

APPENDIX A

DAILY RAINFALL DATA FROM SAVAGE GAUGING STATION AND RUNOFF VOLUMES GENERATED BY LAND USE

Nondegradation Analysis
 City of Savage
 WSB Project No. 1436-10

Date	Precipitation (S)	Impervious		Developed Non-Imp		Ag-A Soils		Ag-B		Ag-C		Ag-D		Open-A		Open-B		Open-C		Open-D	
		Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)
04/20/97	0.04	0.20	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/01/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/02/97	0.19	0.20	0.063	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/03/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/04/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/05/97	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/06/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/07/97	0.32	0.20	0.161	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/08/97	0.21	0.20	0.077	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/09/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/10/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/11/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/12/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/13/97	0.11	0.20	0.018	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/14/97	0.06	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/15/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/16/97	0.02	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/17/97	0.05	0.20	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/18/97	0.12	0.20	0.022	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/19/97	0.04	0.20	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/20/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/21/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/22/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/23/97	0.03	0.20	0.001	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/24/97	0.33	0.20	0.170	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/25/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/26/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/27/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/28/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/29/97	0.21	0.20	0.077	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/30/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/31/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/01/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/02/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/03/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/04/97	0.09	0.20	0.010	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/05/97	0.29	0.20	0.137	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/06/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/07/97	0.31	0.20	0.153	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/08/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/09/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/10/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/11/97	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/12/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/13/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/14/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/15/97	0.15	0.20	0.038	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/16/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/17/97	0.06	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/18/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/19/97	0.18	0.20	0.056	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/20/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/21/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/22/97	0.08	0.20	0.006	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/23/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/24/97	0.94	0.20	0.733	6.39	0	4.71	0	2.82	0.044	1.90	0.127	1.49	0.193	10.00	0	5.87	0	3.33	0.021	2.35	0.079
06/25/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/26/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/27/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/28/97	1.01	0.20	0.801	6.39	0	4.71	0.001	2.82	0.061	1.90	0.158	1.49	0.229	10.00	0	5.87	0	3.33	0.032	2.35	0.101
06/29/97	0.58	0.20	0.391	6.39	0	4.71	0	2.82	0	1.90	0.019	1.49	0.045	10.00	0	5.87	0	3.33	0	2.35	0
06/30/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0

Nondegradation Analysis
 City of Savage
 WSB Project No. 1436-10

Date	Precipitation (S)	Impervious		Developed Non-Imp		Ag-A Soils		Ag-B		Ag-C		Ag-D		Open-A		Open-B		Open-C		Open-D	
		Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)
07/01/97	2.85	0.20	2.619	6.39	0.310	4.71	0.551	2.82	1.023	1.90	1.394	1.49	1.609	10.00	0.067	5.87	0.372	3.33	0.864	2.35	1.199
07/02/97	0.1	0.20	0.013	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/03/97	0.11	0.20	0.018	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/04/97	0.07	0.20	0.004	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/05/97	0.02	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/06/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/07/97	0.61	0.20	0.419	6.39	0	4.71	0	2.82	0.001	1.90	0.025	1.49	0.054	10.00	0	5.87	0	3.33	0	2.35	0.008
07/08/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/09/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/10/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/11/97	0.26	0.20	0.114	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/12/97	0.02	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/13/97	0.48	0.20	0.309	6.39	0	4.71	0	2.82	0	1.90	0.006	1.49	0.022	10.00	0	5.87	0	3.33	0	2.35	0
07/14/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/15/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/16/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/17/97	3.71	0.20	3.476	6.39	0.670	4.71	1.026	2.82	1.658	1.90	2.117	1.49	2.372	10.00	0.250	5.87	0.765	3.33	1.452	2.35	1.880
07/18/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/19/97	0.42	0.20	0.247	6.39	0	4.71	0	2.82	0	1.90	0.001	1.49	0.009	10.00	0	5.87	0	3.33	0	2.35	0
07/20/97	0.3	0.20	0.145	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/21/97	0.34	0.20	0.178	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/22/97	2.69	0.20	2.460	6.39	0.255	4.71	0.474	2.82	0.914	1.90	1.265	1.49	1.472	10.00	0.045	5.87	0.311	3.33	0.764	2.35	1.080
07/23/97	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/24/97	0.02	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/25/97	0.48	0.20	0.282	6.39	0	4.71	0	2.82	0	1.90	0.003	1.49	0.016	10.00	0	5.87	0	3.33	0	2.35	0
07/26/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/27/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/28/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/29/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/30/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/31/97	0.12	0.20	0.022	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/01/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/02/97	0.36	0.20	0.195	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/03/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/04/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/05/97	0.35	0.20	0.186	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/06/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/07/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/08/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/09/97	0.06	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/10/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/11/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/12/97	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/13/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/14/97	0.67	0.20	0.475	6.39	0	4.71	0	2.82	0.004	1.90	0.038	1.49	0.074	10.00	0	5.87	0	3.33	0	2.35	0.016
08/15/97	0.04	0.20	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/16/97	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/17/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/18/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/19/97	3.19	0.20	2.958	6.39	0.440	4.71	0.727	2.82	1.266	1.90	1.674	1.49	1.906	10.00	0.127	5.87	0.515	3.33	1.087	2.35	1.461
08/20/97	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/21/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/22/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/23/97	0.05	0.20	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/24/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/25/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/26/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/27/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/28/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/29/97	0.02	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/30/97	1.24	0.20	1.025	6.39	0	4.71	0.018	2.82	0.131	1.90	0.267	1.49	0.364	10.00	0	5.87	0	3.33	0.084	2.35	0.191
08/31/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0

Nondegradation Analysis
 City of Savage
 WSB Project No. 1436-10

Date	Precipitation (S)	Impervious		Developed Non-Imp		Ag-A Soils		Ag-B		Ag-C		Ag-D		Open-A		Open-B		Open-C		Open-D	
		Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)
09/01/97	0.25	0.20	0.106	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/02/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/03/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/04/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/05/97	0.22	0.20	0.084	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/06/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/07/97	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/08/97	0.48	0.20	0.300	6.39	0	4.71	0	2.82	0	1.90	0.005	1.49	0.020	10.00	0	5.87	0	3.33	0	2.35	0
09/09/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/10/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/11/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/12/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/13/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/14/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/15/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/16/97	1.97	0.20	1.745	6.39	0.067	4.71	0.185	2.82	0.468	1.90	0.723	1.49	0.882	10.00	0	5.87	0.095	3.33	0.366	2.35	0.586
09/17/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/18/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/19/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/20/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/21/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/22/97	0.04	0.20	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/23/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/24/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/25/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/26/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/27/97	0.19	0.20	0.063	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/28/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/29/97	0.03	0.20	0.001	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/30/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/01/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/02/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/03/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/04/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/05/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/06/97	0.09	0.20	0.010	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/07/97	0.03	0.20	0.001	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/08/97	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/09/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/10/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/11/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/12/97	1.43	0.20	1.211	6.39	0.003	4.71	0.046	2.82	0.203	1.90	0.373	1.49	0.487	10.00	0	5.87	0.011	3.33	0.142	2.35	0.279
10/13/97	0.09	0.20	0.010	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/14/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/15/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/16/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/17/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/18/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/19/97	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/20/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/21/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/22/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/23/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/24/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/25/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/26/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/27/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/28/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/29/97	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/30/97	0.02	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/31/97	0.35	0.20	0.186	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/01/97	0.03	0.20	0.001	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0

