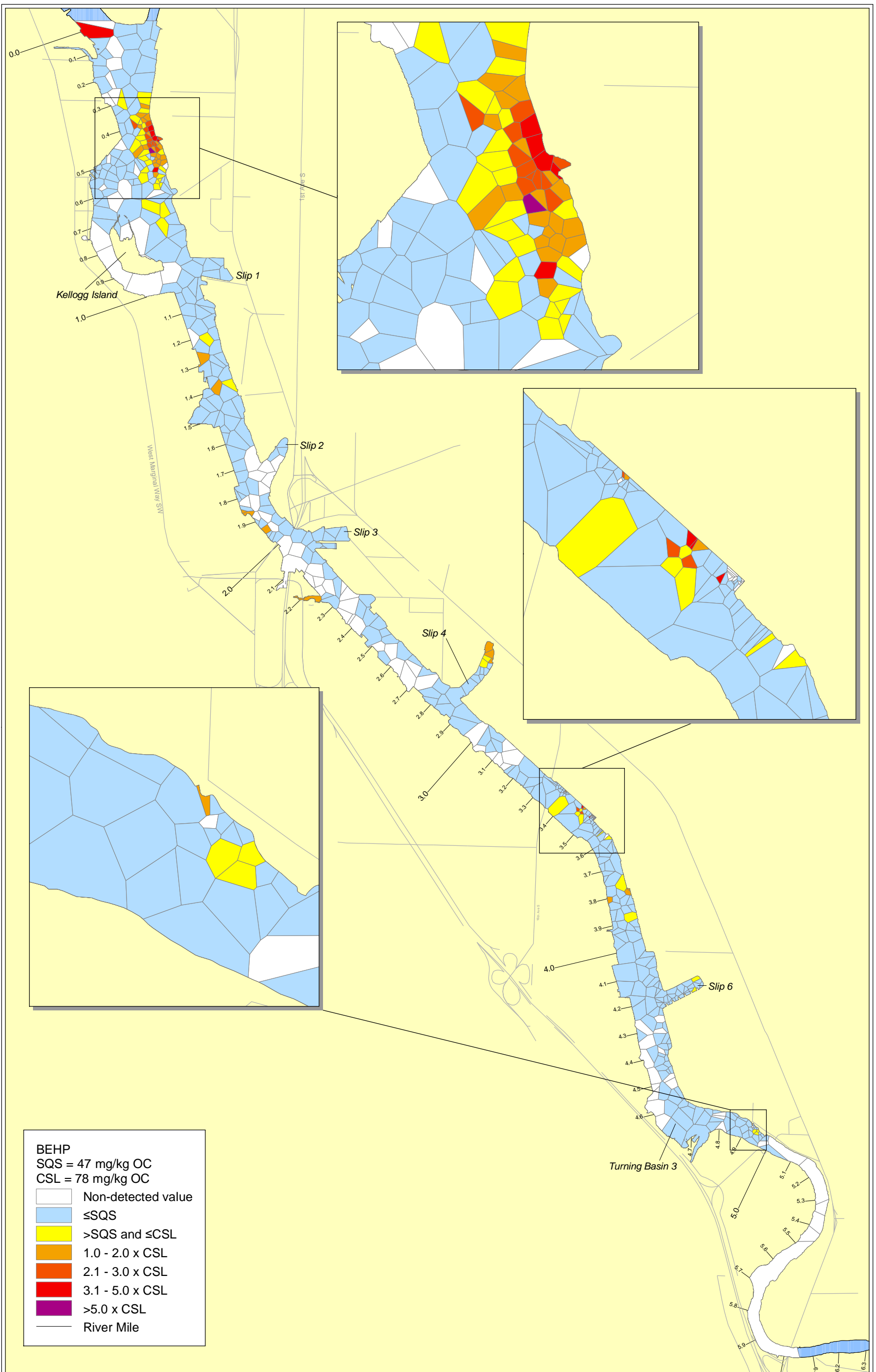


Map 1. Exceedances of SQS/CSL by Thiessen polygon for total PCBs in LDW surface sediment (zero DL)
 TOC normalization conducted for all samples with TOC concentrations greater than 0.2%. For samples with 0.2% TOC or lower or missing TOC concentrations, chemical concentrations were compared to lowest AET (equivalent to SQS) and second lowest AET (equivalent to CSL) in dry weight units.

Detection limits for concentrations reported as undetected were assigned a value of zero for the purpose of data aggregation.



Prepared by SMS 1/30/03 Map 577



BEHP	
SQS = 47 mg/kg OC	
CSL = 78 mg/kg OC	
	Non-detected value
	≤SQS
	>SQS and ≤CSL
	1.0 - 2.0 x CSL
	2.1 - 3.0 x CSL
	3.1 - 5.0 x CSL
	>5.0 x CSL
	River Mile

Map 2. Exceedances of SQS/CSL by Thiessen polygon for BEHP in LDW surface sediment (zero DL)

TOC normalization conducted for all samples with TOC concentrations greater than 0.2%. For samples with 0.2% TOC or lower or missing TOC concentrations, chemical concentrations were compared to lowest AET (equivalent to SQS) and second lowest AET (equivalent to CSL) in dry weight units.

0 625 1,250 2,500
Feet

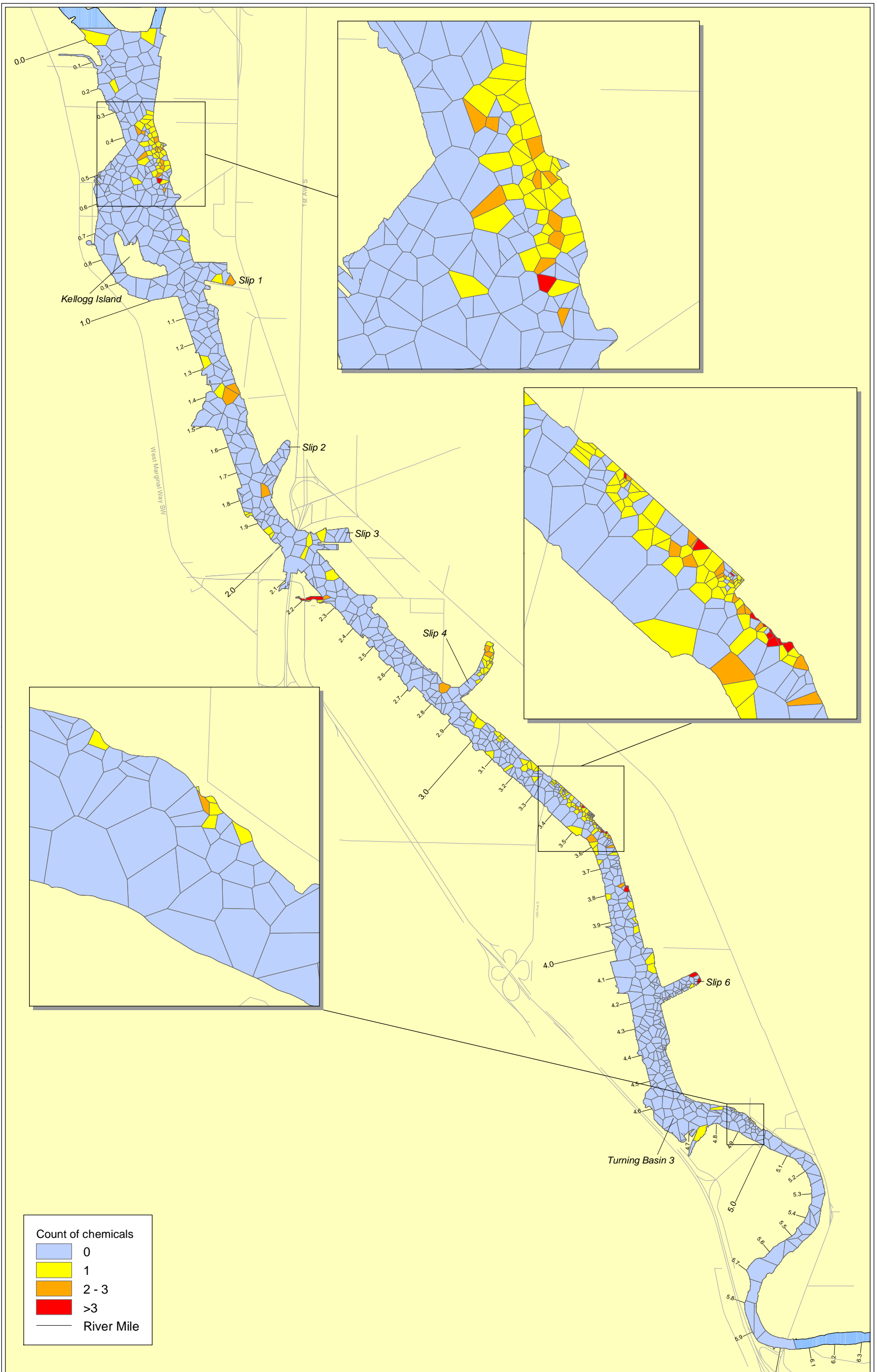
0 250 500 1,000
Meters



Prepared by SMS 1/30/03 Map 578

Detection limits for concentrations reported as undetected were assigned a value of zero for the purpose of data aggregation.

