Appendix C STEPL Spreadsheet Results

The purpose of this appendix is to present screen captures of the US Environmental Protection Agency's Spreadsheet Tool for Estimating Pollutant Loads, version 4.0 (STEPL), illustrating all input values and output results derived in development of this TMDL project. STEPL spreadsheet tools, and user manuals can be downloaded from http://it.tetratech-ffx.com/steplweb/models\$docs.htm

The Spreadsheet Tool for Estimating Pollutant Loads (STEPL)





State California	~	San Benito	*		tion (for rain ANCISCO WS		ictors)						
Canonia		Garbento		CA SAINTIN	A1101000 1110	O AI							
4. Input water	rohod land u	o aroa (ao) a	nd procinitati	ion (in)						Rain correct	ion factors 0.421		
1. Input water	Urban and	e area (ac) a	nu precipitat	ion (iii)	User		Feedlot Perce	nt		0.869 Annual	0.421	Avg.	
	Built Up	Cropland	Range Land	Woodland	Defined	Feedlots	Paved		Total	Rainfall	Rain Days	Rain/Event	
Clear Creek- San Benito							0-24%	-		22.2	46		
River	0	0	13205	21625	0	(0-24%	-	34830			0.996	
Hernandez Reservoir-							0-24%	-		04.0	46		
San Benito	0	470	0004	0000	0	,	0-24%		40007	21.3	46	0.056	
River James Creek-	U	178	8821	9888	0	,	0 0-24%	-	18887			0.956	
San Benito River	0	10	16330	12401	0	,	0-24%		28741	20	46	0.897	
Rock Springs	U	10	10330	12401	0	,	0 0-24%	=	20141			0.697	
Creek-San Benito River	0	303	23080	6397	0		0-24%		29780	18.4	46	0.826	
Sulphur Creek-	0	303	23000	0397		,	0 0-24%	-	29760			0.620	
San Benito River	0	461	20911	2802	0		0-24%		24174	16	46	0.718	
Willow Creek	0	41	15962	2583	0	(0-24%	=	18586	17.6	46	0.790	
Stone Creek Upper Tres	0	5	8133	1922	0		0-24%		10060		46	0.803	
Pinos Creek	0	81	20916	2243	0	(O 0-24%) ∪-∠4%		23240	18.2	46	0.817	
Middle Tres Pinos Creek	0	19	22470	508	0	-	O 0-24%) U-∠4%	=	22997	16.4	46	0.736	
Pescadero							0-24%	-		17.8	46		
Creek Las Aguilas	87	672	13486	11420	0	(0-24%	=	25665			0.799	
Creek	0	0	24509	220	0	(O 0-24% 0 ∪-∠4%		24729	18	46	0.808	
Los Muertos Creek	0	42	18176	710	0		0-24%)∪-∠4%	-	18928	16.1	46	0.722	
Paicines		72	10110	110	İ	,	0-24%		10020	İ		0.722	
Reservoir- San Benito										15.2	46		
River	16	4354	26909	2610	0	(0-24%		33889			0.682	
Lower Tres Pinos Creek	231	2179	13973	1468	0	,	0-24%)∪-∠4%		17851	14.8	46	0.664	
San Juan							0-24%			19.5	50		
Canyon Bird Creek-	927	6136	11360	5774	0	(0-24%		24197	10.5	30	0.805	
San Benito										17	50		
River Quien Sabe	3034	3779	17505	8424	0	(0-24%		32742			0.702	
Creek	0	3172	29268	116	0	(U-24%		32556	17.2	50	0.710	
Santa Ana Creek	853	7084	24603	1177	0		0-24% 0-∠4%		33717	15.7	50	0.648	
Tequisquita							0-24%			17.8	50		
Slough Watsonville	1966	8966	12638	2393	0	(0-24%		25963			0.735	
Slough	4178	5049	292	5952	0	(U-24%		15471	23.1	58	0.822	
Lower Pajaro River	963	11321	11680	9321	0	C	0-24% 0-∠4%	=	33285	23.2	58	0.826	
Arroyo De Las Viboras	0	207	14000	104	0	,	0-24%	=	14740	20.2	50	0.024	
Salsipuedes		327	14229	184		,	0-24%	-		26.2	58	0.834	
Creek Lower	1342	4019	2344	7993	0	(U-Z4%		15698	20.2	90	0.932	
Pacheco							0-24%			21.5	58		