Nondegradation Analysis
 City of Savage
 WSB Project No. 1436-10

Date	Precipitation (S)	Impervious		Developed Non-Imp		Ag-A Soils		Ag-B		Ag-C		Ag-D		Open-A		Open-B		Open-C		Open-D	
		Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)
03/03/98	0.14	0.20	0.032	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/04/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/05/98	0.08	0.20	0.006	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/06/98	0.05	0.20	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/07/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/08/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/09/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/10/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/11/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/12/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/13/98	0.1	0.20	0.013	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/14/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/15/98	0.11	0.20	0.018	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/16/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/17/98	0.02	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/18/98	0.26	0.20	0.114	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/19/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/20/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/21/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/22/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/23/98	0.02	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/24/98	0.02	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/25/98	0.02	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/26/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/27/98	1.52	0.20	1.300	6.39	0.009	4.71	0.083	2.82	0.242	1.90	0.426	1.49	0.549	10.00	0	5.87	0.019	3.33	0.174	2.35	0.325
03/28/98	0.09	0.20	0.010	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/29/98	0.79	0.20	0.589	6.39	0	4.71	0	2.82	0.017	1.90	0.072	1.49	0.122	10.00	0	5.87	0	3.33	0	2.35	0.039
03/30/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/31/98	1.23	0.20	1.015	6.39	0	4.71	0.017	2.82	0.127	1.90	0.262	1.49	0.357	10.00	0	5.87	0	3.33	0.081	2.35	0.186
04/01/98	0.13	0.20	0.027	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/02/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/03/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/04/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/05/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/06/98	0.54	0.20	0.354	6.39	0	4.71	0	2.82	0	1.90	0.012	1.49	0.034	10.00	0	5.87	0	3.33	0	2.35	0
04/07/98	0.16	0.20	0.044	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/08/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/09/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/10/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/11/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/12/98	0.09	0.20	0.010	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/13/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/14/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/15/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/16/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/17/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/18/98	0.07	0.20	0.004	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/19/98	0.48	0.20	0.300	6.39	0	4.71	0	2.82	0	1.90	0.005	1.49	0.020	10.00	0	5.87	0	3.33	0	2.35	0
04/20/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/21/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/22/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/23/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/24/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/25/98	0.07	0.20	0.004	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/26/98	0.02	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/27/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/28/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/29/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/30/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/01/98	0.04	0.20	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/02/98	0.45	0.20	0.273	6.39	0	4.71	0	2.82	0	1.90	0.002	1.49	0.014	10.00	0	5.87	0	3.33	0	2.35	0
05/03/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0

Nondegradation Analysis
 City of Savage
 WSB Project No. 1436-10

Date	Precipitation (S)	Impervious		Developed Non-Imp		Ag-A Soils		Ag-B		Ag-C		Ag-D		Open-A		Open-B		Open-C		Open-D	
		Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)
05/04/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/05/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/06/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/07/98	1.18	0.20	0.966	6.39	0	4.71	0.012	2.82	0.110	1.90	0.236	1.49	0.327	10.00	0	5.87	0	3.33	0.069	2.35	0.165
05/08/98	0.26	0.20	0.114	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/09/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/10/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/11/98	0.03	0.20	0.001	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/12/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/13/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/14/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/15/98	0.77	0.20	0.570	6.39	0	4.71	0	2.82	0.014	1.90	0.066	1.49	0.113	10.00	0	5.87	0	3.33	0	2.35	0.034
05/16/98	0.02	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/17/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/18/98	0.18	0.20	0.056	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/19/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/20/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/21/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/22/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/23/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/24/98	0.31	0.20	0.153	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/25/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/26/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/27/98	0.03	0.20	0.001	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/28/98	0.06	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/29/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/30/98	1.07	0.20	0.859	6.39	0	4.71	0.003	2.82	0.077	1.90	0.183	1.49	0.263	10.00	0	5.87	0	3.33	0.044	2.35	0.123
05/31/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/01/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/02/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/03/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/04/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/05/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/06/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/07/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/08/98	0.15	0.20	0.038	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/09/98	0.11	0.20	0.018	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/10/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/11/98	0.21	0.20	0.077	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/12/98	0.46	0.20	0.282	6.39	0	4.71	0	2.82	0	1.90	0.003	1.49	0.016	10.00	0	5.87	0	3.33	0	2.35	0
06/13/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/14/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/15/98	0.2	0.20	0.070	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/16/98	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/17/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/18/98	0.84	0.20	0.637	6.39	0	4.71	0	2.82	0.025	1.90	0.089	1.49	0.144	10.00	0	5.87	0	3.33	0.009	2.35	0.051
06/19/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/20/98	0.3	0.20	0.145	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/21/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/22/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/23/98	0.55	0.20	0.363	6.39	0	4.71	0	2.82	0	1.90	0.014	1.49	0.036	10.00	0	5.87	0	3.33	0	2.35	0
06/24/98	0.59	0.20	0.400	6.39	0	4.71	0	2.82	0	1.90	0.021	1.49	0.047	10.00	0	5.87	0	3.33	0	2.35	0
06/25/98	0.34	0.20	0.178	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/26/98	2.54	0.20	2.311	6.39	0.208	4.71	0.405	2.82	0.814	1.90	1.147	1.49	1.345	10.00	0.028	5.87	0.258	3.33	0.674	2.35	0.971
06/27/98	0.18	0.20	0.056	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/28/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/29/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/30/98	0.04	0.20	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/01/98	0.26	0.20	0.114	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/02/98	0.13	0.20	0.027	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/03/98	0.17	0.20	0.050	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/04/98	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	

Date	Precipitation (S)	Impervious		Developed Non-Im		Ag-A Soils		Ag-B		Ag-C		Ag-D		Open-A		Open-B		Open-C		Open-D	
		Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)
07/05/98	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/06/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/07/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/08/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/09/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/10/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/11/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/12/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/13/98	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/14/98	1.24	0.20	1.025	6.39	0	4.71	0.018	2.82	0.131	1.90	0.267	1.49	0.364	10.00	0	5.87	0	3.33	0.084	2.35	0.191
07/15/98	0.45	0.20	0.273	6.39	0	4.71	0	2.82	0	1.90	0.002	1.49	0.014	10.00	0	5.87	0	3.33	0	2.35	0
07/16/98	0.03	0.20	0.001	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/17/98	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/18/98	0.25	0.20	0.106	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/19/98	0.02	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/20/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/21/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/22/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/23/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/24/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/25/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/26/98	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/27/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/28/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/29/98	0.04	0.20	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/30/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/31/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/01/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/02/98	0.57	0.20	0.382	6.39	0	4.71	0	2.82	0	1.90	0.017	1.49	0.042	10.00	0	5.87	0	3.33	0	2.35	0
08/03/98	1.54	0.20	1.320	6.39	0.010	4.71	0.068	2.82	0.251	1.90	0.438	1.49	0.563	10.00	0	5.87	0.021	3.33	0.181	2.35	0.336
08/04/98	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/05/98	0.02	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/06/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/07/98	0.55	0.20	0.363	6.39	0	4.71	0	2.82	0	1.90	0.014	1.49	0.036	10.00	0	5.87	0	3.33	0	2.35	0
08/08/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/09/98	0.17	0.20	0.050	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/10/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/11/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/12/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/13/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/14/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/15/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/16/98	0.32	0.20	0.161	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/17/98	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/18/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/19/98	0.74	0.20	0.541	6.39	0	4.71	0	2.82	0.010	1.90	0.057	1.49	0.101	10.00	0	5.87	0	3.33	0	2.35	0.028
08/20/98	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/21/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/22/98	1.88	0.20	1.655	6.39	0.052	4.71	0.156	2.82	0.419	1.90	0.660	1.49	0.813	10.00	0	5.87	0.076	3.33	0.324	2.35	0.530
08/23/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/24/98	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/25/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/26/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/27/98	0.16	0.20	0.044	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/28/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/29/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/30/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/31/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/01/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/02/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/03/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/04/98	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0

Date	Precipitation (S)	Impervious		Developed Non-Imp		Ag-A Soils		Ag-B		Ag-C		Ag-D		Open-A		Open-B		Open-C		Open-D	
		Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)
03/07/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/08/99	0.94	0.20	0.733	6.39	0	4.71	0	2.82	0.044	1.90	0.127	1.49	0.193	10.00	0	5.87	0	3.33	0.021	2.35	0.079
03/09/99	0.26	0.20	0.114	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/10/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/11/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/12/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/13/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/14/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/15/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/16/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/17/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/18/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/19/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/20/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/21/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/22/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/23/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/24/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/25/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/26/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/27/99	0.28	0.20	0.129	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/28/99	0.36	0.20	0.212	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/29/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/30/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/31/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/01/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/02/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/03/99	0.37	0.20	0.203	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/04/99	0.06	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/05/99	0.91	0.20	0.704	6.39	0	4.71	0	2.82	0.038	1.90	0.115	1.49	0.177	10.00	0	5.87	0	3.33	0.017	2.35	0.070
04/06/99	0.13	0.20	0.027	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/07/99	0.08	0.20	0.006	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/08/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/09/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/10/99	0.28	0.20	0.129	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/11/99	0.41	0.20	0.238	6.39	0	4.71	0	2.82	0	1.90	0.000	1.49	0.008	10.00	0	5.87	0	3.33	0	2.35	0
04/12/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/13/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/14/99	0.22	0.20	0.084	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/15/99	0.55	0.20	0.363	6.39	0	4.71	0	2.82	0	1.90	0.014	1.49	0.036	10.00	0	5.87	0	3.33	0	2.35	0
04/16/99	0.02	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/17/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/18/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/19/99	0.05	0.20	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/20/99	0.19	0.20	0.063	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/21/99	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/22/99	0.14	0.20	0.032	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/23/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/24/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/25/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/26/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/27/99	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/28/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/29/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/30/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/01/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/02/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/03/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/04/99	0.46	0.20	0.282	6.39	0	4.71	0	2.82	0	1.90	0.003	1.49	0.016	10.00	0	5.87	0	3.33	0	2.35	0
05/05/99	0.14	0.20	0.032	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/06/99	0.04	0.20	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/07/99	0.41	0.20	0.238	6.39	0	4.71	0	2.82	0	1.90	0.000	1.49	0.008	10.00	0	5.87	0	3.33	0	2.35	0

