.7	43.2	3
4	1	7.3	0.3	1.8	5.3	954.2	OC	N	NA	36	Hydrograph	NA	0.0		45.0	0.5		NA	NA	7.3	0.26	1.0	0.18	33	33	4
4-3	1	5.0	0.1	1.2	3.7	955.3	OC	N	949.6	48	Hydrograph	950.0	0.1		73.0	0.5	Discharge includes flow from 3 and 4.	NA	NA	5	0.13	1.8	0.18	7.8	45.6	4-3
5	1	13.1	0.8	3.1	9.3	939.5	27	N	939.5	42	Hydrograph	943.5	3.6		50.0	1.0		941.2	943.4	13.1	0.76	4.8	0.18	36.6	63	5
6	1	7.6	0.4	3.6	3.6	1055.3	OC	N	1050.0	24	Hydrograph	1054.0	3.0		14.0	3.0		1041.4	1050.5	7.6	0.44	4.0	0.34	40.7	63.8	6
7	1	4.8	0.2	1.1	3.4	1054.7	OC	N	1051.0	24	Hydrograph	1054.7	1.4		16.0	2.0		1045.7	1054	4.8	0.21	2.5	0.18	31.8	60.3	7
7-3	1	17.2	0.5	4.2	12.5	1058.1	OC	N	1057.0	24	Hydrograph	1059.5	2.0		17.0	1.0	Need to construct a berm.	NA	NA	17.2	0.51	3.5	0.18	53.6	53.6	7-3
8	1	3.2	0.0	1.6	1.6	1055.3	OC	N	1050.0	15	Hydrograph	1054.0	0.3		8.0	1.0		NA	NA	3.2	NA	NA	0.34	0	61.9	8
8-2	1	10.0	0.3	2.4	7.3	1051.0	15	N	1051.0	24	Hydrograph	1054.5	1.2		19.0	1.0		NA	NA	10	0.29	2.0	0.18	28.4	59.4	8-2
9	1	17.3	0.0	4.4	12.9	INA	42	N	1044.0	42	Hydrograph	1048.2	1.0		51.0	1.0		NA	NA	17.3	NA	NA	0.19	0	44.2	9
10	1	10.5	0.4	5.0	5.0	1040.4	OC	N	1028.1	15	Hydrograph	1040.0	9.0		6.0	24.0		1026.6	1034.5	10.5	0.43	3.0	0.34	31.7	51.2	10
11	1	8.3	0.3	2.0	6.0	1004.8	12	N	1004.8	15	Hydrograph	1007.3	1.2		8.0	1.0	Potential for flooding is high when upstream system is installed. Lower existing overflow to minimize flooding.	1002.2	1007	8.3	0.34	2.4	0.18	20.2	57.5	11
12	1	11.5	0.0	2.9	8.6	996.4	12	N	996.4	15	Hydrograph	1001.0	1.9		13.0	6.0		996.5	1001	11.5	NA	NA	0.18	0	51.4	12
13	2, 3, 6, 7	3.4	0.4	0.8	2.3	995.1	12	N	995.1	12	Hydrograph	995.8	2.7		4.0	240.0	Existing pipe assumed to be adequate; Modeling From Richards Drive	987.9	1001	3.4	0.38	3.7	0.18	57.4	57.4	13
14	1	7.9	0.9	1.4	5.6	1021.8	OC	N	1020.3	12	Hydrograph	1021.6	1.3		3.0	1.0		1018.3	1020	7.9	0.87	4.1	0.15	59.6	59.6	14
16A	3, 6, 7	3.0	0.1	0.6	2.4	995.4	18	N	995.5	18	Hydrograph	997.4	0.4		17.0	12.0	Existing Conditions based on As-Builts; Modeling From Richards Drive	NA	NA	3	0.06	1.6	0.15	3.6	52.1	16A
16B	3, 6, 7	2.9	0.0	0.6	2.3	994.8	15	N	994.8	15	Hydrograph	995.7	0.7		13.0	48.0	Existing Conditions based on As-Builts; Modeling From Richards Drive	986.4	992.9	2.9	0.03	1.8	0.15	0.47	51.4	16B
16C	1	5.1	0.0	1.3	3.8	988.5	OC	N	985.7	30	Hydrograph	988.5	0.2		31.0	0.5	Discharge includes flow from 14 and 16B.	NA	NA	5.1	NA	NA	0.18	0	49.8	16C
16C-1	1	6.0	0.0	1.5	4.5	1011.1	OC	N	1004.0	12	Hydrograph	1010.0	0.7		5.0	1.0		NA	NA	6	NA	NA	0.18	0	0	16C-1
16C-2	1	2.8	0.0	0.7	2.1	988.0	OC	N	NA	36	Hydrograph	NA	0.0		43.0	0.5	Discharge includes flow from 16C and 16C-1.	NA	NA	2.8	NA	NA	0.18	0	46.6	16C-2

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16D	1	11.9	0.0	3.0	8.9	966.1	OC	N	NA	42	Hydrograph	NA	0.0		99.0	0.5	Discharge includes flow from 16C-2 and 22.	0	0	11.9	NA	NA	0.18	0	42.8	16D	
16D-1	1	15.5	0.0	3.8	11.7	938.0	OC	N	NA	66	Hydrograph	NA	0.0		139.0	0.5	Discharge includes flow from 16D.	NA	NA	15.5	NA	NA	0.18	0	0	16D-1	
16E	1	66.9	5.3	15.4	46.2	932.6	48	N	932.6	48	Hydrograph	936.4	50.0		63.0	12.0		932.5	936	66.9	5.3	1.5	0.18	24.5	53.9	16E	
16E-1	1	39.0	0.0	9.7	29.3	939.0	OC	N	NA	72	Hydrograph	NA	0.0		200.0	0.5	Discharge includes flow from 16D-1.	NA	NA	39	NA	NA	0.18	0	0	16E-1	
16E-3	1	11.3	0.6	2.7	8.0	935.0	OC	N	935.0	OC	Hydrograph	936.4	1.1		63.0	12.0		NA	0	11.3	0.57	0.7	0.18	28.4	28.4	16E-3	
17	1	6.9	0.2	1.7	5.1	1027.9	OC	HFP	1018.6	30	Hydrograph	1021.7	0.8		35.0	1.0		1018.5	1025	6.9	0.16	2.8	0.18	43.4	43.4	17	
17-1	1	8.7	0.0	2.2	6.5	1042.8	OC	HFP	1032.0	21	Hydrograph	1037.4	0.4		22.0	0.5		NA	NA	8.7	NA	NA	0.18	0	0	17-1	
18	1	8.4	0.2	2.0	6.1	991.1	OC	N	991.1	12	Hydrograph	994.4	1.2		6.0	1.0	Need to construct a berm.	983.7	991	8.4	0.24	3.1	0.18	51.5	51.5	18	
19	1	7.3	0.0	1.8	5.5	998.2	OC	HFP	983.0	48	Hydrograph	990.4	1.2		32.0	1.0		982.1	991	7.3	NA	NA	0.18	0	35.5	19	
20	1	24.5	0.0	6.1	18.4	980.0	36	N	980.0	48	Hydrograph	987.2	1.5		70.0	1.0		980.6	987	24.5	NA	NA	0.18	0	19.7	20	
21A-1	1	11.5	0.0	2.9	8.6	975.4	15	N	975.4	21	Hydrograph	979.0	1.4		22.0	1.0	Existing pipe with overflow assumed to be adequate. Discharge includes flow from 21A-1.	980.5	985	11.5	NA	NA	0.18	0	0	21A-1	
21B	1	3.5	0.0	0.9	2.6	967.4	36	N	967.4	36	Hydrograph	978.0	1.7		75.0	1.0		NA	NA	3.5	NA	NA	0.18	0	18.6	21B	
22	1	19.3	0.4	4.7	14.2	951.3	20x24	N	952.0	24	Hydrograph	957.0	2.7		205.0	1.0	Pond 22 has split flow. Low flows (<20 cfs) are conveyed to 16E, all flows > 20 cfs are conveyed to 25 through a proposed 54" RCP.	0	0	19.3	0.4	4.0	0.18	34.8	45.1	22	
24	1	14.5	0.1	3.5	10.8	963.0	OC	N	958.5	30	Hydrograph	962.0	0.9		50.0	1.0		956.1	962	14.5	0.11	1.8	0.18	25.6	27.7	24	
27	1	13.7	0.0	13.0	0.7	931.8	48	N	931.8	48	Hydrograph	935.9	2.3		63.0	12.0		0	0	13.7	NA	NA	0.61	0	52.7	27	
27-1	1	12.0	0.0	11.4	0.6	932.1	30	N	932.1	48	Hydrograph	935.9	3.2		63.0	12.0		0	0	12	NA	NA	0.61	0	56.6	27-1	
27-2	1	14.9	0.2	11.0	3.7	INA	24	N	932.1	30	Hydrograph	937.1	1.7		35.0	1.0		0	0	14.9	0.2	0.5	0.49	14.8	14.8	27-2	
28	1	7.4	0.1	5.5	1.8	930.7	48	N	930.7	48	Hydrograph	934.5	1.1		63.0	24.0		0	0	7.4	0.1	0.6	0.49	0.5	45.9	28	
300	1	5.5	0.0	1.4	4.1	974.1	OC	N	970.0	27	Hydrograph	974.0	1.3		27.0	1.0		970	974.5	5.5	0.04	0.3	0.18	6	6	300	
301	1	7.6	0.0	1.9	5.7	979.0	OC	N	977.5	33	Hydrograph	979.0	0.2		35.0	0.5		978.3	980	7.6	NA	NA	0.18	0	0	301	
Subtotal		576.3	12.9	174.2	389.2															576.3							Subtotal

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Martha Lane																											
29	1	13.0	0.2	3.2	9.6	940.0	OC	HFP	933.7	18	Volume Rtg.	936.0	0.5	12.0		0.5		933.7	939	13	0.2	0.6	0.18	20.3	20.3	29	
30	1	15.4	0.0	11.6	3.9	937.4	OC	HFP	932.3	48	Volume Rtg.	936.0	0.6	44.0		0.5		NA	NA	15.4	NA	NA	0.49	0	4.8	30	
31	1	10.7	0.4	2.6	7.7	947.3	OC	HFP	941.0	12	Volume Rtg.	943.3	1.5	1.0		1.0		942	944	10.7	0.4	0.6	0.18	26.4	26.4	31	
32	1	2.9	0.1	0.7	2.1	946.0	OC	HFP	940.0	18	Volume Rtg.	940.1	0.1	13.0		0.5	Discharge includes flow from 33.	941.3	942	2.92	0.12	1.5	0.18	40.5	40.5	32	
33	1	3.8	0.4	0.9	2.6	946.0	OC	HFP	942.0	12	Volume Rtg.	943.0	0.4	3.0		2.0		939	942	3.8	0.36	0.2	0.18	13	13	33	
34	1	8.0	0.2	2.0	5.9	944.0	OC	HFP	941.0	24	Volume Rtg.	942.0	0.3	20.0		0.5		939.6	943	8	0.19	0.4	0.18	13.7	26.8	34	
35	1	2.9	0.2	0.7	2.0	943.8	OC	HFP	943.0	24	Volume Rtg.	944.0	0.4	17.0		0.5		938	942.9	2.9	0.18	0.4	0.18	20.6	20.6	35	
36	1	16.6	0.0	6.6	10.0	936.8	30	N	NA	42	Hydrograph	NA	0.0			70.0	0.5	934.7	938	16.6	NA	NA	0.28	0	0	36	
Subtotal		73.3	1.5	28.2	43.7															73.32						Subtotal	
Westmark Drive																											
25	1	3.1	0.0	0.8	2.3	942.0	33	N	942.0	42	Hydrograph	949.6	4.6			101.0	1.0	0	0	3.1	NA	NA	0.18	0	0	25	
26	1	6.6	0.0	1.7	5.0	941.2	OC	N	NA	48	Hydrograph	NA	0.0			103.0	0.5	Discharge includes flow from 25.	0	0	6.6	NA	NA	0.18	0	0	26
37	1	4.4	0.8	1.8	1.8	937.9	OC	Y	932.1	12	Volume Rtg.	934.0	1.7	1.0		2.0		930.9	933	4.4	0.8	0.5	0.34	24.4	24.4	37	
38-1	1	4.4	0.8	1.8	1.8	932.8	OC	Y	930.5	12	Volume Rtg.	932.0	1.3	1.0		12.0		930.1	933	4.4	0.8	1.3	0.34	35.3	45.3	38-1	
38-2	1	1.1	0.2	0.5	0.5	937.9	OC	Y	930.8	12	Volume Rtg.	933.7	0.7	1.0		3.0		NA	NA	1.1	0.2	0.3	0.34	10.2	27.7	38-2	
39	1	30.3	2.0	9.9	18.4	937.0	OC	Y	936.2	12	Hydrograph	938.0	4.4			4.0	3.0	Need to construct a berm.	930	935	30.3	2	1.7	0.25	43.1	43.1	39
40	1	9.1	0.0	2.7	6.4	936.0	OC	N	NA	48	Hydrograph	NA	0.0			106.0	0.5	Discharge includes flow from 26.	0	0	9.1	NA	NA	0.22	0	0	40
40-1	1	2.3	0.0	1.2	1.2	930.6	24	N	NA	60	Hydrograph	NA	0.0			112.0	0.5	Discharge includes flow from 39, 40, and 41.	NA	935	2.3	NA	NA	0.34	0	0	40-1
41	1	4.7	0.6	2.1	2.1	935.7	OC	N	934.0	12	Volume Rtg.	935.0	0.8	1.0		0.5		0	0	4.7	0.6	1.5	0.34	41.8	41.8	41	
42	1	10.6	0.0	8.5	2.1	928.1	15	N	930.0	60	Hydrograph	934.0	1.8			116.0	1.0	Discharge includes flow from 40-1.	930.1	935	10.6	NA	NA	0.52	0	0	42
43-1	1	33.3	3.3	18.0	12.0	928.9	Weir	N	928.9	48	Hydrograph	932.6	17.0			70.0	3.0		929.1	930.5	33.3	3.3	3.0	0.40	46.5	53	43-1
Subtotal		109.9	7.7	48.8	53.4															109.9						Subtotal	

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City of Minnetonka, Water Resources Management Plan
Minnehaha Creek Watershed