Creek South Fork	192	4172	15796	1717	0	(0-24%	-	21877			0.765	
Pacheco	_									21.6	58		
Creek Lower Uvas	0	0	11497	10	0	(0-24%	-	11507			0.769	
Creek	1602	4142	13677	6269	0	(U-24%		25690	24.4	58	0.868	
Upper Pajaro River	1313	19596	13487	1070	0	(0-24%) U-∠4%		35466	19.4	58	0.690	
Corralitos							0-24%			32.5	58		
Creek Upper	1108	2594	178	13909	0	(0-24%		17789			1.157	
Pacheco	_	0	40004	000	0		0-24%		40040	20.3	58	0.700	
Creek Lower Llagas	0		18094	222		(0-24%	-	18316	04	E0.	0.722	
Creek	5442	5378	4721	4467	0) JU-24%		20008	21	58	0.747	
Cedar Creek Upper Uvas	0	0	7890	4876	0	(0 0-24% 0 0-24%		12766	21.2	58	0.754	
Creek	201	316	15576	13491	0	(0-24%	- 1	29584	32.7	57	1.184	
Little Llagas Creek	5257	2216	5284	2636	0		0-24% 0-∠4%	=	15393	21.2	57	0.768	
Upper Llagas							0-24%	-		28.8	57		
Creek Lower North	1232	505	14056	2713	0	 	0 0-24%		18506		-	1.043	
Fork Pacheco		0	24891	688	0	,	0-24%		25579	20	58	0.712	
Creek													
Creek Upper North Fork Pacheco	0	0	24091	000	0	,	0 0-24%	-	20010		58	0.712	

65	2. Input agric	cultural anima	ils							
66	Watershed	Beef Cattle		Swine (Hog)	Sheep	Horse	Chicken	Turkey	Duck	# of months manure applied
67	Clear Creek- San Benito River	0	0	O O	0	0	0	0	0	О
07	Hernandez Reservoir-	0	0	0	0	0	0	0	0	0
68	San Benito River James Creek-	0	0	0	0	0	0	0	0	0
69	San Benito River Rock Springs	0	0	0	0	0	0	0	0	0
70	Creek-San Benito River Sulphur Creek-	123	18	13	16	4	0	0	0	0
74	San Benito River				4		0			
71	Willow Creek	6	0	0	1 0	0	0	0	0	0
73	Stone Creek	68	10	0	7	9	2	0	0	0
74	Upper Tres Pinos Creek	0	0	0	0	0	0	0	0	0
	Middle Tres									
75	Pinos Creek Pescadero	0	0	0	0	0	0	0	0	0
76	Creek	0	0	0	0	0	0	0	0	0
77	Las Aguilas Creek	0	0	0	0	0	0	0	0	0
	Los Muertos									
78	Paicines Reservoir- San Benito	0	0	0	0	0	0	0	0	0
79	River	1980	285	3	202	264	66	0	0	0
80	Lower Tres Pinos Creek San Juan	841	121	1	86	112	28	0	3	0
81	Canyon Bird Creek- San Benito	115	17	0	12	15	4	0	0	0
82	River	647	93	1	66	86	22	0	2	0
83	Quien Sabe Creek	0	0	0	0	0	0	0	0	0
84	Santa Ana Creek Tequisquita	1789	258	2	182	238	59	0	5	0
85	Slough Watsonville	2230	322	3	227	297	74	0	7	0
86	Slough	225	0	0	117	682	0	0	10	0
87	Lower Pajaro River Arroyo De	581	23	5	84	405	69	1	5	0
88	Las Viboras	101	8	1	10	24	9	0	0	0
89	Salsipuedes Creek Lower	0	0	0	0	0	0	0	0	0
90	Pacheco Creek South Fork	2043	56	25	211	677	275	6	7	0
91	Pacheco Creek	0	0	0	0	0	0	0	0	0
92	Lower Uvas Creek	617	4	9	64	227	94	2	2	0
93	Upper Pajaro River	3625	196	35	373	1037	403	2	12	0
94	Corralitos Creek Upper	27	0	0	14	78	0	0	1	0
95	Pacheco Creek	0	0	0	0	0	0	0	0	0
96	Lower Llagas Creek	62	0	1	6	23	9	0	0	0
97	Cedar Creek Upper Uvas	0	0	0	0	0	0	0	0	0
98	Creek Little Llagas	115	1	2	12	42	18	0	0	0
99	Creek Upper Llagas	992	6	14	103	365	152	3	3	0
100	Creek Lower North	80	0	1	8	29	12	0	0	0
101	Fork Pacheco Creek Upper North	0	0	0	0	0	0	0	0	0
102	Fork Pacheco Creek	0	0	0	0	0	0	0	0	0

115	3. Input sept	ic system and	l illegal direct	wastewater	discharge da	ta