Nondegradation Analysis
 City of Savage
 WSB Project No. 1436-10

Date	Precipitation (S)	Impervious		Developed Non-Imp		Ag-A Soils		Ag-B		Ag-C		Ag-D		Open-A		Open-B		Open-C		Open-D	
		Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)
05/08/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/09/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/10/99	0.1	0.013	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/11/99	0.83	0.627	6.39	0	4.71	0	2.82	0.023	1.90	0.086	1.49	0.139	10.00	0	5.87	0	3.33	0.008	2.35	0.048	
05/12/99	1.36	1.142	6.39	0	4.71	0.034	2.82	0.175	1.90	0.332	1.49	0.441	10.00	0	5.87	0.006	3.33	0.119	2.35	0.245	
05/13/99	0.09	0.010	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/14/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/15/99	0.09	0.010	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/16/99	0.63	0.438	6.39	0	4.71	0	2.82	0.002	1.90	0.029	1.49	0.060	10.00	0	5.87	0	3.33	0	2.35	0.010	
05/17/99	0.94	0.733	6.39	0	4.71	0	2.82	0.044	1.90	0.127	1.49	0.193	10.00	0	5.87	0	3.33	0.021	2.35	0.079	
05/18/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/19/99	0.01	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/20/99	0.91	0.704	6.39	0	4.71	0	2.82	0.038	1.90	0.115	1.49	0.177	10.00	0	5.87	0	3.33	0.017	2.35	0.070	
05/21/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/22/99	0.35	0.166	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/23/99	0.01	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/24/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/25/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/26/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/27/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/28/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/29/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/30/99	0.19	0.063	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/31/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/01/99	0.09	0.010	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/02/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/03/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/04/99	0.12	0.022	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/05/99	0.88	0.675	6.39	0	4.71	0	2.82	0.032	1.90	0.104	1.49	0.163	10.00	0	5.87	0	3.33	0.013	2.35	0.061	
06/06/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/07/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/08/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/09/99	0.08	0.006	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/10/99	0.3	0.145	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/11/99	1.01	0.801	6.39	0	4.71	0.001	2.82	0.061	1.90	0.156	1.49	0.229	10.00	0	5.87	0	3.33	0.032	2.35	0.101	
06/12/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/13/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/14/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/15/99	0.11	0.018	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/16/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/17/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/18/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/19/99	0.03	0.001	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/20/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/21/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/22/99	0.05	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/23/99	0.44	0.264	6.39	0	4.71	0	2.82	0	1.90	0.002	1.49	0.012	10.00	0	5.87	0	3.33	0	2.35	0	
06/24/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/25/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/26/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/27/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/28/99	0.26	0.114	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/29/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/30/99	0.31	0.153	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/01/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/02/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/03/99	0.57	0.382	6.39	0	4.71	0	2.82	0	1.90	0.017	1.49	0.042	10.00	0	5.87	0	3.33	0	2.35	0	
07/04/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/05/99	0.01	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/06/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/07/99	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/08/99	0.5	0.318	6.39	0	4.71	0	2.82	0	1.90	0.007	1.49	0.024	10.00	0	5.87	0	3.33	0	2.35	0	

Nondegradation Analysis
 City of Savage
 WSB Project No. 1436-10

Date	Precipitation (S)	Impervious		Developed Non-Imp		Ag-A Soils		Ag-B		Ag-C		Ag-D		Open-A		Open-B		Open-C		Open-D	
		Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)
07/09/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/10/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/11/99	0.06	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/12/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/13/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/14/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/15/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/16/99	0.03	0.20	0.001	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/17/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/18/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/19/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/20/99	0.32	0.20	0.161	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/21/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/22/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/23/99	0.14	0.20	0.032	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/24/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/25/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/26/99	2.16	0.20	1.933	6.39	0.107	4.71	0.251	2.82	0.577	1.90	0.859	1.49	1.032	10.00	0	5.87	0.142	3.33	0.462	2.35	0.708
07/27/99	0.15	0.20	0.038	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/28/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/29/99	0.23	0.20	0.091	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/30/99	0.38	0.20	0.212	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/31/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/01/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/02/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/03/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/04/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/05/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/06/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/07/99	0.09	0.20	0.010	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/08/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/09/99	0.76	0.20	0.560	6.39	0	4.71	0	2.82	0.013	1.90	0.063	1.49	0.109	10.00	0	5.87	0	3.33	0	2.35	0.032
08/10/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/11/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/12/99	0.51	0.20	0.327	6.39	0	4.71	0	2.82	0	1.90	0.008	1.49	0.026	10.00	0	5.87	0	3.33	0	2.35	0
08/13/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/14/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/15/99	0.04	0.20	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/16/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/17/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/18/99	0.2	0.20	0.070	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/19/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/20/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/21/99	0.24	0.20	0.098	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/22/99	0.78	0.20	0.579	6.39	0	4.71	0	2.82	0.015	1.90	0.069	1.49	0.117	10.00	0	5.87	0	3.33	0	2.35	0.036
08/23/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/24/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/25/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/26/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/27/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/28/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/29/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/30/99	0.02	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/31/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/01/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/02/99	0.2	0.20	0.070	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/03/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/04/99	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/05/99	0.13	0.20	0.027	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/06/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/07/99	0.2	0.20	0.070	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/08/99	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0

Date	Precipitation (S)	Impervious		Developed Non-Im		Ag-A Soils		Ag-B		Ag-C		Ag-D		Open-A		Open-B		Open-C		Open-D	
		Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)
03/14/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
03/15/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
03/16/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
03/17/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
03/18/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
03/19/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
03/20/01	0.1	0.013	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
03/21/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
03/22/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
03/23/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
03/24/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
03/25/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
03/26/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
03/27/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
03/28/01	0.14	0.032	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
03/29/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
03/30/01	0.02	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
03/31/01	0.29	0.137	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
04/01/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
04/02/01	0.23	0.091	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
04/03/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
04/04/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
04/05/01	0.13	0.027	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
04/06/01	1.5	1.280	6.39	0.007	4.71	0.059	2.82	0.233	1.90	0.414	1.49	0.535	10.00	0	5.87	0.017	3.33	0.167	2.35	0.315	
04/07/01	0.25	0.106	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
04/08/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
04/09/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
04/10/01	0.26	0.114	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
04/11/01	0.95	0.743	6.39	0	4.71	0	2.82	0.046	1.90	0.131	1.49	0.198	10.00	0	5.87	0	3.33	0.022	2.35	0.082	
04/12/01	0.01	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
04/13/01	0.01	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
04/14/01	0.02	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
04/15/01	0.28	0.129	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
04/16/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
04/17/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
04/18/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
04/19/01	0.25	0.106	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
04/20/01	0.03	0.001	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
04/21/01	0.66	0.466	6.39	0	4.71	0	2.82	0.003	1.90	0.036	1.49	0.070	10.00	0	5.87	0	3.33	0	2.35	0.014	
04/22/01	2.21	1.983	6.39	0.118	4.71	0.269	2.82	0.607	1.90	0.896	1.49	1.073	10.00	0.004	5.87	0.155	3.33	0.488	2.35	0.742	
04/23/01	0.07	0.004	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
04/24/01	0.03	0.001	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
04/25/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
04/26/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
04/27/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
04/28/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
04/29/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
04/30/01	0.11	0.018	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/01/01	0.22	0.084	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/02/01	0.04	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/03/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/04/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/05/01	0.1	0.013	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/06/01	0.97	0.762	6.39	0	4.71	0	2.82	0.051	1.90	0.139	1.49	0.208	10.00	0	5.87	0	3.33	0.025	2.35	0.088	
05/07/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/08/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/09/01	0.04	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/10/01	0.15	0.038	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/11/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/12/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/13/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/14/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	

