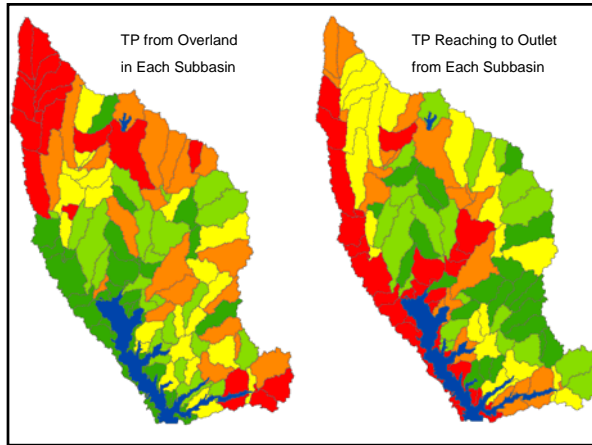
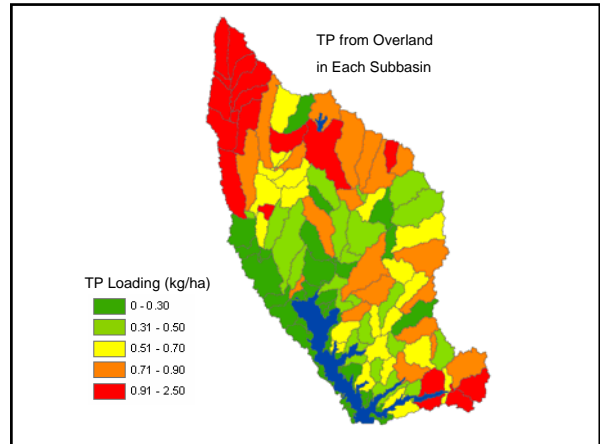


North Central Texas Water Quality Project

BMP Modeling Analyses by SWAT

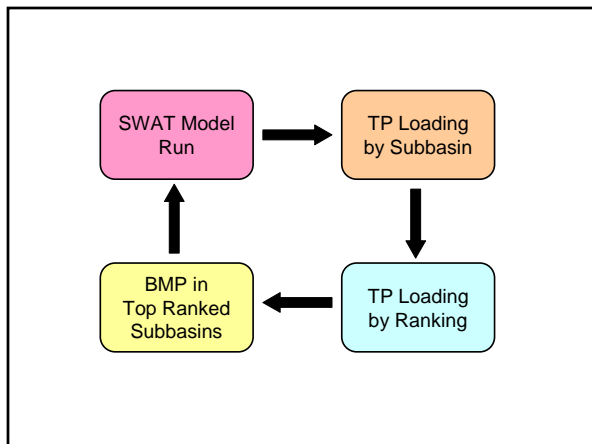
Taesoo Lee
Spatial Sciences Laboratory
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North Central Texas Water Quality Project

BMPs and Adoption Rate

- Filter Strips: 50%
- Graded Stabilization Structures: 100%
- Critical Pastureland Planting (Grassed waterway): 20%
- Terrace: 15%
- WWTP: 100%
- Conversion Cropland to Grass: 20%
- Prescribed Grazing: 15.5% (62% from 25% Maximum)



SUBBASIN	HRU	LANDUSE	HRU Area	Rank by TP	Ranking	Subbasin #	Area	Accum. Area	%
1	1	GRSG	9.22	3	1	2	11.67	11.67	7.2
2	1	GRSG	11.67	1	2	8	1.37	13.04	8.1
3	1	GRSG	0.33	15	3	1	9.22	22.26	13.8
3	2	GRSG	0.60	15	4	12	5.48	27.75	17.2
4	1	GRSG	0.51	9	5	7	9.82	37.57	23.3
4	2	GRSG	1.49	9	6	67	1.21	38.78	24.1
4	3	GRSG	2.29	9	7	6	3.71	42.49	26.4
5	1	GRSG	2.17	14	8	11	7.21	49.70	30.9
5	2	GRSG	1.25	14	9	4	4.29	53.99	33.5
5	3	GRSG	3.06	14	10	21	5.30	59.29	36.8
6	1	GRSG	0.82	7	11	79	1.93	61.22	38.0
6	2	GRSG	1.02	7	12	106	2.58	63.80	39.6
6	3	GRSG	1.30	7	13	66	1.78	65.58	40.7
6	4	GRSG	0.76	7	14	5	6.47	72.05	44.7
7	1	GRSG	1.69	5	15	3	0.93	72.99	45.3
7	2	GRSG	8.13	5	16	33	6.17	79.16	48.1
8	1	GRSG	0.16	2	17	103	0.46	79.62	48.4
8	2	GRSG	0.24	2	18	68	0.06	79.68	48.5
8	3	GRSG	0.70	2	19	17	0.70	80.38	48.9
8	4	GRSG	0.27	2	20	40	2.32	82.70	51.3
11	1	GRSG	7.21	8					
12	1	GRSG	1.66	4					
12	2	GRSG	3.82	4					
17	1	GRSG	0.70	19					
21	1	GRSG	3.50	10					
21	2	GRSG	1.80	10					

	Sediment (Ton)	Total N (Kg)	Total P (Kg)
Baseline	450000	1419380	188670
with FS Reduction(%)	412500	1279660	161840
	8.3	9.8	14.2
w/FS + GSS	401400	1256780	158300
	10.8	11.5	16.1
w/FS +GSS+GWP	396500	1228810	156330
	11.9	13.4	17.1
w/FS+GSS+GWP+TR	376600	1220690	148320
	16.3	14.0	21.4
w/FS+GSS+GWP+TR+WWTP	376600	1198120	139860
	16.3	15.6	25.9
w/FS+GSS+GWP+TR+WWTP+CP	359800	1155950	128910
	20.0	18.6	31.7
w/FS+GSS+GWP+TR+WWTP+CP+PG (15.5%)	354300	1115370	126720
	21.3	21.4	32.8

North Central Texas Water Quality Project

BMPs and Adoption Rate

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- Conversion Cropland to Grass: 20%
- Prescribed Grazing: 15.5%

Original TP Reduction Goal (35%)

- Prescribed Grazing: 25%
- 2000 Feet Buffer Around Lake: 70%

	Sediment	Total N	Total P
Baseline	450000	1419380	188670
with FS Reduction(%)	412500	1279660	161840
	8.3	9.8	14.2
w/FS + GSS	401400	1256780	158300
	10.8	11.5	16.1
w/FS +GSS+GWP	396500	1228810	156330
	11.9	13.4	17.1
w/FS+GSS+GWP+TR	376600	1220690	148320
	16.3	14.0	21.4
w/FS+GSS+GWP+TR+WWTP	376600	1198120	139860
	16.3	15.6	25.9
w/FS+GSS+GWP+TR+WWTP+CP	359800	1155950	128910
	20.0	18.6	31.7
w/FS+GSS+GWP+TR+WWTP+CP+PG (15.5%)	354300	1115370	126720
	21.3	21.4	32.8
w/FS+GSS+GWP+TR+WWTP+CP+PG (25%)	351900	1096660	126200
	21.8	22.7	33.1
w/FS+GSS+GWP+TR+WWTP+CP+PG (25%)+BUF	354600	1057260	123480
	21.2	25.5	34.6

