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To: Doug Tomchuk/R2/USEPA/US@EPA
cc:
Subject: Calculations

06/21/01 01:23 PM

Hello, Doug;

The attached *.xls file contains a preliminary look at the water column PCB data generated by GE in late April 2001 during the spring high flow event. I call it preliminary for a few reasons:

- the data from GE is not yet finalized, especially the results from 25-April at Fort Edward, where an anomalous data point was not included in this analysis

- the flow data from USGS is, of course, preliminary and subject to revision.

A quick look at the history of peak flows in the upper Hudson since 1977 would indicate that this magnitude of flow event is pretty common, occurring every few years. The interesting thing about this event is that it was driven almost completely by snowmelt from the Adirondacks, as the snow pack had already melted about a month earlier in the areas south of Glens Falls. The solids generated would very likely represent sediment generated in the main stem of the Hudson, with little inputs from the tributaries south of Glens Falls.

I also took a preliminary look at what the suspended solids concentrations would be if one allocated the PCB mass solely to the solids.

Let me know if you have any questions. I hope you find this useful.

Kevin F.

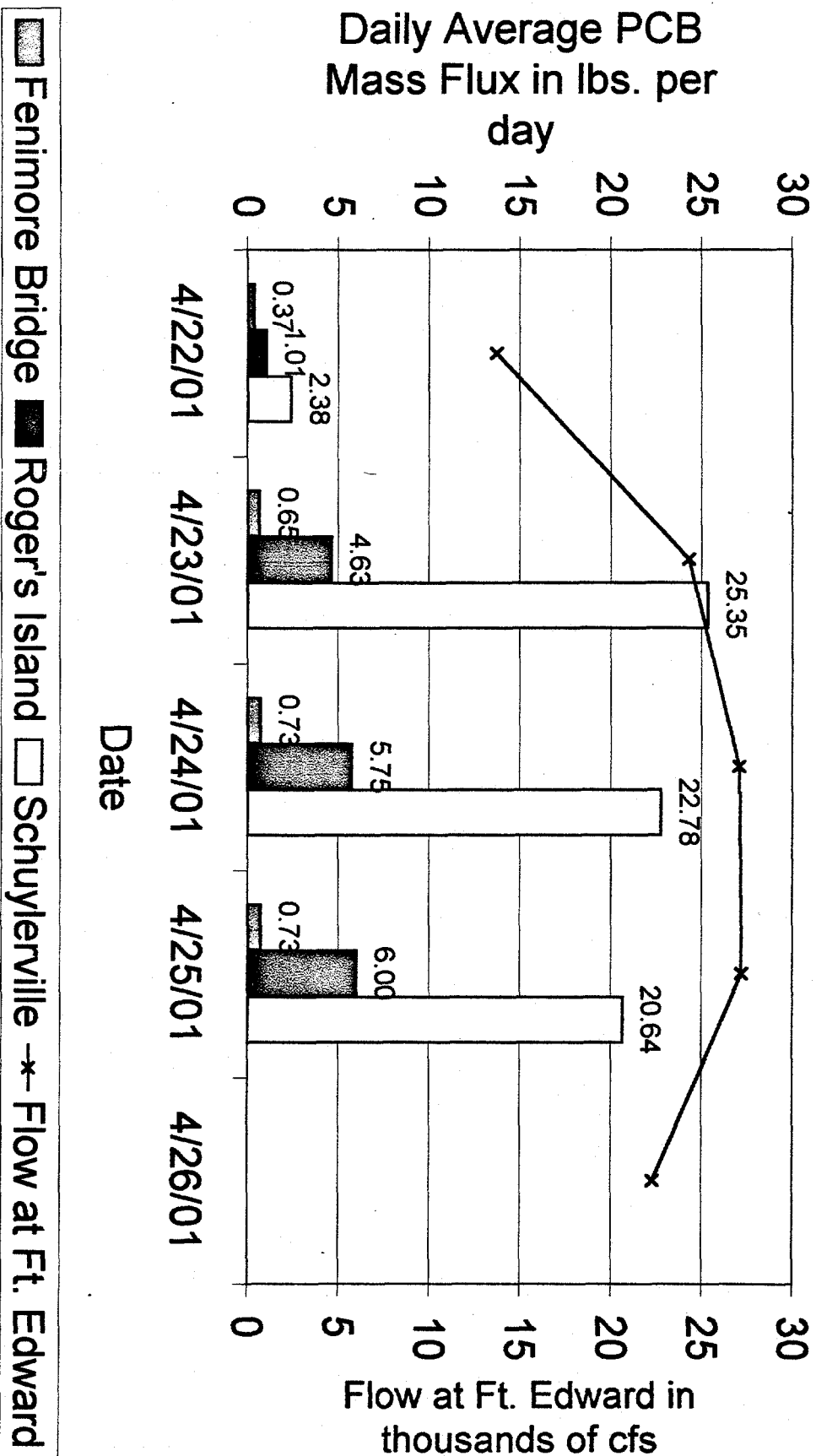


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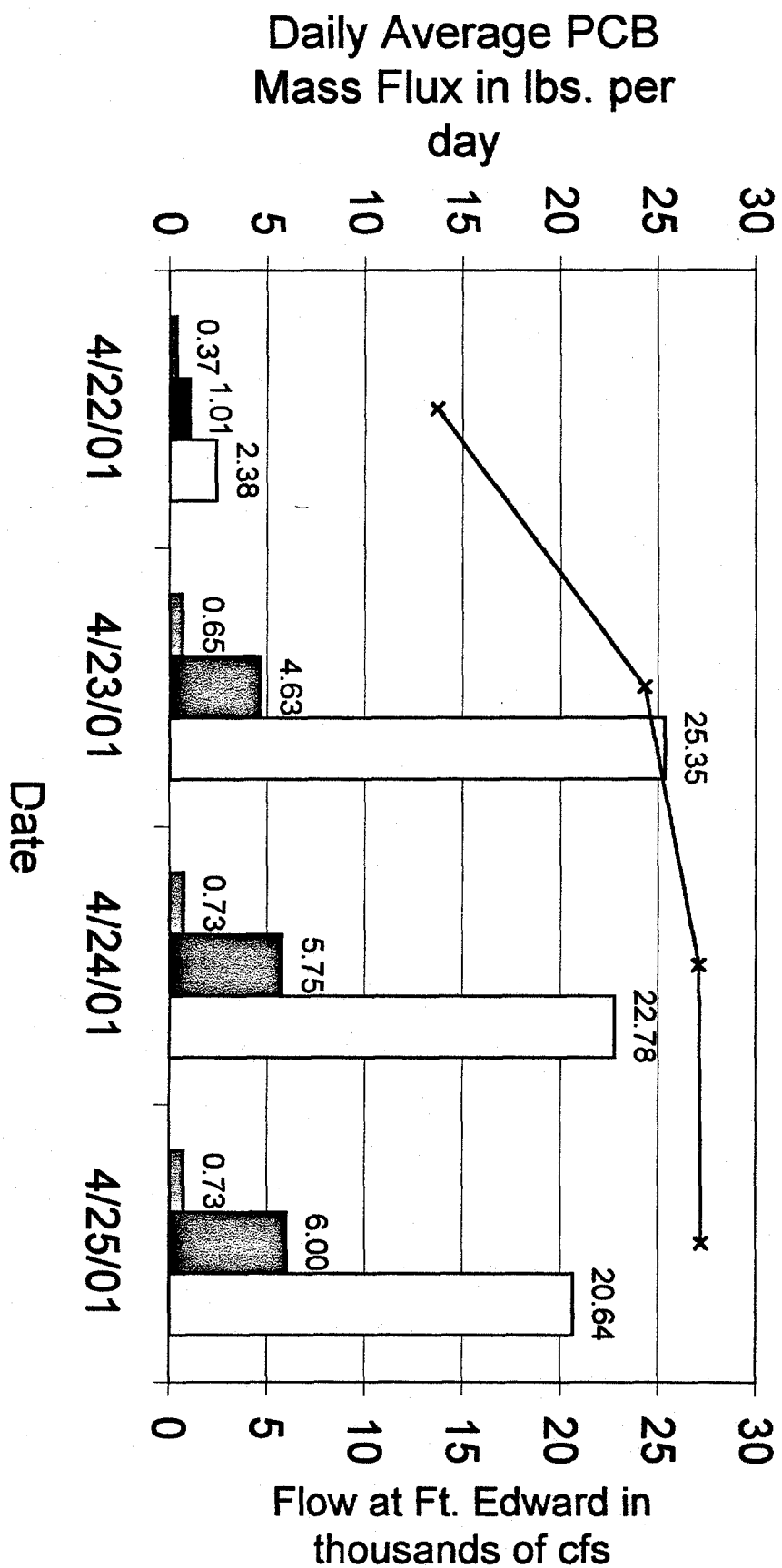
Date	Flow in cfs	Flow in kcfs	Fenimore Bridge Flux at 11ng/l	Roger's Island Flux
4/12/01	6680	6.68		
4/13/01	10400	10.4		
4/14/01	15000	15		
4/15/01	15700	15.7		
4/16/01	14800	14.8		
4/17/01	14900	14.9		
4/18/01	13500	13.5		
4/19/01	12500	12.5		
4/20/01	10700	10.7		
4/21/01	11000	11		
4/22/01	13700	13.7	0.37	1.01
4/23/01	24300	24.3	0.65	4.63
4/24/01	27100	27.1	0.73	5.75
4/25/01	27200	27.2	0.73	6.00
4/26/01	22300	22.3		
4/27/01	16900	16.9		
4/28/01	14300	14.3		
4/29/01	12800	12.8		
4/30/01	11000	11		
5/1/01	9390	9.39		