Nondegradation Analysis
 City of Savage
 WSB Project No. 1436-10

Date	Precipitation (S)	Impervious		Developed Non-Imp		Ag-A Soils		Ag-B		Ag-C		Ag-D		Open-A		Open-B		Open-C		Open-D	
		Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)
05/15/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/16/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/17/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/18/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/19/01	0.04	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/20/01	0.93	0.20	6.39	0	4.71	0	2.82	0.042	1.90	0.123	1.49	0.187	10.00	0	5.87	0	3.33	0.019	2.35	0.076	
05/21/01	0.32	0.20	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/22/01	0.5	0.20	6.39	0	4.71	0	2.82	0	1.90	0.007	1.49	0.024	10.00	0	5.87	0	3.33	0	2.35	0	
05/23/01	0.25	0.20	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/24/01	0.26	0.20	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/25/01	0.69	0.20	6.39	0	4.71	0	2.82	0.005	1.90	0.043	1.49	0.081	10.00	0	5.87	0	3.33	0	2.35	0.019	
05/26/01	0.02	0.20	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/27/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/28/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/29/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/30/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/31/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/01/01	0.62	0.20	6.39	0	4.71	0	2.82	0.001	1.90	0.027	1.49	0.057	10.00	0	5.87	0	3.33	0	2.35	0.009	
06/02/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/03/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/04/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/05/01	0.48	0.20	6.39	0	4.71	0	2.82	0	1.90	0.005	1.49	0.020	10.00	0	5.87	0	3.33	0	2.35	0	
06/06/01	0.01	0.20	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/07/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/08/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/09/01	0.1	0.20	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/10/01	0.23	0.20	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/11/01	0.73	0.20	6.39	0	4.71	0	2.82	0.009	1.90	0.054	1.49	0.097	10.00	0	5.87	0	3.33	0	2.35	0.026	
06/12/01	0.21	0.20	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/13/01	2.37	0.20	6.39	0.159	4.71	0.333	2.82	0.705	1.90	1.016	1.49	1.203	10.00	0.013	5.87	0.202	3.33	0.576	2.35	0.851	
06/14/01	0.77	0.20	6.39	0	4.71	0	2.82	0.014	1.90	0.066	1.49	0.113	10.00	0	5.87	0	3.33	0	2.35	0.034	
06/15/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/16/01	0.02	0.20	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/17/01	0.01	0.20	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/18/01	0.29	0.20	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/19/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/20/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/21/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/22/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/23/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/24/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/25/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/26/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/27/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/28/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/29/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/30/01	0.51	0.20	6.39	0	4.71	0	2.82	0	1.90	0.008	1.49	0.026	10.00	0	5.87	0	3.33	0	2.35	0	
07/01/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/02/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/03/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/04/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/05/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/06/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/07/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/08/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/09/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/10/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/11/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/12/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/13/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/14/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/15/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	

Nondegradation Analysis
 City of Savage
 WSB Project No. 1436-10

Date	Precipitation (S)	Impervious		Developed Non-Imv		Ag-A Soils		Ag-B		Ag-C		Ag-D		Open-A		Open-B		Open-C		Open-D	
		Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)
07/16/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/17/01	0.06	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/18/01	0.34	0.178	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/19/01	0.26	0.114	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/20/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/21/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/22/01	0.99	0.781	6.39	0	4.71	0	2.82	0.056	1.90	0.148	1.49	0.219	10.00	0	5.87	0	3.33	0.029	2.35	0.095	
07/23/01	0.08	0.006	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/24/01	0.04	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/25/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/26/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/27/01	0.34	0.178	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/28/01	0.01	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/29/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/30/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/31/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
08/01/01	0.19	0.063	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
08/02/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
08/03/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
08/04/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
08/05/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
08/06/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
08/07/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
08/08/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
08/09/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
08/10/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
08/11/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
08/12/01	0.04	0.020	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
08/13/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
08/14/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
08/15/01	0.03	0.020	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
08/16/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
08/17/01	0.72	0.522	6.39	0	4.71	0	2.82	0.008	1.90	0.051	1.49	0.093	10.00	0	5.87	0	3.33	0	2.35	0.024	
08/18/01	0.63	0.438	6.39	0	4.71	0	2.82	0.002	1.90	0.029	1.49	0.060	10.00	0	5.87	0	3.33	0	2.35	0.010	
08/19/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
08/20/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
08/21/01	0.03	0.020	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
08/22/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
08/23/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
08/24/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
08/25/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
08/26/01	0.01	0.020	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
08/27/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
08/28/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
08/29/01	0.66	0.466	6.39	0	4.71	0	2.82	0.003	1.90	0.036	1.49	0.070	10.00	0	5.87	0	3.33	0	2.35	0.014	
08/30/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
08/31/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
09/01/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
09/02/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
09/03/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
09/04/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
09/05/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
09/06/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
09/07/01	0.82	0.617	6.39	0	4.71	0	2.82	0.021	1.90	0.082	1.49	0.135	10.00	0	5.87	0	3.33	0.007	2.35	0.046	
09/08/01	0.07	0.004	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
09/09/01	0.45	0.273	6.39	0	4.71	0	2.82	0	1.90	0.002	1.49	0.014	10.00	0	5.87	0	3.33	0	2.35	0	
09/10/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
09/11/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
09/12/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
09/13/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
09/14/01	0.04	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
09/15/01	0	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	

Date	Precipitation (S)	Impervious		Developed Non-Imp		Ag-A Soils		Ag-B		Ag-C		Ag-D		Open-A		Open-B		Open-C		Open-D	
		Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)
11/17/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
11/18/01	0.11	0.018	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
11/19/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
11/20/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
11/21/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
11/22/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
11/23/01	0.63	0.20	0.438	6.39	0	4.71	0	2.82	0.002	1.90	0.029	1.49	0.060	10.00	0	5.87	0	3.33	0	2.35	0.010
11/24/01	1.06	0.20	0.849	6.39	0	4.71	0.003	2.82	0.074	1.90	0.178	1.49	0.257	10.00	0	5.87	0	3.33	0.042	2.35	0.119
11/25/01	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/26/01	0.48	0.20	0.300	6.39	0	4.71	0	2.82	0	1.90	0.005	1.49	0.020	10.00	0	5.87	0	3.33	0	2.35	0
11/27/01	0.19	0.20	0.063	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/28/01	0.07	0.20	0.004	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/29/01	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/30/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
12/01/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
12/02/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
12/03/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
12/04/01	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
12/05/01	0.16	0.20	0.044	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
12/06/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
12/07/01	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
12/08/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
12/09/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
12/10/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
12/11/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
12/12/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
12/13/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
12/14/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
12/15/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
12/16/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
12/17/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
12/18/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
12/19/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
12/20/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
12/21/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
12/22/01	0.41	0.20	0.238	6.39	0	4.71	0	2.82	0	1.90	0.000	1.49	0.008	10.00	0	5.87	0	3.33	0	2.35	0
12/23/01	0.1	0.20	0.013	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
12/24/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
12/25/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
12/26/01	0.05	0.20	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
12/27/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
12/28/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
12/29/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
12/30/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
12/31/01	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
	34.23		22.211	0.30	0.75	2.17	4.06	5.57	0.02	0.41	1.59	2.96									
01/01/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
01/02/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
01/03/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
01/04/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
01/05/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
01/06/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
01/07/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
01/08/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
01/09/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
01/10/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
01/11/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
01/12/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
01/13/02	0.19	0.20	0.063	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
01/14/02	0.12	0.20	0.022	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0

Date	Precipitation (S)	Impervious		Developed Non-Im		Ag-A Soils		Ag-B		Ag-C		Ag-D		Open-A		Open-B		Open-C		Open-D	
		Accumulated Direct Runoff (Q) inches	(S)	Accumulated Direct Runoff (Q) inches	(S)	Accumulated Direct Runoff (Q) inches	(S)	Accumulated Direct Runoff (Q) inches	(S)	Accumulated Direct Runoff (Q) inches	(S)	Accumulated Direct Runoff (Q) inches	(S)	Accumulated Direct Runoff (Q) inches	(S)	Accumulated Direct Runoff (Q) inches	(S)	Accumulated Direct Runoff (Q) inches	(S)	Accumulated Direct Runoff (Q) inches	(S)
03/18/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/19/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/20/02	0.031	0.20	0.001	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/21/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/22/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/23/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/24/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/25/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/26/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/27/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/28/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/29/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/30/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/31/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/01/02	0.31	0.20	0.153	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/02/02	0.4	0.20	0.229	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/03/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/04/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/05/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/06/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/07/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/08/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/09/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/10/02	0.52	0.20	0.336	6.39	0	4.71	0	2.82	0	1.90	0.009	1.49	0.029	10.00	0	5.87	0	3.33	0	2.35	0
04/11/02	0.5	0.20	0.318	6.39	0	4.71	0	2.82	0	1.90	0.007	1.49	0.024	10.00	0	5.87	0	3.33	0	2.35	0
04/12/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/13/02	0.16	0.20	0.044	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/14/02	0.06	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/15/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/16/02	0.11	0.20	0.018	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/17/02	0.04	0.20	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/18/02	0.15	0.20	0.036	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/19/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/20/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/21/02	0.22	0.20	0.084	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/22/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/23/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/24/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/25/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/26/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/27/02	0.67	0.20	0.475	6.39	0	4.71	0	2.82	0.004	1.90	0.038	1.49	0.074	10.00	0	5.87	0	3.33	0	2.35	0.016
04/28/02	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/29/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/30/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/01/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/02/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/03/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/04/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/05/02	0.29	0.20	0.137	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/06/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/07/02	0.23	0.20	0.091	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/08/02	1.28	0.20	1.064	6.39	0	4.71	0.023	2.82	0.145	1.90	0.286	1.49	0.389	10.00	0	5.87	0	3.33	0.095	2.35	0.208
05/09/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/10/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/11/02	0.22	0.20	0.084	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/12/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/13/02	0.12	0.20	0.022	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/14/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/15/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/16/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/17/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/18/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0