116	Watershed	No. of Septic Systems	Population per Septic System	Septic Failure Rate, %	Wastewate r Direct Discharge, # of People	Direct Discharge Reduction, %
	Clear Creek- San Benito					
117	River	0	2.43	2	0	0
	Hernandez					
	Reservoir- San Benito					
118	River	0	2.43	2	0	0
	James Creek-					
119	San Benito River	0	2.43	2	0	0
	Rock Springs					
120	Creek-San Benito River	0	2.43	2	0	0
120	Sulphur Creek		2.40		·	·
101	San Benito River	,	0.40	2		0
121	Willow Creek	0	2.43 2.43	2	0	0
123	Stone Creek	0	2.43	2	0	0
404	Upper Tres Pinos Creek		0.40	•	0	
124	Middle Tres	0	2.43	2	U	0
125	Pinos Creek	0	2.43	2	0	0
126	Pescadero Creek	0	2.43	2	0	0
120	Las Aguilas	0	2.43		U	U
127	Creek	0	2.43	2	0	0
128	Los Muertos Creek	0	2.43	2	0	0
120	Paicines		2.40			
	Reservoir-					
129	San Benito River	0	2.43	2	0	0
	Lower Tres					
130	Pinos Creek San Juan	0	2.43	2	0	0
131	Canyon	0	2.43	2	0	0
	Bird Creek-					
132	San Benito River	100	3	2	0	0
102	Quien Sabe					
133	Creek Santa Ana	0	2.43	2	0	0
134	Creek	0	2.43	2	0	0
135	Tequisquita Slough	31	3	2	0	0
155	Watsonville	31	,		U	- 0
136	Slough	70	2.5	2	0	0
137	Lower Pajaro River	125	2.5	2	0	0
	Arroyo De					
138	Las Viboras Salsipuedes	0	2.43	2	0	0
139	Creek	0	2.5	2	0	0
	Lower					
140	Pacheco Creek	0	2.43	2	0	0
	South Fork	•	20		·	
111	Pacheco Creek	0	2.43	2	0	0
141	Lower Uvas	U	2.43		U	U
142	Creek	0	2.43	2	0	0
143	Upper Pajaro River	0	2.43	2	0	0
140	Corralitos		2.40		·	Ť
144	Creek	200	2.5	2	0	0
	Upper Pacheco					
145	Creek	0	2.43	2	0	0
146	Lower Llagas Creek	150	2.77	2	0	0
147	Cedar Creek	0	2.43	2	0	0
	Upper Uvas	_				
148	Creek Little Llagas	0	2.43	2	0	0
149	Creek	0	2.43	2	0	0
1E0	Upper Llagas Creek	450	0.77	_		0
150	Lower North	150	2.77	2	0	0
	Fork Pacheco					
151	Creek Upper North	0	2.43	2	0	0
	Fork Pacheco					
152	Creek	0	2.43	2	0	0

64 4. Modify t	the Universa	l Soil Loss	Equation (L	JSLE) paran	neters	.					-									
55 Watershe	Cropland B				D	Pastureland B	<u> </u>	LS	С	P	Forest	V	LS	ic i	n	User Defin	ed	LS	c	n
Clear Creek-	н	K	LS	L	P	н	K	LS	L	Р	н	K	LS	ե	Р	н	K	L5	L	P
San Benito																				
River	31,552	0.326	11,394	0.200	1.000	31,552	0.326	11,394	0.040	1.000	31,552	0.326	11.394	0.003	1.000	31.552	0.326	11.394	0.062	1.00
Hernandez																				
Reservoir-San																				
Benito River	31,552	0.326	11.394	0.200	1.000	31,552	0.326	11.394	0.040	1.000	31,552	0.326	11.394	0.003	1.000	31,552	0.326	11.394	0.062	1.00
James Creek-																				
San Benito Biver	31,552	0.326	11.394	0.200	1000	31,552	0.326	11,394	0.040	1000	31,552	0.326	11,394	0.003	1.000	31,552	0.326	11,394	0.062	1.00
Rock Springs	51.552	0.020	11.004	0.200	1.000	31.332	0.020	11.004	0.040	1,000	31.002	0.020	11.004	0.000	1.000	51.552	0.020	11.004	0.002	1.00
Creek-San																				
Benito River	31,552	0.326	11.394	0.200	1.000	31,552	0.326	11,394	0.040	1.000	31,552	0.326	11.394	0.003	1.000	31,552	0.326	11.394	0.062	1.00
Sulphur Creek- San Benito	1 1																			
1 River	31,552	0.326	11.394	0.200	1.000	31,552	0.326	11.394	0.040	1.000	31,552	0.326	11.394	0.003	1,000	31,552	0.326	11.394	0.062	1.00
