

Tables

Table 2. Sediment Sample Data Summary*

Lower Columbia River Estuary Contaminant Data Compilation and Synthesis Project

Analyte Group	Analyte	Number Sampled	Number Detected	Frequency of Detection	Maximum Result ^a	Minimum Result ^b
Metals (mg/kg)	Aluminum	374	374	100%	78,800	1,510
	Antimony	816	557	68%	48	0.02
	Arsenic	1,485	1,412	95%	132	0.0285
	Cadmium	1,367	1,108	81%	46	0.00159
	Chromium	1,620	1,605	99%	1,090	0.021
	Copper	1,682	1,661	99%	4,870	0.014
	Lead	1,801	1,732	96%	3,710	0.007
	Manganese	313	313	100%	3,210	0.53
	Mercury	1,743	1,460	84%	33,000	0.001
	Nickel	1,562	1,543	99%	841	0.014
	Selenium	623	283	45%	21.1	0.0001
	Silver	1,037	763	74%	18	0.0005
	Thallium	58	32	55%	7.5	0.04
	Zinc	1,688	1,673	99%	2,850	0.038
PAHs (ug/kg) c,d,e	Carcinogenic Polycyclic Aromatic Hydrocarbons (CPAH)	399	202	51%	800,000	0.02
	High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAH)	402	222	55%	2,200,000	0.02
	Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAH)	224	133	59%	2,679	0.43
	Polycyclic aromatic hydrocarbons (PAH)	405	236	58%	3,000,000	0.00005
PCBs (ug/kg) c,d,e	PCB, Sum of Aroclors	1,021	484	47%	15,110	1.27
Pesticides (ug/kg) c,d,e	Aldrin	522	31	6%	1,800	0.0754
	alpha-Hexachlorocyclohexane	246	8	3%	1,800	0.25
	beta-Hexachlorocyclohexane	243	11	5%	1,800	0.25
	DDT/DDD/DDE, o,p' and p,p' isomers	337	178	53%	627.1	0.27
	delta-Hexachlorocyclohexane	240	4	2%	1,800	0.25
	Dieldrin	768	49	6%	1,800	0.01
	Endosulfan Sulfate	358	25	7%	1,800	0.11
	Endrin	602	25	4%	22,000	0.01
	Endrin Aldehyde	344	3	1%	1,800	0.071
	Endrin Ketone	339	7	2%	1,800	0.11
	gamma-Hexachlorocyclohexane	513	15	3%	1,800	0.08
	Heptachlor	759	40	5%	1,800	0.01
	Heptachlor Epoxide	356	11	3%	1,800	0.16
	Methoxychlor	507	18	4%	1,800	0.14
	Mirex	3	2	67%	0.9	0.5
	Total Chlordane	314	83	26%	410	0.08
	Total Endosulfan	335	9	3%	52	0.87

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Lower Columbia River Estuary Contaminant Data Compilation and Synthesis Project

Analyte Group	Analyte	Number Sampled	Number Detected	Frequency of Detection	Maximum Result ^a	Minimum Result ^b
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Notes:

* Data reported in this table excludes samples from the Willamette River (i.e., LWG data), duplicate sample results, blanks, and data identified in the database as not reportable (see text).

a) Samples with multiple results for an analyte: the maximum value was marked as reportable. This was done without regard to detection.

b) Analytes with result values of 0 or a negative number were marked as not-reportable

c) Calculated totals are estimated based of a sum of specific list of analyte or congener concentrations. The list of analytes/congeners used in a given calculated total is defined in Attachment A - Table A3.

d) Estimated concentrations (J qualified) are included in the total estimates.

e) If all of the analytes/congeners are not detected, then the highest RDL/PQL is the selected value for the calculated total, and a U qualifier is added to indicate the lack of detected values. The detect flag is designated as N.