Nondegradation Analysis
 City of Savage
 WSB Project No. 1436-10

Date	Precipitation (S)	Impervious		Developed Non-Imp		Ag-A Soils		Ag-B		Ag-C		Ag-D		Open-A		Open-B		Open-C		Open-D	
		Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)
05/19/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/20/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/21/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/22/02	0.25	0.106	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/23/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/24/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/25/02	0.01	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/26/02	0.18	0.056	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/27/02	0.04	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/28/02	0.18	0.056	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/29/02	0.03	0.001	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/30/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
05/31/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/01/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/02/02	0.31	0.153	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/03/02	0.45	0.273	6.39	0	4.71	0	2.82	0	1.90	0.002	1.49	0.014	10.00	0	5.87	0	3.33	0	2.35	0	
06/04/02	0.5	0.318	6.39	0	4.71	0	2.82	0	1.90	0.007	1.49	0.024	10.00	0	5.87	0	3.33	0	2.35	0	
06/05/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/06/02	0.43	0.255	6.39	0	4.71	0	2.82	0	1.90	0.001	1.49	0.011	10.00	0	5.87	0	3.33	0	2.35	0	
06/07/02	0.12	0.022	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/08/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/09/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/10/02	0.7	0.503	6.39	0	4.71	0	2.82	0.006	1.90	0.046	1.49	0.085	10.00	0	5.87	0	3.33	0	2.35	0.021	
06/11/02	0.05	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/12/02	0.18	0.056	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/13/02	0.16	0.044	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/14/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/15/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/16/02	0.02	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/17/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/18/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/19/02	0.37	0.203	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/20/02	0.06	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/21/02	2.95	0.20	2.718	6.39	0.346	4.71	0.601	2.82	1.093	1.90	1.475	1.49	1.696	10.00	0.082	5.87	0.412	3.33	0.928	2.35	1.275
06/22/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/23/02	0.28	0.129	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/24/02	1.54	0.20	1.320	6.39	0.010	4.71	0.068	2.82	0.251	1.90	0.438	1.49	0.583	10.00	0	5.87	0.021	3.33	0.181	2.35	0.336
06/25/02	0.18	0.056	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/26/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/27/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/28/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/29/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
06/30/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/01/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/02/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/03/02	0.43	0.255	6.39	0	4.71	0	2.82	0	1.90	0.001	1.49	0.011	10.00	0	5.87	0	3.33	0	2.35	0	
07/04/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/05/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/06/02	0.2	0.070	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/07/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/08/02	0.14	0.032	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/09/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/10/02	1.93	0.20	1.705	6.39	0.060	4.71	0.172	2.82	0.446	1.90	0.695	1.49	0.851	10.00	0	5.87	0.086	3.33	0.347	2.35	0.561
07/11/02	0.01	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/12/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/13/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/14/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/15/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/16/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/17/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/18/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
07/19/02	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	

Date	Precipitation (S)	Impervious		Developed Non-Imp		Ag-A Soils		Ag-B		Ag-C		Ag-D		Open-A		Open-B		Open-C		Open-D	
		Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)
07/20/02	0.53	0.20	0.345	6.39	0	4.71	0	2.82	0	1.90	0.011	1.49	0.031	10.00	0	5.87	0	3.33	0	2.35	0
07/21/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/22/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/23/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/24/02	0.73	0.20	0.532	6.39	0	4.71	0	2.82	0.009	1.90	0.054	1.49	0.097	10.00	0	5.87	0	3.33	0	2.35	0
07/25/02	0.1	0.20	0.013	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/26/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/27/02	0.22	0.20	0.084	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/28/02	0.78	0.20	0.579	6.39	0	4.71	0	2.82	0.015	1.90	0.069	1.49	0.117	10.00	0	5.87	0	3.33	0	2.35	0.036
07/29/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/30/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/31/02	0.12	0.20	0.022	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/01/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/02/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/03/02	2.36	0.20	2.132	6.39	0.156	4.71	0.329	2.82	0.699	1.90	1.008	1.49	1.195	10.00	0.013	5.87	0.199	3.33	0.570	2.35	0.844
08/04/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/05/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/06/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/07/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/08/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/09/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/10/02	0.12	0.20	0.022	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/11/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/12/02	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/13/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/14/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/15/02	0.05	0.20	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/16/02	1.97	0.20	1.745	6.39	0.067	4.71	0.185	2.82	0.468	1.90	0.723	1.49	0.882	10.00	0	5.87	0.095	3.33	0.366	2.35	0.586
08/17/02	0.39	0.20	0.220	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/18/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/19/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/20/02	0.94	0.20	0.733	6.39	0	4.71	0	2.82	0.044	1.90	0.127	1.49	0.193	10.00	0	5.87	0	3.33	0.021	2.35	0.079
08/21/02	2	0.20	1.774	6.39	0.073	4.71	0.194	2.82	0.484	1.90	0.744	1.49	0.906	10.00	0	5.87	0.102	3.33	0.381	2.35	0.605
08/22/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/23/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/24/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/25/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/26/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/27/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/28/02	0.39	0.20	0.220	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/29/02	0.07	0.20	0.004	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/30/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/31/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/01/02	0.09	0.20	0.010	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/02/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/03/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/04/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/05/02	1.1	0.20	0.888	6.39	0	4.71	0.005	2.82	0.086	1.90	0.197	1.49	0.280	10.00	0	5.87	0	3.33	0.050	2.35	0.134
09/06/02	1.27	0.20	1.054	6.39	0	4.71	0.021	2.82	0.141	1.90	0.283	1.49	0.383	10.00	0	5.87	0	3.33	0.092	2.35	0.204
09/07/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/08/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/09/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/10/02	0.16	0.20	0.044	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/11/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/12/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/13/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/14/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/15/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/16/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/17/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/18/02	0.03	0.20	0.001	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/19/02	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0

Nondegradation Analysis
 City of Savage
 WSB Project No. 1436-10

Date	Precipitation (S)	Impervious		Developed Non-Imp		Ag-A Soils		Ag-B		Ag-C		Ag-D		Open-A		Open-B		Open-C		Open-D	
		Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)
09/20/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
09/21/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
09/22/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
09/23/02	0.02: 0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
09/24/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
09/25/02	0.7: 0.20	0.503	6.39	0	4.71	0	2.82	0.006	1.90	0.046	1.49	0.085	10.00	0	5.87	0	3.33	0	2.35	0.021	
09/26/02	0.29: 0.20	0.137	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
09/27/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
09/28/02	0.08: 0.20	0.006	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
09/29/02	0.02: 0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
09/30/02	0.01: 0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
10/01/02	0.01: 0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
10/02/02	0.04: 0.20	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
10/03/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
10/04/02	1.93: 0.20	1.705	6.39	0.060	4.71	0.172	2.82	0.446	1.90	0.695	1.49	0.851	10.00	0	5.87	0.086	3.33	0.347	2.35	0.561	
10/05/02	0.65: 0.20	0.456	6.39	0	4.71	0	2.82	0.003	1.90	0.033	1.49	0.067	10.00	0	5.87	0	3.33	0	2.35	0.013	
10/06/02	0.34: 0.20	0.178	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
10/07/02	0.18: 0.20	0.056	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
10/08/02	0.01: 0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
10/09/02	0.39: 0.20	0.220	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
10/10/02	0.21: 0.20	0.077	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
10/11/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
10/12/02	0.24: 0.20	0.098	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
10/13/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
10/14/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
10/15/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
10/16/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
10/17/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
10/18/02	0.13: 0.20	0.027	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
10/19/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
10/20/02	0.03: 0.20	0.001	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
10/21/02	0.02: 0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
10/22/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
10/23/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
10/24/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
10/25/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
10/26/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
10/27/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
10/28/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
10/29/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
10/30/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
10/31/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
11/01/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
11/02/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
11/03/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
11/04/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
11/05/02	0.04: 0.20	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
11/06/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
11/07/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
11/08/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
11/09/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
11/10/02	0.04: 0.20	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
11/11/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
11/12/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
11/13/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
11/14/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
11/15/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
11/16/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
11/17/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
11/18/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
11/19/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	
11/20/02	0: 0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0	