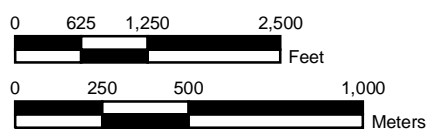
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Map 3. Number of chemicals exceeding CSL/ML by Thiessen polygon in LDW surface sediments

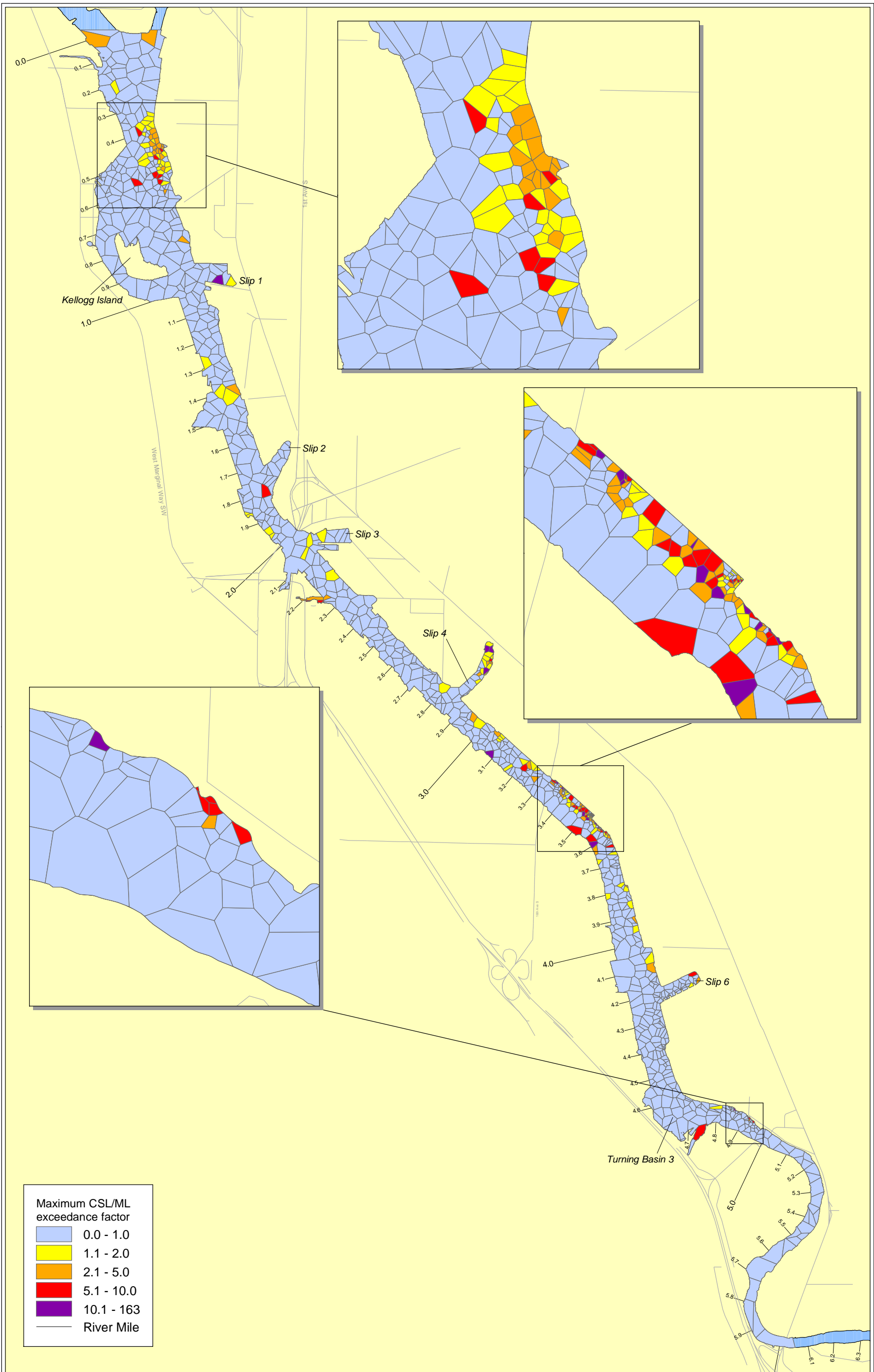
TOC normalization conducted for all samples with TOC concentrations greater than 0.2%. For samples with lower or missing TOC concentrations, concentrations of chemicals requiring TOC normalization were compared to lowest AET (equivalent to SQS) and second lowest AET (equivalent to CSL) in dry weight units.

Detection limits for concentrations reported as undetected were assigned a value of zero for the purpose of data aggregation.



Prepared by SMS 1/30/03 Map 579

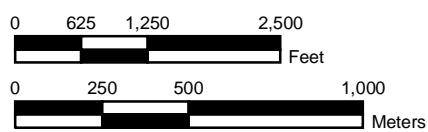
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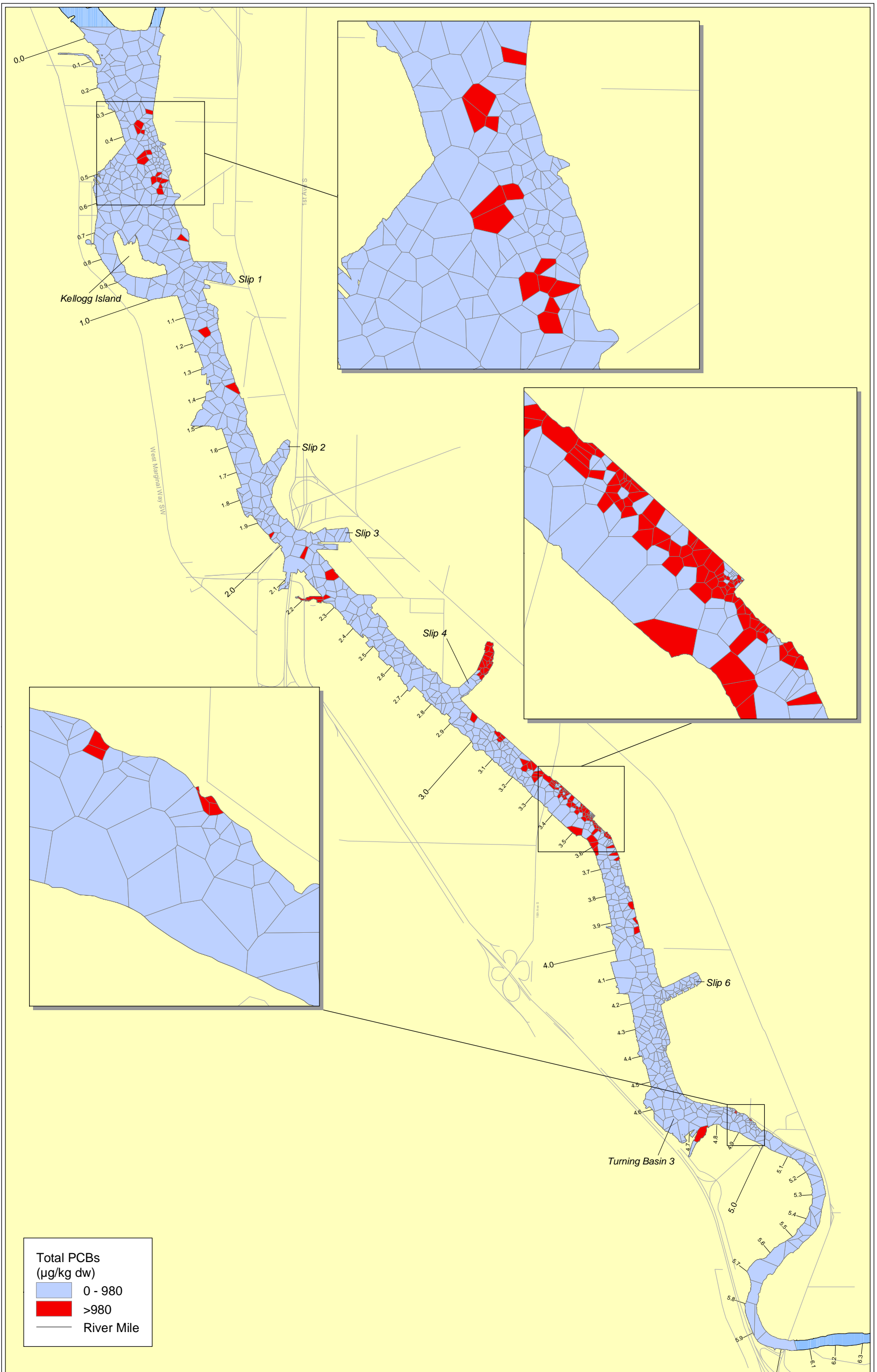
Map 4. Maximum CSL/ML exceedance factor by Thiessen polygon in LDW surface sediments (zero DL)

TOC normalization conducted for all samples with TOC concentrations greater than 0.2%. For samples with lower or missing TOC concentrations, concentrations of chemicals requiring TOC normalization were compared to lowest AET (equivalent to SQS) and second lowest AET (equivalent to CSL) in dry weight units.

Detection limits for concentrations reported as undetected were assigned a value of zero for the purpose of data aggregation.