Subwatershed No.	Foot Notes ^A	Hydrologic Modeling															Water Quality Modeling						Subwatershed No.				
		Watershed Characteristics				Existing Conditions			Proposed Conditions								Historical Elevations ^C		PondNET Information								
		Total Area (Ac)	Water Area (Ac)	Impervious Area (Ac)	Turf Area (Ac)	Existing Outlet Elevation	Existing Outlet Size (in)	Land-Locked?	Proposed Normal Elevation	Proposed Outlet Size (in) Approx	Hydrologic Evaluation Method	1% Annual Exceedance Probability Storm (100-yr) Flood Elevation	Storage (Ac-ft)	Average Discharge (cfs)	Peak Discharge (cfs)	Critical Storm Duration (hrs)	Comments	Normal Elevation	Flood Elevation	Total Direct Watershed Area (Ac)	Pond Area (Ac)	Mean Depth (ft)		Runoff Coefficient	Total Phosphorus Removal (%) Pond	Total Phosphorus Removal (%) Watershed	
<i>I-494 South</i>																											
44	1	12.1	0.2	3.6	8.3	985.0	OC	N	982.1	15	Volume Rtg.	984.9	1.3	9.0		1.0		982.1	984.9	12.1	0.23	0.5	0.22	19.1	19.1	44	
45	1	25.9	0.4	6.4	19.1	1061.3	OC	N	1046.0	12	Volume Rtg.	1050.0	3.5	1.0		1.0		1044.2	1048.5	25.9	0.41	2.5	0.18	44.4	44.4	45	
46	1	11.7	0.2	2.9	8.6	1033.6	30	N	1038.0	12	Volume Rtg.	1043.5	2.7	3.0		48.0		1033.6	1043.5	11.7	0.21	1.1	0.18	17.8	42.9	46	
47	1	39.4	0.0	11.8	27.6	984.0	OC	N	980.0	42	Volume Rtg.	984.0	2.1	70.0		0.5		976	984	39.4	NA	NA	0.22	0	18.8	47	
48	1	4.3	0.3	1.2	2.8	977.0	OC	N	972.0	15	Volume Rtg.	977.0	2.1	7.0		1.0	Discharge and storage based on pond regrading during I-494 expansion.	970	977	4.3	0.32	2.0	0.22	17.6	48.2	48	
48-1	1	6.2	0.9	1.6	3.7	INA	INA	N	978.0	12	Volume Rtg.	984.0	6.7	3.0		12.0	Discharge and storage based on pond regrading during I-494 expansion.	NA	NA	6.2	0.92	2.0	0.22	34.2	45.5	48-1	
49	1	11.7	0.0	2.9	8.8	970.0	OC	N	NA	OC	Volume Rtg.	NA	0.0	37.0		0.5		NA	NA	11.7	NA	NA	0.18	0	7.3	49	
49-1	2	8.2	0.1	2.0	6.1	4022.8	42	N	1022.8	12	Volume Rtg.	1026.5	1.2	1.0		3.0	Existing Conditions Assumed to be same as proposed; Review of As-builts needed	1022.2	1026	8.2	0.1	0.5	0.18	17.8	17.8	49-1	
50	1	4.4	0.0	1.1	3.3	972.0	OC	N	NA	OC	Volume Rtg.	NA	0.0	24.0		0.5		NA	NA	4.4	NA	NA	0.18	0	46.4	50	
51	1	10.4	0.5	2.5	7.4	1015.7	OC	N	1004.0	12	Volume Rtg.	1007.0	1.6	1.0		1.0		998.2	1002.5	10.4	0.48	4.0	0.18	57.2	57.2	51	
52	1	29.8	0.6	7.3	21.9	984.0	27	N	987.7	12	Volume Rtg.	991.0	4.0	3.0		1.0		981.7	991.5	29.8	0.6	3.9	0.18	48.9	56.5	52	
53	1	8.9	0.0	2.2	6.7	968.0	24	N	NA	36	Volume Rtg.	NA	0.0	27.0		0.5		968	972	8.9	NA	NA	0.18	0	0	53	
54	1	37.4	1.3	9.0	27.1	954.6	12	N	954.6	12	Volume Rtg.	958.6	10.8	2.0		48.0		954.8	960.2	37.4	1.33	0.8	0.18	27.2	46.3	54	
55A	1	5.1	0.0	1.5	3.6	952.0	OC	N	NA	OC	Volume Rtg.	NA	0.0	41.0		0.5		937	939	5.1	NA	NA	0.22	0	44.2	55A	
55B	1	9.6	0.0	2.9	6.7	942.0	OC	N	NA	60	Volume Rtg.	NA	0.0	67.0		0.5		NA	NA	9.6	NA	NA	0.22	0	40.52	55B	
56	1	1.2	0.0	0.3	0.9	988.3	OC	N	986.0	12	Volume Rtg.	988.3	0.3	1.0		1.0		982.2	984	1.2	0.04	0.9	0.18	31.2	31.2	56	
57	1	8.5	0.7	2.0	5.9	973.2	OC	Y	965.9	12	Volume Rtg.	968.0	1.7	1.0		1.0		965.2	968	8.5	0.7	3.4	0.18	55.7	55.7	57	
58	1	15.5	5.5	2.5	7.5	956.5	OC	Y	952.7	12	Volume Rtg.	956.0	19.0	2.0		240.0		949.9	956	15.5	5.5	6.0	0.18	55.5	73.6	58	
59	1	16.3	1.0	3.8	11.5	956.3	OC	Y	947.0	12	Volume Rtg.	949.0	2.3	3.0		1.0		944.2	950	16.3	1.02	2.0	0.18	19.5	71.3	59	
60	1	13.4	0.3	3.3	9.8	940.0	OC	Y	939.1	36	Volume Rtg.	939.2	0.1	42.0		0.5		938.7	940.6	13.4	0.27	0.4	0.18	2.1	65.4	60	
61	2	37.4	0.5	11.1	25.8	930.8	66	N	930.8	66	Volume Rtg.	934.1	5.8			166.0	0.5	Percent phosphorus removal includes the proposed sedimentation pond; Existing Conditions Assumed to be same as proposed; Review of As-builts needed	930	936	37.4	0.5	4.0	0.22	12	51.2	61
62	2	6.6	0.7	2.4	3.6	930.0	42	N	930.0	12	Volume Rtg.	932.0	1.6	1.0		1.0	Existing Conditions Assumed to be same as proposed; Review of As-builts needed	NA	NA	6.6	0.65	0.8	0.28	30	30	62	

Abbreviations: INA - Information Not Available; OC - Outlet is an Open Channel; NA - Not Available; Y - Yes; N - No; HFP - High Flood Potential; DNR - Minnesota Department of Natural Resources; PWC - DNR Public Watercourse; PD - DNR Public Ditch; US - Upstream; WQ - Water Quality; Const. - Construction

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		Total Area (Ac)	Water Area (Ac)	Impervious Area (Ac)	Turf Area (Ac)	Existing Outlet Elevation	Existing Outlet Size (in)	Land-Locked?	Proposed Normal Elevation	Proposed Outlet Size (in) Approx	Hydrologic Evaluation Method	1% Annual Exceedance Probability Storm (100-yr) Flood Elevation	Storage (Ac-ft)	Average Discharge (cfs)	Peak Discharge (cfs)	Critical Storm Duration (hrs)	Comments	Normal Elevation	Flood Elevation	Total Direct Watershed Area (Ac)	Pond Area (Ac)	Mean Depth (ft)		Runoff Coefficient	Total Phosphorus Removal (%) Pond	Total Phosphorus Removal (%) Total Watershed
63	1	13.2	0.4	3.2	9.6	997.0	OC	N	996.0	24	Volume Rtg.	997.0	0.7	22.0	0.5		996.3	1000	13.2	0.38	1.4	0.18	38	38	63	
64	1	19.6	0.5	4.8	14.3	982.0	24	N	982.0	24	Volume Rtg.	984.0	1.4	20.0	0.5		982.1	984	19.6	0.5	2.0	0.18	43.6	43.6	64	
65	1	11.5	0.1	2.8	8.5	987.7	OC	Y	981.0	30	Volume Rtg.	982.7	0.3	24.0	0.5		979.7	984	11.5	0.14	1.0	0.18	27.6	27.6	65	
66	1	19.8	0.6	4.8	14.4	973.6	15	N	975.4	42	Volume Rtg.	976.0	0.7	90.0	0.5		975.4	978.5	19.8	0.64	1.0	0.18	23.8	41.3	66	
67	1	11.6	0.7	3.3	7.6	958.5	18	N	964.5	18	Volume Rtg.	970.0	7.1	12.0	2.0		958.5	968	11.6	0.7	1.6	0.22	28.4	51.6	67	
68	1	7.6	0.6	2.1	4.9	983.0	OC	N	977.0	15	Volume Rtg.	982.0	6.7	6.0	3.0	Discharge and storage based on pond regrading during I-494 expansion.	977	982.9	7.6	0.56	2.0	0.22	35.6	45.9	68	
68-1	1	12.7	0.0	8.9	3.8	962.6	OC	N	NA	OC	Volume Rtg.	NA	0.0	50.0	0.5		NA	NA	12.7	NA	NA	0.46	0	27.6	68-1	
68-2	1	11.7	0.0	2.9	8.8	974.0	OC	N	NA	42	Volume Rtg.	NA	0.0	51.0	0.5		NA	NA	11.7	NA	NA	0.18	0	20.1	68-2	
69	1	14.0	1.2	11.5	1.3	943.6	24	N	949.0	12	Volume Rtg.	952.0	4.6	4.0	48.0	Need to construct a berm.	946.4	950	14	1.2	3.0	0.58	34	52.4	69	
69-1	1	9.2	0.0	2.3	6.9	953.0	24	N	954.0	12	Volume Rtg.	964.0	8.9	4.0	12.0	Need to construct a berm.	NA	NA	9.2	NA	NA	0.18	0	45.2	69-1	
70	4	3.3	0.7	0.7	2.0	946.5	12	N	944.2	12	Hydrograph	944.8	0.4		1.7	1.0	Existing conditions based on As-builts; Modeling for Bet Shalom	943.9	945	3.3	0.67	2.1	0.18	49	49	70
71	4	1.9	0.3	0.4	1.2	941.9	30	N	939.4	30	Hydrograph	943.5	1.1		19.8	2.0	Existing pipe assumed to be adequate; Existing conditions based on As-builts; Modeling for Bet Shalom	940.8	943	1.9	0.3	1.2	0.18	46.7	46.7	71
73	1	26.1	0.0	15.7	10.4	942.9	OC	N	NA	42	Volume Rtg.	NA	0.0	92.0	0.5		940	943	26.1	NA	NA	0.40	0	0	73	
74	4	3.7	0.0	0.9	2.8	941.0	12	N	941.0	12" then overflow to 71 @ 942.66	Hydrograph	944.2	1.1		48.1	1.0	Existing conditions based on As-builts; Modeling for Bet Shalom	939.8	943	3.7	NA	NA	0.18	0	2.5	74
75	1	9.5	2.0	1.9	5.6	945.8	OC	Y	941.8	42	Volume Rtg.	944.0	5.5	58.0	1.0		939.6	943	9.5	2	1.0	0.18	16.4	58.2	75	
76	1	9.6	0.4	2.3	6.9	940.6	INA	N	940.6	30	Volume Rtg.	942.0	0.1	29.0	0.5		938	942	9.6	0.4	0.3	0.18	14.8	21.4	76	
77	1	16.3	1.1	3.8	11.4	941.0	OC	Y	939.8	15	Volume Rtg.	942.0	3.4	5.0	1.0		939.6	942	16.3	1.1	0.5	0.18	21.4	28.3	77	
78	1	22.8	1.3	5.4	16.1	948.0	OC	Y	936.2	42	Volume Rtg.	939.9	8.2	0.0	58.0	3.0	Excavate channel to divert upstream flows around wetland area.	930	934	22.8	1.3	0.9	0.18	38.4	48	78
79	1	6.7	0.0	2.0	4.7	948.0	OC	N	NA	27	Volume Rtg.	NA	0.0	23.0	0.5		NA	NA	6.7	NA	NA	0.22	0	0	79	
297	1	4.4	0.0	1.1	3.3	942.0	OC	N	NA	42	Volume Rtg.	NA	NA	70.0	0.5		NA	NA	4.4	NA	NA	0.18	0	44.3	297	
302	1	2.1	0.0	0.5	1.6	982.5	OC	N	978.0	12	Volume Rtg.	980.0	0.1	5.0	0.5		970	974.5	2.1	NA	NA	0.18	0	0	302	
Subtotal		561.3	23.1	165.5	372.7														561.33							Subtotal

