

S5 Table. Land use data and sampling site average concentrations for eligible fecal pollution water quality measurements.

River Tributary	Site	Land Use Parameters				Eligible Water Quality Metrics*			
		Human Population Count ($\log_{10}$)	Percent Non- Sewer Area	Permitted Cattle Count ($\log_{10}$)	Percent Cropland	<i>E. coli</i>	Rum2Bac	HF183/BacR287	GFD
Kilchis	K1	2.32	2.24	0.00	0.64	2.08	-0.43	-0.61	0.30
	K6	0.27	0.21	0.00	25.73	1.61	-0.11	-0.89	-0.42
	K2	1.81	3.76	3.39	3.67	2.19	0.85	-0.39	0.49
	K5	2.19	0.02	2.94	0.18	1.62	0.58	-0.56	-0.49
	K4	1.92	0.01	0.00	0.13	1.47	-0.16	-1.12	-0.89
	K3	1.81	0.01	0.00	0.09	1.38	-0.01	-1.10	-0.61
Tillamook	TL8	3.14	0.88	3.71	1.01	1.77	0.90	-0.38	0.39
	TL7	3.04	0.22	3.46	0.84	2.22	1.86	-0.28	0.24
	TL4	2.85	0.11	2.92	0.57	1.88	1.13	-0.29	-0.17
	TL3	2.84	0.11	2.92	0.57	1.77	1.12	-0.60	-0.20
	TL2	2.76	0.10	2.83	0.50	1.93	0.60	-0.40	-0.30
	TL9	1.89	0.22	0.00	0.53	2.04	0.37	0.09	-0.16
	TL6	2.93	0.15	3.28	0.85	2.14	1.86	0.15	-0.13
	TL5	2.86	0.11	2.92	0.57	2.01	1.37	0.25	-0.25
	TL1	1.04	0.01	2.30	0.31	2.52	1.79	-0.26	0.07
Trask	TR3	2.83	4.51	3.34	0.08	2.46	2.12	0.22	0.46
	TR4	3.27	4.63	3.34	0.40	2.38	1.86	0.44	0.19
	TR2	2.93	7.44	3.74	7.29	2.16	0.75	0.45	0.02
	TR1	2.38	2.62	3.24	6.30	1.68	-0.06	-0.43	-0.37
	TR13	2.53	0.88	2.71	2.00	1.90	0.29	-0.70	-0.29
	TR12	1.91	0.69	0.00	0.61	1.54	-1.10	-0.44	-0.32
	TR11	1.75	0.34	0.00	0.22	2.76	-0.04	0.14	0.04
	TR5	2.21	0.01	0.00	0.09	1.57	0.07	-0.87	-0.44
	TR10	3.81	0.18	4.09	0.40	1.87	0.74	-0.18	-0.41
	TR6	2.73	0.03	3.25	0.20	1.71	0.63	-1.12	-0.39
	TR14	2.55	0.86	2.71	2.16	2.21	0.79	-0.11	-0.10
	TR7	3.08	0.09	3.71	0.29	1.85	0.40	-0.89	-0.42
	TR8	3.67	0.18	4.01	0.38	2.39	1.58	-0.34	0.31
	TR9	3.80	0.18	4.06	0.40	1.81	0.92	-0.71	-0.48

* Indicates 20% or more site averages > 0.

Human population estimated using EnviroAtlas Dasymetric toolbox (9).

Maximum permitted CAFO cattle population and percent non-sewered area estimated using SPARROW data layers (10).

Percent cropland was estimated from the National Gap Analysis Project Land Cover data set (<https://gapanalysis.usgs.gov/gaplandcover/>).

E. coli reported as MPN per 100 mL.

Rum2Bac, HF183/BacR287, and GFD qPCR values reported as $\log_{10}$ copies per reaction.