

Table 4-12. Summary of Mean Standard Error of Land Use Stations

Station	Constituent	No. of Detections	Normal Distribution			Lognormal Distribution			Shapiro-Wilk Normality Test		Distribution*	Error Rate	Is Error Rate Less Than 25%?
			Mean	Standard Deviation	Standard Error	Mean	Standard Deviation	Standard Error	p-value for Normal Distribution	p-value for Lognormal Distribution			
Dominguez	Ammonia	52	0.52	0.78	0.11	0.50	0.75	0.10	0	0.0268		20.7%	Y
Dominguez	Bis(2-ethylhexyl)phthalate	29	13.41	17.30	3.21	14.57	25.95	4.47	0.0001	0.8236	Lognormal	30.7%	N
Dominguez	Dissolved Copper	64	33.55	22.08	2.76	35.44	31.66	3.88	0.0001	0.0097		8.2%	Y
Dominguez	Dissolved Nickel	34	6.54	7.65	1.31	6.13	5.23	0.88	0.0001	0.0001		20.0%	Y
Dominguez	Dissolved Phosphorus	59	3.48	23.78	3.10	0.65	1.10	0.13	0	0.0001		89.0%	N
Dominguez	Dissolved Zinc	64	232.53	214.15	26.77	245.36	260.27	31.48	0.0001	0.0026		11.5%	Y
Dominguez	NH3-N	51	0.40	0.60	0.08	0.39	0.51	0.07	0	0.0128		20.9%	Y
Dominguez	Nitrate	62	3.68	4.09	0.52	3.53	3.20	0.40	0	0.4587	Lognormal	11.2%	Y
Dominguez	Nitrate-N	61	0.94	1.23	0.16	0.89	0.93	0.12	0	0.329	Lognormal	13.0%	Y
Dominguez	Nitrite-N	62	0.11	0.07	0.01	0.11	0.08	0.01	0.0001	0.2892	Lognormal	9.2%	Y
Dominguez	TKN	62	2.08	1.92	0.24	2.01	1.51	0.19	0	0.0504	Lognormal	9.4%	Y
Dominguez	Total Cadmium	38	1.36	1.21	0.20	1.33	1.11	0.18	0.0001	0.0001		14.4%	Y
Dominguez	Total Chromium	43	5.82	5.05	0.77	5.65	4.53	0.68	0.0001	0.0001		13.2%	Y
Dominguez	Total Copper	64	59.15	56.78	7.10	56.99	40.81	5.05	0	0.1021	Lognormal	8.9%	Y
Dominguez	Total Lead	49	12.94	17.91	2.56	12.11	17.49	2.34	0.0001	0.0001		19.8%	Y
Dominguez	Total Nickel	50	8.14	8.26	1.17	7.96	7.17	0.99	0.0001	0.0025		14.3%	Y
Dominguez	Total Phosphorus	59	4.80	33.14	4.31	0.81	1.30	0.16	0	0.0001		89.8%	N
Dominguez	Total Suspended Solids	62	90.24	99.62	12.65	87.29	80.81	10.03	0	0.342	Lognormal	11.5%	Y
Dominguez	Total Zinc	64	325.78	328.17	41.02	312.73	240.90	29.71	0	0.0293		12.6%	Y
Project 1202	Ammonia	55	0.60	0.80	0.11	0.64	1.19	0.14	0.0001	0.001		17.9%	Y
Project 1202	Bis(2-ethylhexyl)phthalate	21	9.71	9.68	2.11	10.78	17.06	3.56	0.0007	0.6052	Lognormal	33.1%	N
Project 1202	Dissolved Copper	49	13.05	9.24	1.32	13.42	11.49	1.61	0.0001	0.1571	Lognormal	12.0%	Y
Project 1202	Dissolved Nickel	33	5.53	4.12	0.72	5.61	4.56	0.78	0.0001	0.0391		13.0%	Y
Project 1202	Dissolved Phosphorus	54	0.21	0.15	0.02	0.22	0.22	0.03	0.0001	0.0247		9.8%	Y
Project 1202	Dissolved Zinc	57	357.14	349.50	46.29	421.24	636.02	78.26	0.0001	0.0001		13.0%	Y
Project 1202	NH3-N	56	0.49	0.66	0.09	0.50	0.86	0.10	0.0001	0.0006		17.7%	Y
Project 1202	Nitrate	56	4.14	4.21	0.56	4.11	4.29	0.56	0.0001	0.8574	Lognormal	13.5%	Y
Project 1202	Nitrate-N	55	0.96	1.12	0.15	0.95	1.08	0.14	0.0001	0.9402	Lognormal	14.8%	Y