2 Willow Creek	31.552	0.326	11.394	0.200	1,000	31.552	0.326	11.394	0.040	1.000	31.552 31.552	0.326	11,394	0.003	1,000	31.552 31.552	0.326	11,394	0.062	1.00
3 Stone Creek	31,552	0.326	11,394	0.200	1.000	31,552	0.326	11.394	0.040	1,000	31,552	0.326	11.394	0.003	1.000	31,552	0.326	11.394	0.062	1.00
Upper Tres		0.326		0,200	1.000	31,552	0.326		0.040	1.000	31,552	0.326	11.394		1.000	31,552	0.326			1.00
Pinos Creek Middle Tres	31,552	0.326	11.394	0.200	1,000	31.552	0.326	11.394	0.040	1,000	31,552	0.326	11.394	0.003	1.000	31,552	0.326	11.394	0.062	1.00
5 Pinos Creek	31,552	0.326	11,394	0.200	1.000	31,552	0.326	11,394	0.040	1.000	31,552	0.326	11.394	0.003	1.000	31,552	0.326	11.394	0.062	1.00
Pescadero																				
6 Creek	31,552	0.326	11,394	0.200	1.000	31,552	0.326	11,394	0.040	1.000	31,552	0.326	11.394	0.003	1.000	31,552	0.326	11.394	0.062	1.00
Las Aguilas 7 Creek	31,552	0.326	11,394	0.200	1.000	31,552	0.326	11,394	0.040	1,000	31,552	0.326	11,394	0.003	1.000	31,552	0.326	11.394	0.062	1.00
Los Muertos																				
8 Creek	31,552	0.326	11.394	0.200	1.000	31,552	0.326	11,394	0.040	1.000	31,552	0.326	11.394	0.003	1.000	31.552	0.326	11.394	0.062	1.00
Paicines																				
Reservoir-San																				
9 Benito River	31.552	0.326	11.394	0.200	1.000	31,552	0.326	11.394	0.040	1.000	31.552	0.326	11.394	0.003	1.000	31.552	0.326	11.394	0.062	1.00
Lower Tres																				
O Pinos Creek San Juan	31,552	0.326	11,394	0.200	1.000	31,552	0.326	11,394	0.040	1.000	31,552	0.326	11.394	0.003	1.000	31,552	0.326	11.394	0.062	1.00
San Juan 1 Canyon	31,552	0.326	11.394	0.200	1.000	31,552	0.326	11.394	0.040	1.000	31,552	0.326	11.394	0.003	1.000	31.552	0.326	11.394	0.062	1.00
Bird Creek-	01.002	0.020	11.001	0.200	1.000	01.002	0.020	11.001	0.010	1.000	01.002	0.020	11.001	0.000		01.002	0.020	11.001	0.002	1.00
San Benito																				
2 River	31,552	0.326	11,394	0.200	1.000	31,552	0.326	11,394	0.040	1.000	31,552	0.326	11.394	0.003	1.000	31,552	0.326	11.394	0.062	1.00
Quien Sabe 3 Creek	31,552	0.326	11.394	0.200	1.000	31,552	0.326	11.394	0.040	1,000	31,552	0.326	11.394	0.003	1.000	31.552	0.326	11.394	0.062	1.00
Santa Ana	51.552	0.020	11.004	0.200	1.000	31.332	0.020	11.004	0.040	1,000	31.332	0.020	11.004	0.000	1.000	01.002	0.020	11.004	0.002	1.00
4 Creek	31,552	0.326	11,394	0.200	1.000	31,552	0.326	11.394	0.040	1,000	31,552	0.326	11.394	0.003	1.000	31,552	0.326	11.394	0.062	1.00
Tequisquita		0.326		0,200	1000	31,552		11,394	0.040	1000	31,552	0.326	11.394		1.000	31,552	0.326	11.394		
5 Slough Watsonville	31,552	0.326	11.394	0.200	1.000	31.552	0.326	11.394	0.040	1,000	31,552	0.326	11.394	0.003	1.000	31,552	0.326	11.394	0.062	1.00
6 Slough	240,535	0.234	0.895	0.277	0.981	240,535	0.234	0.895	0.040	1.000	240,535	0.234	0.895	0.003	1.000	240,535	0.234	0.895	0.277	1.00
Lower Pajaro																				
7 River	240.535	0.234	0.895	0.277	0.981	240,535	0.234	0.895	0.040	1.000	240.535	0.234	0.895	0.003	1.000	240.535	0.234	0.895	0.277	1.00