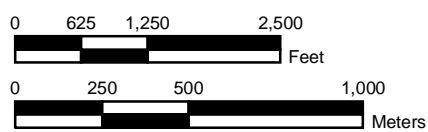


Prepared by SMS 1/30/03 Map 580

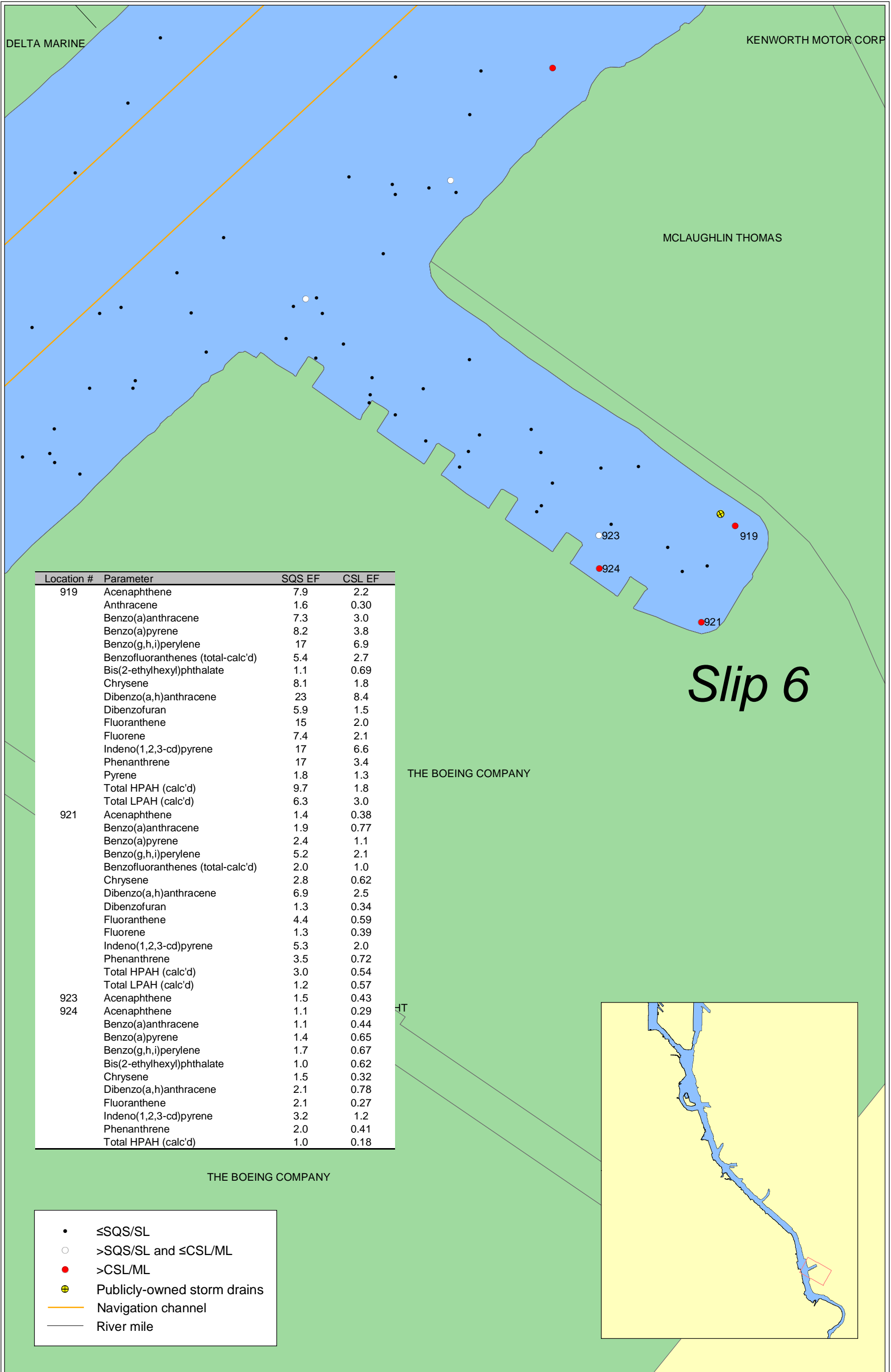


Map 5. Upper 5th percentile of total PCBs by Thiessen polygon in LDW surface sediments

Detection limits for concentrations reported as undetected were assigned a value of zero for the purpose of data aggregation.



Prepared by SMS 1/30/03 Map 581



Location #	Parameter	SQS EF	CSL EF
919	Acenaphthene	7.9	2.2
	Anthracene	1.6	0.30
	Benzo(a)anthracene	7.3	3.0
	Benzo(a)pyrene	8.2	3.8
	Benzo(g,h,i)perylene	17	6.9
	Benzofluoranthenes (total-calc'd)	5.4	2.7
	Bis(2-ethylhexyl)phthalate	1.1	0.69
	Chrysene	8.1	1.8
	Dibenzo(a,h)anthracene	23	8.4
	Dibenzofuran	5.9	1.5
	Fluoranthene	15	2.0
	Fluorene	7.4	2.1
	Indeno(1,2,3-cd)pyrene	17	6.6
	Phenanthrene	17	3.4
	Pyrene	1.8	1.3
	Total HPAH (calc'd)	9.7	1.8
	Total LPAH (calc'd)	6.3	3.0
921	Acenaphthene	1.4	0.38
	Benzo(a)anthracene	1.9	0.77
	Benzo(a)pyrene	2.4	1.1
	Benzo(g,h,i)perylene	5.2	2.1
	Benzofluoranthenes (total-calc'd)	2.0	1.0
	Chrysene	2.8	0.62
	Dibenzo(a,h)anthracene	6.9	2.5
	Dibenzofuran	1.3	0.34
	Fluoranthene	4.4	0.59
	Fluorene	1.3	0.39
	Indeno(1,2,3-cd)pyrene	5.3	2.0
	Phenanthrene	3.5	0.72
	Total HPAH (calc'd)	3.0	0.54
	Total LPAH (calc'd)	1.2	0.57
923	Acenaphthene	1.5	0.43
924	Acenaphthene	1.1	0.29
	Benzo(a)anthracene	1.1	0.44
	Benzo(a)pyrene	1.4	0.65
	Benzo(g,h,i)perylene	1.7	0.67
	Bis(2-ethylhexyl)phthalate	1.0	0.62
	Chrysene	1.5	0.32
	Dibenzo(a,h)anthracene	2.1	0.78
	Fluoranthene	2.1	0.27
	Indeno(1,2,3-cd)pyrene	3.2	1.2
	Phenanthrene	2.0	0.41
Total HPAH (calc'd)	1.0	0.18	

- ≤SQS/SL
- >SQS/SL and ≤CSL/ML
- >CSL/ML
- ⊕ Publicly-owned storm drains
- Navigation channel
- River mile

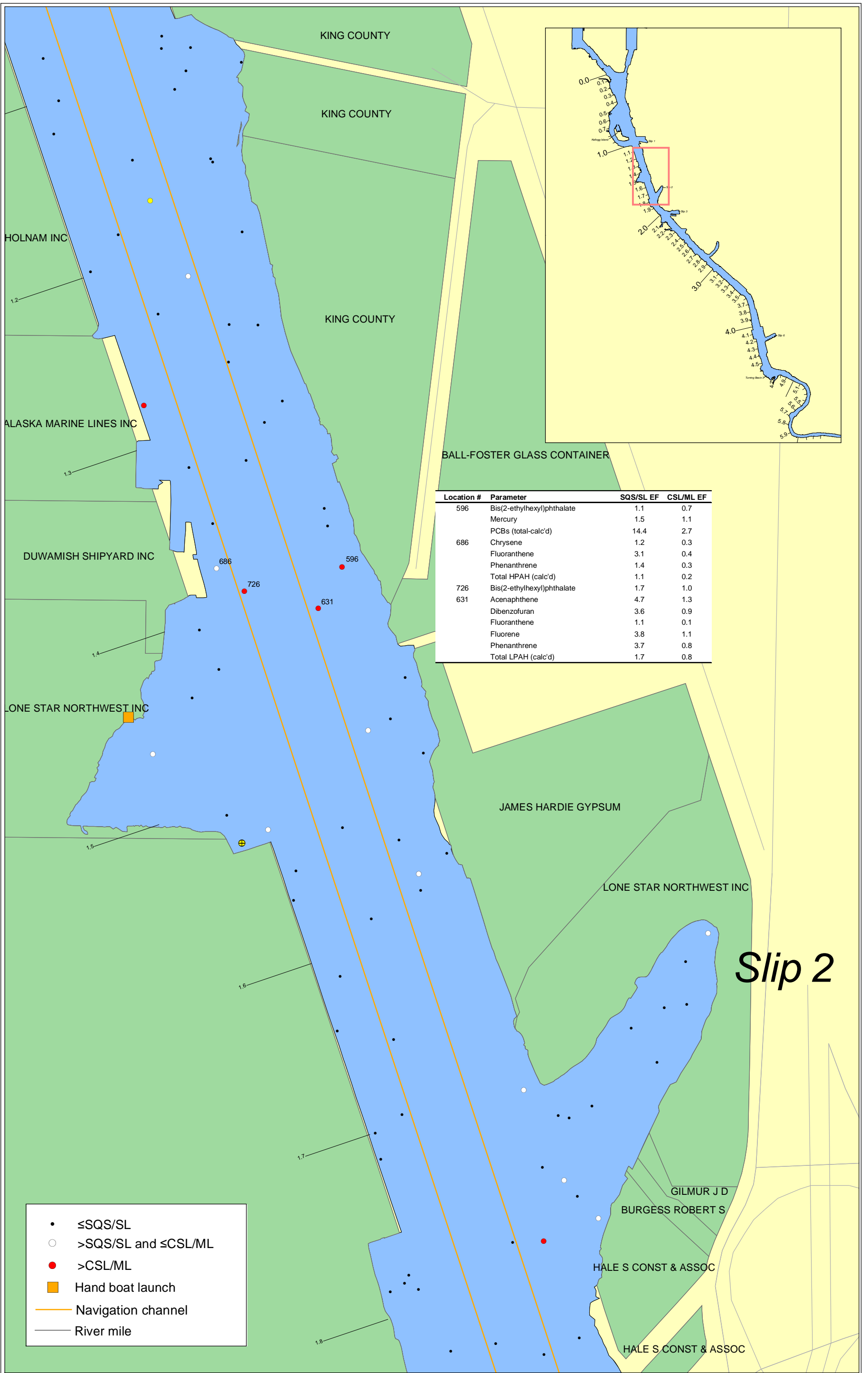
Map 6. Head of Slip 6

TOC normalization conducted for all samples with TOC concentrations greater than 0.2%. For samples with 0.2% TOC or lower or missing TOC concentrations, chemical concentrations were compared to lowest AET (equivalent to SQS) and second lowest AET (equivalent to CSL) in dry weight units. Detection limits for concentrations reported as undetected were assigned a value of zero for the purpose of data aggregation.