Nondegradation Analysis
 City of Savage
 WSB Project No. 1436-10

Date	Impervious (S)	Accumulated Direct Runoff (Q) Inches	Developed Non-imp (S)	Accumulated Direct Runoff (Q) Inches	Ag-A Soils		Ag-B		Ag-C		Ag-D		Open-A		Open-B		Open-C		Open-D		
					(S)	(Q) Inches	(S)	(Q) Inches	(S)	(Q) Inches	(S)	(Q) Inches	(S)	(Q) Inches	(S)	(Q) Inches	(S)	(Q) Inches	(S)	(Q) Inches	(S)
03/22/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/23/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/24/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/25/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/26/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/27/03	0.57	0.20	0.382	6.39	0	4.71	0	2.82	0	1.90	0.017	1.49	0.042	10.00	0	5.87	0	3.33	0	2.35	0
03/28/03	0.02	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/29/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/30/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/31/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/01/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/02/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/03/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/04/03	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/05/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/06/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/07/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/08/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/09/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/10/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/11/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/12/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/13/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/14/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/15/03	0.86	0.20	0.656	6.39	0	4.71	0	2.82	0.028	1.90	0.096	1.49	0.153	10.00	0	5.87	0	3.33	0.011	2.35	0.056
04/16/03	1.04	0.20	0.830	6.39	0	4.71	0.002	2.82	0.069	1.90	0.169	1.49	0.246	10.00	0	5.87	0	3.33	0.038	2.35	0.112
04/17/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/18/03	0.11	0.20	0.018	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/19/03	0.24	0.20	0.098	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/20/03	0.1	0.20	0.013	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/21/03	0.02	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/22/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/23/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/24/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/25/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/26/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/27/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/28/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/29/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/30/03	0.02	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/01/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/02/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/03/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/04/03	0.64	0.20	0.447	6.39	0	4.71	0	2.82	0.002	1.90	0.031	1.49	0.063	10.00	0	5.87	0	3.33	0	2.35	0.012
05/05/03	0.18	0.20	0.056	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/06/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/07/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/08/03	0.44	0.20	0.264	6.39	0	4.71	0	2.82	0	1.90	0.002	1.49	0.012	10.00	0	5.87	0	3.33	0	2.35	0
05/09/03	0.5	0.20	0.318	6.39	0	4.71	0	2.82	0	1.90	0.007	1.49	0.024	10.00	0	5.87	0	3.33	0	2.35	0
05/10/03	0.73	0.20	0.532	6.39	0	4.71	0	2.82	0.009	1.90	0.054	1.49	0.097	10.00	0	5.87	0	3.33	0	2.35	0.028
05/11/03	1.37	0.20	1.152	6.39	0	4.71	0.036	2.82	0.179	1.90	0.338	1.49	0.447	10.00	0	5.87	0.006	3.33	0.123	2.35	0.250
05/12/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/13/03	0.02	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/14/03	0.76	0.20	0.560	6.39	0	4.71	0	2.82	0.013	1.90	0.063	1.49	0.109	10.00	0	5.87	0	3.33	0	2.35	0.032
05/15/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/16/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/17/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/18/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/19/03	0.94	0.20	0.733	6.39	0	4.71	0	2.82	0.044	1.90	0.127	1.49	0.193	10.00	0	5.87	0	3.33	0.021	2.35	0.079
05/20/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/21/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/22/03	0.35	0.20	0.186	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0

Nondegradation Analysis
City of Savage
WSB Project No. 1436-10

Date	Precipitation (S)	Soil Types																			
		Impervious		Developed Non-Irn		Ag-A Soils		Ag-B		Ag-C		Ag-D		Open-A		Open-B		Open-C		Open-D	
		Accumulated Direct Runoff (Q) Inches	Accumulated Direct Runoff (Q) Inches	Accumulated Direct Runoff (Q) Inches	Accumulated Direct Runoff (Q) Inches	Accumulated Direct Runoff (Q) Inches	Accumulated Direct Runoff (Q) Inches	Accumulated Direct Runoff (Q) Inches	Accumulated Direct Runoff (Q) Inches	Accumulated Direct Runoff (Q) Inches	Accumulated Direct Runoff (Q) Inches	Accumulated Direct Runoff (Q) Inches	Accumulated Direct Runoff (Q) Inches	Accumulated Direct Runoff (Q) Inches	Accumulated Direct Runoff (Q) Inches	Accumulated Direct Runoff (Q) Inches	Accumulated Direct Runoff (Q) Inches	Accumulated Direct Runoff (Q) Inches	Accumulated Direct Runoff (Q) Inches	Accumulated Direct Runoff (Q) Inches	
05/23/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/24/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/25/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/26/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/27/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/28/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/29/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/30/03	0.21	0.20	0.077	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/31/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/01/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/02/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/03/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/04/03	0.28	0.20	0.129	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/05/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0.028
06/06/03	0.74	0.20	0.541	6.39	0	4.71	0	2.82	0.010	1.90	0.057	1.49	0.101	10.00	0	5.87	0	3.33	0	2.35	0
06/07/03	0.02	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/08/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/09/03	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/10/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/11/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/12/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/13/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/14/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/15/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/16/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/17/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/18/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/19/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/20/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/21/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/22/03	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/23/03	0.02	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/24/03	1.37	0.20	1.152	6.39	0	4.71	0.036	2.82	0.179	1.90	0.338	1.49	0.447	10.00	0	5.87	0.006	3.33	0.123	2.35	0.250
06/25/03	2.09	0.20	1.864	6.39	0.091	4.71	0.225	2.82	0.536	1.90	0.808	1.49	0.977	10.00	0	5.87	0.123	3.33	0.426	2.35	0.662
06/26/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/27/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/28/03	0.12	0.20	0.022	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/29/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/30/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/01/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/02/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/03/03	0.8	0.20	0.598	6.39	0	4.71	0	2.82	0.018	1.90	0.076	1.49	0.126	10.00	0	5.87	0	3.33	0	2.35	0.041
07/04/03	0.05	0.20	0.090	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/05/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/06/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/07/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/08/03	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/09/03	0.04	0.20	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/10/03	0.02	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/11/03	0.12	0.20	0.022	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/12/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/13/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/14/03	0.61	0.20	0.419	6.39	0	4.71	0	2.82	0.001	1.90	0.025	1.49	0.054	10.00	0	5.87	0	3.33	0	2.35	0.008
07/15/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/16/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/17/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/18/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/19/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/20/03	0.1	0.20	0.013	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/21/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/22/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/23/03	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0

Nondegradation Analysis
 City of Savage
 WSB Project No. 1438-10

Date	Precip (Acres)	Impervious		Developed Non-Imp		Ag-A Soils		Ag-B		Ag-C		Ag-D		Open-A		Open-B		Open-C		Open-D	
		(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches
03/29/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
03/30/05	0.91	0.20	0.704	6.39	0	4.71	0	2.82	0.038	1.90	0.115	1.49	0.177	10.00	0	5.87	0	3.33	0.017	2.35	0.070
03/31/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/01/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/02/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/03/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/04/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/05/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/06/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/07/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/08/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/09/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/10/05	0.44	0.20	0.284	6.39	0	4.71	0	2.82	0	1.90	0.002	1.49	0.012	10.00	0	5.87	0	3.33	0	2.35	0
04/11/05	0.19	0.20	0.083	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/12/05	0.18	0.20	0.056	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/13/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/14/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/15/05	0.13	0.20	0.027	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/16/05	0.94	0.20	0.733	6.39	0	4.71	0	2.82	0.044	1.90	0.127	1.49	0.193	10.00	0	5.87	0	3.33	0.021	2.35	0.079
04/17/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/18/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/19/05	0.21	0.20	0.077	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/20/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/21/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/22/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/23/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/24/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/25/05	0.1	0.20	0.013	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/26/05	0.11	0.20	0.018	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/27/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/28/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/29/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/30/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/01/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/02/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/03/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/04/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/05/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/06/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/07/05	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/08/05	0.25	0.20	0.106	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/09/05	0.12	0.20	0.022	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/10/05	0.02	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/11/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/12/05	0.62	0.20	0.428	6.39	0	4.71	0	2.82	0.001	1.90	0.027	1.49	0.057	10.00	0	5.87	0	3.33	0	2.35	0.009
05/13/05	0.48	0.20	0.300	6.39	0	4.71	0	2.82	0	1.90	0.005	1.49	0.020	10.00	0	5.87	0	3.33	0	2.35	0
05/14/05	0.1	0.20	0.013	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/15/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/16/05	0.27	0.20	0.121	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/17/05	0.16	0.20	0.044	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/18/05	0.38	0.20	0.212	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/19/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/20/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/21/05	0.06	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/22/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/23/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/24/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/25/05	0.2	0.20	0.070	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/26/05	0.05	0.20	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/27/05	0.04	0.20	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/28/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/29/05	0.02	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0

