APPENDIX F

Summary Statistics for Microbiological Parameters Measured at Sites in the Green-Duwamish Watershed in 2001 and 2002

Table F1. Summary statistics for fecal coliform bacteria concentrations at sites in the Green-Duwamish watershed in 2001 and 2002.

Site Locator	N	Geometric Mean (CFU/100 mL)	Minimum (CFU/100 mL)	Maximum (CFU/100 mL)	Standard Deviation (CFU/100 mL)	Lower 95% C.I. (CFU/100 mL)	Upper 95% C.I. (CFU/100 mL)	Median (CFU/100 mL)	10th Percentile (CFU/100 mL)	25th Percentile (CFU/100 mL)	75th Percentile (CFU/100 mL)	90th Percentile (CFU/100 mL)	Quartile Range (CFU/100 mL)	Standard Exceeded[a] (yes/no)
Base Flow														
A310	7	25	8	68	23	12	55	38	8	11	53	68	42	no
E319	11	1	0	5	1	0	2	1	0	0	2	2	2	no
A307	7	274	52	7,535	2,763	-1,236	3,875	197	52	73	1,043	7,535	971	yes
C317	5	116	30	450	190	-44	428	88	30	53	340	450	287	yes
A317	8	95	43	470	159	11	276	67	43	57	193	470	137	yes
A326	7	75	18	260	97	26	205	67	18	19	190	260	171	yes
B317	8	662	84	4,700	1,755	-71	2,864	495	84	300	2,400	4,700	2,100	yes
A315	5	228	23	890	333	-27	800	360	23	170	490	890	320	yes
A330	7	15	4	81	33	-1	60	9	4	4	70	81	66	no
A320	5	36	10	100	36	3	92	31	10	30	68	100	38	no
Y320	6	135	3	5,300	2,102	-1,184	3,229	172	3	49	440	5,300	391	yes
F321	6	6	3	14	4	2	11	6	3	3	8	14	5	no
0322	8	39	12	160	50	12	95	32	12	23	75	160	52	no
D322	10	171	19	9,407	2,913	-915	3,253	94	23	46	620	5,222	574	yes
B322	2	169	54	530	337	-2,732	3,316	292	54	54	530	530	476	yes
I322B	5	349	120	680	227	131	693	430	120	260	570	680	310	yes
S322	3	118	19	497	243	-373	836	178	19	19	497	497	478	yes
A341	4	11	5	32	13	-5	35	11	5	6	24	32	18	no
All	114	55	0	9,407	1,322	173	663	62	3	14	260	570	246	yes
Storm Flow														
A310	5	250	80	499	191	75	549	396	80	137	450	499	313	yes
E319	9	5	0	23	7	2	13	5	0	4	10	23	6	no
A307	10	652	84	2,800	839	372	1,573	656	192	304	1,425	2,250	1,121	yes
C317	4	1,038	540	4,300	1,826	-1,337	4,472	715	540	575	2,560	4,300	1,985	yes
A317	12	2,021	350	210,000	60,043	-18,587	57,712	1,550	520	610	2,750	11,000	2,140	yes
A326	5	386	280	690	170	198	622	340	280	290	450	690	160	yes
B317	8	2,263	400	12,000	3,901	672	7,195	3,450	400	685	5,400	12,000	4,715	yes
A315	4	1,991	440	3,500	1,446	284	4,886	3,200	440	1,720	3,450	3,500	1,730	yes
A330	5	163	38	540	200	-9	487	260	38	76	280	540	204	yes
A320	4	163	35	880	389	-296	942	189	35	56	590	880	534	yes
Y320	9	1,276	660	8,900	2,656	-83	4,001	920	660	791	1,347	8,900	556	yes
F321	3	55	14	490	272	-500	852	24	14	14	490	490	476	yes
0322	12	1,381	200	5,878	1,831	968	3,294	1,540	360	659	3,450	4,500	2,791	yes
D322	5	1,115	145	5,058	2,002	-408	4,565	1,847	145	439	2,902	5,058	2,463	yes
B322	5	13,858	2,000	39,000	14,160	2,418	37,582	18,000	2,000	13,000	28,000	39,000	15,000	yes
I322B	7	701	110	6,910	2,410	-741	3,717	597	110	440	1,109	6,910	669	yes
S322	2	147	99	220	86	-612	931	159	99	99	220	220	121	yes
A341	4	90	30	330	139	-81	362	101	30	36	245	330	209	yes
All	113	556	0	210,000	20,204	342	7,873	610	30	280	2,300	5,058	2,020	yes

[a] Applicable water quality standard is shown in Table 11.

N: number of samples; C.I.: confidence interval.

n.a.: not applicable.