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Farmington Road																											
80	1	21.7	0.0	5.4	16.3	948.0	OC	N	NA	36	Volume Rtg.	NA	0.0	54.0		0.5		NA	NA	21.7	NA	NA	0.18	0	0	80	
81	1	20.0	0.0	5.0	15.0	945.0	OC	N	NA	36	Volume Rtg.	NA	0.0	51.0		0.5	Discharge based on 10-year runoff volume.	NA	NA	20	NA	NA	0.18	0	0	81	
82	1	12.3	0.1	4.9	7.3	936.5	OC	N	934.0	42	Volume Rtg.	936	0.3	90.0		0.5		NA	NA	12.3	0.11	2.5	0.28	14.6	44.8	82	
83	1	2.9	0.3	0.7	2.0	1007.9	OC	N	1005.0	12	Volume Rtg.	1006.2	0.4	1.0		1.0		1005.6	1006	2.9	0.3	2.0	0.18	47.5	47.5	83	
84	1	4.3	0.3	1.0	3.0	998.5	OC	Y	995.3	12	Volume Rtg.	997	0.7	1.0		1.0		993.6	997.5	4.3	0.34	3.1	0.18	54.5	54.5	84	
85	1	2.3	0.2	0.5	1.6	1002.1	OC	Y	1001.0	12	Volume Rtg.	1002	0.3	1.0		1.0		998.3	1001	2.3	0.2	1.0	0.18	35.4	35.4	85	
86A	1	9.5	0.4	2.3	6.8	993.0	OC	N	990.7	21	Volume Rtg.	992	0.7	17.0		0.5		987.6	990.5	9.5	0.4	2.0	0.18	38.9	52.5	86A	
86B	1	9.9	0.7	2.3	6.9	974.5	OC	N	976.0	24	Volume Rtg.	977	0.9	27.0		0.5	Need to construct a berm.	974	978	9.9	0.66	1.5	0.18	29.3	54.5	86B	
87	1	11.5	3.0	2.1	6.4	967.2	18	N	967.2	18	Volume Rtg.	969.2	6.2	16.0		2.0		965.8	970.5	11.5	3	2.0	0.18	39.5	57.4	87	
89	1	11.1	0.7	2.6	7.8	979.3	27	N	979.3	12	Volume Rtg.	981.5	1.9	1.0		2.0		981.1	983.5	11.1	0.7	2.0	0.18	48.8	48.8	89	
91	3, 7	20.5	0.0	5.1	15.4	67.86/ 968.4	29 in arch with Weir	N	967/ 971.02	24" with Weir	Volume Rtg.	971.02	0.8		9.5	24.0	Existing Conditions from As-Built; Modeling from Plymouth Road	968.2	970	20.5	NA	NA	0.18	0	0	91	
92	1	40.9	2.3	9.7	29.0	963.0	OC	Y	938.0	12	Volume Rtg.	946	19.0	1.0		12.0	Pumped outlet.	933.4	938.5	40.9	2.3	6.5	0.18	64.8	64.8	92	
93	1	23.6	0.9	5.7	17.1	958.4	OC	N	958.0	36	Volume Rtg.	958.4	0.4	62.0		0.5		NA	NA	23.6	0.85	0.7	0.18	27.4	27.4	93	
94	1	2.5	0.4	0.5	1.6	1004.9	OC	Y	1002.8	12	Volume Rtg.	1004	0.6	1.0		1.0		1001.5	1003	2.5	0.4	1.0	0.18	36.2	36.2	94	
95	1	5.9	0.6	1.3	4.0	984.7	OC	Y	978.7	12	Volume Rtg.	981	1.4	1.0		1.0		977.6	982.5	5.9	0.58	0.5	0.18	18.7	39.9	95	
95-1	1	7.9	0.4	1.9	5.6	986.8	OC	Y	983.9	12	Volume Rtg.	986	1.0	3.0		1.0		NA	NA	7.9	0.4	1.9	0.18	45.6	45.6	95-1	
96	1	25.6	1.8	6.0	17.9	964.5	OC	Y	957.0	12	Volume Rtg.	963	16.0	3.0		12.0		953.1	963.5	25.6	1.8	2.3	0.18	24.4	75.5	96	
97	1	16.3	0.5	4.0	11.9	949.0	OC	N	944.0	48	Volume Rtg.	946	1.5	75.0		0.5		941	947.2	16.3	0.46	1.9	0.18	12.6	65.1	97	
98A	1	9.2	0.0	2.3	6.9	945.1	OC	HFP	936.6	24	Volume Rtg.	939	0.3	22.0		0.5		936.6	941.2	9.2	NA	NA	0.18	0	0	98A	
98B	8	22.1	0.5	5.4	16.2	930.0	42	N	930.0	42	Volume Rtg.	932	1.3	135.0		0.5	Existing Conditions Assumed to be same as proposed; Review of As-Built needed	926.2	934	22.1	0.51	1.7	0.18	12.6	61.1	98B	
Subtotal		280.0	13.0	68.6	198.4															280						Subtotal	

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9 - Modeled outlet size and invert not provided

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11 - Outlets observed in the field; no modeling information related to flood elevations or discharge - modeling required

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Table 3-14b Watershed Data, Hydrologic Modeling, and Water Quality Modeling Summary
City of Minnetonka, Water Resources Management Plan
Minnehaha Creek Watershed

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City of Minnetonka, Water Resources Management Plan
Minnehaha Creek Watershed

Subwatershed No.	Foot Notes ^A	Hydrologic Modeling															Water Quality Modeling						Subwatershed No.				
		Watershed Characteristics				Existing Conditions			Proposed Conditions								Historical Elevations ^C		PondNET Information								
		Total Area (Ac)	Water Area (Ac)	Impervious Area (Ac)	Turf Area (Ac)	Existing Outlet Elevation	Existing Outlet Size (in)	Land-Locked?	Proposed Normal Elevation	Proposed Outlet Size (in) Approx	Hydrologic Evaluation Method	1% Annual Exceedance Probability Storm (100-yr) Flood Elevation	Storage (Ac-ft)	Average Discharge (cfs)	Peak Discharge (cfs)	Critical Storm Duration (hrs)	Comments	Normal Elevation	Flood Elevation	Total Direct Watershed Area (Ac)	Pond Area (Ac)	Mean Depth (ft)		Runoff Coefficient	Total Phosphorus Removal (%) Pond	Total Phosphorus Removal (%) Watershed	
<i>Friar Lane</i>																											
99	1	27.4	0.0	6.9	20.6	933.5	OC	N	930	21	Volume Rtg.	936	2.7	19.0		1.0	Need to construct a berm.	930.6	936.5	27.4	NA	NA	0.18	0	19.8	99	
100	1	7.8	0.0	2.0	5.9	936	OC	N	NA	24	Volume Rtg.	NA	0.0	25.0		0.5		NA	NA	7.8	NA	NA	0.18	0	30.1	100	
101	1	5.0	0.2	1.2	3.6	933.5	OC	N	930.6	12	Volume Rtg.	934	2.0	3.0		6.0	Need to construct a berm.	930.6	934	5	0.22	1.3	0.18	25.7	43.2	101	
102	1	32.3	0.0	19.4	12.9	INA	60	N	NA	60	Volume Rtg.	NA	0.0	193.0		0.5		NA	NA	32.3	NA	NA	0.40	0	0	102	
103	1	10.4	0.5	2.5	7.4	944.8	OC	N	943	12	Volume Rtg.	944.8	1.3	3.0		1.0		941.5	944	10.4	0.5	3.0	0.18	52.7	52.7	103	
105	1	17.7	0.2	7.0	10.5	949.9	OC	N	945.4	48	Volume Rtg.	946.6	0.3	48.0		0.5		NA	NA	17.7	0.15	1.0	0.28	21.2	21.2	105	
106	1	14.8	0.0	14.1	0.7	INA	54	N	NA	54	Volume Rtg.	NA	0.0	79.0		0.5		NA	NA	14.8	NA	NA	0.61	0	10	106	
107	1	18.2	0.5	4.4	13.3	930.5	15	N	930.5	15	Volume Rtg.	933.5	3.8	5.0		1.0		930.7	933.5	18.2	0.5	3.8	0.18	46.9	53.6	107	
108	1	15.0	0.0	3.8	11.3	934.3	24	N	938	24	Volume Rtg.	948	1.2	15.0		0.5		943.3	948	15	NA	NA	0.18	0	0	108	
109	1	139.5	0.7	55.5	83.3	905.6	48	N	905.6	48	Volume Rtg.	912.4	79.0	34.0		3.0	Existing pipe assumed to be adequate. Need to construct a berm.	908.3	910	139.5	0.7	2.0	0.28	15.1	24.9	109	
109-1	1	10.5	1.6	3.6	5.3	919.1	OC	Y	912.1	12	Volume Rtg.	914	3.8	1.0		6.0		NA	NA	10.5	1.6	2.6	0.28	50.5	50.5	109-1	
110	2, 3	7.1	0.3	3.4	3.4	937.2	12	N	937.2	12	Hydrograph	941.5	1.5			6.2	12.0	Existing pipe assumed to be adequate; Modeling from CR73 and CR5 Drainage Study.	NA	NA	7.1	0.27	3.6	0.34	27.3	62.6	110
111	2, 3	20.0	1.5	9.3	9.3	942.5	12	N	942.5	12	Hydrograph	945.09	4.6			6.1	12.0	Existing pipe assumed to be adequate; Modeling from CR73 and CR5 Drainage Study.	NA	NA	20	1.5	4.3	0.34	53.9	60.7	111
118	1	12.6	0.2	6.2	6.2	953.4	18	N	954	18	Volume Rtg.	958.8	1.7	6.0		1.0		NA	NA	12.6	0.17	2.0	0.34	34.5	34.5	118	
119	1	40.9	See Comm.	See Comm.	See Comm.	905.5	24	N	905.5	24	Hydrograph	912.2	61.0			7.0	NE	Pond managed in the city of Hopkins. Discharge based on creek flood elevation of 912.2. Existing pipe with overflow assumed to be adequate. DNR wetland #719P.	NA	NA	40.9	See Comm.	See Comm.	0.34	NE	NE	119
123	3	8.2	0.5	3.9	3.9	950.9	18	N	950.9	18	Hydrograph	952.83	1.2			7.8	1.0	Existing pipe assumed to be adequate; Modeling from CR73 and CR5 Drainage Study.	NA	NA	8.2	0.45	2.9	0.34	50.7	50.7	123
124	3	34.6	0.0	8.7	26.0	909.9	58 in Arch	N	909.9	48	Hydrograph	912.69	0.5			45.6	1.0	Modeling from CR73 and CR5 Drainage Study; Existing outlet from As-Bilts	NA	NA	34.6	NA	NA	0.18	0	41.2	124
Subtotal		422.0	6.1	151.6	223.5															422						Subtotal	

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Table 3-14b Watershed Data, Hydrologic Modeling, and Water Quality Modeling Summary
 City of Minnetonka, Water Resources Management Plan
 Minnehaha Creek Watershed

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 City of Minnetonka, Water Resources Management Plan
 Minnehaha Creek Watershed

Subwatershed No.	Foot Notes ^A	Hydrologic Modeling																Water Quality Modeling						Subwatershed No.		
		Watershed Characteristics				Existing Conditions			Proposed Conditions									Historical Elevations ^C		PondNET Information						
		Total Area (Ac)	Water Area (Ac)	Impervious Area (Ac)	Turf Area (Ac)	Existing Outlet Elevation	Existing Outlet Size (in)	Land-Locked?	Proposed Normal Elevation	Proposed Outlet Size (in) Approx	Hydrologic Evaluation Method	1% Annual Exceedance Probability Storm (100-yr) Flood Elevation	Storage (Ac-ft)	Average Discharge (cfs)	Peak Discharge (cfs)	Critical Storm Duration (hrs)	Comments	Normal Elevation	Flood Elevation	Total Direct Watershed Area (Ac)	Pond Area (Ac)	Mean Depth (ft)	Runoff Coefficient		Total Phosphorus Removal (%) Pond	Total Phosphorus Removal (%) Total Watershed
Orchard Road		Orchard Road																								
112	1	12.8	0.0	3.2	9.6	933.5	21	N	NA	36	Volume Rtg.	NA	0.0	36.0		0.5		933.1	934.9	12.8	NA	NA	0.18	0	0	112
113	1	3.8	0.5	0.8	2.5	935.7	OC	HFP	932.5	15	Volume Rtg.	933	0.3	8.0		0.5		931.8	933.5	3.8	0.51	1.0	0.18	27.2	52.2	113
114	1	7.0	0.6	1.6	4.8	955.4	OC	HFP	953.0	12	Volume Rtg.	955.4	1.7	1.0		1.0		947.6	951.5	7	0.57	2.9	0.18	53	53	114
115	1	46.1	8.5	9.4	28.2	939.0	OC	Y	917.6	12	Volume Rtg.	919.7	12.0	0.0	4.0	1.0		916	919	46.1	8.53	2.0	0.18	44.5	53.3	115
116	1	12.8	1.4	3.4	8.0	942.0	OC	Y	935.9	12	Volume Rtg.	937.2	1.8	1.0		3.0		932.8	935.5	12.8	1.44	2.5	0.22	51.1	51.1	116
117	1	17.1	0.1	16.2	0.9	914.5	18	N	916.2	36	Volume Rtg.	922.3	1.2	48.0		0.5	Discharge includes flow from 115.	916.2	924	17.1	0.1	0.3	0.61	3.3	3.3	117
Subtotal		99.6	11.2	34.6	53.9														99.6							Subtotal
Hopkins		Hopkins																								
330	1	5.8	0.0	4.6	1.2	907.0	15	N	907.0	15	Volume Rtg.	911.9	1.0	9.0		0.5		NA	NA	5.8	NA	NA	0.52	0	0	330
331	1	12.3	0.0	3.1	9.2	909.0	15	N	NA	36	Volume Rtg.	NA	0.0	36.0		0.5		NA	NA	12.3	NA	NA	0.18	0	0	331
MC-15	3, 7	8.3	0.0	4.2	4.2	913.5	16	N	913.5	16	Hydrograph	915.22	0.5	0.0	6.9	0.5	Existing pipe assumed to be adequate; Modeling from 34th Circle West	NA	NA	8.3	NA	NA	0.34	0	0	MC-15
MC-18	1	22.9	0.7	6.6	15.5	909.1	15	N	909.1	15	Volume Rtg.	912	2.8	8.0		1.0		NA	NA	22.9	0.74	3.6	0.22	53.3	53.3	MC-18
MC-19	1	32.1	0.3	12.7	19.1	900.3	2-24	N	900.3	24	Volume Rtg.	908	30.0	25.0		1.0	Flood elevation based on creek flood elevation of 908. Percent phosphorus removal includes the proposed sedimentation pond.	NA	NA	32.1	0.25	4.0	0.28	34.6	34.6	MC-19
Subtotal		81.4	1.0	31.3	49.2														81.4							Subtotal

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 City of Minnetonka, Water Resources Management Plan
 Minnehaha Creek Watershed