Prepared by SMS 4/16/03 Map 771

Locations of publicly-owned storm drain outfalls (City of Seattle, WSDOT, and King County) and combined sewer overflows are shown based on best available information from agency records and have not been field verified. Locations of privately-owned storm drain outfalls are not shown. Because most of the waterfront properties are served by private storm drains, there are numerous privately-owned storm drain outfalls in the LDW study area.

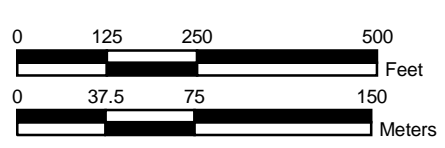


Location #	Parameter	SQS/SL EF	CSL/ML EF
596	Bis(2-ethylhexyl)phthalate	1.1	0.7
	Mercury	1.5	1.1
	PCBs (total-calc'd)	14.4	2.7
686	Chrysene	1.2	0.3
	Fluoranthene	3.1	0.4
	Phenanthrene	1.4	0.3
	Total HPAH (calc'd)	1.1	0.2
	Bis(2-ethylhexyl)phthalate	1.7	1.0
726	Acenaphthene	4.7	1.3
	Dibenzofuran	3.6	0.9
	Fluoranthene	1.1	0.1
	Fluorene	3.8	1.1
	Phenanthrene	3.7	0.8
631	Total LPAH (calc'd)	1.7	0.8

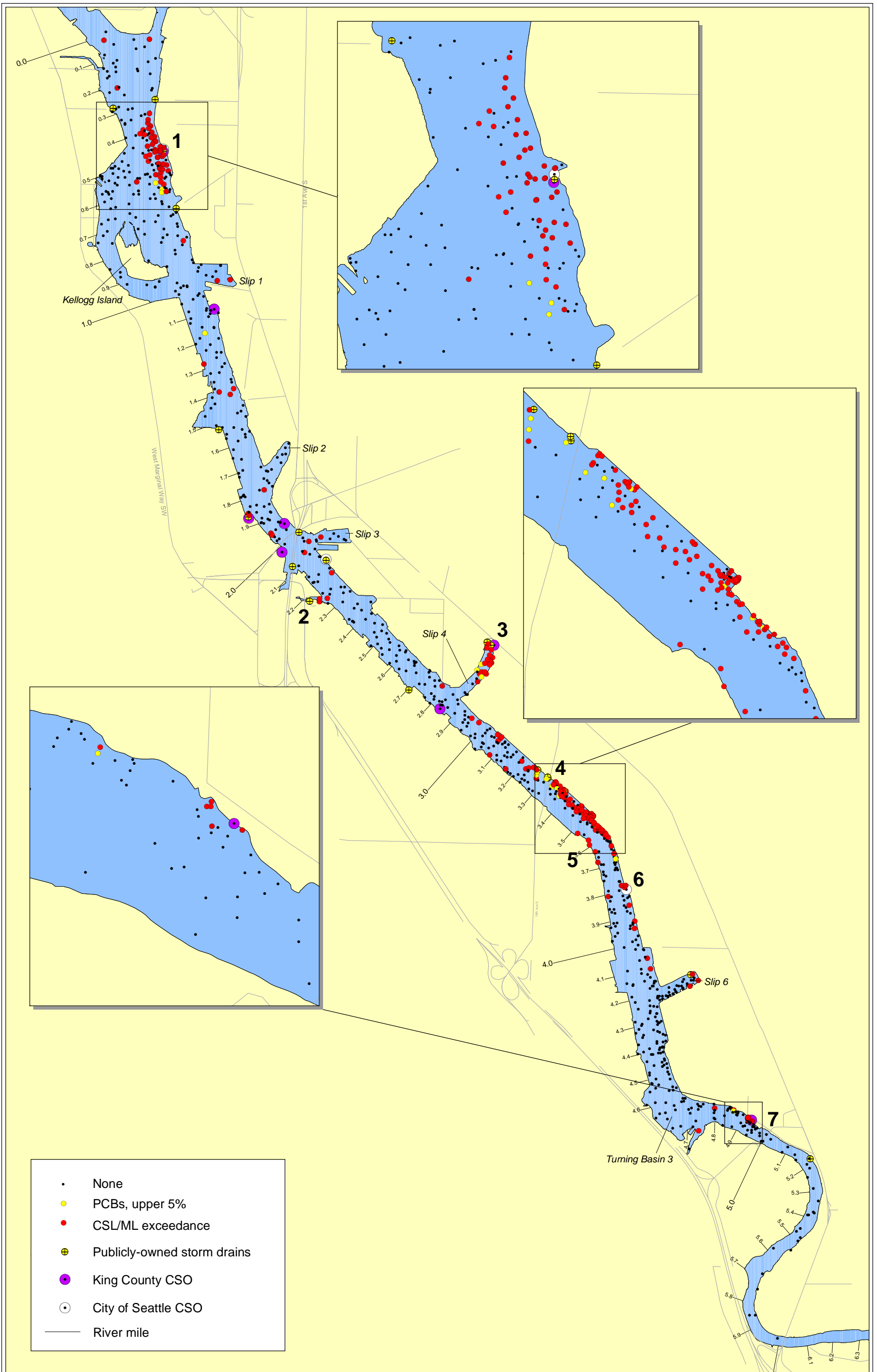
- ≤SQS/SL
- >SQS/SL and ≤CSL/ML
- >CSL/ML
- Hand boat launch
- Navigation channel
- River mile

Map 7. River mile 1.4

TOC normalization conducted for all samples with TOC concentrations greater than 0.2%. For samples with 0.2% TOC or lower or missing TOC concentrations, chemical concentrations were compared to lowest AET (equivalent to SQS) and second lowest AET (equivalent to CSL) in dry weight units. Detection limits for concentrations reported as undetected were assigned a value of zero for the purpose of data aggregation.



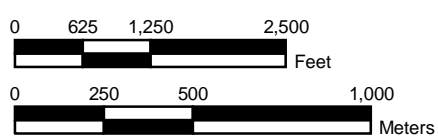
Locations of privately-owned storm drain outfalls are not shown. Because most of the waterfront properties are served by private storm drains, there are numerous privately-owned storm drain outfalls in the LDW study area.



Map 8. High priority areas

TOC normalization conducted for all samples with TOC concentrations greater than 0.2%. For samples with 0.2% TOC or lower or missing TOC concentrations, chemical concentrations were compared to lowest AET (equivalent to SQS) and second lowest AET (equivalent to CSL) in dry weight units.