Nondegradation Analysis
 City of Savage
 WSB Project No. 1436-10

Date	Precipitation (S)	Impervious		Developed Non-Imp		Ag-A Soils		Ag-B		Ag-C		Ag-D		Open-A		Open-B		Open-C		Open-D	
		Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)
05/30/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/31/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/01/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/02/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/03/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/04/05	0.39	0.20	0.220	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/05/05	0.38	0.20	0.212	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/06/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/07/05	0.04	0.20	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/08/05	0.72	0.20	0.522	6.39	0	4.71	0	2.82	0.008	1.90	0.051	1.49	0.093	10.00	0	5.87	0	3.33	0	2.35	0.024
06/09/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/10/05	0.35	0.20	0.186	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/11/05	0.1	0.20	0.013	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/12/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/13/05	0.26	0.20	0.114	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/14/05	0.06	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/15/05	0.05	0.20	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/16/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/17/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/18/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/19/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/20/05	0.55	0.20	0.363	6.39	0	4.71	0	2.82	0	1.90	0.014	1.49	0.036	10.00	0	5.87	0	3.33	0	2.35	0
06/22/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/23/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/24/05	0.06	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/25/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/26/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/27/05	1.03	0.20	0.820	6.39	0	4.71	0.002	2.82	0.066	1.90	0.165	1.49	0.240	10.00	0	5.87	0	3.33	0.036	2.35	0.108
06/28/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/29/05	0.25	0.20	0.106	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/30/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/01/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/02/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/03/05	0.17	0.20	0.050	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/04/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/05/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/06/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/07/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/08/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/09/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/10/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/11/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/12/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/13/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/14/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/15/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/16/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/17/05	0.21	0.20	0.077	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/18/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/19/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/20/05	0.37	0.20	0.203	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/21/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/22/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/23/05	0.63	0.20	0.438	6.39	0	4.71	0	2.82	0.002	1.90	0.029	1.49	0.060	10.00	0	5.87	0	3.33	0	2.35	0.010
07/24/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/25/05	1.56	0.20	1.339	6.39	0.012	4.71	0.072	2.82	0.260	1.90	0.451	1.49	0.577	10.00	0	5.87	0.024	3.33	0.189	2.35	0.346
07/26/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/27/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/28/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/29/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/30/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0

Nondegradation Analysis
 City of Savage
 WSB Project No. 1436-10

Date	Flow Station	Impervious	Developed Non-Imp	Ag-A Soils	Ag-B	Ag-C	Ag-D	Open-A	Open-B	Open-C	Open-D
		(S) Accumulated Direct Runoff (Q) Inches	(S) Accumulated Direct Runoff (Q) Inches	(S) Accumulated Direct Runoff (Q) Inches	(S) Accumulated Direct Runoff (Q) Inches	(S) Accumulated Direct Runoff (Q) Inches	(S) Accumulated Direct Runoff (Q) Inches	(S) Accumulated Direct Runoff (Q) Inches	(S) Accumulated Direct Runoff (Q) Inches	(S) Accumulated Direct Runoff (Q) Inches	(S) Accumulated Direct Runoff (Q) Inches
07/31/05		0 0.20	0 6.39	0 4.71	0 2.82	0 1.90	0 1.49	0 10.00	0 5.87	0 3.33	0 2.35
08/01/05		0 0.20	0 6.39	0 4.71	0 2.82	0 1.90	0 1.49	0 10.00	0 5.87	0 3.33	0 2.35
08/02/05		0 0.20	0 6.39	0 4.71	0 2.82	0 1.90	0 1.49	0 10.00	0 5.87	0 3.33	0 2.35
08/03/05	1.46	0.20 1.241	6.39 0.005	4.71 0.052	2.82 0.216	1.90 0.390	1.49 0.508	10.00 0	5.87 0.013	3.33 0.153	2.35 0.294
08/04/05	0.02	0.20 0.002	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
08/05/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
08/06/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
08/07/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
08/08/05	0.16	0.20 0.044	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
08/09/05	1.17	0.20 0.956	6.39 0	4.71 0.011	2.82 0.107	1.90 0.231	1.49 0.321	10.00 0	5.87 0	3.33 0.066	2.35 0.161
08/10/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
08/11/05	0.04	0.20 0.000	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
08/12/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
08/13/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
08/14/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
08/15/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
08/16/05	0.01	0.20 0.005	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
08/17/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
08/18/05	0.3	0.20 0.145	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
08/19/05	0.02	0.20 0.002	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
08/20/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
08/21/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
08/22/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
08/23/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
08/24/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
08/25/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
08/26/05	2.04	0.20 1.814	6.39 0.081	4.71 0.208	2.82 0.507	1.90 0.772	1.49 0.937	10.00 0	5.87 0.111	3.33 0.401	2.35 0.630
08/27/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
08/28/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
08/29/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
08/30/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
08/31/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
09/01/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
09/02/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
09/03/05	0.94	0.20 0.733	6.39 0	4.71 0	2.82 0.044	1.90 0.127	1.49 0.193	10.00 0	5.87 0	3.33 0.021	2.35 0.079
09/04/05	0.33	0.20 0.170	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
09/05/05	0.02	0.20 0.002	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
09/06/05	0.12	0.20 0.022	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
09/07/05	0.26	0.20 0.114	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
09/08/05	0.09	0.20 0.010	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
09/09/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
09/10/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
09/11/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
09/12/05	0.39	0.20 0.220	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
09/13/05	0.27	0.20 0.121	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
09/14/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
09/15/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
09/16/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
09/17/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
09/18/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
09/19/05	0.24	0.20 0.098	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
09/20/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
09/21/05	0.21	0.20 0.077	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
09/22/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
09/23/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
09/24/05	0.67	0.20 0.475	6.39 0	4.71 0	2.82 0.004	1.90 0.038	1.49 0.074	10.00 0	5.87 0	3.33 0	2.35 0.016
09/25/05	0.53	0.20 0.345	6.39 0	4.71 0	2.82 0	1.90 0.011	1.49 0.031	10.00 0	5.87 0	3.33 0	2.35 0
09/26/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
09/27/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
09/28/05	0.37	0.20 0.203	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
09/29/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0
09/30/05	0	0.20 0	6.39 0	4.71 0	2.82 0	1.90 0	1.49 0	10.00 0	5.87 0	3.33 0	2.35 0

Nondegradation Analysis
 City of Savage
 WSB Project No. 1436-10

Date	Precipitation (S)	Impervious		Developed Non-Imp		Ag-A Soils		Ag-B		Ag-C		Ag-D		Open-A		Open-B		Open-C		Open-D	
		Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)
10/01/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/02/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/03/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/04/05	4.61	0.20	4.374	6.39	1.141	4.71	1.607	2.82	2.384	1.90	2.916	1.49	3.202	10.00	0.540	5.87	1.268	3.33	2.137	2.35	2.643
10/05/05	0.28	0.20	0.129	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/06/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/07/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/08/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/09/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/10/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/11/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/12/05	0.22	0.20	0.084	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/13/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/14/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/15/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/16/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/17/05	0.2	0.20	0.070	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/18/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/19/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/20/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/21/05	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/22/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/23/05	0.04	0.20	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/24/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/25/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/26/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/27/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/28/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/29/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/30/05	0.09	0.20	0.010	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/31/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/01/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/02/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/03/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/04/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/05/05	0.12	0.20	0.022	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/06/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/07/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/08/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/09/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/10/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/11/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/12/05	0.09	0.20	0.010	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/13/05	0.1	0.20	0.013	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/14/05	0.04	0.20	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/15/05	0.38	0.20	0.195	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/16/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/17/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/18/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/19/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/20/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/21/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/22/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/23/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/24/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/25/05	0.14	0.20	0.032	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/26/05	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/27/05	0.06	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/28/05	0.43	0.20	0.255	6.39	0	4.71	0	2.82	0	1.90	0.001	1.49	0.011	10.00	0	5.87	0	3.33	0	2.35	0
11/29/05	0.11	0.20	0.018	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
11/30/05	0.08	0.20	0.008	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
12/01/05	0.02	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0