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 Minnehaha Creek Watershed

Subwatershed No.	Foot Notes ^A	Hydrologic Modeling																Water Quality Modeling						Subwatershed No.		
		Watershed Characteristics				Existing Conditions			Proposed Conditions									Historical Elevations ^C		PondNET Information						
		Total Area (Ac)	Water Area (Ac)	Impervious Area (Ac)	Turf Area (Ac)	Existing Outlet Elevation	Existing Outlet Size (in)	Land-Locked?	Proposed Normal Elevation	Proposed Outlet Size (in) Approx	Hydrologic Evaluation Method	1% Annual Exceedance Probability Storm (100-yr) Flood Elevation	Storage (Ac-ft)	Average Discharge (cfs)	Peak Discharge (cfs)	Critical Storm Duration (hrs)	Comments	Normal Elevation	Flood Elevation	Total Direct Watershed Area (Ac)	Pond Area (Ac)	Mean Depth (ft)	Runoff Coefficient		Total Phosphorus Removal (%) Pond	Total Phosphorus Removal (%) Watershed
<i>Lake Minnetonka South</i>																										
319A	1	13.3	0.3	3.2	9.7	954.0	OC	HFP	942.0	18	Volume Rtg.	944.7	1.4	11.0		1.0		937	942	13.3	0.34	0.8	0.18	27.2	27.2	319A
319B	2	62.0	0.3	15.4	46.2	955.8	66	N	955.8	66	Volume Rtg.	957.7	0.7	180.0		0.5	Excavate pond bottom for water quality; Existing Conditions Assumed to be same as proposed; Review of As-builts needed	955.8	957.4	62	0.34	4.0	0.18	59.8	59.8	319B
319C	1	138.0	15.0	30.8	92.3	INA	INA	N	928.6	12	Volume Rtg.	930.2	44.0	4.0		48.0	Watershed criteria and areas are approximate, verify topographic information in Deephaven. Water Quality Management Classification was not assigned since part of the lake and its watershed is outside the City of Minnetonka.	929.5	930.2	138	15	10.0	0.18	70.9	71.6	319C
320	1	8.0	0.2	2.0	5.9	952.6	OC	N	946.0	12	Volume Rtg.	950.5	1.5	1.0		1.0		942.5	950.5	8	0.17	1.3	0.18	34.6	34.6	320
321	1	17.5	0.8	4.2	12.6	947.8	OC	Y	934.2	12	Volume Rtg.	938	3.8	1.0		24.0		933.5	938	17.5	0.75	2.1	0.18	43.1	49.2	321
322	1	14.3	0.6	3.4	10.3	933.5	OC	Y	930.6	42	Volume Rtg.	931	0.3	39.0		0.5		929	931	14.3	0.55	3.8	0.18	44.5	62	322
323	1	6.0	0.3	1.4	4.2	953.0	OC	N	944.0	12	Volume Rtg.	946	0.9	1.0		1.0		942	946	6	0.34	1.4	0.18	40.2	40.2	323
324	1	10.8	0.4	2.6	7.8	947.4	OC	N	944.0	18	Volume Rtg.	945.4	1.0	5.0		1.0		945.3	947.5	10.8	0.44	0.3	0.18	14.1	14.1	324
325	1	8.5	0.0	2.1	6.4	961.0	OC	N	NA	36	Volume Rtg.	NA	0.0	25.0		0.5		950	951	8.5	NA	NA	0.18	0	0	325
326	1	8.8	0.0	2.2	6.6	954.0	OC	HFP	NA	33	Volume Rtg.	NA	0.0	24.0		0.5		953	954	8.8	NA	NA	0.18	0	0	326
327	1	2.1	0.1	0.5	1.5	944.7	OC	N	938.0	18	Volume Rtg.	939	0.1	5.0		0.5		937.3	940.5	2.1	0.1	0.3	0.18	14.4	14.4	327
328	8	4.8	0.0	1.2	3.6	953.7	21	N	NA	21	Volume Rtg.	NA	0.0	15.0		0.5	Existing Conditions Assumed to be same as proposed; Review of As-builts needed	950.4	954	4.8	NA	NA	0.18	0	0	328
329	8	3.3	0.2	0.8	2.3	948.0	30	N	948.0	30	Volume Rtg.	951	0.9	27.0		0.5	Existing Conditions Assumed to be same as proposed; Review of As-builts needed	944.5	948	3.3	0.2	2.2	0.18	40.5	40.5	329
Subtotal		297.4	18.2	69.8	209.4															297.4						Subtotal

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Highway 12 & I-494		Highway 12 & I-494																								
120	1	14.9	2.0	3.2	9.7	NA	NA	N	956.5	12	Volume Rtg.	958	5.4	1.0		1.0	NA	NA	14.9	2	3.3	0.18	55.79	55.79	120	
121	2, 3	95.0	18.0	19.3	57.8	945.6	30	N	945.6	30	Hydrograph	949.74	81.0		57.8	12.0	Modeling from Sheridan Hills Road	948	950	95	18	4.8	0.18	50.82	69.35	121
125	1	43.9	1.7	38.0	4.2	961.0	27	N	961.0	27	Volume Rtg.	965.5	7.3	28.0		1.0	Pond constructed as part of development. Drainage area includes area in Plymouth.	NA	NA	43.9	1.7	9.0	0.58	66.64	66.64	125
126	1	18.0	0.0	10.8	7.2	953.8	40x65	N	NA	40x65	Volume Rtg.	NA	0.0	80.0		0.5	Existing pipe assumed to be adequate. Drainage area includes area in Plymouth.	NA	NA	18	NA	NA	0.40	0	51.95	126
127	1	103.5	2.4	40.4	60.7	INA	48	N	956.0	48	Volume Rtg.	960.7	11.3	62.0		0.5		959	962	103.5	2.4	2.0	0.28	40.5	40.5	127
127A	1	26.7	4.0	5.7	17.0	950.0	33	N	950.0	33	Volume Rtg.	957.5	8.3	62.0		3.0		NA	NA	26.7	4	2.0	0.18	35.36	57.81	127A
128	2, 3	305.0	50.0	63.8	191.3	940.9	27	N	940.9	27	Hydrograph	944.62	186.3		23.4	96.0	Existing outlet Structure should be modified to reduce wetland inundation; Modeling from Sheridan Hills Road	941	944	305	50	0.5	0.18	14.65	55.24	128
128-1	1	2.1	0.7	0.4	1.1	942.3	OC	N	942.3	OC	Volume Rtg.	944	1.2	NA		NA	Pond is hydraulically connected to pond 128. Existing outlet assumed to be adequate.	NA	NA	2.1	0.7	0.5	0.18	29.19	29.19	128-1
128-2	1	14.2	1.6	3.8	8.8	941.0	3-31x51	N	941.0	3-31x51	Volume Rtg.	944	4.9	62.0		3.0		NA	NA	14.2	1.6	0.2	0.22	1.05	65.71	128-2
128-3	2	20.0	1.1	4.7	14.2	948.2	21" with weir @ 950	N	948.2	21" with weir @ 950	Hydrograph	950.95	1.5		11.8	24.0	Assumes no existing outlet.	0	NA	20	1.1	0.5	0.18	27.1	27.09	128-3
129	1	20.5	0.0	12.3	8.2	INA	30	N	964.2	30	Volume Rtg.	966	0.2	70.0		0.5	Existing outlet assumed to be adequate. Pipe is added to divert flow to existing sedimentation pond in 133A.	NA	NA	20.5	NA	NA	0.40	0	0	129

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Table 3-14b Watershed Data, Hydrologic Modeling, and Water Quality Modeling Summary
City of Minnetonka, Water Resources Management Plan
Minnehaha Creek Watershed

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City of Minnetonka, Water Resources Management Plan
Minnehaha Creek Watershed

Subwatershed No.	Foot Notes ^A	Hydrologic Modeling															Water Quality Modeling						Subwatershed No.			
		Watershed Characteristics				Existing Conditions			Proposed Conditions								Historical Elevations ^C		PondNET Information							
		Total Area (Ac)	Water Area (Ac)	Impervious Area (Ac)	Turf Area (Ac)	Existing Outlet Elevation	Existing Outlet Size (in)	Land-Locked?	Proposed Normal Elevation	Proposed Outlet Size (in) Approx	Hydrologic Evaluation Method	1% Annual Exceedance Probability Storm (100-yr) Flood Elevation	Storage (Ac-ft)	Average Discharge (cfs)	Peak Discharge (cfs)	Critical Storm Duration (hrs)	Comments	Normal Elevation	Flood Elevation	Total Direct Watershed Area (Ac)	Pond Area (Ac)	Mean Depth (ft)		Runoff Coefficient	Total Phosphorus Removal (%) Pond	Total Phosphorus Removal (%) Total Watershed
133A	2, 3	110.7	5.0	15.9	89.8	939.5	OC	N	939.5	OC	Hydrograph	940.55	24.3		25.0	96.0	This is city wetland #133A1 (not the same as 133A-1); wetland area was estimated and includes area in Wayzata. Existing outlet assumed to be adequate; Modeling from Sheridan Hills Road	NA	NA	110.7	5	2.0	0.12	17.96	59.12	133A
133A-1	1	16.5	1.4	3.8	11.3	960.7	18	N	960.7	18	Volume Rtg.	962.6	1.5	17.0		0.5		NA	NA	16.5	1.4	0.0	0.18	0	0	133A-1
133A-2	3	75.3	2.5	14.6	58.2	934.0	48" with V-notch weir	N	934.0	48" with V-notch weir	Hydrograph	936.76	43.1		22.7	96.0	Modeling from Sheridan Hills Road	936	942	75.3	2.5	2.0	0.15	10.17	60.82	133A-2
133A-4	10	2.7	0.8	0.5	1.5	938.8	31" x 51" Arch	N	938.8	31" x 51" Arch	Volume Rtg.	941.5	0.8	80.0		0.5	Sedimentation pond proposed to protect pond 133A2. Pondnet numbers pertain to the pond which is in 133A2 and directly north of 133A-4.	NA	NA	2.7	0.75	4.0	0.18	46.61	61.78	133A-4
133A-5	10	31.3	0.5	7.7	23.1	940.5	OC	N	940.5	OC	Volume Rtg.	941.5	0.8	NA		0.5	Pond is hydraulically connected to pond 133A-4. Existing outlet assumed to be adequate.	NA	NA	31.3	0.5	1.3	0.18	30.01	30.03	133A-5
133A-7	1	9.1	0.7	2.1	6.3	939.5	12	N	939.5	12	Volume Rtg.	942.4	1.4	3.0		0.5		NA	NA	9.1	0.7	1.3	0.18	38.96	38.96	133A-7
133A-8	1	2.8	0.2	0.7	2.0	938.8	12	N	938.8	12	Volume Rtg.	941.5	0.5	3.0		0.5		NA	NA	2.8	0.2	0.0	0.18	0	29.82	133A-8
134	1	4.4	0.3	1.0	3.1	947.5	OC	N	947.5	OC	Volume Rtg.	948	0.1	15.0		0.5		946	948	4.4	0.3	1.8	0.18	44.49	44.48	134
135	1	32.0	8.5	5.9	17.6	940.0	12	N	940.0	12	Volume Rtg.	941	10.0	6.0		2.0		936	938	32	8.5	4.0	0.18	58.03	61.53	135
135-2	1	5.8	0.5	1.3	4.0	950.4	OC	N	950.4	12	Volume Rtg.	951	0.1	10.0		0.5		NA	NA	5.8	0.5	0.6	0.18	27.04	27.04	135-2
137	1	8.4	0.0	2.1	6.3	NA	OC	N	NA	OC	Volume Rtg.	NA	NA	25.0		0.5		NA	NA	8.4	NA	NA	0.18	0	0	137
138	1	9.7	0.0	2.4	7.3	940.7	18	N	940.7	24	Volume Rtg.	944	0.4	17.0		0.5		NA	NA	9.7	NA	NA	0.18	0	0	138
139	1	3.6	0.0	0.9	2.7	INA	OC	N	940.0	OC	Volume Rtg.	943	0.2	22.0		0.5		NA	NA	3.6	NA	NA	0.18	0	0	139
140	1	8.2	0.4	2.0	5.9	INA	12	N	949.8	12	Volume Rtg.	952	1.5	3.0		1.0		NA	NA	8.2	0.4	2.4	0.18	49.03	49.02	140
141	1	10.9	0.0	2.7	8.2	935.1	8	N	936.6	8	Volume Rtg.	939	2.4	1.0		12.0		940	941.5	10.9	NA	NA	0.18	0	15.47	141
142	1	1.9	0.3	0.4	1.2	932.8	18	N	934.0	12	Volume Rtg.	936	1.0	1.0		24.0		936	938	1.9	0.3	1.0	0.18	31.54	40.93	142
143	1	6.4	0.0	1.6	4.8	939.5	OC	N	939.5	OC	Volume Rtg.	940	0.5	17.0		0.5		938	939	6.4	NA	NA	0.18	0	0	143
144A	2, 3	101.4	1.0	20.1	80.3	931.8	36	N	931.8	36	Hydrograph	934.66	19.2		37.9	2.0	Existing pipe assumed to be adequate; Modeling from Sheridan Hills Road	934	936	101.4	1	2.0	0.15	4.56	59.18	144A
144A-4	1	0.8	0.4	0.1	0.3	945.4	OC	N	945.4	12	Volume Rtg.	946	0.1	3.0		0.5		NA	NA	0.8	0.4	3.2	0.18	56.34	56.34	144A-4

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 City of Minnetonka, Water Resources Management Plan
 Minnehaha Creek Watershed