Project 1202	Nitrite-N	56	0.10	0.07	0.01	0.10	0.07	0.01	0.0001	0.0797	Lognormal	9.4%	Y
Project 1202	TKN	55	2.63	1.89	0.25	2.67	2.14	0.28	0.0001	0.6165	Lognormal	10.6%	Y
Project 1202	Total Chromium	39	5.89	4.92	0.79	5.77	4.73	0.75	0.0001	0.0001		13.4%	Y
Project 1202	Total Copper	57	42.49	129.27	17.12	31.35	34.17	4.37	0	0.002		40.3%	N
Project 1202	Total Lead	43	13.92	15.74	2.40	13.84	18.71	2.71	0.0001	0.001		17.2%	Y
Project 1202	Total Nickel	43	9.44	12.19	1.86	8.90	7.81	1.17	0.0001	0.0058		19.7%	Y
Project 1202	Total Phosphorus	53	0.35	0.28	0.04	0.37	0.40	0.05	0.0001	0.119	Lognormal	14.5%	Y
Project 1202	Total Suspended Solids	52	181.35	177.94	24.68	188.49	196.54	26.45	0.0001	0.1717	Lognormal	14.0%	Y
Project 1202	Total Zinc	57	483.92	525.52	69.61	478.73	419.49	54.52	0	0.108	Lognormal	11.4%	Y
Project 156	Ammonia	39	0.81	0.86	0.14	0.97	2.00	0.29	0.0001	0.0139		17.0%	Y
Project 156	Dissolved Copper	38	15.11	18.05	2.93	15.10	17.53	2.75	0.0001	0.0362		19.4%	Y
Project 156	Dissolved Phosphorus	36	0.26	0.22	0.04	0.27	0.27	0.04	0.0001	0.4226	Lognormal	16.1%	Y
Project 156	Dissolved Zinc	38	172.38	188.94	30.65	170.56	172.68	27.33	0.0001	0.2628	Lognormal	16.0%	Y

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			Mean	Standard Deviation	Standard Error	Mean	Standard Deviation	Standard Error	p-value for Normal Distribution	p-value for Lognormal Distribution			
Project 156	NH3-N	39	0.67	0.72	0.11	0.79	1.66	0.24	0.0001	0.0018		17.2%	Y
Project 156	Nitrate	35	7.48	26.25	4.44	5.08	8.09	1.28	0.0001	0.0001		59.3%	N
Project 156	Nitrate-N	35	0.67	0.42	0.07	0.73	0.69	0.11	0.0291	0.0017		10.5%	Y
Project 156	Nitrite-N	35	0.17	0.19	0.03	0.16	0.18	0.03	0.0001	0.7781	Lognormal	18.3%	Y
Project 156	TKN	40	3.09	2.44	0.39	3.46	4.11	0.63	0.0001	0.0012		12.5%	Y
Project 156	Total Copper	38	22.31	25.63	4.16	21.41	17.65	2.82	0.0001	0.3303	Lognormal	13.2%	Y
Project 156	Total Phosphorus	36	0.33	0.29	0.05	0.33	0.32	0.05	0.0001	0.6412	Lognormal	15.9%	Y
Project 156	Total Suspended Solids	34	90.24	99.00	16.98	87.00	87.89	14.73	0.0001	0.1781	Lognormal	16.9%	Y
Project 156	Total Zinc	38	233.74	294.10	47.71	217.51	194.13	30.95	0.0001	0.009		20.4%	Y
Project 404	Ammonia	34	0.57	0.75	0.13	0.65	1.49	0.22	0.0001	0.0018		22.5%	Y
Project 404	Bis(2-ethylhexyl)phthalate	22	25.00	48.66	10.38	25.38	81.58	15.24	0.0001	0.8252	Lognormal	60.1%	N
Project 404	Dissolved Copper	35	9.14	6.37	1.08	9.31	7.15	1.20	0.0001	0.0363		11.8%	Y
Project 404	Dissolved Zinc	35	107.25	138.23	23.37	101.47	92.85	15.42	0.0001	0.0219		21.8%	Y
Project 404	NH3-N	34	0.48	0.62	0.11	0.52	1.07	0.16	0.0001	0.0023		22.2%	Y
Project 404	Nitrate	33	7.28	4.36	0.76	7.59	6.22	1.07	0.0543	0.0934	Normal	10.4%	Y
Project 404	Nitrate-N	33	1.64	0.98	0.17	1.71	1.40	0.24	0.0553	0.0939	Normal	10.4%	Y