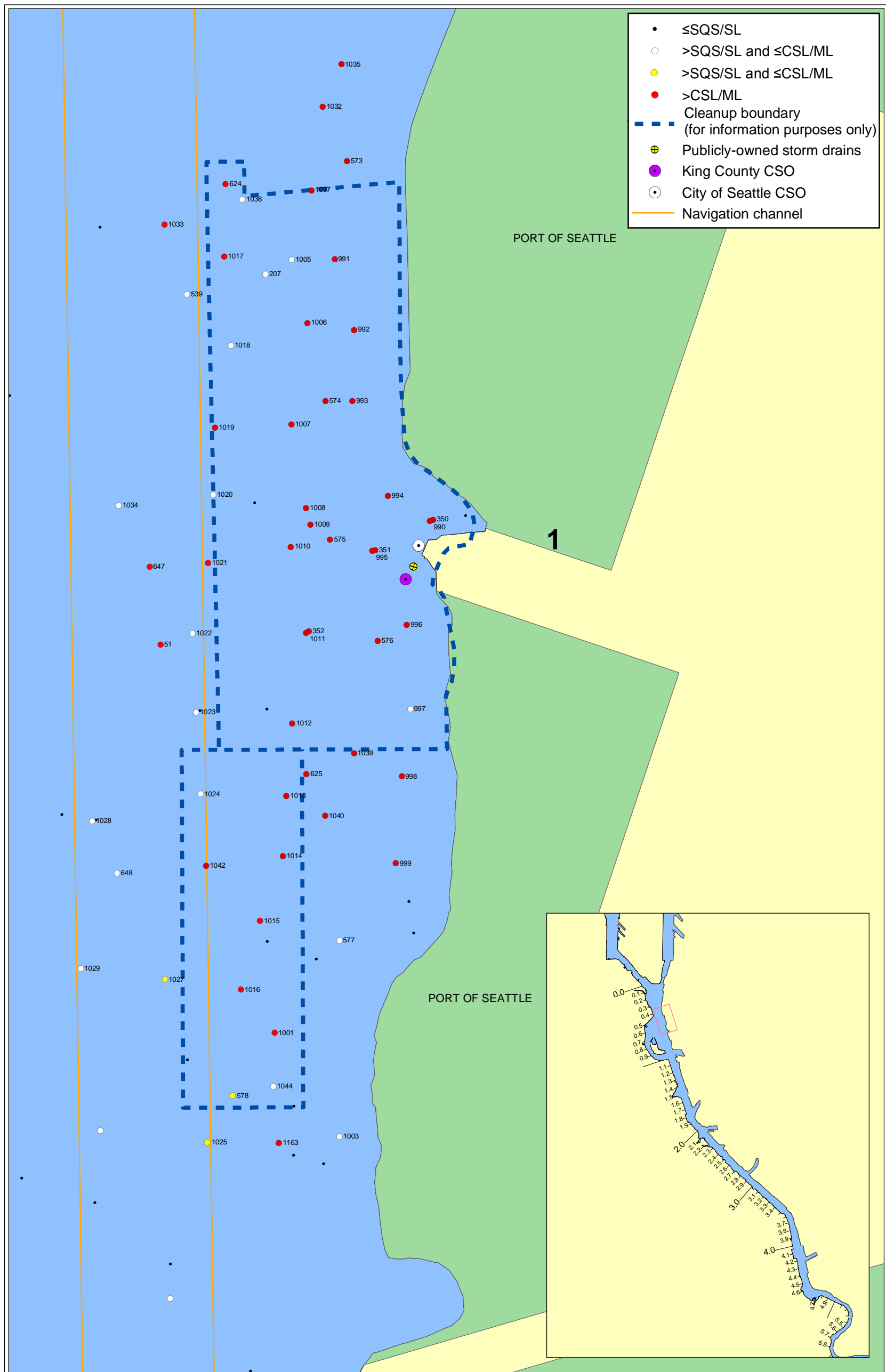
Detection limits for concentrations reported as undetected were assigned a value of zero for the purpose of data aggregation. Locations of publicly-owned storm drain outfalls (City of Seattle, WSDOT, and King County) and combined sewer overflows are shown based on best available information from agency records and have not been field verified. Locations of privately-owned storm drain outfalls are not shown. Because most of the waterfront properties are served by private storm drains, there are numerous privately-owned storm drain outfalls in the LDW study area.



Windward
environmental L.L.C.

Prepared by SMS 4/15/03 Map 751

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Map 9. High priority area 1 - Duwamish/Diagonal

TOC normalization conducted for all samples with TOC concentrations greater than 0.2%. For samples with 0.2% TOC or lower or missing TOC concentrations, chemical concentrations were compared to lowest AET (equivalent to SQS) and second lowest AET (equivalent to CSL) in dry weight units. Detection limits for concentrations reported as undetected were assigned a value of zero for the purpose of data aggregation.

Data associated with labeled locations is provided in Appendix C.

Locations of publicly-owned storm drain outfalls (City of Seattle, WSDOT, and King County) and combined sewer overflows are shown based on best available information from agency records and have not been field verified. Locations of privately-owned storm drain outfalls are not shown. Because most of the waterfront properties are served by private storm drains, there are numerous privately-owned storm drain outfalls in the LDW study area.