Arroyo De Las 8 Viboras	31,552	0.326	11,394	0.200	1.000	31,552	0.326	11.394	0.040	1.000	31,552	0.326	11.394	0.003	1.000	31,552	0.326	11.394	0.062	1.00
Salsipuedes																				
9 Creek	240.535	0.234	0.895	0.277	0.981	240,535	0.234	0.895	0.040	1.000	240,535	0.234	0.895	0.003	1.000	240.535	0.234	0.895	0.277	1.00
Lower																				
Pacheco IO Creek	60.825	0.290	10.765	0.200	1.000	60.825	0.290	10.765	0.040	1,000	60.825	0.290	10.765	0.003	1.000	60.825	0.290	10.765	0.100	1.00
South Fork	60.020	0.230	10.760	0.200	1.000	60.020	0.230	10.760	0.040	1,000	00.020	0.200	10.760	0.003	1.000	00.020	0.230	10.760	0.100	1.00
Pacheco																				
1 Creek	60.825	0.290	10.765	0.200	1.000	60.825	0.290	10,765	0.040	1.000	60.825	0.290	10.765	0.003	1.000	60.825	0.290	10.765	0.100	1.00
Lower Uvas																				
2 Creek Upper Pajaro	60.825	0.290	10.765	0.200	1.000	60.825	0.290	10.765	0.040	1.000	60.825	0.290	10.765	0.003	1.000	60.825	0.290	10.765	0.100	1.00
3 River	31,552	0.326	11.394	0.200	1.000	31,552	0.326	11.394	0.040	1.000	31,552	0.326	11.394	0.003	1.000	31.552	0.326	11.394	0.062	1.00
Correlitos																				
4 Creek	240.535	0.234	0.895	0.277	0.981	240.535	0.234	0.895	0.040	1.000	240.535	0.234	0.895	0.003	1.000	240.535	0.234	0.895	0.277	1.00
Upper Pacheco																				
5 Creek	60.825	0.290	10.765	0.200	1.000	60.825	0.290	10.765	0.040	1.000	60.825	0.290	10.765	0.003	1.000	60.825	0.290	10.765	0.100	1.00
Lower Llagas																				
6 Creek	60.825	0.290	10.765	0.200	1.000	60.825	0.290	10.765	0.040	1.000	60.825	0.290	10.765	0.003	1.000	60.825	0.290	10.765	0.100	1.00
7 Cedar Creek Upper Uvas	60.825	0.290	10.765	0.200	1.000	60.825	0.290	10.765	0.040	1.000	60.825	0.290	10.765	0.003	1.000	60.825	0.290	10.765	0.100	1.00
Upper Uvas Creek	60.825	0.290	10.765	0.200	1.000	60.825	0.290	10.765	0.040	1,000	60.825	0.290	10,765	0.003	1.000	60.825	0.290	10,765	0.100	1.00
Little Llagas																				
9 Creek	60.825	0.290	10.765	0.200	1.000	60.825	0.290	10.765	0.040	1.000	60.825	0.290	10.765	0.003	1.000	60.825	0.290	10.765	0.100	1.00
Upper Llagas O Creek	60,825	0.290	10,765	0.200	1.000	60.825	0.290	10,765	0.040	1,000	60,825	0.290	10,765	0.003	1.000	60.825	0.290	10,765	0.100	1.00
J Creek	60.825	0.290	10.765	0.200	1.000	60.825	0.290	10.765	0.040	1.000	60.825	0.290	10.765	0.003	1.000	60.825	0.290	10.765	0.100	1.00
Fork Pacheco										1										
11 Creek	60.825	0.290	10.765	0.200	1.000	60.825	0.290	10.765	0.040	1.000	60.825	0.290	10.765	0.003	1.000	60.825	0.290	10.765	0.100	1.00
Upper North																				
Fork Pacheco			11394		****	31552				1000	31552		11394		1000	31552	0.326	11 394	0.062	100
2 Creek 3 Miller Canal	31,552	0.326	11.394 11.394	0.200	1.000	31.552 31.552	0.326	11.394	0.040 0.040	1.000		0.326	11.394 11.394	0.003	1.000			11.394 11.394	0.062	1.00
McGowan Di	31,552 31,552	0.326	11,394	0.200	1,000	31,552	0.326 0.326	11.394	0.040	1,000	31.552 31.552	0.326	11,394	0.003	1,000	31.552 31.552	0.326	11.394	0.062	1.00