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		Total Area (Ac)	Water Area (Ac)	Impervious Area (Ac)	Turf Area (Ac)	Existing Outlet Elevation	Existing Outlet Size (in)	Land-Locked?	Proposed Normal Elevation	Proposed Outlet Size (in) Approx	Hydrologic Evaluation Method	1% Annual Exceedance Probability Storm (100-yr) Flood Elevation	Storage (Ac-ft)	Average Discharge (cfs)	Peak Discharge (cfs)	Critical Storm Duration (hrs)	Comments	Normal Elevation	Flood Elevation	Total Direct Watershed Area (Ac)	Pond Area (Ac)	Mean Depth (ft)		Runoff Coefficient	Total Phosphorus Removal (%) Pond	Total Phosphorus Removal (%) Watershed
144B	2, 3	54.3	28.5	6.5	19.4	929.1	42	N	929.1	42	Hydrograph	933.06	17.1		60.6	2.0	Existing pipe assumed to be adequate; Modeling from Sheridan Hills Road	932	934	54.3	28.5	0.5	0.18	10.56	60.79	144B
145	1	12.4	0.0	11.2	1.2	940.0	OC	N	NA	36	Volume Rtg.	NA	0.0	49.0		0.5		937.6	944	12.4	NA	NA	0.58	0	0	145
146	1	4.2	0.9	1.7	1.7	939.2	OC	N	936.0	12	Volume Rtg.	938.4	2.6	1.0		2.0		936	938.4	4.2	0.9	3.0	0.34	58.12	58.12	146
147	1	7.1	1.4	2.9	2.9	938.4	OC	N	936.0	12	Volume Rtg.	938	3.5	1.0		12.0		931.7	935.5	7.1	1.39	2.6	0.34	56.07	56.07	147
148	1	10.3	3.0	3.7	3.7	935.0	OC	N	931.0	12	Volume Rtg.	934	8.2	1.0		48.0		928	931	10.3	3	1.3	0.34	40.5	47.5	148
149	1	7.3	0.4	1.7	5.2	975.2	OC	N	970.2	12	Volume Rtg.	974	2.1	1.0		1.0	Need to construct a berm.	970.2	976	7.3	0.38	0.1	0.18	6.89	6.88	149
150	1	5.4	0.1	1.3	4.0	936.8	OC	N	933.1	27	Volume Rtg.	936	0.4	20.0		0.5	Discharge includes flow from 153-1.	931.5	935.5	5.4	0.1	2.0	0.18	41.87	41.86	150
151	1	8.1	0.4	1.9	5.8	986.0	OC	N	977.0	12	Volume Rtg.	980.7	1.4	1.0		1.0		970.3	976	8.1	0.37	4.5	0.18	58.95	58.95	151
152	1	16.5	1.0	3.9	11.6	954.8	OC	N	953.9	42	Volume Rtg.	954	0.1	51.0		0.5		952	956.5	16.5	1	0.3	0.18	15.91	17.68	152
152-1	1	6.8	0.4	1.6	4.8	988.6	OC	N	980.1	12	Volume Rtg.	982	1.0	1.0		1.0		NA	NA	6.8	0.4	3.6	0.18	55.89	55.88	152-1
152-3	1	16.8	0.0	4.2	12.6	930.0	OC	N	NA	42	Volume Rtg.	NA	0.0	48.0		0.5		NA	NA	16.8	NA	NA	0.18	0	0	152-3
153	1	5.2	0.2	2.5	2.5	959.2	24	N	962.0	12	Volume Rtg.	965	1.4	1.0		2.0		961.3	964	5.2	0.17	1.4	0.34	35.37	35.37	153
153-1	1	17.0	0.4	8.3	8.3	INA	36	N	962.0	21	Volume Rtg.	965	2.0	12.0		1.0		NA	NA	17	0.4	2.5	0.34	39.1	46.33	153-1
184	1	3.8	0.1	0.9	2.8	974.5	OC	N	974.6	12	Volume Rtg.	976.2	0.7	1.0		0.5	Need to construct a berm.	974.2	976.2	3.8	0.1	2.0	0.18	43.7	43.69	184
185	1	3.2	0.7	0.6	1.9	987.4	OC	N	987.4	18	Volume Rtg.	988	0.1	6.0		0.5	Need to construct a berm.	NA	NA	3.2	0.7	2.7	0.18	53.24	53.24	185
185-1	1	15.9	0.0	4.0	11.9	967.0	18	N	967.0	27	Volume Rtg.	969	1.8	10.0		1.0		NA	NA	15.9	NA	NA	0.18	0	14.69	185-1
186	1	22.2	1.0	10.6	10.6	946.2	60	N	946.2	60	Volume Rtg.	950	2.3	47.0		0.5		959.5	964	22.2	1	4.0	0.34	46.39	56.35	186
186-1	1	18.4	0.6	7.1	10.7	963.0	31x51	N	963.0	31x51	Volume Rtg.	966	1.7	30.0		2.0		NA	NA	18.4	0.6	1.2	0.28	29.08	33.7	186-1
195	1	3.4	0.3	0.6	2.5	962.0	OC	N	962.0	OC	Volume Rtg.	962.5	0.1	10.0		0.5		958.8	960.7	3.4	0.3	2.0	0.15	51.55	51.55	195
196A	1	19.3	4.3	6.0	9.0	955.0	24	N	955.0	24	Volume Rtg.	957	9.0	13.0		3.0	Storage assumes pond base at 955.0, berm needed in Southeast corner to provide storage. Existing pipe assumed to be adequate.	954.5	957	19.3	4.3	1.0	0.28	29.58	53.51	196A
196B	1	31.7	0.7	12.4	18.6	973.7	24	N	973.7	24	Volume Rtg.	981.6	3.7	26.0		0.5	Drainage area includes watershed area in Plymouth. Existing pipe assumed to be adequate.	NA	NA	31.7	0.7	4.0	0.28	53.99	53.98	196B

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 Minnehaha Creek Watershed

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198	1	37.7	0.5	22.3	14.9	946.0	42	N	946.0	42	Volume Rtg.	950	9.7	12.0		3.0		948	950	37.7	0.5	1.0	0.40	22.03	23.26	198	
198-1	1	4.3	0.1	1.1	3.2	949.7	OC	N	949.7	OC	Volume Rtg.	950	0.1	12.0		3.0		NA	NA	4.3	0.1	1.0	0.18	32.24	32.23	198-1	
198B	1	5.4	0.7	2.4	2.4	949.6	42	N	949.6	18	Volume Rtg.	951	0.6	6.0		2.0		NA	NA	5.4	0.7	1.0	0.34	35.84	35.84	198B	
198C	1	8.1	1.6	3.3	3.3	949.6	60	N	946.2	60	Volume Rtg.	950	2.0	45.0		1.0		NA	NA	8.1	1.6	4.0	0.34	46.47	65.51	198C	
199A	1	15.7	0.0	11.0	4.7	INA	INA	N	NA	42	Volume Rtg.	NA	NA	65.0		0.5		NA	NA	15.7	NA	NA	0.46	0	0	199A	
199B	1	16.1	1.0	7.6	7.6	6.2	45x73	N	946.2	45x73	Volume Rtg.	950	2.3	55.0		0.5		NA	NA	16.1	1	2.0	0.34	40.16	40.15	199B	
211	1	8.7	0.0	6.5	2.2	INA	INA	N	NA	36	Volume Rtg.	NA	NA	34.0		0.5	Existing drainage system not known. Assume existing system is adequate.	939.5	944	8.65	NA	NA	0.49	0	0	211	
286	1	3.8	0.4	0.9	2.6	985.5	12	N	985.5	12	Volume Rtg.	986.5	0.5	1.0		1.0		985.7	986.5	3.8	0.4	2.1	0.18	47.93	47.93	286	
287	1	9.3	0.0	4.7	4.7	934.0	OC	N	934.0	OC	Volume Rtg.	935	0.1	29.0		0.5		938.6	941	9.3	NA	NA	0.34	0	0	287	
287-1	1	4.3	0.0	3.2	1.1	INA	CB	N	938.4	21	Volume Rtg.	NA	0.0	17.0		0.5	Existing drainage system not known. Assume existing system is adequate.	938.6	941	4.3	NA	NA	0.49	0	0	287-1	
312-1	1	3.9	0.9	0.8	2.3	943.6	OC	N	942.0	12	Volume Rtg.	943.4	1.2	1.0		1.0		NA	NA	3.9	0.85	3.0	0.18	58.7	58.7	312-1	
MC-6	1	3.7	0.3	0.9	2.6	929.0	OC	N	930.5	12	Volume Rtg.	932.5	0.7	1.0		12.0	Need to construct a berm.	NA	NA	3.7	0.3	1.0	0.18	25.16	52.25	MC-6	
MC-21	1	9.1	1.3	3.9	3.9	929.9	OC	N	928.9	12	Volume Rtg.	929.9	1.6	2.0		1.0		NA	NA	9.1	1.3	0.8	0.34	26.36	41.58	MC-21	
MC-22	1	3.1	0.3	1.4	1.4	937.0	OC	N	935.0	12	Volume Rtg.	937	0.7	1.0		2.0		NA	NA	3.1	0.26	2.1	0.34	46.09	46.09	MC-22	
Subtotal		1528.2	155.3	451.1	921.8															1528.15						Subtotal	

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Table 3-14b Watershed Data, Hydrologic Modeling, and Water Quality Modeling Summary
 City of Minnetonka, Water Resources Management Plan
 Minnehaha Creek Watershed

Table 3-14b Watershed Data, Hydrologic Modeling, and Water Quality Modeling Summary
 City of Minnetonka, Water Resources Management Plan
 Minnehaha Creek Watershed

Subwatershed No.	Foot Notes ^A	Hydrologic Modeling																	Water Quality Modeling						Subwatershed No.		
		Watershed Characteristics				Existing Conditions			Proposed Conditions										Historical Elevations ^C		PondNET Information						
		Total Area (Ac)	Water Area (Ac)	Impervious Area (Ac)	Turf Area (Ac)	Existing Outlet Elevation	Existing Outlet Size (in)	Land-Locked?	Proposed Normal Elevation	Proposed Outlet Size (in) Approx	Hydrologic Evaluation Method	1% Annual Exceedance Probability Storm (100-yr) Flood Elevation	Storage (Ac-ft)	Average Discharge (cfs)	Peak Discharge (cfs)	Critical Storm Duration (hrs)	Comments	Normal Elevation	Flood Elevation	Total Direct Watershed Area (Ac)	Pond Area (Ac)	Mean Depth (ft)	Runoff Coefficient	Total Phosphorus Removal (%) Pond		Total Phosphorus Removal (%) Watershed	
<i>Indian Road</i>																											
154	1	9.1	1.4	1.9	5.8	957.0	OC	Y	951.6	12	Volume Rtg.	953	2.4	1.0		2.0		950.9	954	9.1	1.4	1.3	0.18	39.9	39.9	154	
154-1	1	6.5	0.0	1.6	4.9	960.9	24	N	960.9	24	Volume Rtg.	964	0.5	8.0		0.5		NA	NA	6.5	NA	NA	0.18	0	0	154-1	
155	1	2.2	0.2	0.5	1.5	951.0	OC	Y	949.5	12	Volume Rtg.	951	0.4	1.0		24.0		946.1	949.5	2.2	0.23	1.4	0.18	27.1	52.6	155	
156	1	8.6	1.0	1.9	5.7	948.3	OC	N	947.8	24	Volume Rtg.	948	0.1	22.0		0.5		NA	NA	8.6	1	0.5	0.18	24.7	24.7	156	
157	1	10.0	0.0	2.5	7.5	940.2	30	N	940.2	30	Volume Rtg.	945	1.0	34.0		0.5		940.2	944	10	NA	NA	0.18	0	31.5	157	
158	1	20.4	2.6	4.5	13.4	963.4	CB	N	963.4	33	Volume Rtg.	964	1.5	27.0		0.5		963.4	964	20.4	2.6	4.2	0.18	59.7	59.7	158	
159	1	77.4	11.0	16.6	49.8	937.6	Weir	N	938.0	12	Volume Rtg.	940	28.0	2.0		48.0		936	940.5	77.4	11	1.0	0.18	33.5	41.8	159	
160	2, 4	15.4	2.5	3.2	9.7	980.2	OC	N	980.2	12	Hydrograph	980.95	2.2		16.2	1.0	Need to construct a berm; Modeling from 162 Culvert Replacement	980.2	983	15.4	2.5	1.8	0.18	46.2	46.2	160	
161	2, 4	45.8	14.5	7.8	23.5	963.3	15	N	963.3	15	Hydrograph	964.39	19.4		3.1	96.0	Need to construct a berm; Modeling from 162 Culvert Replacement	963.3	965.5	45.8	14.5	1.2	0.18	37.5	44.8	161	
162	4	18.4	0.3	7.2	10.9	954.5	36	N	952.7	36	Hydrograph	955.12	0.5		28.5	1.0	Existing Conditions from As-Built; Modeling from 162 Culvert Replacement	NA	NA	18.4	0.3	0.5	0.28	7.3	35.5	162	
163	1	7.2	0.0	3.6	3.6	952.1	OC	N	948.5	24	Volume Rtg.	950	0.3	17.0		0.5		NA	NA	7.2	NA	NA	0.34	0	0	163	
164	1	1.5	0.2	0.3	1.0	969.5	12	N	969.5	12	Volume Rtg.	970	0.1	2.0		1.0		NA	NA	1.5	0.2	1.0	0.18	36	36	164	
164-1	1	3.5	0.4	0.8	2.3	972.8	OC	Y	969.4	12	Volume Rtg.	970.7	0.6	1.0		1.0		965.2	969	3.5	0.42	2.1	0.18	48.9	48.9	164-1	
165	1	16.5	1.1	3.9	11.6	942.9	OC	Y	935.9	12	Volume Rtg.	940	5.0	1.0		12.0		933.5	937.5	16.5	1.1	3.9	0.18	55.5	60.2	165	
166	1	14.2	0.6	3.4	10.2	977.0	OC	N	974.0	12	Volume Rtg.	977	2.6	1.0		2.0		978	979	14.2	0.6	3.5	0.18	54.8	54.8	166	
167	1	11.5	0.5	2.8	8.3	945.5	OC	N	945.0	21	Volume Rtg.	946	0.8	20.0		0.5		945	947	11.5	0.5	2.5	0.18	39.8	58	167	
168	2	8.6	2.9	1.4	4.3	970.0	42	N	970.0	12	Volume Rtg.	972.3	7.0	1.0		2.0	Existing Conditions Assumed to be same as proposed; Review of As-builts needed	966.9	968.5	8.6	2.9	1.0	0.18	30.1	51.1	168	
169	2	3.7	0.6	0.8	2.3	967.0	42	N	967.0	12	Volume Rtg.	968.5	1.1	1.0		24.0	Existing Conditions Assumed to be same as proposed; Review of As-builts needed	966.1	968	3.7	0.6	0.5	0.18	14	51.5	169	

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 City of Minnetonka, Water Resources Management Plan
 Minnehaha Creek Watershed

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 City of Minnetonka, Water Resources Management Plan
 Minnehaha Creek Watershed