0 62.5 125 250 Feet

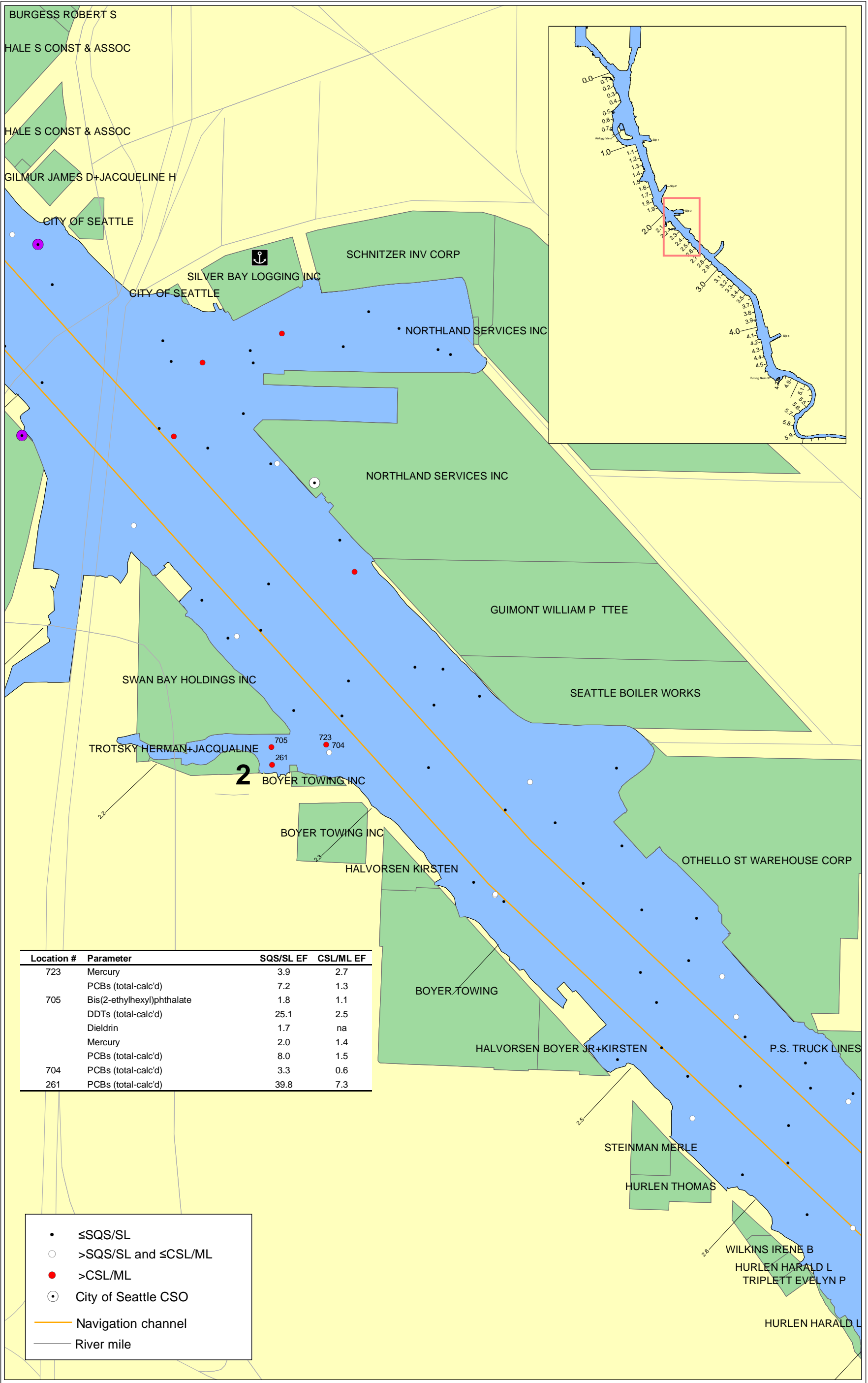
0 25 50 100 Meters



WindWard
environmental LLC

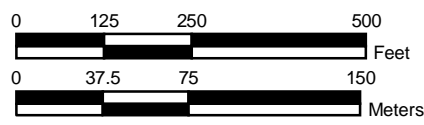
Prepared by SMS 1/30/03 Map 764

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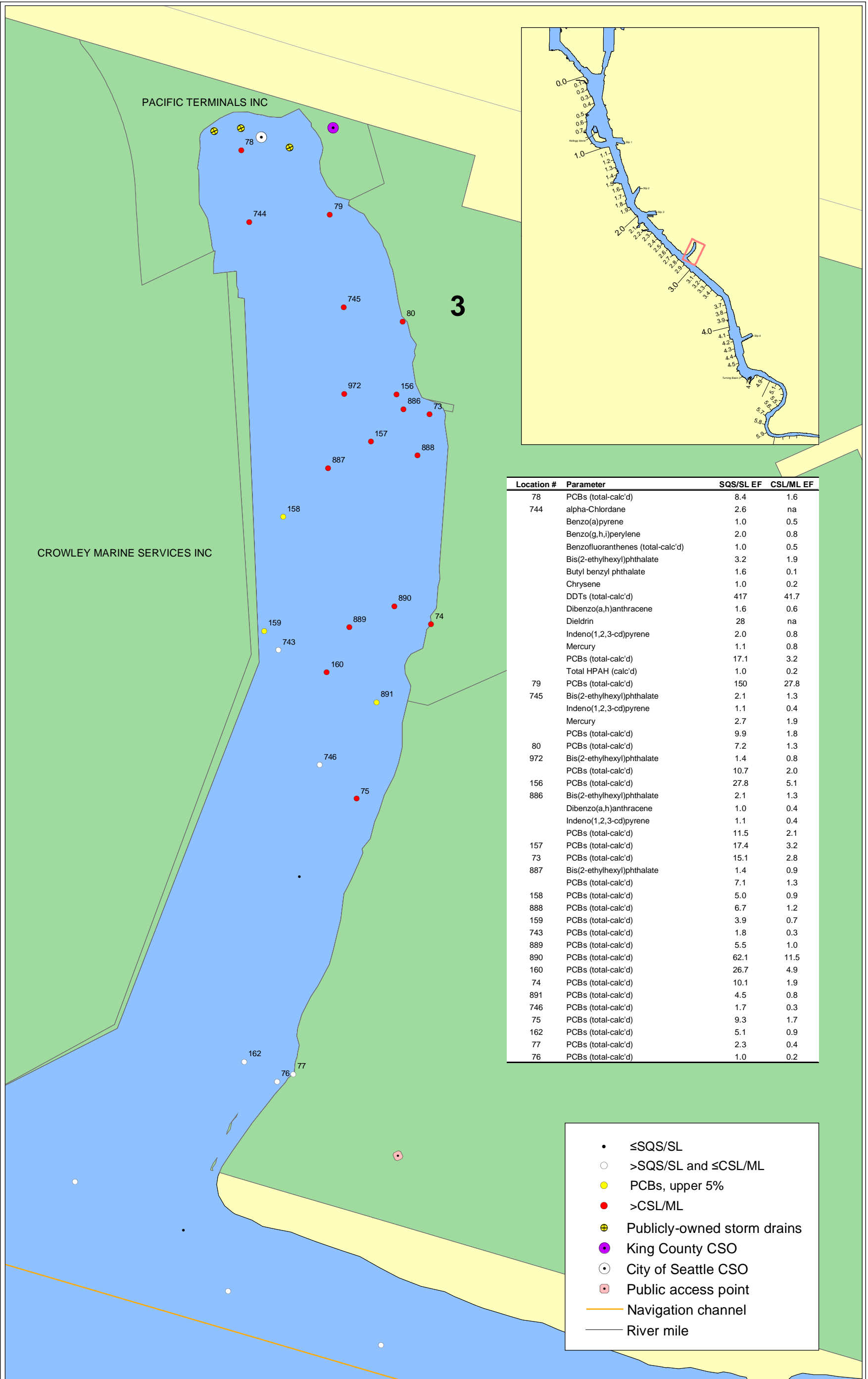
Map 10. High priority area 2 - RM 2.2 west

TOC normalization conducted for all samples with TOC concentrations greater than 0.2%. For samples with 0.2% TOC or lower or missing TOC concentrations, chemical concentrations were compared to lowest AET (equivalent to SQS) and second lowest AET (equivalent to CSL) in dry weight units. Detection limits for concentrations reported as undetected were assigned a value of zero for data aggregation purposes.



Prepared by SMS 4/16/03 Map 769

Locations of publicly-owned storm drain outfalls (City of Seattle, WSDOT, and King County) and combined sewer overflows are shown based on best available information from agency records and have not been field verified. Locations of privately-owned storm drain outfalls are not shown. Because most of the waterfront properties are served by private storm drains, there are numerous privately-owned storm drain outfalls in the LDW study area.

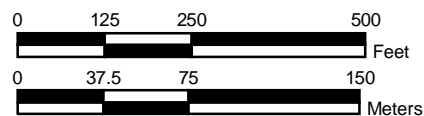


Location #	Parameter	SQS/SL EF	CSL/ML EF
78	PCBs (total-calc'd)	8.4	1.6
744	alpha-Chlordane	2.6	na
	Benzo(a)pyrene	1.0	0.5
	Benzo(g,h,i)perylene	2.0	0.8
	Benzo(a)fluoranthene (total-calc'd)	1.0	0.5
	Bis(2-ethylhexyl)phthalate	3.2	1.9
	Butyl benzyl phthalate	1.6	0.1
	Chrysene	1.0	0.2
	DDTs (total-calc'd)	417	41.7
	Dibenzo(a,h)anthracene	1.6	0.6
	Dieldrin	28	na
	Indeno(1,2,3-cd)pyrene	2.0	0.8
	Mercury	1.1	0.8
	PCBs (total-calc'd)	17.1	3.2
	Total HPAH (calc'd)	1.0	0.2
79	PCBs (total-calc'd)	150	27.8
745	Bis(2-ethylhexyl)phthalate	2.1	1.3
	Indeno(1,2,3-cd)pyrene	1.1	0.4
	Mercury	2.7	1.9
	PCBs (total-calc'd)	9.9	1.8
80	PCBs (total-calc'd)	7.2	1.3
972	Bis(2-ethylhexyl)phthalate	1.4	0.8
	PCBs (total-calc'd)	10.7	2.0
156	PCBs (total-calc'd)	27.8	5.1
886	Bis(2-ethylhexyl)phthalate	2.1	1.3
	Dibenzo(a,h)anthracene	1.0	0.4
	Indeno(1,2,3-cd)pyrene	1.1	0.4
	PCBs (total-calc'd)	11.5	2.1
157	PCBs (total-calc'd)	17.4	3.2
73	PCBs (total-calc'd)	15.1	2.8
887	Bis(2-ethylhexyl)phthalate	1.4	0.9
	PCBs (total-calc'd)	7.1	1.3
158	PCBs (total-calc'd)	5.0	0.9
888	PCBs (total-calc'd)	6.7	1.2
159	PCBs (total-calc'd)	3.9	0.7
743	PCBs (total-calc'd)	1.8	0.3
889	PCBs (total-calc'd)	5.5	1.0
890	PCBs (total-calc'd)	62.1	11.5
160	PCBs (total-calc'd)	26.7	4.9
74	PCBs (total-calc'd)	10.1	1.9
891	PCBs (total-calc'd)	4.5	0.8
746	PCBs (total-calc'd)	1.7	0.3
75	PCBs (total-calc'd)	9.3	1.7
162	PCBs (total-calc'd)	5.1	0.9
77	PCBs (total-calc'd)	2.3	0.4
76	PCBs (total-calc'd)	1.0	0.2

- ≤SQS/SL
- >SQS/SL and ≤CSL/ML
- PCBs, upper 5%
- >CSL/ML
- ⊕ Publicly-owned storm drains
- King County CSO
- City of Seattle CSO
- ⊠ Public access point
- Navigation channel
- River mile

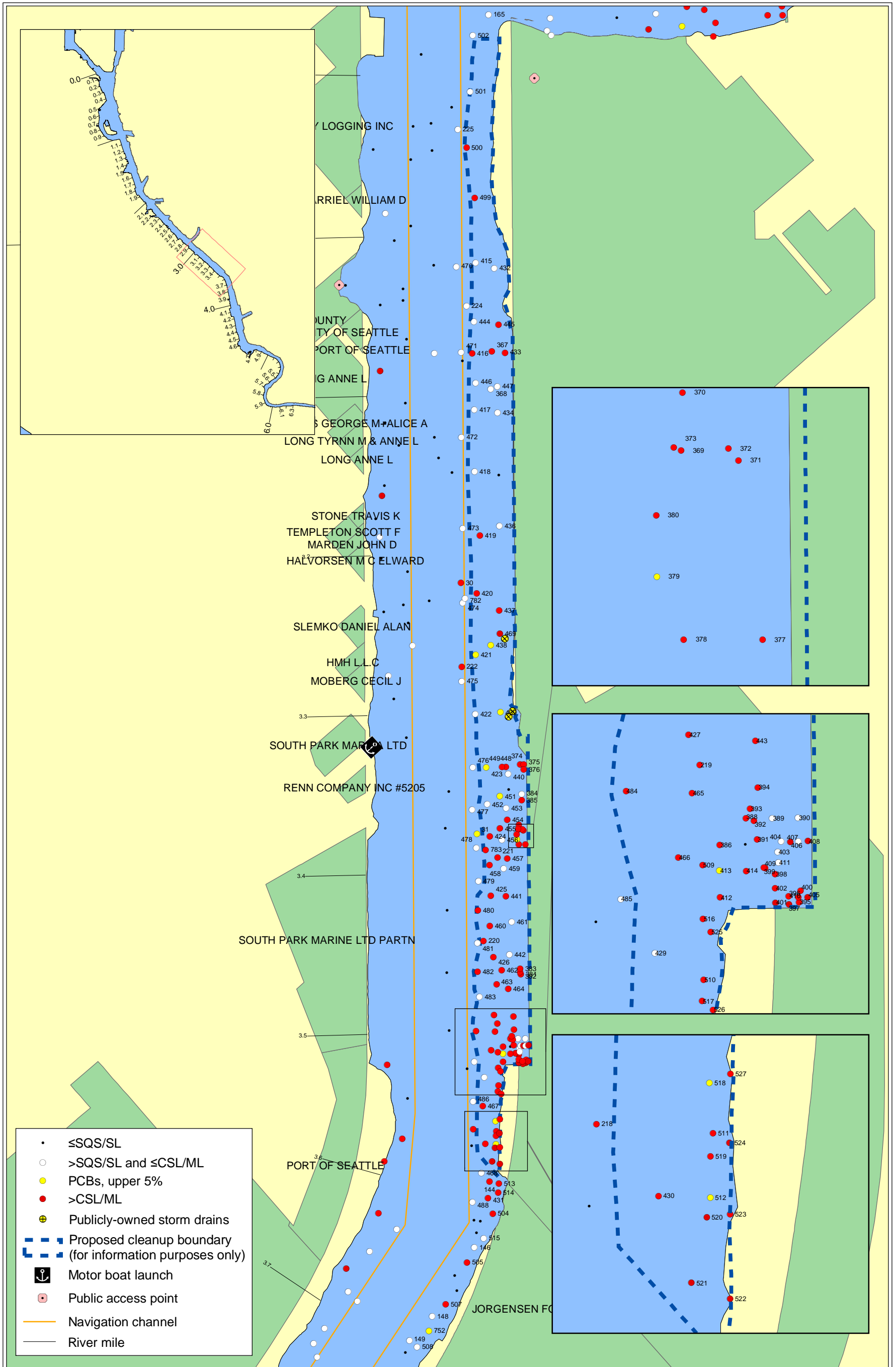
Map 11. High priority area 3 - Slip 4

TOC normalization conducted for all samples with TOC concentrations greater than 0.2%. For samples with 0.2% TOC or lower or missing TOC concentrations, chemical concentrations were compared to lowest AET (equivalent to SQS) and second lowest AET (equivalent to CSL) in dry weight units. Detection limits for concentrations reported as undetected were assigned a value of zero for data aggregation purposes.



