

Table 1: Subwatersheds of Afton		
Subwatershed		
Subwatershed Name	Symbol	Acres
Rest Area Pond	RAP	1926.4
Rest Area Pond	RAP-1	254.8
Rest Area Pond	RAP-2	194.8
Rest Area Pond	RAP-3	46.4
Rest Area Pond	RAP-4	38.8
Rest Area Pond	RAP-5	42.8
Rest Area Pond	RAP-6	13.2
Rest Area Pond	RAP-7	111.0
Rest Area Pond	RAP-8	139.3
Rest Area Pond	RAP-9	573.5
Rest Area Pond	RAP-10	21.4
Rest Area Pond	RAP-11	250.5
Rest Area Pond	RAP-12	126.5
Rest Area Pond	RAP-13	113.4
Fahlstrom Pond	FAL	2612.8
Fahlstrom Pond	FAL-1	213.6
Fahlstrom Pond	FAL-2	66.1
Fahlstrom Pond	FAL-3	189.6
Fahlstrom Pond	FAL-4	272.2
Fahlstrom Pond	FAL-5	792.8
Fahlstrom Pond	FAL-6	31.0
Fahlstrom Pond	FAL-7	44.4
Fahlstrom Pond	FAL-8	632.1
Fahlstrom Pond	FAL-9	371.0
Lake Edith	EDI	1496.4
Lake Edith	EDI-1	691.9
Lake Edith	EDI-2	55.1
Lake Edith	EDI-3	247.1
Lake Edith	EDI-4	490.0
Lake Edith	EDI-5	12.3
Valley (Branch) Creek*		
North Valley Branch	NVB	1279.5
North Valley Branch	NVB-1	285.6
North Valley Branch	NVB-2	124.1
North Valley Branch	NVB-3	213.6
North Valley Branch	NVB-4	656.2
Middle Valley Branch	MVB	1208.0
Middle Valley Branch	MVB-1	175.1
Middle Valley Branch	MVB-2	501.7
Middle Valley Branch	MVB-3	220.2

Table 1

Middle Valley Branch	MVB-4	219.2
Middle Valley Branch	MVB-5	91.8
South Valley Branch	SVB	5172.5
South Valley Branch	SVB-1	561.8
South Valley Branch	SVB-10	166.7
South Valley Branch	SVB-11	227.9
South Valley Branch	SVB-12	17.4
South Valley Branch	SVB-2	518.3
South Valley Branch	SVB-3	131.9
South Valley Branch	SVB-4	661.1
South Valley Branch	SVB-5	296.2
South Valley Branch	SVB-6	906.8
South Valley Branch	SVB-7	165.2
South Valley Branch	SVB-8	520.9
South Valley Branch	SVB-9	998.4
Kelles Coulee	KCO-1	2348.6
Bailey Lake	BL	435.2
Swede Hill Creek	SHC-1	835.7
Trout Brook	TRB	5374.7
Trout Brook	TRB-1	2134.1
Trout Brook	TRB-2	726.6
Trout Brook	TRB-3	450.1
Trout Brook	TRB-4	2063.9
*Valley Creek is also know as Valley Branch Creek with the branches also know as:		
South Branch Valley Branch Creek		
North Branch Valley Branch Creek		
Main Branch Valley Branch Creek.		

Table 1

Table 2: Erosivity Index Values by Subwatersheds		
Watershed Name	EI Value	EI Ranking
Rest Area Pond	3.39	Low
Rest Area Pond 1	4.84	Moderate
Rest Area Pond 2	4.59	Moderate
Rest Area Pond 3	19.29	High
Rest Area Pond 4	0.6	Low
Rest Area Pond 5	3.98	Low
Rest Area Pond 6	4.01	Moderate
Rest Area Pond 7	3.91	Low
Rest Area Pond 8	3.32	Low
Rest Area Pond	1.94	Low
Fahlstrom Pond	5.92	Moderate
Fahlstrom Pond 1	6.88	Moderate
Fahlstrom Pond 2	6.76	Moderate
Fahlstrom Pond 3	4.71	Moderate
Fahlstrom Pond 4		
Fahlstrom Pond 5	4.67	Moderate
Fahlstrom Pond 6	2.67	Low
Fahlstrom Pond 7	3.08	Low
Fahlstrom Pond 8	7.51	Moderate
Fahlstrom Pond 9	6.43	Moderate
Lake Edith	6.59	Moderate
Lake Edith 1	6.34	Moderate
Lake Edith 2	5.98	Moderate
Lake Edith 3	7.71	Moderate
Lake Edith 4	6.48	Moderate
Lake Edith 5	4.03	Moderate
Valley Branch Creek		High
North Valley Branch	8.65	High
North Valley Branch 1	13.94	High
North Valley Branch 2	6.78	Moderate
North Valley Branch 3	8.93	High
North Valley Branch 4	6.41	Moderate
Middle Valley Branch	10.51	High
Middle Valley Branch 1	2.54	Low
Middle Valley Branch 2	13.49	High
Middle Valley Branch 3	7.9	Moderate
Middle Valley Branch 4	12.45	High
Middle Valley Branch 5	9.16	High
South Valley Branch	11.01	High
South Valley Branch 1	16.33	High
South Valley Branch 2	15.17	High
South Valley Branch 3	6.36	Moderate
South Valley Branch 4	10.93	High
South Valley Branch 5	12.79	High