Subwatershed No.	Foot Notes ^A	Hydrologic Modeling																Water Quality Modeling						Subwatershed No.		
		Watershed Characteristics				Existing Conditions			Proposed Conditions									Historical Elevations ^C		PondNET Information						
		Total Area (Ac)	Water Area (Ac)	Impervious Area (Ac)	Turf Area (Ac)	Existing Outlet Elevation	Existing Outlet Size (in)	Land-Locked?	Proposed Normal Elevation	Proposed Outlet Size (in) Approx	Hydrologic Evaluation Method	1% Annual Exceedance Probability Storm (100-yr) Flood Elevation	Storage (Ac-ft)	Average Discharge (cfs)	Peak Discharge (cfs)	Critical Storm Duration (hrs)	Comments	Normal Elevation	Flood Elevation	Total Direct Watershed Area (Ac)	Pond Area (Ac)	Mean Depth (ft)	Runoff Coefficient		Total Phosphorus Removal (%) Pond	Total Phosphorus Removal (%) Watershed
170	1	7.3	0.0	1.8	5.5	965.3	OC	N	NA	27	Volume Rtg.	NA	0.0	23.0	0.5		NA	NA	7.3	NA	NA	0.18	0	40	170	
171	1	2.7	0.2	0.6	1.9	979.0	12	N	979.0	12	Volume Rtg.	981	0.2	5.0	0.5		979	980	2.7	0.2	0.5	0.18	24	24	171	
172	1	3.4	0.0	0.9	2.6	964.9	OC	N	966.4	24	Volume Rtg.	966.5	0.1	16.0	0.5		NA	NA	3.4	NA	NA	0.18	0	34	172	
173	1	3.9	0.2	0.9	2.8	985.0	12	N	985.0	12	Volume Rtg.	986.5	0.6	4.0	0.5		985	986.5	3.9	0.21	1.0	0.18	34.4	34.4	173	
174	1	16.8	5.7	2.8	8.3	971.5	15	N	971.5	15	Volume Rtg.	972.8	7.2	4.0	0.5		971.5	972.5	16.8	5.7	1.0	0.18	35.5	39.6	174	
175	1	41.5	1.0	10.1	30.4	949.5	42	N	952.0	18	Volume Rtg.	957.1	9.7	0.0	18.0	6.0	Need to construct a berm.	954.2	956.5	41.5	1	0.5	0.18	10.6	33.6	175
176	2	118.2	12.9	26.3	79.0	929.8	18	N	929.8	18	Volume Rtg.	932	51.0	8.0		48.0	Existing Conditions Assumed to be same as proposed; Review of As-builts needed	930	932	118.2	12.9	1.0	0.18	26.2	47.7	176
177	1	5.1	0.2	1.2	3.6	950.3	OC	N	950.0	21	Volume Rtg.	950.3	0.1	15.0	0.5		NA	NA	5.1	0.24	0.8	0.18	30.3	30.3	177	
178	1	7.9	0.0	2.0	5.9	950.0	OC	HFP	942.7	24	Volume Rtg.	945	1.0	17.0	0.5		943.4	946.5	7.9	NA	NA	0.18	0	11.9	178	
179	1	3.6	0.0	0.9	2.7	941.6	18	N	941.1	21	Volume Rtg.	943	0.3	20.0	0.5		NA	NA	3.6	NA	NA	0.18	0	5.9	179	
180	1	9.5	0.0	2.4	7.1	945.4	OC	N	941.3	12	Volume Rtg.	945.2	1.6	1.0	1.0		941.3	945.7	9.5	NA	NA	0.18	0	0	180	
181	1	7.1	0.7	1.6	4.8	940.7	OC	Y	935.0	12	Volume Rtg.	937	1.8	1.0	1.0		933.2	935.5	7.1	0.72	2.0	0.18	47.5	47.5	181	
182	1	11.4	0.0	2.9	8.6	927.6	24	N	927.6	24	Volume Rtg.	930.2	0.8	16.0	0.5	Upstream flows by-pass this preserve wetland.	928.6	930.5	11.4	NA	NA	0.18	0	0	182	
182-1	1	6.1	0.4	1.4	4.3	933.0	OC	N	934.5	12	Volume Rtg.	938	3.6	4.0	2.0	Need to construct a berm.	NA	NA	6.1	0.4	3.0	0.18	45.3	47.9	182-1	
183	1	11.4	5.0	1.6	4.8	926.4	24x48	N	926.4	24	Volume Rtg.	930	11.0	0.0	25.0	24.0		928	930	11.4	5	0.5	0.18	9.8	51.2	183
210	1	10.7	2.0	2.2	6.5	979.8	12	N	979.8	12	Volume Rtg.	982	2.7	4.0	0.5		979.8	982	10.7	2	0.5	0.18	25.1	25.1	210	
212	1	10.1	1.7	2.1	6.3	972.9	18	N	972.9	12	Volume Rtg.	974.8	4.7	1.0	0.5		972.9	974.5	10.1	1.7	2.0	0.18	46.8	49.8	212	
212-1	1	3.0	0.3	0.7	2.0	987.5	2-13x22	N	987.5	2-13x22	Volume Rtg.	988.5	0.3	14.0	0.5		NA	NA	3	0.28	0.5	0.18	24.4	24.4	212-1	
Subtotal		560.2	70.2	127.0	363.0														560.2							Subtotal

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 City of Minnetonka, Water Resources Management Plan
 Minnehaha Creek Watershed

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Subwatershed No.	Foot Notes ^A	Hydrologic Modeling																Water Quality Modeling						Subwatershed No.		
		Watershed Characteristics				Existing Conditions			Proposed Conditions									Historical Elevations ^C		PondNET Information						
		Total Area (Ac)	Water Area (Ac)	Impervious Area (Ac)	Turf Area (Ac)	Existing Outlet Elevation	Existing Outlet Size (in)	Land-Locked?	Proposed Normal Elevation	Proposed Outlet Size (in) Approx	Hydrologic Evaluation Method	1% Annual Exceedance Probability Storm (100-yr) Flood Elevation	Storage (Ac-ft)	Average Discharge (cfs)	Peak Discharge (cfs)	Critical Storm Duration (hrs)	Comments	Normal Elevation	Flood Elevation	Total Direct Watershed Area (Ac)	Pond Area (Ac)	Mean Depth (ft)	Runoff Coefficient		Total Phosphorus Removal (%) Pond	Total Phosphorus Removal (%) Total Watershed
South Ridge																										
88	1	6.3	0.0	1.6	4.7	1000.0	OC	N	NA	21	Volume Rtg.	NA	0.0	20.0		0.5		1000	1001	6.3	NA	NA	0.18	0	0	88
187A	1	7.4	0.1	5.5	1.8	948.0	12	N	948.0	12	Volume Rtg.	964	6.3	6.0		0.5	Discharge includes flow from 187A-1. Existing pipe assumed to be adequate.	946	950	7.4	0.05	1.5	0.49	21	21	187A
187A-1	1	9.7	0.3	7.0	2.3	962.0	12	N	962.0	12	Volume Rtg.	966	2.2	3.0		0.5		NA	NA	9.7	0.34	2.5	0.49	45.9	45.9	187A-1
189	1	7.2	0.0	1.8	5.4	1000.6	OC	N	NA	24	Volume Rtg.	NA	0.0	20.0		0.5		998.5	998	7.2	NA	NA	0.18	0	0	189
190	1	14.5	0.0	3.6	10.9	993.7	15	N	993.7	15	Volume Rtg.	998.9	2.5	7.0		1.0		NA	NA	14.5	NA	NA	0.18	0	0	190
192	1	5.1	0.0	1.3	3.8	1000.0	OC	N	NA	48	Volume Rtg.	NA	0.0	96.0		0.5	Discharge includes flow from 88 and 193.	NA	NA	5.1	NA	NA	0.18	0	0	192
193	1	20.1	0.0	5.0	15.1	997.4	OC	N	NA	42	Volume Rtg.	NA	0.0	15.0		0.5		NA	NA	20.1	NA	NA	0.18	0	0	193
194	4	38.5	0.0	9.6	28.9	990.4	21	N	990.1	21	Hydrograph	994	1.5	0.0	8.9	1.0	Drainage area is approximate. Verify topographic information in Plymouth; Existing Conditions based on As-builts; Modeling from 2001 Street Rehabilitation	NA	NA	38.5	NA	NA	0.18	0	0	194
197-1	1	74.6	0.3	44.6	29.7	945.7	30	N	945.7	42	Volume Rtg.	956.5	13.0	129.0		0.5	Pond 197-1 has split flow. Low flows (<12 cfs) are conveyed to 204A, all flows >12 cfs are conveyed to 220A. Existing pipe with overflow assumed to be adequate.	946	952.5	74.6	0.25	4.0	0.40	23.8	24.3	197-1
204A	1	65.1	1.0	16.0	48.1	939.4	2-48&36	N	939.4	72	Volume Rtg.	943.5	1.6	230.0		0.5		942.4	944.5	65.1	1	0.5	0.18	8.6	23.2	204A
204A-1	1	5.7	0.3	1.4	4.1	953.0	OC	N	952.7	18	Volume Rtg.	953	0.1	15.0		0.5		NA	NA	5.7	0.26	1.0	0.18	33.9	33.9	204A-1
206A	1	4.8	0.0	1.2	3.6	944.0	OC	N	NA	18	Volume Rtg.	NA	0.0	15.0		0.5		942.5	944	4.81	NA	NA	0.18	0	0	206A
207A	1	9.9	1.0	2.2	6.7	937.3	OC	N	937.3	OC	Volume Rtg.	941.8	3.1	225.0		0.5		937.8	942	9.9	1	3.0	0.18	28.4	44.2	207A
207B	1	11.6	0.9	2.7	8.0	934.6	18&24	N	934.6	60	Volume Rtg.	941.8	4.6	200.0		1.0		934.2	938	11.6	0.9	3.0	0.18	22.2	55.3	207B
208	1	7.6	1.5	1.5	4.6	981.0	OC	N	980.0	12	Volume Rtg.	981	1.7	1.0		1.0		979.7	981	7.6	1.5	0.5	0.18	25.2	25.2	208
209	1	7.2	0.2	1.8	5.3	965.0	OC	N	960.0	12	Volume Rtg.	964	1.3	1.0		1.0		959.8	962.6	7.2	0.2	1.0	0.18	32.2	32.2	209
209-1	1	3.0	0.2	0.7	2.1	956.5	OC	Y	955.4	15	Volume Rtg.	956.5	0.2	5.0		0.5		NA	NA	3	0.2	1.7	0.18	43.9	43.9	209-1
215	1	2.4	0.6	0.9	0.9	942.0	OC	Y	941.0	12	Volume Rtg.	942	0.7	1.0		2.0		938.5	939.5	2.4	0.64	2.0	0.34	47.9	47.9	215

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216	1	10.5	0.4	5.1	5.1	936.5	4	N	936.5	4	Volume Rtg.	939.3	2.4	2.0	6.0		936	937	10.5	0.4	3.3	0.34	47.8	52.5	216	
217	1	15.0	0.3	8.8	5.9	945.7	15	N	948.0	15	Volume Rtg.	949	0.3	5.0	1.0		NA	NA	15	0.28	2.5	0.40	34.9	43.3	217	
218	1	13.3	0.4	3.2	9.7	945.1	OC	N	940.0	12	Volume Rtg.	944	2.1	1.0	1.0		NA	NA	13.3	0.36	0.5	0.18	21.4	21.4	218	
219A	1	30.3	0.0	7.6	22.7	945.8	18	N	947.0	33	Volume Rtg.	955	2.5	46.0	0.5		947	955	30.3	NA	NA	0.18	0	22.4	219A	
220A	1	146.2	15.2	85.2	45.9	933.8	OC	N	933.8	60	Volume Rtg.	935.8	40.0	100.0	150.0	2.0	934	935.2	146.2	15.2	1.0	0.43	25.8	44.9	220A	
220B	1	83.3	2.0	20.3	61.0	929.0	OC	N	929.0	48	Volume Rtg.	934	95.0	0.0	90.0	0.5	932	934	83.3	2	1.0	0.18	8.3	44.2	220B	
222A	10	33.3	4.1	7.3	21.9	961.9	14	N	960.0	12	Volume Rtg.	962	8.5	1.0	1.0	Existing Conditions based on As-Built (Emerald Trail)	956	958.5	33.3	4.1	2.0	0.18	47.7	47.7	222A	
223	1	7.4	0.0	1.9	5.6	982.4	OC	N	NA	21	Volume Rtg.	NA	0.0	20.0	0.5		981.4	982.3	7.4	NA	NA	0.18	0	0	223	
226	1	4.3	0.1	1.1	3.2	968.7	8	N	968.7	8	Volume Rtg.	974	0.6	1.0	1.0		970	974	4.3	0.1	0.5	0.18	20.9	20.9	226	
227	10	22.4	2.6	5.0	14.9	939.4	15	N	939.3	12	Volume Rtg.	940.8	4.2	3.0	3.0	Existing Conditions based on As-Built (2004 Street Rehabilitation)	937.7	940	22.4	2.6	4.6	0.18	58.4	64	227	
227-1	1	7.0	0.3	1.7	5.0	969.1	OC	Y	960.7	15	Volume Rtg.	962	0.6	5.0	1.0		NA	NA	7	0.3	2.9	0.18	51.5	51.5	227-1	
228A	1	124.4	1.0	30.9	92.6	926.0	24	N	926.0	48	Volume Rtg.	926	83.0	0.0	72.0	12.0	926	930	124.4	1	1.0	0.18	2.9	45	228A	
228B	1	29.0	0.0	7.3	21.8	921.4	36	N	921.4	48	Volume Rtg.	926	7.6	34.0	24.0		921.2	927	29	NA	NA	0.18	0	52.7	228B	
228B-1	1	3.7	0.3	0.9	2.6	934.2	15	N	934.2	12	Volume Rtg.	935.5	0.5	1.0	2.0		NA	NA	3.7	0.3	2.0	0.18	47.1	47.1	228B-1	
228C-1	1	34.3	1.8	8.1	24.4	920.5	60	N	920.5	48	Volume Rtg.	922	9.2	34.0	24.0		NA	NA	34.3	1.78	1.0	0.18	4.5	46	228C-1	
228C-2	1, 11	13.7	1.7	3.0	9.0	926.0	2-48"	N	917.9	48	Volume Rtg.	921	8.5	0.0	75.0	24.0	NA	NA	13.7	1.7	0.5	0.18	2.1	46.6	228C-2	
228C-3	1	4.0	1.0	0.8	2.3	919.1	OC	N	918.3	48	Volume Rtg.	921	4.6	0.0	75.0	24.0	NA	NA	4	1	1.0	0.18	36.5	36.5	228C-3	
229A	1	70.3	4.9	16.4	49.1	921.7	12	N	921.7	12	Volume Rtg.	923.7	10.6	2.0	12.0		921	923.5	70.3	4.86	1.5	0.18	41.9	41.9	229A	
231	2, 3, 6, 7	3.9	0.4	0.9	2.7	962.2	OC	N	960.0	12	Volume Rtg.	961.4	1.5		3.8	4-0	Modeling from Eldorado Trail	955.9	960	3.9	0.36	1.9	0.18	46.5	46.5	231
232	2, 3, 6, 7	2.0	0.2	0.5	1.4	959.1	OC	N	956.0	12	Volume Rtg.	957.6	0.6		4.3	6-0	Modeling from Eldorado Trail	954.3	956.5	2	0.17	1.0	0.18	26.5	49	232
233	2, 3, 6, 7	2.1	0.0	0.5	1.6	959.5	OC	N	NA	18	Volume Rtg.	955.5	0.8		6.7	0-5	Modeling from Eldorado Trail	955.1	956.2	2.1	NA	NA	0.18	0	0	233
234	3, 6, 7	8.6	0.4	2.1	6.2	944.7	21	N	944.7	21	Volume Rtg.	947	4.0		10.0	42-0	Existing Conditions from As-Built; Modeling from Eldorado Trail	943.2	948.5	8.6	0.37	2.4	0.18	42.4	52.4	234
235	1	4.4	0.0	1.1	3.3	957.3	OC	N	NA	21	Volume Rtg.	NA	0.0	12.0	0.5		NA	NA	4.4	NA	NA	0.18	0	0	235	
236	1	4.7	0.0	1.2	3.5	936.0	OC	N	NA	21	Volume Rtg.	NA	0.0	12.0	0.5		NA	NA	4.7	NA	NA	0.18	0	0	236	
238	1	10.3	1.1	4.6	4.6	921.9	OC	Y	919.1	OC	Volume Rtg.	920.5	2.1	1.0	2.0		918	920	10.3	1.1	0.5	0.34	23.9	23.9	238	
238-1	1	2.2	0.3	0.5	1.4	921.9	OC	Y	919.1	12	Volume Rtg.	920.5	0.6	1.0	2.0		NA	NA	2.2	0.3	1.5	0.18	31.5	46.2	238-1	
408	1	4.5	0.9	2.2	1.5	957.0	12	N	957.0	12	Volume Rtg.	958.8	1.7	3.0	1.0		956	957.2	4.5	0.86	3.5	0.40	56.4	56.4	408	
Subtotal		995.8	45.5	336.1	614.3														995.81						Subtotal	

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1 - Numbers shown are preliminary estimates taken from the 1999 WRMP. A detailed hydrologic and hydraulic analysis considering multiple storm durations should be performed as part of final design.