Table 3. Surface Water Sample (Grab Sample) Summary***Lower Columbia River Estuary Contaminant Data Compilation and Synthesis Project**

Analyte Group	Analyte	Number Sampled	Number Detected	Frequency of Detection	Maximum Result ^a	Minimum Result ^b
Metals (ug/L)	Aluminum	669	453	68%	22,100	1
	Antimony	318	44	14%	1,000	0.03
	Arsenic	351	311	89%	10,000	0.1
	Cadmium	331	74	22%	152	0.02
	Chromium	327	269	82%	8,980	0.5
	Copper	332	320	96%	13,500	0.11
	Iron	823	715	87%	77,600	3
	Lead	502	269	54%	3,500	0.02
	Manganese	517	431	83%	21,500	0.2
	Mercury	50	39	78%	500	0.00028
	Methyl Mercury	31	28	90%	0.036	0.000018
	Nickel	324	298	92%	500	0.38
	Selenium	315	67	21%	1,500	0.5
	Silver	318	20	6%	350	0.009
	Thallium	314	23	7%	2,500	0.1
	Zinc	346	193	56%	37,400	0.23
PAHs (ug/L) ^{c, d, e}	Carcinogenic Polycyclic Aromatic Hydrocarbons (CPAH)	73	36	49%	8.21	0.000023
	High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAH)	74	48	65%	12.86	0.000023
	Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAH)	54	31	57%	330	0.01
	Polycyclic aromatic hydrocarbons (PAH)	75	54	72%	331	0.000023
PCBs (ug/L)	PCB, Sum of Aroclors	12	5	42%	5.64	0.1
Pesticides (ug/L) ^{c, d, e}	2,4-D	37	33	89%	0.52	0.02
	2-Chloro-4-isopropylamino-6-amino-s-triazine (CIAT)	121	51	42%	0.014	0.001
	alpha-Hexachlorocyclohexane	121	51	42%	0.014	0.001
	Atrazine	121	51	42%	0.014	0.001
	Bromacil	84	59	70%	0.06	0.01
	Chloropyrifos	63	44	70%	0.046	0.003
	DDT/DDD/DDE, p,p' isomers	24	21	88%	0.0248	0.00007
	Diazinon	50	45	90%	0.108	0.01
	Dieldrin	81	66	81%	0.022	0.000046

Table 3. Surface Water Sample (Grab Sample) Summary*
Lower Columbia River Estuary Contaminant Data Compilation and Synthesis Project

Analyte Group	Analyte	Number Sampled	Number Detected	Frequency of Detection	Maximum Result ^a	Minimum Result ^b
Pesticides (ug/L) c, d, e	Diuron	54	54	100%	1	0.02
	Ethoprop	53	36	68%	0.042	0.003
	Heptachlor Epoxide	21	9	43%	0.0094	0.000032
	Hexazinone	64	31	48%	0.026	0.006
	Malathion	69	64	93%	0.032	0.02
	MCPA	22	13	59%	0.17	0.01
	Methoxychlor	21	8	38%	0.0094	0.000011
	Metolachlor	186	174	94%	0.229	0.003
	Metribuzin	140	118	84%	0.138	0.002
	Napropamide	27	13	48%	0.068	0.005
	Pendimethalin	30	13	43%	0.036	0.01
	Prometon	172	65	38%	0.08	0.01
	Propachlor	156	64	41%	0.025	0.007
	Propyzamide	52	31	60%	0.082	0.003
	S-Ethyl Dipropylthiocarbamate (EPTC)	118	92	78%	0.037	0.002
	Simazine	383	310	81%	0.243	0.002

Notes:

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b) Analytes with result values of 0 or a negative number were marked as not-reportable

c) Calculated totals are estimated based of a sum of specific list of analyte or congener concentrations. The list of analytes/congeners used in a given calculated total is defined in [Attachment A - Table A3](#).

d) Estimated concentrations (J qualified) are included in the total estimates.

e) If all of the analytes/congeners are not detected, then the highest RDL/PQL is the selected value for the calculated total, and a U qualifier is added to indicate the lack of detected values. The detect flag is designated as N.

Table 4. Biological Sample Data Summary****Lower Columbia River Estuary Contaminant Data Compilation and Synthesis Project***