CFU/100 mL: colony forming units/100 milliliters

Table F2. Summary statistics for Enterococci bacteria concentrations at sites in the Green-Duwamish watershed in 2001 and 2002.

Site Locator	N	Geometric Mean (CFU/100 mL)	Minimum (CFU/100 mL)	Maximum (CFU/100 mL)	Standard Deviation (CFU/100 mL)	Lower 95% C.I. (CFU/100 mL)	Upper 95% C.I. (CFU/100 mL)	Median (CFU/100 mL)	10th Percentile (CFU/100 mL)	25th Percentile (CFU/100 mL)	75th Percentile (CFU/100 mL)	90th Percentile (CFU/100 mL)	Quartile Range (CFU/100 mL)	Standard Exceeded[a] (yes/no)
Base Flow														
A310	7	11	2	32	12	5	27	14	2	4	32	32	28	no
E319	11	1	0	5	2	0	3	1	0	0	2	4	2	no
A307	7	202	65	5,115	1,884	-896	2,588	104	65	80	280	5,115	200	yes
C317	5	32	9	68	21	12	65	37	9	33	47	68	14	no
A317	8	57	27	700	233	-71	319	43	27	30	61	700	32	yes
A326	7	139	16	1,700	594	-176	922	230	16	17	250	1,700	233	yes
B317	8	292	60	7,500	2,569	-983	3,312	240	60	98	540	7,500	443	yes
A315	5	76	14	620	261	-124	524	59	14	17	290	620	273	yes
A330	7	32	4	140	49	8	98	40	4	13	80	140	67	no
A320	5	35	8	140	53	-10	122	49	8	14	70	140	56	yes
Y320	6	80	9	7,200	2,924	-1,837	4,300	46	9	35	54	7,200	19	yes
F321	6	11	3	22	7	6	21	14	3	8	19	22	11	no
0322	8	28	14	51	12	20	41	31	14	20	38	51	19	no
D322	10	352	16	8,476	2,852	-293	3,788	352	24	50	2,357	6,772	2,306	yes
B322	2	106	36	310	194	-1,568	1,914	173	36	36	310	310	274	yes
I322B	5	80	11	5,100	2,264	-1,759	3,862	60	11	14	71	5,100	57	yes
S322	3	63	11	191	90	-119	329	113	11	11	191	191	180	yes
A341	4	22	5	186	87	-83	194	16	5	9	102	186	93	no
All	114	45	0	8,476	1,474	184	731	39	4	14	140	607	126	yes
Storm Flow														
A310	5	312	61	705	284	71	777	419	61	235	700	705	465	yes
E319	9	5	0	78	25	-5	33	6	0	1	10	78	9	no
A307	10	3,563	949	22,000	6,104	863	9,597	3,742	1,125	2,491	5,500	13,936	3,009	yes
C317	4	2,943	2,400	3,600	506	2,170	3,780	2,950	2,400	2,600	3,350	3,600	750	yes
A317	12	2,870	350	5,500	1,345	2,483	4,192	3,450	1,800	2,900	4,000	4,900	1,100	yes
A326	5	924	560	1,800	485	401	1,607	810	560	750	1,100	1,800	350	yes
B317	8	1,996	540	5,500	1,868	1,075	4,198	2,250	540	1,125	4,150	5,500	3,025	yes
A315	4	888	340	4,500	1,985	-1,623	4,693	650	340	430	2,640	4,500	2,210	yes
A330	5	413	52	1,200	412	88	1,113	640	52	470	640	1,200	170	yes
A320	4	472	61	1,900	816	-436	2,161	745	61	226	1,500	1,900	1,275	yes
Y320	9	1,739	359	4,900	1,550	1,120	3,503	2,098	359	1,047	3,400	4,900	2,353	yes
F321	3	35	9	340	190	-350	592	14	9	9	340	340	331	yes
0322	12	929	69	4,900	1,588	696	2,714	1,417	286	336	2,750	3,696	2,414	yes
D322	5	341	43	3,469	1,446	-902	2,689	338	43	239	376	3,469	137	yes
B322	5	3,165	410	36,000	14,976	-9,038	28,154	4,600	410	780	6,000	36,000	5,220	yes
I322B	7	1,566	130	7,801	2,669	279	5,217	1,890	130	720	4,600	7,801	3,880	yes
S322	2	83	19	366	245	-2,010	2,395	192	19	19	366	366	347	yes
A341	4	125	10	320	145	-8	453	280	10	130	315	320	185	yes
All	113	691	0	36,000	4,130	1,527	3,067	1,100	19	340	3,200	4,900	2,860	yes

[a] Applicable water quality standard is shown in Table 12.