Project 404	Nitrite-N	33	0.16	0.24	0.04	0.14	0.16	0.03	0.0001	0.0023		25.8%	N
Project 404	TKN	37	2.20	2.23	0.37	2.10	1.46	0.24	0.0001	0.094	Lognormal	11.3%	Y
Project 404	Total Copper	40	13.19	5.99	0.95	13.33	6.52	1.03	0.001	0.1742	Lognormal	7.7%	Y
Project 404	Total Suspended Solids	32	51.50	68.00	12.02	48.66	62.54	10.61	0.0001	0.0958	Lognormal	21.8%	Y
Project 404	Total Zinc	40	155.46	209.50	33.12	144.22	137.98	21.35	0.0001	0.0045		21.3%	Y
Project 474	Ammonia	40	0.48	1.68	0.27	0.31	0.56	0.08	0	0.0001		55.6%	N
Project 474	Bis(2-ethylhexyl)phthalate	10	14.50	15.30	4.84	16.99	30.88	10.17	0.031	0.5983	Lognormal	59.9%	N
Project 474	Dissolved Copper	41	13.70	12.34	1.93	13.74	12.91	1.97	0.0001	0.1549	Lognormal	14.4%	Y
Project 474	Dissolved Phosphorus	37	0.27	0.24	0.04	0.27	0.24	0.04	0.0001	0.78	Lognormal	14.2%	Y
Project 474	Dissolved Zinc	36	82.88	61.42	10.24	84.08	68.59	11.28	0.0001	0.0052		12.4%	Y
Project 474	NH3-N	40	0.40	1.39	0.22	0.25	0.42	0.06	0	0.0001		55.0%	N
Project 474	Nitrate	38	3.12	1.88	0.31	3.17	2.13	0.34	0.0002	0.206	Lognormal	10.8%	Y
Project 474	Nitrate-N	37	0.68	0.38	0.06	0.67	0.37	0.06	0.0001	0.4868	Lognormal	9.0%	Y
Project 474	TKN	39	1.96	1.91	0.31	1.87	1.22	0.19	0.0001	0.0004		15.6%	Y
Project 474	Total Copper	41	25.07	36.33	5.67	22.47	17.18	2.65	0.0001	0.0001		22.6%	Y
Project 474	Total Phosphorus	37	0.31	0.20	0.03	0.31	0.18	0.03	0.0001	0.156	Lognormal	9.7%	Y
Project 474	Total Suspended Solids	39	111.64	95.99	15.37	122.92	150.17	23.10	0.0001	0.1693	Lognormal	18.8%	Y
Project 474	Total Zinc	41	141.18	242.41	37.86	127.05	114.27	17.52	0	0.0024		26.8%	N
Project 620	Ammonia	32	0.56	0.58	0.10	0.64	1.18	0.19	0.0001	0.0097		18.4%	Y
Project 620	Bis(2-ethylhexyl)phthalate	22	11.54	18.43	3.93	10.41	15.08	3.09	0.0001	0.0868	Lognormal	29.7%	N
Project 620	Dissolved Copper	30	11.35	9.08	1.66	11.75	11.89	2.12	0.0004	0.0275		14.6%	Y
Project 620	Dissolved Phosphorus	31	0.36	0.21	0.04	0.37	0.26	0.05	0.0164	0.1976	Lognormal	12.7%	Y
Project 620	NH3-N	32	0.49	0.48	0.08	0.55	0.91	0.15	0.0001	0.0095		17.3%	Y
Project 620	Nitrate	31	4.06	5.54	1.00	4.66	9.02	1.48	0.0001	0.2244	Lognormal	31.7%	N
Project 620	Nitrate-N	31	0.92	1.25	0.22	0.94	1.45	0.24	0.0001	0.826	Lognormal	26.1%	N

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Project 620	TKN	34	3.41	3.34	0.57	3.36	3.18	0.53	0.0001	0.3445	Lognormal	15.9%	Y
Project 620	Total Copper	36	21.58	15.11	2.52	22.00	17.56	2.89	0.0003	0.4311	Lognormal	13.1%	Y
Project 620	Total Lead	29	14.85	20.80	3.86	14.35	26.36	4.52	0.0001	0.0001	Lognormal	26.0%	N
Project 620	Total Phosphorus	31	0.48	0.31	0.06	0.49	0.40	0.07	0.0097	0.314	Lognormal	14.4%	Y
Project 620	Total Suspended Solids	29	151.97	164.23	30.50	151.92	171.79	31.01	0.0001	0.9666	Lognormal	20.4%	Y