Analyte Group	Analyte	Number Sampled	Number Detected	Frequency of Detection	Maximum Result ^a	Minimum Result ^b
Flame Retardants (ng/kg)	PBDEs	335	297	89%	179,580,000	0
Metals (mg/kg)	Aluminum	129	115	89%	302	0.5313
	Antimony	164	27	16%	10	0.0006
	Arsenic	389	206	53%	270	0.018311
	Cadmium	342	244	71%	0.65	0.0004
	Chromium	300	237	79%	15.4	0.00002
	Copper	414	391	94%	90	0.038
	Lead	373	252	68%	5	0.009
	Manganese	38	38	100%	18.01	0.295
	Mercury	735	690	94%	15.59	0.0009
	Nickel	212	88	42%	17.29	0.03
	Selenium	329	215	65%	12.5	0.03
	Silver	216	97	45%	1.54	0.00288
	Thallium	40		0%	25	0.002
	Zinc	442	441	100%	470	1.8
PAHs (ug/kg) ^{c, d, e}	Benzo(e)pyrene	116	68	59%	1,500	0.087
	Carcinogenic Polycyclic Aromatic Hydrocarbons (CPAH)	402	163	41%	4,493	ND
	High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAH)	402	193	48%	12,073	ND
	Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAH)	404	245	61%	8,903	0.89
	Polycyclic aromatic hydrocarbons (PAH)	404	247	61%	15,628	ND
PCBs (ng/kg) ^{c, d, e}	PCB, Sum of Aroclors	386	231	60%	21,000	ND
	PCB, Sum of Congeners	613	551	90%	3,506,827,000	ND
Pesticides (ug/kg) ^{c, d, e}	Aldrin	503	13	3%	67	0.059
	alpha-Hexachlorocyclohexane	587	43	7%	25	0.061
	beta-Hexachlorocyclohexane	580	47	8%	210	0.061
	Chlordane	149	21	14%	200	2
	DDT/DDD/DDE, o,p' and p,p' isomers	431	412	96%	1,000	0.18
	delta-Hexachlorocyclohexane	219	9	4%	71,000	0.44
	Dieldrin	599	166	28%	370	0.059
	Endosulfan Sulfate	166	8	5%	26	0.47

Table 4. Biological Sample Data Summary****Lower Columbia River Estuary Contaminant Data Compilation and Synthesis Project***

Analyte Group	Analyte	Number Sampled	Number Detected	Frequency of Detection	Maximum Result ^a	Minimum Result ^b
Pesticides (ug/kg) c, d, e	Endrin	319	36	11%	72,800	0.47
	gamma-Hexachlorocyclohexane	587	56	10%	180	0.059
	Heptachlor	531	12	2%	71,600	0.059
	Heptachlor Epoxide	572	35	6%	25	0.059
	Hexachlorobenzene	331	228	69%	10	0.027
	Methoxychlor	261	14	5%	832	0.32
	Mirex	109	6	6%	250	3
	Total Chlordane	486	313	64%	299	ND
	Total Endosulfan	176	13	7%	148	2

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e) If all of the analytes/congeners are not detected, then the highest RDL/PQL is the selected value for the calculated total, and a U qualifier is added to indicate the lack of detected values. The detect flag is designated as N.

Table 5. SPMD Sample Data Summary***Lower Columbia River Estuary Contaminant Data Compilation and Synthesis Project***

Analyte Group	Analyte	Number Sampled	Number Detected	Frequency of Detection	Maximum Result ^a	Minimum Result ^b
Flame Retardants (ng/L)	PBDES ^{c, d, e}	8	7	88%	201.5	1.4
PAHs (ng/SPM)	High Molecular Weight Polycyclic Aromatic Hydrocarbons (HPAH) ^{c, d, e}	8	3	38%	4,800	3,300
	Low Molecular Weight Polycyclic Aromatic Hydrocarbons (LPAH) ^{c, d, e}	8	3	38%	720	400
	Polycyclic Aromatic Hydrocarbons (PAH) ^{c, d, e}	8	3	38%	5,260	4,020
Pesticides (ng/SPM)	Total Chlordane ^{c, d, e}	53	46	87%	29.2	1.5
	Total Endosulfan ^{c, d, e}	17	12	71%	48.7	11.2
	DDT/DDD/DDE, o,p' and p,p' isomers ^{c, d, e}	23	23	100%	103	8.69
PCBs (ng/SPM)	Total Aroclors	24	24	100%	650	150
	Sum of Congeners ^{c, d, e}	8	8	100%	237	20

Notes:

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b) Analytes with result values of 0 or a negative number were marked as not-reportable

c) Calculated totals are estimated based of a sum of specific list of analyte or congener concentrations. The list of analytes/congeners used in a given calculated total is defined in Attachment A - Table A3.

d) Estimated concentrations (J qualified) are included in the total estimates.

e) If all of the analytes/congeners are not detected, then the highest RDL/PQL is the selected value for the calculated total, and a U qualifier is added to indicate the lack of detected values. The detect flag is designated as N.