Prepared by SMS 4/16/03 Map 768

Locations of publicly-owned storm drain outfalls (City of Seattle, WSDOT, and King County) and combined sewer overflows are shown based on best available information from agency records and have not been field verified. Locations of privately-owned storm drain outfalls are not shown. Because most of the waterfront properties are served by private storm drains, there are numerous privately-owned storm drain outfalls in the LDW study area.

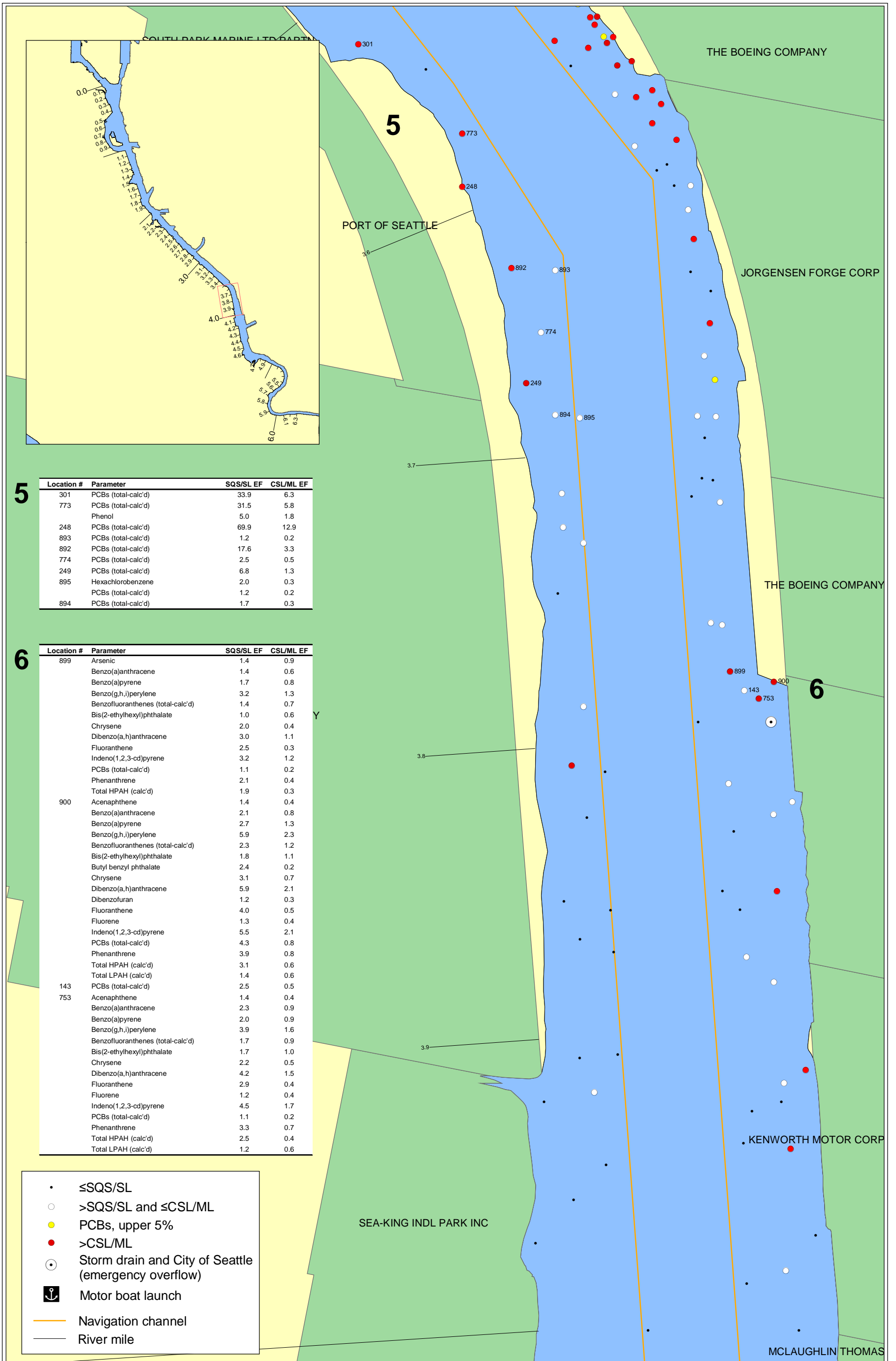


Map 12. High priority area 4 - RM 2.9 to 3.7 east

TOC normalization conducted for all samples with TOC concentrations greater than 0.2%. For samples with 0.2% TOC or lower or missing TOC concentrations, chemical concentrations were compared to lowest AET (equivalent to SQS) and second lowest AET (equivalent to CSL) in dry weight units. Detection limits for concentrations reported as undetected were assigned a value of zero for the purpose of data aggregation.



Data associated with labeled locations is provided in Appendix C. Locations of publicly-owned storm drain outfalls (City of Seattle, WSDOT, and King County) and combined sewer overflows are shown based on best available information from agency records and have not been field verified. Locations of privately-owned storm drain outfalls are not shown. Because most of the waterfront properties are served by private storm drains, there are numerous privately-owned storm drain outfalls in the LDW study area.



5

Location #	Parameter	SQS/SL EF	CSL/ML EF
301	PCBs (total-calc'd)	33.9	6.3
773	PCBs (total-calc'd)	31.5	5.8
	Phenol	5.0	1.8
248	PCBs (total-calc'd)	69.9	12.9
893	PCBs (total-calc'd)	1.2	0.2
892	PCBs (total-calc'd)	17.6	3.3
774	PCBs (total-calc'd)	2.5	0.5
249	PCBs (total-calc'd)	6.8	1.3
895	Hexachlorobenzene	2.0	0.3
	PCBs (total-calc'd)	1.2	0.2
894	PCBs (total-calc'd)	1.7	0.3

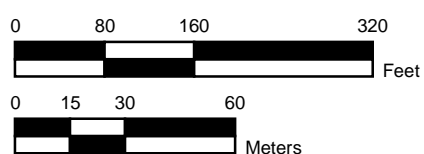
6

Location #	Parameter	SQS/SL EF	CSL/ML EF
899	Arsenic	1.4	0.9
	Benzo(a)anthracene	1.4	0.6
	Benzo(a)pyrene	1.7	0.8
	Benzo(g,h,i)perylene	3.2	1.3
	Benzo(a)fluoranthenes (total-calc'd)	1.4	0.7
	Bis(2-ethylhexyl)phthalate	1.0	0.6
	Chrysene	2.0	0.4
	Dibenzo(a,h)anthracene	3.0	1.1
	Fluoranthene	2.5	0.3
	Indeno(1,2,3-cd)pyrene	3.2	1.2
	PCBs (total-calc'd)	1.1	0.2
	Phenanthrene	2.1	0.4
	Total HPAH (calc'd)	1.9	0.3
900	Acenaphthene	1.4	0.4
	Benzo(a)anthracene	2.1	0.8
	Benzo(a)pyrene	2.7	1.3
	Benzo(g,h,i)perylene	5.9	2.3
	Benzo(a)fluoranthenes (total-calc'd)	2.3	1.2
	Bis(2-ethylhexyl)phthalate	1.8	1.1
	Butyl benzyl phthalate	2.4	0.2
	Chrysene	3.1	0.7
	Dibenzo(a,h)anthracene	5.9	2.1
	Dibenzofuran	1.2	0.3
	Fluoranthene	4.0	0.5
	Fluorene	1.3	0.4
	Indeno(1,2,3-cd)pyrene	5.5	2.1
	PCBs (total-calc'd)	4.3	0.8
	Phenanthrene	3.9	0.8
	Total HPAH (calc'd)	3.1	0.6
	Total LPAH (calc'd)	1.4	0.6
143	PCBs (total-calc'd)	2.5	0.5
753	Acenaphthene	1.4	0.4
	Benzo(a)anthracene	2.3	0.9
	Benzo(a)pyrene	2.0	0.9
	Benzo(g,h,i)perylene	3.9	1.6
	Benzo(a)fluoranthenes (total-calc'd)	1.7	0.9
	Bis(2-ethylhexyl)phthalate	1.7	1.0
	Chrysene	2.2	0.5
	Dibenzo(a,h)anthracene	4.2	1.5
	Fluoranthene	2.9	0.4
	Fluorene	1.2	0.4
	Indeno(1,2,3-cd)pyrene	4.5	1.7
	PCBs (total-calc'd)	1.1	0.2
	Phenanthrene	3.3	0.7
	Total HPAH (calc'd)	2.5	0.4
	Total LPAH (calc'd)	1.2	0.6