Nondegradation Analysis
 City of Savage
 WSB Project No. 1436-10

Date	Flow (MGD)	Impervious		Developed Non-Irr		Ag-A Soils		Ag-B		Ag-C		Ag-D		Open-A		Open-B		Open-C		Open-D	
		(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches
04/02/06	1.06	0.20	0.849	6.39	0	4.71	0.003	2.82	0.074	1.90	0.178	1.49	0.257	10.00	0	5.87	0	3.33	0.042	2.35	0.119
04/03/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/04/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/05/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/06/06	2.58	0.20	2.350	6.39	0.220	4.71	0.423	2.82	0.840	1.90	1.178	1.49	1.378	10.00	0.032	5.87	0.271	3.33	0.698	2.35	1.000
04/07/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/08/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/09/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/10/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/11/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/12/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/13/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/14/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/15/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/16/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/17/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/18/06	0.06	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/19/06	0.02	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/20/06	0.28	0.20	0.129	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/21/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/22/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/23/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/24/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/25/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/26/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/27/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/28/06	0.26	0.20	0.114	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
04/29/06	0.9	0.20	0.694	6.39	0	4.71	0	2.82	0.036	1.90	0.111	1.49	0.172	10.00	0	5.87	0	3.33	0.015	2.35	0.067
04/30/06	0.81	0.20	0.608	6.39	0	4.71	0	2.82	0.020	1.90	0.079	1.49	0.130	10.00	0	5.87	0	3.33	0.006	2.35	0.043
05/01/06	0.46	0.20	0.282	6.39	0	4.71	0	2.82	0	1.90	0.003	1.49	0.016	10.00	0	5.87	0	3.33	0	2.35	0
05/02/06	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/03/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/04/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/05/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/06/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/07/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/08/06	0.23	0.20	0.091	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/09/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/10/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/11/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/12/06	0.46	0.20	0.282	6.39	0	4.71	0	2.82	0	1.90	0.003	1.49	0.016	10.00	0	5.87	0	3.33	0	2.35	0
05/13/06	0.11	0.20	0.018	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/14/06	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/15/06	0.06	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/16/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/17/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/18/06	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/19/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/20/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/21/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/22/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/23/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/24/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/25/06	0.31	0.20	0.153	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/26/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/27/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/28/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/29/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/30/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
05/31/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/01/06	0.07	0.20	0.004	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/02/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0

Nondegradation Analysis
 City of Savage
 WSB Project No. 1436-10

Date	Precipitation (S)	Impervious		Developed Non-Imp		Ag-A Soils		Ag-B		Ag-C		Ag-D		Open-A		Open-B		Open-C		Open-D	
		Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)
06/03/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/04/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/05/06	1.04	0.20	0.830	6.39	0	4.71	0.002	2.82	0.069	1.90	0.169	1.49	0.246	10.00	0	5.87	0	3.33	0.038	2.35	0.112
06/06/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/07/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/08/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/09/06	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/10/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/11/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/12/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/13/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/14/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/15/06	0.05	0.20	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/16/06	1.15	0.20	0.937	6.39	0	4.71	0.009	2.82	0.101	1.90	0.221	1.49	0.309	10.00	0	5.87	0	3.33	0.061	2.35	0.153
06/17/06	0.04	0.20	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/18/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/19/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/20/06	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/21/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/22/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/23/06	0.02	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/24/06	0.18	0.20	0.056	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/25/06	0.24	0.20	0.098	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/26/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/27/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/28/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/29/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
06/30/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/01/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/02/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/03/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/04/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/05/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/06/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/07/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/08/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/09/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/10/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/11/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/12/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/13/06	0.04	0.20	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/14/06	0.1	0.20	0.013	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/15/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/16/06	0.05	0.20	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/17/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/18/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/19/06	0.71	0.20	0.513	6.39	0	4.71	0	2.82	0.007	1.90	0.048	1.49	0.089	10.00	0	5.87	0	3.33	0	2.35	0.022
07/20/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/21/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/22/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/23/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/24/06	0.28	0.20	0.129	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/25/06	0.02	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/26/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/27/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/28/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/29/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/30/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
07/31/06	0.09	0.20	0.010	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/01/06	1.05	0.20	0.839	6.39	0	4.71	0.002	2.82	0.071	1.90	0.174	1.49	0.251	10.00	0	5.87	0	3.33	0.040	2.35	0.115
08/02/06	2.69	0.20	2.460	6.39	0.255	4.71	0.474	2.82	0.914	1.90	1.265	1.49	1.472	10.00	0.045	5.87	0.311	3.33	0.764	2.35	1.080
08/03/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0

Nondegradation Analysis
 City of Savage
 WSB Project No. 1436-10

Date	Elevation (S)	Impervious		Developed Non-Imp		Ag-A Soils		Ag-B		Ag-C		Ag-D		Open-A		Open-B		Open-C		Open-D	
		Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)
08/04/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/05/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/06/06	0.27	0.20	0.121	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/07/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/08/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/09/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/10/06	0.28	0.20	0.129	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/11/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/12/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/13/06	0.45	0.20	0.273	6.39	0	4.71	0	2.82	0	1.90	0.002	1.49	0.014	10.00	0	5.87	0	3.33	0	2.35	0
08/14/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/15/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/16/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/17/06	0.07	0.20	0.004	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/18/06	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/19/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/20/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/21/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/22/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/23/06	0.76	0.20	0.560	6.39	0	4.71	0	2.82	0.013	1.90	0.063	1.49	0.109	10.00	0	5.87	0	3.33	0	2.35	0.032
08/24/06	1.26	0.20	1.044	6.39	0	4.71	0.020	2.82	0.138	1.90	0.278	1.49	0.376	10.00	0	5.87	0	3.33	0.090	2.35	0.199
08/25/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/26/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/27/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/28/06	0.06	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/29/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/30/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
08/31/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/01/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/02/06	0.39	0.20	0.220	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/03/06	0.63	0.20	0.438	6.39	0	4.71	0	2.82	0.002	1.90	0.029	1.49	0.060	10.00	0	5.87	0	3.33	0	2.35	0.010
09/04/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/05/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/06/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/07/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/08/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/09/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/10/06	0.03	0.20	0.001	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/11/06	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/12/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/13/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/14/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/15/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/16/06	0.19	0.20	0.063	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/17/06	0.14	0.20	0.032	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/18/06	0.03	0.20	0.001	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/19/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/20/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/21/06	0.52	0.20	0.336	6.39	0	4.71	0	2.82	0	1.90	0.009	1.49	0.029	10.00	0	5.87	0	3.33	0	2.35	0
09/22/06	0.27	0.20	0.121	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/23/06	0.13	0.20	0.027	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/24/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/25/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/26/06	0.03	0.20	0.001	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/27/06	0.06	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/28/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/29/06	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
09/30/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/01/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/02/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/03/06	0.02	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
10/04/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0

Nondegradation Analysis
 City of Savage
 WSB Project No. 1436-10

Date	Flow (cfs)	Impervious		Developed Non-Imp		Ag-A Soils		Ag-B		Ag-C		Ag-D		Open-A		Open-B		Open-C		Open-D	
		(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches	(S)	Accumulated Direct Runoff (Q) Inches
12/06/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
12/07/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
12/08/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
12/09/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
12/10/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
12/11/06	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
12/12/06	0.08	0.20	0.006	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
12/13/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
12/14/06	0.01	0.20	0.005	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
12/15/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
12/16/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
12/17/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
12/18/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
12/19/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
12/20/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
12/21/06	0.71	0.20	0.513	6.39	0	4.71	0	2.82	0.007	1.90	0.048	1.49	0.089	10.00	0	5.87	0	3.33	0	2.35	0.022
12/22/06	0.07	0.20	0.004	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
12/23/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
12/24/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
12/25/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
12/26/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
12/27/06	0	0.20	0	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
12/28/06	0.02	0.20	0.002	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
12/29/06	0.04	0.20	0.000	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
12/30/06	0.21	0.20	0.077	6.39	0	4.71	0	2.82	0	1.90	0	1.49	0	10.00	0	5.87	0	3.33	0	2.35	0
12/31/06	0.98	0.20	0.772	6.39	0	4.71	0	2.82	0.053	1.90	0.143	1.49	0.213	10.00	0	5.87	0	3.33	0.027	2.35	0.091
27.57		18.066		0.48		0.93		2.36		4.11		5.43		0.08		0.58		1.78		3.12	

* Runoff volumes were estimated with SCS methodology. The equation used was taken from the MPCA 2000 Drainage Manual in section 3.6.