5 Beach Road	31,552	0.326	11.394	0.200	1.000	31,552	0.326	11.394	0.040	1.000	31,552	0.326	11.394	0.003	1.000	31,552	0.326	11.394	0.062	1.00
Watsonville 9	31,552	0.326	11.394	0.200	1.000	31.552	0.326	11.394	0.040	1.000	31.552	0.326	11.394	0.003	1.000	31,552	0.326	11.394	0.062	1.00
7 Struve Sloug	31,552	0.326	11.394	0.200	1.000	31.552	0.326	11.394	0.040	1.000	31,552	0.326	11.394	0.003	1.000	31,552	0.326	11.394	0.062	1.00
8 Gallighan Slo	31,552	0.326	11.394	0.200	1.000	31,552	0.326	11.394	0.040	1.000	31,552	0.326	11.394	0.003	1.000	31,552	0.326	11.394	0.062	1.00
9 Hanson Slou	31.552	0.326	11.394	0.200	1.000	31.552	0.326	11.394	0.040	1.000	31,552	0.326	11.394	0.003	1.000	31.552	0.326	11.394	0.062	1.00
10 Harkins Slou	31,552	0.326	11,394	0.200	1.000	31.552	0.326	11.394	0.040	1.000	31,552	0.326	11,394	0.003	1.000	31,552	0.326	11.394	0.062	1.00

214 215		verage so	il hydrologic	group (SHG), SHG A =	highest infi	Itration and	SHG D = lowest in	filtration
216	Watershe d	SHG A	SHG B	SHG C	SHG D	SHG Selected	Soil N conc.%	Soil P conc.%	Soil BOD
216	Clear Creek-					Selected	conc.%		conc.%
047	San Benito		•	•	O	_	0.000	0.000	0.400
217	River					D	0.068	0.038	0.160
	Hernandez Reservoir-San				0				
218	Benito River					ь .	0.068	0.038	0.160
210	James Creek-								
219	San Benito River	•	•	•	•	_ c	0.068	0.038	0.160
213	Rock Springs						0.068	0.038	0.160
	Creek-San			0		_			
220	Benito River Sulphur Creek-					С	0.068	0.038	0.160
	San Benito	•	0	O	0				
221	River Willow Creek		-			C B	0.068 0.068	0.038 0.038	0.160 0.160
223	Stone Creek	H	 	H	<u> </u>	B	0.068	0.038	0.160
	Upper Tres			ō					
224	Pinos Creek Middle Tres	_				С	0.068	0.038	0.160
225	Pinos Creek	•	•	•	o	D	0.068	0.038	0.160
226	Pescadero Creek	•	O	0	0	В	0.068	0.038	0.160
	Las Aguilas		-	0					
227	Creek Los Muertos					С	0.068	0.038	0.160
228	Creek	•	•	O	0	c	0.068	0.038	0.160
	Paicines								
	Reservoir-San	•	0	O	0				
229	Benito River					С	0.068	0.038	0.160
230	Lower Tres Pinos Creek	•	0	o	0	c	0.068	0.038	0.160
	San Juan		—	o	_				
231	Canyon Bird Creek-					С	0.068	0.038	0.160
	San Benito		o		0				
232	River					В	0.068	0.038	0.160
233	Quien Sabe Creek	•	0	0	O	ا ا	0.068	0.038	0.160
	Santa Ana			0					
234	Creek Tequisquita					С	0.068	0.038	0.160
235	Slough	•	•	•	٥	D	0.068	0.038	0.160
236	Watsonville	•	0	0	ø	ا ا	0.068	0.038	0.160
	Slough Lower Pajaro			0					
237	River			- 1		С	0.068	0.038	0.160
238	Arroyo De Las Viboras		•	O	•	С	0.068	0.038	0.160
239	Salsipuedes		Ö		0		0.000	0.000	0.400
238	Creek Lower				_	В	0.068	0.038	0.160
	Pacheco			0	0	_			
240	Creek South Fork					С	0.068	0.038	0.160
	Pacheco	•	0	O	•				
241	Creek Lower Uvas		-		_	l c	0.068	0.038	0.160
242	Creek			•		l c	0.068	0.038	0.160
	Upper Pajaro	•			0	_			
243	River Corralitos	_					0.068	0.038	0.160
244	Creek	•	0	•	•	В	0.068	0.038	0.160
	Upper Pacheco								
245	Creek					c	0.068	0.038	0.160
240	Lower Llagas	•			ø		0.000	0.000	0.400
246	Creek Cedar Creek				0	<u>D</u>		0.038 0.038	0.160 0.160
	Upper Uvas	H							
248	Creek Little Llagas	_		_		- 0	0.068	0.038	0.160
249	Creek	•	•	•	o	0	0.068	0.038	0.160