Project 620	Total Zinc	36	72.26	60.75	10.12	72.15	67.43	11.02	0.0001	0.0001	Lognormal	14.0%	Y
Santa Monica	Ammonia	30	6.54	6.46	1.18	8.32	18.85	3.06	0.0003	0.1426	Lognormal	36.8%	N
Santa Monica	Dissolved Chromium +6	26	12.28	9.03	1.77	12.57	10.57	2.05	0.0017	0.8565	Lognormal	16.3%	Y
Santa Monica	Dissolved Copper	26	247.83	590.58	115.82	414.86	3219.04	452.17	0.0001	0.0293	Lognormal	46.7%	N
Santa Monica	Dissolved Phosphorus	31	78.17	75.95	13.64	787.73	26264.38	2415.90	0.0001	0.0001	Lognormal	17.5%	Y
Santa Monica	Dissolved Zinc	22	68.15	69.89	14.90	92.22	259.13	49.32	0.0028	0.0207	Lognormal	21.9%	Y
Santa Monica	NH3-N	27	0.23	0.31	0.06	0.22	0.24	0.05	0.0001	0.17	Lognormal	20.5%	Y
Santa Monica	Nitrate	30	49.40	47.53	8.68	53.60	77.85	13.50	0.0001	0.1083	Lognormal	25.2%	N
Santa Monica	Nitrate-N	30	3.55	3.23	0.59	3.55	3.50	0.63	0.0001	0.1685	Lognormal	17.6%	Y
Santa Monica	Nitrite-N	27	386.03	371.19	71.44	1943.80	24569.04	3072.04	0.0007	0.0001	Lognormal	18.5%	Y
Santa Monica	TKN	32	196.34	216.73	38.31	1009.66	19221.47	1781.57	0.0001	0.0001	Lognormal	19.5%	Y
Santa Monica	Total Cadmium	12	5.59	3.62	1.05	5.73	4.24	1.22	0.0378	0.1708	Lognormal	21.4%	Y
Santa Monica	Total Chromium +6	26	29.77	19.61	3.85	30.33	23.07	4.49	0.0085	0.788	Lognormal	14.8%	Y
Santa Monica	Total Copper	37	714.73	1044.99	171.80	950.54	3720.60	466.62	0.0001	0.0626	Lognormal	49.1%	N
Santa Monica	Total Lead	13	42.46	42.08	11.67	42.70	45.55	12.59	0.0018	0.2252	Lognormal	29.5%	N
Santa Monica	Total Mercury	14	5.20	3.39	0.91	5.46	4.67	1.24	0.0713	0.1699	Normal	17.4%	Y
Santa Monica	Total Phosphorus	32	5.84	2.80	0.49	12.11	41.12	5.89	0.0001	0.0001	Lognormal	8.5%	Y
Santa Monica	Total Suspended Solids	29	11.30	25.91	4.81	10.07	311.76	33.05	0.0001	0.0001	Lognormal	42.6%	N
Santa Monica	Total Zinc	11	251.73	115.79	34.91	255.29	129.70	39.11	0.3026	0.6809	Normal	13.9%	Y
Sawpit	Bis(2-ethylhexyl)phthalate	27	16.74	33.12	6.37	16.03	38.85	6.64	0.0001	0.1434	Lognormal	41.4%	N
Sawpit	Nitrate	42	5.76	3.23	0.50	5.82	3.70	0.57	0.0004	0.0268	Lognormal	8.6%	Y
Sawpit	Nitrate-N	42	1.30	0.73	0.11	1.31	0.84	0.13	0.0004	0.0268	Lognormal	8.7%	Y
Sawpit	Nitrite-N	27	0.04	0.02	0.00	0.04	0.01	0.00	0.0001	0.0393	Lognormal	7.4%	Y
Sawpit	TKN	42	1.17	2.17	0.34	1.00	1.02	0.15	0	0.0114	Lognormal	28.6%	N
Sawpit	Total Copper	32	11.90	14.64	2.59	11.20	13.35	2.28	0.0001	0.0023	Lognormal	21.7%	Y
Sawpit	Total Phosphorus	31	0.11	0.14	0.02	0.11	0.10	0.02	0.0001	0.0077	Lognormal	21.6%	Y
Sawpit	Total Suspended Solids	40	150.13	241.16	38.13	170.40	690.14	81.44	0.0001	0.0098	Lognormal	25.4%	N
Sawpit	Total Zinc	27	42.33	44.79	8.62	39.86	29.42	5.62	0.0001	0.0001	Lognormal	20.4%	Y

* If a constituent is neither normal nor lognormal, we assume that it is normal.