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Table 3-14b Watershed Data, Hydrologic Modeling, and Water Quality Modeling Summary
 City of Minnetonka, Water Resources Management Plan
 Minnehaha Creek Watershed

Table 3-14b Watershed Data, Hydrologic Modeling, and Water Quality Modeling Summary
 City of Minnetonka, Water Resources Management Plan
 Minnehaha Creek Watershed

Subwatershed No.	Foot Notes ^A	Hydrologic Modeling																Water Quality Modeling						Subwatershed No.			
		Watershed Characteristics				Existing Conditions			Proposed Conditions									Historical Elevations ^C		PondNET Information							
		Total Area (Ac)	Water Area (Ac)	Impervious Area (Ac)	Turf Area (Ac)	Existing Outlet Elevation	Existing Outlet Size (in)	Land-Locked?	Proposed Normal Elevation	Proposed Outlet Size (in) Approx	Hydrologic Evaluation Method	1% Annual Exceedance Probability Storm (100-yr) Flood Elevation	Storage (Ac-ft)	Average Discharge (cfs)	Peak Discharge (cfs)	Critical Storm Duration (hrs)	Comments	Normal Elevation	Flood Elevation	Total Direct Watershed Area (Ac)	Pond Area (Ac)	Mean Depth (ft)	Runoff Coefficient		Total Phosphorus Removal (%) Pond	Total Phosphorus Removal (%) Watershed	
<i>Cedar Lake</i>																											
239	1	6.2	0.4	1.5	4.4	959.6	OC	Y	954.3	12	Volume Rtg.	957.8	2.1	1.0		1.0		953	958.5	6.2	0.4	2.1	0.18	48.3	48.3	239	
240	1	7.5	0.2	1.8	5.5	943.4	15	N	944.0	12	Volume Rtg.	946	1.0	3.0		1.0		943.4	948	7.5	0.2	0.3	0.18	9.2	29	240	
241	2	5.9	0.4	1.4	4.2	933.8	42	N	933.8	12	Volume Rtg.	936	1.0	1.0		1.0	Existing conditions assumed to be the same as proposed; As-builts need to be reviewed	932.5	937	5.9	0.35	2.4	0.18	49.5	49.5	241	
242	1	16.9	0.5	4.1	12.3	943.7	15	N	943.7	15	Volume Rtg.	946.4	1.9	8.0		1.0		943.8	948	16.9	0.5	0.5	0.18	20	26.5	242	
242-1	1	3.2	0.3	0.7	2.2	989.1	12	N	989.1	12	Volume Rtg.	990	0.3	3.0		1.0		NA	NA	3.2	0.3	2.6	0.18	51.4	51.4	242-1	
243	1	4.2	0.0	1.1	3.2	953.2	12	N	952.0	18	Volume Rtg.	952.5	0.2	10.0		0.5		955	958	4.2	NA	NA	0.18	0	0	243	
243-1	1	11.0	0.0	2.8	8.3	965.0	OC	N	962.4	24	Volume Rtg.	964	0.1	29.0		0.5		NA	NA	11	NA	NA	0.18	0	0	243-1	
244A-1	1	28.6	1.6	6.8	20.3	917.5	18x28	N	917.5	15	Volume Rtg.	921.3	5.4	4.0		12.0		915.3	921	28.6	1.6	3.8	0.18	54.2	58	244A-1	
244A-2	1	12.9	1.5	2.9	8.6	918.2	15	N	918.2	15	Volume Rtg.	921.3	6.8	4.0		12.0		915.3	921	12.9	1.5	3.1	0.18	37.9	68	244A-2	
245	1	68.1	2.2	16.5	49.4	919.3	15	N	912.0	15	Volume Rtg.	916	21.0	0.0	6.0	12.0	Flood elevation based on creek. Existing pipe assumed to be adequate.	911.2	915	68.1	2.2	2.0	0.18	44.6	44.6	245	
246	1	33.3	0.0	8.3	25.0	908.4	12	N	908.4	42	Volume Rtg.	916	17.7	58.0		0.5	Flood elevation based on creek. Discharge is based on 1-foot of freeboard to low house. Several houses in the watershed will be flooded by the creek backwater during the 100 year event.	909.8	913	33.3	NA	NA	0.18	0	47	246	
247	1	6.9	0.3	1.7	5.0	948.8	OC	N	942.0	12	Volume Rtg.	944.5	1.1	1.0		1.0		941.5	944.5	6.9	0.29	0.4	0.18	18	18	247	
248	1	13.6	0.5	3.3	9.8	917.9	6	N	918.0	12	Volume Rtg.	920	2.0	1.0		1.0		919	924	13.6	0.48	0.3	0.18	7.7	36.4	248	
248-1	1	4.9	0.4	1.1	3.3	933.6	OC	Y	928.3	12	Volume Rtg.	931	1.6	3.0		12.0		NA	NA	4.9	0.44	1.6	0.18	34.3	47.7	248-1	
249	1	13.2	0.6	3.2	9.5	918.2	30	N	918.2	15	Volume Rtg.	920.9	1.4	0.0	6.0	1.0		916.9	920	13.2	0.58	1.0	0.18	33.8	33.8	249	
250	1	2.9	0.4	0.6	1.9	929.6	OC	N	926.0	12	Volume Rtg.	928	0.9	1.0		1.0		919.4	923	2.9	0.37	3.6	0.18	57.1	57.1	250	
Subtotal		239.3	9.2	57.5	172.6															239.3						Subtotal	

Abbreviations: INA - Information Not Available; OC - Outlet is an Open Channel; NA - Not Available; Y - Yes; N - No; HFP - High Flood Potential; DNR - Minnesota Department of Natural Resources; PWC - DNR Public Watercourse; PD - DNR Public Ditch; US - Upstream; WQ - Water Quality; Const. - Construction

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- 1 - Numbers shown are preliminary estimates taken from the 1999 WRMP. A detailed hydrologic and hydraulic analysis considering multiple storm durations should be performed as part of final design.
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Table 3-14b Watershed Data, Hydrologic Modeling, and Water Quality Modeling Summary
City of Minnetonka, Water Resources Management Plan
Minnehaha Creek Watershed

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Subwatershed No.	Foot Notes ^A	Hydrologic Modeling																Water Quality Modeling						Subwatershed No.		
		Watershed Characteristics				Existing Conditions			Proposed Conditions									Historical Elevations ^C		PondNET Information						
		Total Area (Ac)	Water Area (Ac)	Impervious Area (Ac)	Turf Area (Ac)	Existing Outlet Elevation	Existing Outlet Size (in)	Land-Locked?	Proposed Normal Elevation	Proposed Outlet Size (in) Approx	Hydrologic Evaluation Method	1% Annual Exceedance Probability Storm (100-yr) Flood Elevation	Storage (Ac-ft)	Average Discharge (cfs)	Peak Discharge (cfs)	Critical Storm Duration (hrs)	Comments	Normal Elevation	Flood Elevation	Total Direct Watershed Area (Ac)	Pond Area (Ac)	Mean Depth (ft)	Runoff Coefficient		Total Phosphorus Removal (%) Pond	Total Phosphorus Removal (%) Watershed
<i>Cedar Hills</i>																										
251	1	9.1	0.0	2.3	6.8	940.0	OC	N	NA	30	Volume Rtg.	NA	0.0	27.0		0.5		NA	NA	9.1	NA	NA	0.18	0	0	251
252	1	3.8	0.0	1.0	2.9	928.0	OC	N	NA	27	Volume Rtg.	NA	0.0	25.0		0.5		NA	NA	3.8	NA	NA	0.18	0	18.7	252
252-1	1	7.6	0.1	1.9	5.6	957.2	12	N	957.0	18	Volume Rtg.	962	0.4	12.0		0.5		NA	NA	7.6	0.1	1.0	0.18	28.1	28.1	252-1
253	1	8.0	0.5	1.9	5.6	915.3	OC	Y	915.3	OC	Volume Rtg.	919	2.1	24.0		0.5		915.3	919.5	8	0.5	0.5	0.18	18.6	24.7	253
254	1	13.6	1.2	3.1	9.3	932.3	OC	Y	915.2	12	Volume Rtg.	919	5.8	3.0		3.0		912.1	914.5	13.6	1.2	5.6	0.18	58	65	254
255	1	8.2	1.0	1.8	5.4	923.2	OC	Y	912.0	12	Volume Rtg.	914	2.2	3.0		48.0		910.6	913.5	8.2	1	1.0	0.18	19	63.1	255
256A	1	55.2	12.3	10.7	32.2	918.9	OC	Y	910.6	OC	Volume Rtg.	912.8	31.0	4.0		48.0		907.8	912.5	55.2	12.3	3.0	0.18	48.5	64	256A
256B	1	73.3	15.4	29.0	29.0	923.0	OC	Y	910.6	21	Volume Rtg.	912.8	35.0	4.0		48.0	Creek flood elevation at discharge point is 912.	907.8	912.5	73.3	15.4	1.5	0.34	35.2	51.9	256B
257	1	9.6	0.6	4.5	4.5	952.7	OC	Y	949.4	12	Volume Rtg.	952.5	2.1	1.0		3.0		945.4	949.5	9.6	0.6	4.7	0.34	62.2	62.2	257
258	1	42.7	0.3	33.9	8.5	909.9	22	N	910.6	54	Volume Rtg.	912.3	0.4	170.0		0.5	Excavated pond bottom for water quality.	907.5	912	42.7	0.3	3.0	0.52	27	32	258
258-1	1	11.1	0.0	2.8	8.3	955.9	15	N	955.9	15	Volume Rtg.	964	1.1	6.0		1.0		NA	NA	11.1	NA	NA	0.18	0	35.8	258-1
259	1	12.1	0.0	7.3	4.8	944.5	42	N	NA	42	Volume Rtg.	NA	0.0	44.0		0.5		NA	NA	12.1	NA	NA	0.40	0	0	259
260	1	61.5	1.5	48.0	12.0	907.8	Weir	N	905.8	42	Volume Rtg.	910.5	8.5	60.0		1.0	Existing pipe assumed to be adequate. Flood elevation based on creek.	906.5	910.5	61.5	1.5	3.0	0.52	46.5	46.5	260
260A	1	11.7	0.4	5.7	5.7	909.0	OC	N	904.0	12	Volume Rtg.	910.4	2.9	1.0		3.0	Flood elevation based on creek.	904	910.1	11.7	0.4	2.0	0.34	41.7	41.7	260A
260B	1	7.2	1.1	3.1	3.1	911.0	OC	Y	908.8	12	Volume Rtg.	910.4	1.4	1.0		3.0	Flood elevation based on creek.	908	910.1	7.2	1.1	0.6	0.34	32.1	32.12	260B
260C	1	10.2	0.8	4.7	4.7	908.4	Weir	N	907.1	36	Volume Rtg.	910.4	4.0	3.0		3.0	Existing pipe assumed to be adequate. Flood elevation based on creek.	908	910.5	10.2	0.8	3.0	0.34	56.1	56.1	260C
261	1	3.2	0.0	3.0	0.2	920.0	OC	N	NA	21	Volume Rtg.	NA	0.0	15.0		0.5		NA	NA	3.2	NA	NA	0.61	0	0	261
273	1	23.7	0.0	5.9	17.8	950.0	INA	N	950.0	18	Volume Rtg.	953.4	2.4	11.0		1.0		950	952.3	23.7	NA	NA	0.19	0	0	273
274	1	63.8	0.5	31.7	31.7	916.7	18	N	916.7	18	Hydrograph	924.6	12.0		21.0	0.5	Excavated pond bottom for water quality.	916.4	924	63.8	0.5	3.0	0.34	34.7	35.4	274
275	1	11.9	0.0	6.0	6.0	939.7	CB	N	NA	33	Volume Rtg.	NA	0.0	41.0		0.5		NA	NA	11.9	NA	NA	0.34	0	0	275
279	1	13.3	0.2	3.3	9.8	928.4	CB	N	929.0	30	Volume Rtg.	931	0.3	32.0		0.5		928.4	931.1	13.3	0.2	1.0	0.18	29	29	279
280	1	1.3	0.0	1.2	0.1	918.0	OC	N	NA	15	Volume Rtg.	NA	0.0	8.0		0.5		NA	NA	1.3	NA	NA	0.58	0	0	280
281	1	95.4	31.9	25.4	38.1	911.6	OC	Y	904.0	15	Volume Rtg.	910.4	205.0	6.0		48.0	Flood elevation based on creek.	898.5	NA	95.4	31.9	3.0	0.28	53.8	63.8	281
Subtotal		557.5	67.8	237.8	251.9															557.5						Subtotal

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Table 3-14b Watershed Data, Hydrologic Modeling, and Water Quality Modeling Summary
City of Minnetonka, Water Resources Management Plan
Minnehaha Creek Watershed