250	Upper Llagas			0	•	С	0.068	0.038	0.160
200	Creek Lower North					Η	0.068	0.038	0.160
OF4	Fork Pacheco				•	_			
251	Creek Upper North	 		+		<u>-</u>	0.068	0.038	0.160
	Fork Pacheco	•		•	0				
252	Creek					_ D	0.068	0.038	0.160

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6. Referen	ce runoff cu	irve numbei	(may be m	odified)
SHG	A	В	C	D
Urban	83	89	92	93
Cropland	67	78	85	89
Rangeland	49	69	79	84
Forest	39	60	73	79
User Defined	50	70	80	85

7. Nutrient	concentrat	ion in runol	f (mg/l)
Land use	N	P	BOD
1. L-Cropla	11.4	0.64	4
1a. w/ manure	8.1	2	12.3
2. M-Cropi	11.4	0.64	6.1
2a. w/ manure	12.2	3	18.5
3. H-Cropi	11.4	0.64	9.2
3a. w/ manure	18.3	4	24.6
4. Rangela	0.25	0.21	13
5. Forest	0.2	0.1	0.5
6. User Del	0	0	0

	d urban reference			_
UrbantSH	A	В	C	D
Commercial	89	92	94	95
Industrial	81	88	91	93
Institutional	81	88	91	93
Transportation	98	98	98	98
Multi-Family	77	85	90	92
Single-Family	57	72	81	86
Urban-Cultiva	67	78	85	89
Vacant-Deve	77	85	90	92
Open Space	49	69	79	84

7a. Nutrier	nt concentration in	shallow gro	oundwater (
Landuse	N	Р	BOD
Urban	1.8	0.04	0
Cropland	5.93	0.04	0
Rangeland	0.14	0.04	0
Forest	0.14	0.04	0
Feedlot	6	0.07	0
User-Defined	0	0	0

	Vatershe	Urban	an land use Commerc	Industrial		Transport	Multi-	Single-Family %	Urban-	Vacant	Open	Total %
	d	Area (ac.)	ial %	7	nal %	ation %	Famile %			(develope		Area
	Clear Creek- San Benito											
	River	۰ ا	15	10	10	10	10	30	5	5	5	100
	Hernandez	Ť						**				
	Reservoir-San											
	Benito River	۰ ا	15	10	10	10	10	30	5	5	5	100
	James Creek-	· ·	10	10	10	10	10	30	,	,	,	100
	San Benito											
	River	0	15	10	10	10	10	30	5	5	5	100
	Rock Springs Creek-San											
	Benito River	0	15	10	10	10	10	30	5	5	5	100
	Sulphur Creek-											
	San Benito River	۰ ا	15	10	10	10	10	30	5	5		100
	Willow Creek	0		10	10	10		30	5		5	100
	Stone Creek	ŏ		10		10		30	5		5	100
	Upper Tres								_	_	_	
	Pinos Creek Middle Tres	0	15	10	10	10	10	30	5	5	5	100
	Pinos Creek	0	15	10	10	10	10	30	5	5	5	100
	Pescadero								_	_	_	
	Creek Las Aguilas	87	15	10	10	10	10	30	5	5	5	100
	Creek	0	15	10	10	10	10	30	5	5	5	100
	Los Muertos		_							_	_	
	Creek	0	15	10	10	10	10	30	5	5	5	100
	Paicines											
	Reservoir-San Benito River											
		16	15	10	10	10	10	30	5	5	5	100
	Lower Tres Pinos Creek	231	15	10	10	10	10	30	5	5	5	100
	San Juan											
	Canyon	927	15	10	10	10	10	30	5	5	5	100
	Bird Creek- San Benito											
	River	3034	15	10	10	10	10	30	5	5	5	100
	Quien Sabe								_	_	_	
	Creek Santa Ana	0	15	10	10	10	10	30	5	5	5	100
	Creek	853	15	10	10	10	10	30	5	5	5	100
	Tequisquita								_	_	_	
	Slough Watsonville	1966	15	10	10	10	10	30	5	5	5	100
	Slough	4178	15	10	10	10	10	30	5	5	5	100
	Lower Pajaro								_	_	_	
	River Arroyo De Las	963	15	10	10	10	10	30	5	5	5	100
	Viboras	0	15	10	10	10	10	30	5	5	5	100
	Salsipuedes								_	_	_	
	Creek Lower	1342	15	10	10	10	10	30	5	5	5	100
	Pacheco											
	Creek	192	15	10	10	10	10	30	5	5	5	100
	South Fork Pacheco											
	Creek		15	10	10	10	10	30	5	5	5	100
