

APPENDIX A

Table 1. Submodel Prioritization Comparison

Submodel Abbreviation	Submodel Name	Location	Frequency of Surface Flooding			City GIS Flooding		Depth of Flooding / Severity			Land Use			Model Score	Number of Structures Flooded	Sanitary Sewer I/I Impacts			Prior Damage Costs			Community Impacts			Community Score	Total Priority Score	Lift Station	Arterial Roads	City Notes (City comments/ R-M comments)	Alternatives					
			500-yr	100-yr	10-yr	No	Yes	0.0' - 1.0'	1.1' - 2.0'	2.1' +	Open	Commercial	Residential			None	Moderate	Significant	None	Moderate	Significant	None	Moderate	Significant											
			1	2	3	1	2	1	2	3	1	2	3			0	2	4	0	2	4	0	2	4											
MRR5.1	Commerce Dr. Creek	Chandwick Dr. between West St and Commerce Dr.			3		2			3			3	54	22									22	76			Red Fox Ct low spot and Commerce Drive accessibility.	X	X		X	X	X	
MRR5.2	Deer Trail	Milford St between Commerce Dr. and Johnson St.			3		2			3			3	54	28							2		30	84		X	South St. is a main thoroughfare to Milford St. & floods during heavy rain events. At least 1 lane to remain open during 500-year event./ South St. between Maplecrest Ln and Milford St. Low spot at Winnebago Way.	X				X		
MRR5.3	Bethseda	Hoffman Rd between Fairview Dr. and Hoffman Dr.			3		2	1				2		12	0								4	4	16		X	Fairview Dr./Hoffman Rd. are access to WWTP; multiple feet of flooding recorded in 2018. At least 1 lane to remain open in 500-year events.	X					X	
MRR5.5	Downstream Watertown HS Creek	S. Monroe St. between Elm St. and Lafayette St.			3		2			3		2		36	43									43	79			Continue piping of creek between parking lot outfall and Bernard St.	X						
MRR5.6	Downstream Dayton Creek	West St. between Dayton St. and Milford St.			3	1				3	1			9	10									10	19			Dayton St. access.	X					X	
MRR5.8	Upper Dayton Creek	Louisa St between Welsh Rd. and Elba St.			3		2		2				3	36	15							2		17	53		X	Drainage ditch in backyards between Meadow and Clement overtops in heavy rain events; high frequency of maintenance needed; downstream Dayton St. is a main North-South route crossing the RR tracks; at least 1 lane to remain open during 500-year events/ Underground storage upstream and upsizing downstream.	X	X				X	
MRR5.10	Brandt-Quirk Creek	Carriage Hill Dr. between Endeavour Dr to W. Main St.			3		2			3			3	54	15								4	19	73		X	W. Main St. Viaduct under RR Tracks is impassable in heavy events; at least 1 lane to remain open during 500-year event.	X	X				X	
MRR6.1	North of RR	Residential between Jefferson and Railroad tracks			3	1				3			3	27	72			4			4		4	84	111			Homes around 7th, 8th Streets get flooded; some basement back-ups reported/ Intersection of 9th and Dodge sees overland flooding into adjacent yards.	X	X	X			X	
MRR6.2	Mary St.	Mary St. between Dakota St. and Terry Ln			3		2			3		2		36	36				2				4	42	78			Twelfth St. is a main arterial crossing RR tracks; at least 1 lane to remain open during 500-year events. Manhole cover on Sunset routinely pops off structure during heavy rain events. Hart St. routinely floods - impassable to trucks and other vehicles. WE Energies property has historically flooded, but private storm was up-sized in 2020. High groundwater.	X	X				X	
MRR6.3	North ALDI	River Dr between Railroad Tracks and William St.			3		2	1					3	18	4							2		6	24		X	Residential areas flood in large rain events. / Main area of concern is along River Drive and at the intersection of River Drive and 3rd Street.	X	X				X	
MRR6.4	ALDI Creek	Franklin St from Rock River to Lakeside Terrace			3	1				3			3	27	9							2		11	38			Intersection of Mary & Neenah floods in heavy rain events. Stormwater ditch upstream of Utah Street floods regularly. Storm pipe runs under Schurz School property.	X	X				X	
MRR6.6	Lake Victoria	Franklin St from Dakota St to 10th St.			3	1		1					3	9	5							2		7	16	X		Lakeside Terrace historically floods in heavy rain events; storm improvements have been made in the past. High groundwater? French Drains here.	X					X	
MRR6.8	Airport Creek	Church St between Jefferson Rd and Granit Ln.			3	1				3			3	27	3							2		5	32			Lauren Lane area floods in heavy rain events. At least 1 lane to remain open during 500-year event.	X					X	
SSL1.3	Drain South to Rock	Residential between 2nd St and 4th St.			3		2			3			3	54	31								4	35	89		X	Spaulding St is a main road on north side of City crossing Silver Creek; at least 1 lane to remain open durign 500-year event; Spaulding & Center is a known flooding problem area/ Spaulding St and N 2nd St. intersection and Spaulding and Center St. intersection.	X	X				X	
SSL1.5	Drain to HWY 16	Medowbrook Dr between 4th St. and Memrial Dr.			3		2		2			2		24	2								4	6	30			Main Route to Hospital & Medical Facilities; Frontage Road to have at least 1 lane passable during 500-year event.	X	X				X	

Sanitary Sewer I/I impacts example definition: Moderate would represent an incrase of flows at the treatment plant and Significant would represent flow backs into basements.

Prior Flooding Cost example definition: Moderate would represeent costs up to \$20,000 and Significant would represent costs above \$20,000.

Community Impacts example definition: Moderate would represent an inconvenience to community events, included but not limited to markets and traffic detours, and Significant would represent road closures for multiple days.

Rain Barrels: Rain barrels are a green infrastructure alternative that can be applied to all areas with heavy residential and industrial land use. It was not modeled in all alternatives because in the larger rain events the reduction effects are small. Rain barrel assumptions included one house would have a 55-gallon drum as a rain barrel.