Table 3-14b Watershed Data, Hydrologic Modeling, and Water Quality Modeling Summary
City of Minnetonka, Water Resources Management Plan
Minnehaha Creek Watershed

Subwatershed No.	Foot Notes ^A	Hydrologic Modeling																Water Quality Modeling						Subwatershed No.			
		Watershed Characteristics				Existing Conditions			Proposed Conditions									Historical Elevations ^C		PondNET Information							
		Total Area (Ac)	Water Area (Ac)	Impervious Area (Ac)	Turf Area (Ac)	Existing Outlet Elevation	Existing Outlet Size (in)	Land-Locked?	Proposed Normal Elevation	Proposed Outlet Size (in) Approx	Hydrologic Evaluation Method	1% Annual Exceedance Probability Storm (100-yr) Flood Elevation	Storage (Ac-ft)	Average Discharge (cfs)	Peak Discharge (cfs)	Critical Storm Duration (hrs)	Comments	Normal Elevation	Flood Elevation	Total Direct Watershed Area (Ac)	Pond Area (Ac)	Mean Depth (ft)	Runoff Coefficient		Total Phosphorus Removal (%) Pond	Total Phosphorus Removal (%) Watershed	
<i>Lake Windsor</i>																											
263	1	7.5	1.1	1.6	4.8	947.1	12	N	947.1	12	Volume Rtg.	949	2.3	2.0		0.5		940.5	946.5	7.5	1.1	5.6	0.18	63.9	63.9	263	
264	1	10.9	0.0	2.7	8.2	945.1	13x22	N	NA	13x22	Volume Rtg.	NA	0.0	27.0		0.5		945.7	948	10.9	NA	NA	0.18	0	26	264	
265	1	11.1	0.0	2.8	8.3	942.7	INA	N	NA	33	Volume Rtg.	NA	0.0	36.0		0.5		939.4	940.5	11.1	NA	NA	0.18	0	0	265	
266	1	36.2	5.3	7.7	23.2	936.7	12	N	936.7	12	Volume Rtg.	938	8.6	6.0		0.5		936.9	938	36.2	5.3	2.0	0.18	45.8	49.8	266	
267	10	13.0	1.1	3.0	8.9	932.2	15	N	936.5	15	Volume Rtg.	937.2	1.3	7.0		1.0	Need to construct a berm; Existing conditions from As-builts (2002 Street Rehabilitation)	933.3	937.5	13	1.1	2.3	0.18	49.2	49.2	267	
268	1	3.2	0.0	0.8	2.4	953.0	OC	N	NA	15	Volume Rtg.	NA	0.0	71.0		0.5	Discharge includes flow from 270.	950.5	952	3.2	NA	NA	0.18	0	0	268	
269	10	22.9	5.5	4.4	13.1	932.1	6 ft weir	Y	932.1	30	Volume Rtg.	933.1	6.3	18.0		3.0	Flood elevation is above low house. Cost estimate assumes \$10,000 to flood protect house; Existing conditions from As-builts (2002 Street Rehabilitation)	929.2	934	22.9	5.5	5.0	0.18	57.8	67.1	269	
269-1	10	4.7	0.1	1.2	3.5	933.0	18" arch	N	933.1	18	Volume Rtg.	933.5	0.1	12.0		0.5	Existing conditions from As-builts (2002 Street Rehabilitation)	NA	NA	4.7	0.1	0.5	0.18	20.5	20.5	269-1	
269-2	1	7.1	0.4	1.7	5.1	932.8	OC	N	932.8	12	Volume Rtg.	936	0.9	70.0		0.5	Need to construct a berm.	NA	NA	7.1	0.36	1.0	0.18	26.9	26.9	269-2	
270	1	22.2	0.0	5.6	16.7	948.3	12	N	NA	42	Volume Rtg.	NA	0.0	63.0		0.5		948.5	951	22.2	NA	NA	0.18	0	0	270	
271	1	14.0	0.4	3.4	10.2	932.2	15	N	932.2	24	Volume Rtg.	934	0.9	22.0		0.5		931.6	934	14	0.35	2.0	0.18	43.5	43.5	271	
271-1	1	2.7	0.0	0.7	2.0	948.9	12	N	NA	12	Volume Rtg.	NA	0.0	8.0		0.5		NA	NA	2.7	NA	NA	0.18	0	0	271-1	
272	1	51.1	13.8	9.3	28.0	932.1	15	N	932.1	30	Volume Rtg.	933	12.4	18.0		3.0		931.4	934	51.1	13.8	10.0	0.18	63.5	79	272	
272-1	1	7.6	0.4	1.8	5.4	932.1	OC	N	932.1	OC	Volume Rtg.	933	0.7	18.0		3.0		NA	NA	7.6	0.4	0.5	0.18	23.4	23.4	272-1	
272-2	1	1.6	0.6	0.3	0.8	936.3	OC	Y	935.2	12	Volume Rtg.	935.4	0.1	3.0		3.0		NA	NA	1.6	0.6	2.0	0.18	48.6	48.6	272-2	
276	3, 7	5.9	0.8	1.3	3.8	920.0	12	N	920.0	12	Hydrograph	921.2	1.0			1.0	0.5	Existing Conditions based on As-builts; Modeling from Enclave	916.5	919	5.9	0.8	3.0	0.18	54.5	54.5	276
277	1	5.1	0.5	1.8	2.8	915.9	12	N	915.9	15	Volume Rtg.	916.5	0.3	10.0		0.5		914.7	916	5.1	0.5	2.9	0.28	47.1	59.4	277	

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Table 3-14b Watershed Data, Hydrologic Modeling, and Water Quality Modeling Summary
 City of Minnetonka, Water Resources Management Plan
 Minnehaha Creek Watershed

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 City of Minnetonka, Water Resources Management Plan
 Minnehaha Creek Watershed

Subwatershed No.	Foot Notes ^A	Hydrologic Modeling															Water Quality Modeling						Subwatershed No.			
		Watershed Characteristics				Existing Conditions			Proposed Conditions								Historical Elevations ^C		PondNET Information							
		Total Area (Ac)	Water Area (Ac)	Impervious Area (Ac)	Turf Area (Ac)	Existing Outlet Elevation	Existing Outlet Size (in)	Land-Locked?	Proposed Normal Elevation	Proposed Outlet Size (in) Approx	Hydrologic Evaluation Method	1% Annual Exceedance Probability Storm (100-yr) Flood Elevation	Storage (Ac-ft)	Average Discharge (cfs)	Peak Discharge (cfs)	Critical Storm Duration (hrs)	Comments	Normal Elevation	Flood Elevation	Total Direct Watershed Area (Ac)	Pond Area (Ac)	Mean Depth (ft)		Runoff Coefficient	Total Phosphorus Removal (%) Pond	Total Phosphorus Removal (%) Total Watershed
278-1	1	13.4	1.2	3.7	8.5	912.3	15	N	912.3	48	Volume Rtg.	913.2	1.2	70.0		0.5	Discharge includes flow from 277.	910.1	916	13.4	1.2	1.0	0.22	28.2	43.5	278-1
278-2	1	27.9	1.2	6.7	20.0	909.9	24	N	912.3	42	Volume Rtg.	913.3	1.5	50.0		0.5	Flood elevation is above low house. Cost estimate assumes \$10,000 to flood protect house.	910.1	916	27.9	1.24	1.0	0.18	33.9	33.9	278-2
315	1	46.6	2.2	22.2	22.2	898.5	24	N	898.5	36	Volume Rtg.	905	14.6	31.0		2.0		898.5	903	46.6	2.2	0.5	0.34	7.4	56.2	315
316	1	8.3	0.0	2.1	6.2	936.5	CB	N	NA	30	Volume Rtg.	NA	0.0	30.0		0.5		NA	NA	8.3	NA	NA	0.18	0	0	316
317	1	6.2	0.0	1.6	4.7	946.5	CB	N	NA	21	Volume Rtg.	NA	0.0	11.0		0.5		NA	NA	6.2	NA	NA	0.18	0	0	317
318	1	12.9	0.3	6.3	6.3	924.0	OC	N	918.0	15	Volume Rtg.	924	2.1	9.0		1.0		NA	NA	12.9	0.27	2.8	0.34	41.9	41.9	318
Subtotal		342.1	34.8	92.4	214.9															342.1						Subtotal

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City of Minnetonka, Water Resources Management Plan
Minnehaha Creek Watershed

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City of Minnetonka, Water Resources Management Plan
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Subwatershed No.	Foot Notes ^A	Hydrologic Modeling																Water Quality Modeling						Subwatershed No.		
		Watershed Characteristics				Existing Conditions			Proposed Conditions									Historical Elevations ^C		PondNET Information						
		Total Area (Ac)	Water Area (Ac)	Impervious Area (Ac)	Turf Area (Ac)	Existing Outlet Elevation	Existing Outlet Size (in)	Land-Locked?	Proposed Normal Elevation	Proposed Outlet Size (in) Approx	Hydrologic Evaluation Method	1% Annual Exceedance Probability Storm (100-yr) Flood Elevation	Storage (Ac-ft)	Average Discharge (cfs)	Peak Discharge (cfs)	Critical Storm Duration (hrs)	Comments	Normal Elevation	Flood Elevation	Total Direct Watershed Area (Ac)	Pond Area (Ac)	Mean Depth (ft)	Runoff Coefficient		Total Phosphorus Removal (%) Pond	Total Phosphorus Removal (%) Watershed
<i>Lake Minnetonka North</i>																										
133A-9	1	55.0	10.0	11.3	33.8	INA	INA	N	936.2	24	Volume Rtg.	937	8.2	8.0	1.0	Drainage area is approximate. Verify topographic information in Wayzata. Wetland area was estimated and includes area in Wayzata.	NA	NA	55	10	468.1	0.18	NE	NE	133A-9	
133A-11	1	75.0	40.0	8.8	26.3	931.4	36	N	931.4	36	No Analysis Performed	936	NE	NE	NE	Wetland area only includes city of Minnetonka. Topographic and other information not available for hydrologic analysis. Flood elevation based on low house in Minnetonka. Existing pipe assumed to be adequate. Verify topographic information in Wayzata.	NA	NA	75	40	0.5	0.18	NE	NE	133A-11	
133A-12	1	9.1	2.9	1.6	4.7	929.2	24	N	929.2	24	No Analysis Performed	935.2	12.3	NE	NE	Topographic information not available for upstream watersheds. Existing pipe assumed to be adequate.	NA	NA	9.1	2.9	#VALUE!	0.18	NE	NE	133A-12	
303-1	1	19.0	2.3	4.2	12.5	955.1	24x48	N	956.0	12	Volume Rtg.	957	2.9	2.0	3.0		956.6	958	19	2.3	1.0	0.18	33.8	40.5	303-1	
303-2	1	4.2	0.4	1.0	2.9	956.3	18	N	956.7	12	Volume Rtg.	959	0.4	3.0	1.0		NA	NA	4.2	0.4	3.4	0.18	55.8	55.8	303-2	
304	1	5.8	1.2	1.1	3.4	946.7	OC	Y	943.3	12	Volume Rtg.	944	0.9	1.0	2.0		941.6	944.5	5.8	1.22	4.1	0.18	51.2	67	304	
305	1	7.2	0.4	1.7	5.1	955.3	OC	N	953.2	18	Volume Rtg.	954	0.3	15.0	0.5		947.4	954	7.2	0.37	2.6	0.18	50.5	50.5	305	
306-3	1	13.0	2.2	2.7	8.1	944.5	OC	Y	942.0	12	Volume Rtg.	943.4	3.2	1.0	12.0		940.8	944	12.96	2.21	1.5	0.18	30.1	62.9	306-3	
306-4	1	9.8	0.0	2.5	7.4	938.8	15	N	938.8	12	Volume Rtg.	943	2.3	1.0	96.0		940.8	944	9.8	NA	NA	0.18	0	52.5	306-4	
307-1	1	9.5	2.6	1.7	5.2	929.9	18	N	932.0	12	Volume Rtg.	933	2.8	1.0	1.0		930.2	931.5	9.5	2.59	1.0	0.18	36.5	36.5	307-1	
307-2	1	1.0	0.0	0.3	0.8	930.6	4	N	930.6	4	Volume Rtg.	932.5	0.1	1.0	0.5		NA	NA	1	NA	NA	0.18	0	0	307-2	
308	1	13.0	2.0	5.5	5.5	942.5	OC	N	936.0	12	Volume Rtg.	938	5.0	1.0	12.0		934.8	936.5	13	2	5.5	0.34	65.2	65.2	308	
309	1	9.4	1.6	3.9	3.9	941.0	OC	N	940.0	12	Volume Rtg.	941	1.8	1.0	1.0		937	938.5	9.4	1.6	4.0	0.34	58.5	58.5	309	

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 Minnehaha Creek Watershed

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310	1	3.1	0.4	0.7	2.0	947.0	OC	N	944.0	12	Volume Rtg.	946	1.0	1.0		1.0		942	946	3.1	0.43	1.1	0.18	41.8	41.8	310	
311	1	4.2	0.3	2.0	2.0	943.5	OC	N	943.7	OC	Volume Rtg.	946	1.3	1.0		6.0		940.9	945	4.2	0.3	0.5	0.34	26.1	26.1	311	
312	1	4.6	0.6	2.0	2.0	947.0	OC	Y	942.0	12	Volume Rtg.	946	3.2	1.0		24.0		936	940	4.6	0.6	3.5	0.34	56	61.5	312	
313	1	20.5	6.8	6.9	6.9	940.1	18	N	940.1	12	Volume Rtg.	941	7.0	3.0		24.0		936	938.5	20.5	6.8	5.6	0.34	60	71.3	313	
314	1	3.8	0.4	1.7	1.7	942.0	OC	N	940.0	12	Volume Rtg.	942	1.0	1.0		3.0		937.8	941	3.8	0.4	1.4	0.34	40.5	40.5	314	
GB-4	1	3.3	0.5	0.7	2.1	933.0	OC	Y	931.9	12	Volume Rtg.	933	0.7	1.0		1.0		NA	NA	3.3	0.5	3.4	0.18	56.9	56.9	GB-4	
GB-5	1	3.3	0.6	0.7	2.0	932.6	15	N	932.6	12	Volume Rtg.	935	0.7	1.0		48.0		NA	NA	3.3	0.6	1.8	0.18	16.5	60.3	GB-5	
Subtotal		273.8	75.2	60.6	138.0															273.76						Subtotal	
TOTAL		6998.1	552.7	2134.8	4269.7															6998.07						TOTAL	

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