WinSLAMM version 10.4.1 was used to model TSS and TP removal by the proposed best stormwater management practices. An existing conditions model was used to establish the average annual baseline TSS and TP loading from the contributing area using the Wisconsin annual regulatory rainfall series for the Minneapolis area (3/13/1959 to 11/04/1959). Additional models were created of phase 1 and phase 2 of the proposed storm sewer modifications and BMP installations. To address flow routing limitations within WinSLAMM the proposed conditions models utilized a modified rainfall file that was adjusted to exclude the volume of rain that would bypass the intercepting storm sewer. The iron enhanced sand filter was modeled as a bioretention device in WinSLAMM with 90% removal of particulate material filtrating though the media. This model likely underpredicts the removal of TP since WinSLAMM does not account the removal of dissolved P reacting with the iron filings. The resulting modeling found that on an annual basis, at the end of phase 1 of the proposed BMPs remove 38% and 31% of the TSS and TP, respectively. While at the end of phase 2, in total 86% and 68% of the total TSS and TP generated will be removed.

	Annual Average Loading			
	TSS (lb)	% of total	TP (lb)	% of total
Existing Conditions - Generated from Contributing Area	**3600**	**100%**	**6.398**	**100%**
Removed by Existing Catch Basin Sumps	461	13%	0.659	10%
Removed by Proposed Wet Pond (Phase 1)	1357	38%	1.976	31%
Removed by Proposed Iron Enhanced Sand Filter (Phase 2)	1169	32%	1.704	27%
Removed by Rain Garden (Phase 2)	108	3%	0.883	14%
Total Removed	**2986.8**	**86%**	**4.339**	**68%**