_	Lower Uvas											
	Creek	1602	15	10	10	10	10	30	5	5	5	100
	Upper Pajaro River	1313	15	10	10	10	10	30	5	5		100
	Corralitos			10	10	10	10			1	Ĭ	100
	Creek	1108	15	10	10	10	10	30	5	5	5	100
	Upper Pacheco											
	Creek	0	15	10	10	10	10	30	5	5	5	100
	Lower Llagas											
	Creek	5442						30	5			100
	Cedar Creek Upper Uvas	0	15	10	10	10	10	30	5	5	5	100
	Creek	201	15	10	10	10	10	30	5	5	5	100
	Little Llagas								_	_		400
	Creek Upper Llagas	5257	15	10	10	10	10	30	5	5	5	100
	Opper Liagas Creek	1232	15	10	10	10	10	30	5	5	5	100
	Lower North											
	Fork Pacheco Creek		15	10	10	10	10	30	5	5	5	100
	Upper North	 "	10	10	10	10	10	30	-	1	9	100
	Fork Pacheco											
	Creek	0	15	10	10	10	10	30	5	5	5	100

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1	Total Load		This is the su	mmary of anni	ual nutrient ar
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104		d by subwa			
	Watershe	N Load	P Load	BOD Load	
	d	(no BMP)	(no BMP)	(no BMP)	Load (no
105					BMP)
106		lb/year	lb/year	lb/year	t/year
107	W1	19313.6	11604.9		2202.0
108	W2	15689.7	7109.0	203073.0	1552.3
109	W3	16615.1	9736.5	270113.6	2570.7
110	W4	24812.9	11978.8	331768.6	3723.8
111	W5	22397.1	9719.2	241084.8	3478.9
112	W6	12698.5	6695.6	145723.9	2429.7
113	W7	6410.3	3489.6	76392.8	1233.0
114	W8	17435.1	9956.4	291894.7	3191.4
115	W9	16222.1	10342.6	328765.2	3356.8
116	W10	25600.3	7831.2	134556.3	2634.9
117	W11	17753.1	11096.1	334009.2	3642.3
118	W12	13075.0	7661.2	207731.6	2738.4
119	W13	86775.5	18611.3	318388.5	7258.4
120	W14	43292.5	9457.0	160625.0	3723.7
121	W15	146067.1	19161.5	247003.8	6391.3
122	W16	90814.2	15156.1	205392.1	5689.0
123	W17	83089.8	20011.4	470184.8	6702.5
124	W18	131947.4	22765.1	325437.0	8982.4
125	W19	205065.4	26291.0	327143.3	8737.3
126	W20	167708.4	14594.8	154098.1	2750.4
127	W21	293026.6	26565.5	329660.2	5802.1
128	W22	18289.1	7605.8	224189.8	2358.0
129	W23	124894.5	9863.6	97142.1	2078.1
130	W24	117935.3	21973.0	315317.6	8874.6
131	W25	11800.9	7225.9	186368.2	2768.0
132	W26	146596.7	24277.5	367341.5	8582.0
133	W27	441210.4	49576.6	459733.1	16687.3
134	W28	114847.6	9558.5	70718.6	1369.8
135	W29	18011.7	10932.0	266230.2	4360.0
136	W30	177779.7	23851.0	273914.0	8277.4
137	W31	9755.0	6002.1	157068.2	1987.5
138	W32	44351.8	18632.6	516300.4	4410.1
139	W33	98191.5	14550.3	237953.4	4565.8
140	W34	48257.3	14729.3	405759.2	4227.5
141	W35	25321.8	16045.9	444181.0	6004.7
142	W36	5707.1	2915.7	35880.0	378.3

254	254 2. Total load by land uses (with BMP)				
	Sources	N Load (lb/yr)	P Load (lb/yr)	BOD Load (lb/yr)	Sediment Load
255					(t/yr)
256	Urban	182,542	21,565	544,347	3,196
257	Cropland	1,869,231	204,350	1,051,823	72,706
258	Grazing Land	377,410	249,930	7,778,577	87,727
259	Woodland	44,199	22,434	109,661	2,091
260	Feedlots	0	0	0	0
261	User Defined	0	0	0	0
262	Septic	566	222	2,311	0
263	Gully	0	0	0	0
264	Streambank	0	0	0	0
265	Groundwater	384,812	19,074	0	
266	Total	2,858,760	517,575	9,486,719	165,720
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