South Valley Branch 6	8.36	High		
South Valley Branch 7	10.89	High		
South Valley Branch 8	9.24	High		
South Valley Branch 9	10.68	High		
South Valley Branch 10	11.45	High		
South Valley Branch 11	5.28	Moderate		
South Valley Branch 12	4.27	Moderate		
Kelles Coulee	19.98	High		
Bailey Lake	4.58	Moderate		
Swede Hill	15.84	High		
Trout Brook	14.27	High		
Trout Brook 1	18.03	High		
Trout Brook 2	18.99	High		
Trout Brook 3	7.54	Moderate		
Trout Brook 4	10.21	High		

Table 3: Water Resource Ranking

<u>Watershed Name</u>	<u>Water Quality Ranking</u>	<u>Erosivity Index Ranking</u>	<u>Predominant Groundwater Sensitivity Ranking*</u>
Rest Area Pond	Low	Low	High
Fahlstrom Pond	Low	Moderate	High
Lake Edith	High	Moderate	High/Moderate
North Valley (Branch) Creek	High	High	High
Middle Valley (Branch) Creek	High	High	Moderate
Lower Valley (Branch) Creek	High	High	High/Moderate
Kelles Coulee	High	High	Moderate
Bailey Lake	Low	Moderate	Moderate
Swede Hill	High	High	Moderate\Low
Trout Brook	High	High	Moderate
* = Groundwater Sensitivity Ranking was not determined on a watershed basis.			
Note: Desirable water quality outcomes for existing conditions:			
Water quality ranking = high			
Erosivity Index = low			
Groundwater Sensitivity = low			

Table 4: Natural Resource Inventory -combined Water Resources Evaluation Results

Feature Inventoried	Feature Type	Additional Inventory Information	Valley Creek Number of Features Mapped	Kelles Coulee Number of Features Mapped	Trout Brook Number of Features Mapped
Centerline Stream	line	percent canopy, riparian Landuse	NA	NA	NA
Sediment Delivery	line	type, severity index	21	29	29
Sediment-ation Site	area	Depression Area Type	25	5	5
Stream Width	point	number	50	5	5
Streambank erosion	point	condition, size	59	37	37
Plant Population	point	size, type	50	NA	NA
Human-Made	point	type, extent/feature	458	76	76
Sediment Sample Point	point	Number	42	NA	NA
Tree Downfalls	point	none	118	70	70
Seeps	point	none	48	16	16
Springs	point	none	12	0	0

Table 5. Water Resource Recommendations

Watershed Name(s)	Specific Location(s)	Priority Reason(s)	Recommended Action(s)
South Valley Creek	Perennial reaches in Sections 15,16,17	Active springs, reproducing trout stream, excellent water quality, sensitive groundwater, high erosion potential	<ol style="list-style-type: none"> Promote conservation easements for resource protection. Promote buffer strips along perennial and intermittent stream. Develop delivery program to provide technical, financial, and educational resources to interested vested landowners. Develop priority implementation plan based on suggestions developed by the Valley Creek subwatershed technical/citizen group.
Kelles Coulee	Perennial reaches, Section 22	High erosion potential, high water quality	<ol style="list-style-type: none"> Provide maintenance recommendation to protect existing quality. Promote conservation easements to protect existing quality resource. Further investigate the watershed contributing to erosion and sedimentation concerns.
Valley Creek/Kelles Coulee/Trout Brook/ Swede Hill	Sediment Delivery Areas	Sedimentation reduces water quality, watershed instability, reduces habitat quality, contribution of nutrients	<ol style="list-style-type: none"> Further analyze areas of instability & provide remedial actions based on priorities. Educate landowners regarding watershed drainage and the relationship with their watershed.
Valley Creek/Trout Brook	Major in-channel ponds	provides significant sediment removal for downstream channel, thermal impacts, habitat	<ol style="list-style-type: none"> Investigate the value of in-stream ponding for sediment retention, and conduct study of historic sedimentation. Investigate impacts of in-stream ponds.
Lake Edith	Lake Edith/Metcalf Marsh Complex	Unique Afton resource, high water quality	<ol style="list-style-type: none"> Develop watershed management plan to protect the lake water quality. Provide riparian landowners resources for lakeshore protection.
Kelles Coulee/Trout Brook	Various location within perennial streams	Establish baseline water quality monitoring data	<ol style="list-style-type: none"> Establish monitoring along the perennial stream to begin investigation of existing water quality, and stream dynamics. Establish biomonitoring program. Investigate the opportunity to maintain/establish the stream as a trout stream and/or other trout fishery.

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