N: number of samples; C.I.: confidence interval.

n.a.: not applicable.

CFU/100 mL: colony forming units/100 milliliters

Table F3. Summary statistics for *E. coli* bacteria concentrations at sites in the Green-Duwamish watershed in 2001 and 2002.

Site Locator	N	Geometric Mean (CFU/100 mL)	Minimum (CFU/100 mL)	Maximum (CFU/100 mL)	Standard Deviation (CFU/100 mL)	Lower 95% C.I. (CFU/100 mL)	Upper 95% C.I. (CFU/100 mL)	Median (CFU/100 mL)	10th Percentile (CFU/100 mL)	25th Percentile (CFU/100 mL)	75th Percentile (CFU/100 mL)	90th Percentile (CFU/100 mL)	Quartile Range (CFU/100 mL)	Standard Exceeded[a] (yes/no)
Base Flow														
A310	7	20	6	69	24	8	52	37	6	7	42	69	35	no
E319	11	2	0	5	2	0	3	1	0	0	2	5	2	no
A307	7	195	47	3,387	1,224	-492	1,773	170	47	54	565	3,387	511	yes
C317	5	113	29	450	197	-51	437	71	29	55	360	450	305	no
A317	8	82	42	440	138	4	235	60	42	49	130	440	81	no
A326	7	62	12	250	103	10	200	80	12	15	250	250	235	no
B317	8	597	100	12,000	4,079	-1,405	5,415	420	100	250	1,300	12,000	1,050	yes
A315	5	106	20	480	196	-38	450	200	20	22	310	480	288	no
A330	7	17	2	95	35	3	67	21	2	3	61	95	58	no
A320	5	31	8	93	39	-3	94	23	8	21	83	93	62	no
Y320	6	137	5	5,500	2,189	-1,257	3,338	155	5	49	380	5,500	331	yes
F321	6	6	2	20	6	1	14	6	2	5	7	20	2	no
0322	8	35	9	110	35	16	74	27	9	25	69	110	45	no
D322	10	184	17	10,532	3,265	-997	3,674	104	19	53	573	6,051	520	yes
B322	2	194	90	420	233	-1,842	2,352	255	90	90	420	420	330	yes
I322B	5	281	60	540	177	128	568	390	60	340	410	540	70	yes
S322	3	114	16	463	225	-334	784	194	16	16	463	463	447	no
A341	4	11	4	36	14	-8	37	9	4	6	23	36	17	no
All	114	50	0	12,000	114	399	442	55	3	12	200	463	188	no
Storm Flow														
A310	5	211	41	468	177	62	503	372	41	155	377	468	222	yes
E319	9	5	0	27	8	1	14	5	0	5	7	27	2	no
A307	10	599	59	2,800	883	343	1,606	667	105	347	1,524	2,400	1,177	yes
C317	4	1,012	550	1,700	530	270	1,955	1,100	550	675	1,550	1,700	875	yes
A317	12	1,372	380	5,400	1,407	908	2,696	1,550	550	645	2,500	2,800	1,855	yes
A326	5	356	250	920	290	54	774	250	250	250	400	920	150	yes
B317	8	1,294	410	12,000	4,123	-610	6,285	715	410	530	3,900	12,000	3,370	yes
A315	4	1,841	400	3,900	1,515	39	4,861	2,750	400	1,350	3,550	3,900	2,200	yes
A330	5	154	36	590	227	-40	524	190	36	64	330	590	266	yes
A320	4	160	41	850	376	-290	905	170	41	56	560	850	505	yes
Y320	9	1,012	340	4,000	1,147	431	2,194	910	340	755	1,100	4,000	345	yes
F321	3	65	21	360	192	-337	615	36	21	21	360	360	339	no
0322	12	1,246	97	9,026	2,398	616	3,663	1,653	320	671	2,650	3,200	1,979	yes
D322	5	1,164	168	4,855	1,875	-306	4,351	2,002	168	507	2,580	4,855	2,073	yes
B322	5	6,798	600	16,000	6,018	2,848	17,792	12,000	600	9,000	14,000	16,000	5,000	yes
I322B	7	706	180	7,416	2,610	-879	3,948	498	180	340	1,096	7,416	756	yes
S322	2	142	81	250	119	-908	1,239	166	81	81	250	250	169	yes
A341	4	93	26	410	177	-122	442	102	26	35	285	410	251	no
All	113	471	0	16,000	113	1,622	1,664	560	36	250	1,900	3,900	1,650	yes

[a] Applicable water quality standard is shown in Table 12.

N: number of samples; C.I.: confidence interval.

n.a.: not applicable.

CFU/100 mL: colony forming units/100 milliliters