- ≤SQS/SL
- >SQS/SL and ≤CSL/ML
- PCBs, upper 5%
- >CSL/ML
- Storm drain and City of Seattle (emergency overflow)
- ⚓ Motor boat launch
- Navigation channel
- River mile

Map 13. High priority areas 5 and 6 - RM 3.6 west and 3.8 east

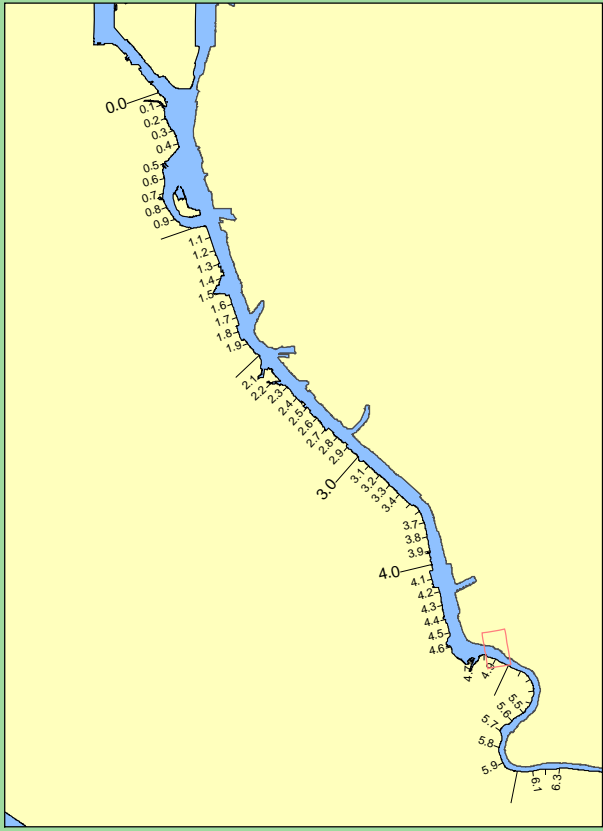
TOC normalization conducted for all samples with TOC concentrations greater than 0.2%. For samples with 0.2% TOC or lower or missing TOC concentrations, chemical concentrations were compared to lowest AET (equivalent to SQS) and second lowest AET (equivalent to CSL) in dry weight units. Detection limits for concentrations reported as undetected were assigned a value of zero for the purpose of data aggregation.



Prepared by SMS 4/15/03 Map 766

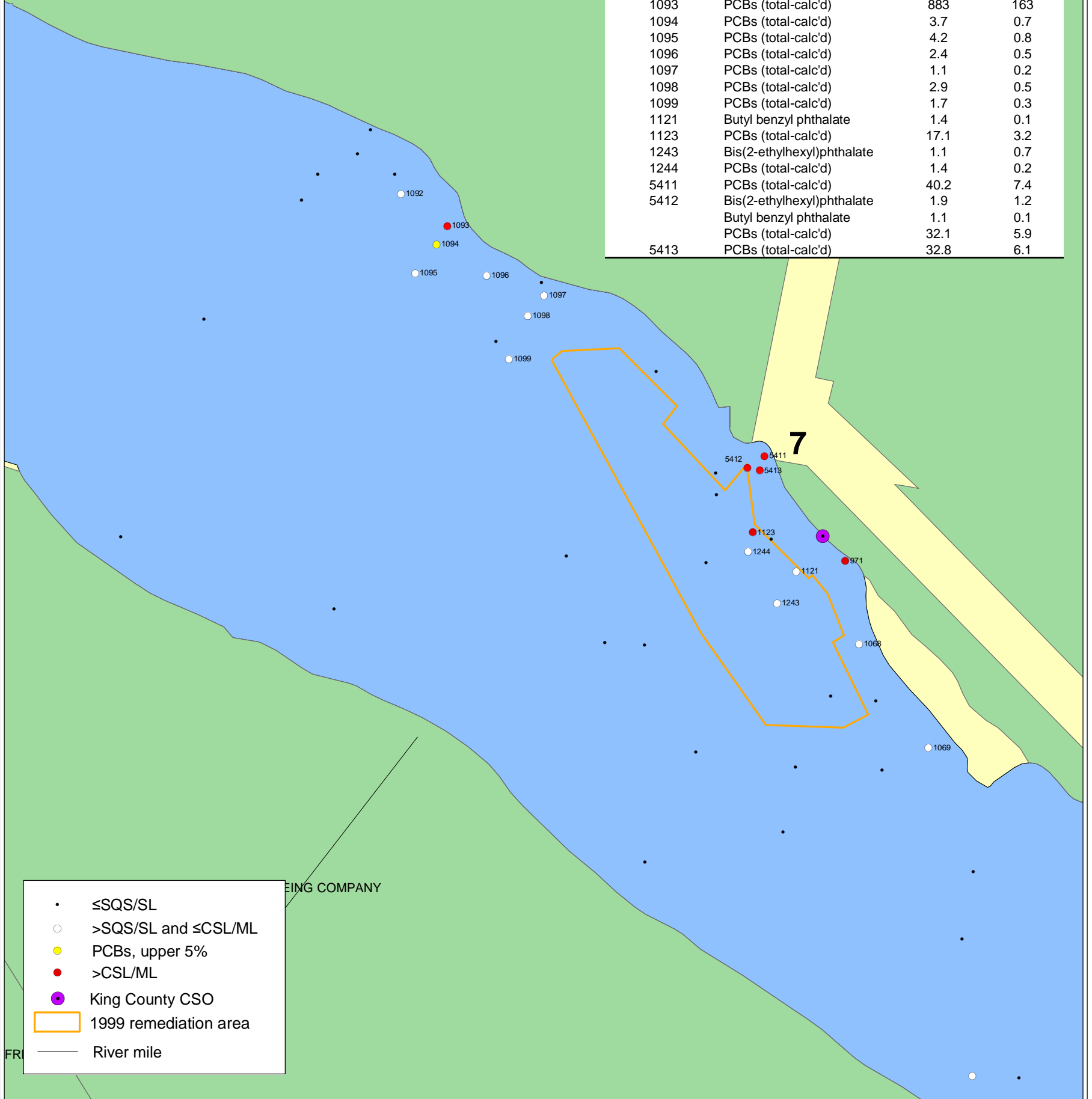
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Locations of publicly-owned storm drain outfalls (City of Seattle, WSDOT, and King County) and combined sewer overflows are shown based on best available information from agency records and have not been field verified. Locations of privately-owned storm drain outfalls are not shown. Because most of the waterfront properties are served by private storm drains, there are numerous privately-owned storm drain outfalls in the LDW study area.



THE BOEING COMPANY

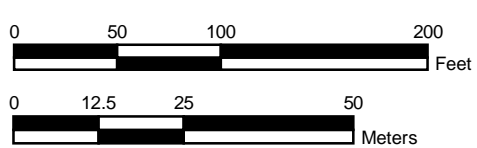
Location #	Parameter	SQS EF	CSL EF
971	1,4-Dichlorobenzene	21	7.2
1068	Bis(2-ethylhexyl)phthalate	1.4	0.9
1069	Dibenzo(a,h)anthracene	1.4	0.5
	Indeno(1,2,3-cd)pyrene	1.2	0.5
	Phenanthrene	1.4	0.3
1092	PCBs (total-calc'd)	1.5	0.3
1093	PCBs (total-calc'd)	883	163
1094	PCBs (total-calc'd)	3.7	0.7
1095	PCBs (total-calc'd)	4.2	0.8
1096	PCBs (total-calc'd)	2.4	0.5
1097	PCBs (total-calc'd)	1.1	0.2
1098	PCBs (total-calc'd)	2.9	0.5
1099	PCBs (total-calc'd)	1.7	0.3
1121	Butyl benzyl phthalate	1.4	0.1
1123	PCBs (total-calc'd)	17.1	3.2
1243	Bis(2-ethylhexyl)phthalate	1.1	0.7
1244	PCBs (total-calc'd)	1.4	0.2
5411	PCBs (total-calc'd)	40.2	7.4
5412	Bis(2-ethylhexyl)phthalate	1.9	1.2
	Butyl benzyl phthalate	1.1	0.1
	PCBs (total-calc'd)	32.1	5.9
5413	PCBs (total-calc'd)	32.8	6.1



- \leq SQS/SL
- $>$ SQS/SL and \leq CSL/ML
- PCBs, upper 5%
- $>$ CSL/ML
- King County CSO
- ▭ 1999 remediation area
- River mile

Map 14. High priority area 7 - Norfolk CSO

TOC normalization conducted for all samples with TOC concentrations greater than 0.2%. For samples with 0.2% TOC or lower or missing TOC concentrations, chemical concentrations were compared to lowest AET (equivalent to SQS) and second lowest AET (equivalent to CSL) in dry weight units. Detection limits for concentrations reported as undetected were assigned a value of zero for the purpose of data aggregation.



Prepared by SMS 4/15/03 Map 765

Locations of publicly-owned storm drain outfalls (City of Seattle, WSDOT, and King County) and combined sewer overflows are shown based on best available information from agency records and have not been field verified. Locations of privately-owned storm drain outfalls are not shown. Because most of the waterfront properties are served by private storm drains, there are numerous privately-owned storm drain outfalls in the LDW study area.