Flow in cfs	FB Conc in ppt (all ND @ 11)	FB TSS in mg/l	Calc. Susp. Solids Conc. in ppm	RI Conc. In ppt	RI TSS in mg/l	Calc. Susp. Solids Conc. in ppm	Sch'ville conc. in ppt	Sch'ville TSS in mg/l	Calc. Susp. Solids Conc. in ppm
22-Apr 15900				13	3.9	3.33			
22-Apr 15800				10.9	2.6	4.19			
22-Apr 15800							28	7	3.78
22-Apr 16800				10.9	3.5	3.11			
22-Apr 17600				10.9	4.3	2.53			
Day avg.					3.58	3.29			
23-Apr 24400	11	10.5	1.05					7.40	3.78
23-Apr 22200				39	8.8	4.43			
23-Apr 24700				51	14.4	3.54			
23-Apr 24800				27	17.4	1.55			
23-Apr 24800							131	29	4.55
23-Apr 25500				44	19.8	2.22			
23-Apr 25400				21	18.6	1.13			
23-Apr 25300							267	32	8.34
23-Apr 25300							163	31	5.21
23-Apr 25400				28	18.4	1.52			
Day avg.	11	10.5	1.05		16.23	2.40			
24-Apr 26300	11	12.8	0.86					30.70	6.03
24-Apr 26700				55	19.5	2.82			
24-Apr 26800				28	14.8	1.89			
24-Apr 28300							106	27.8	3.81
24-Apr 28300				96	17.2	5.58			
24-Apr 28300				56	16	3.50			
24-Apr 28300							147	24.2	6.07
24-Apr 28200				62	14.6	4.25			
24-Apr 28100				38	19.2	1.98			
24-Apr 27000							205	22.8	8.99
Day avg.	11	12.8	0.86		16.88	3.34		24.93	6.29

PCB Mass Flux during 2001 High Flow Event (GE PCRDMP)

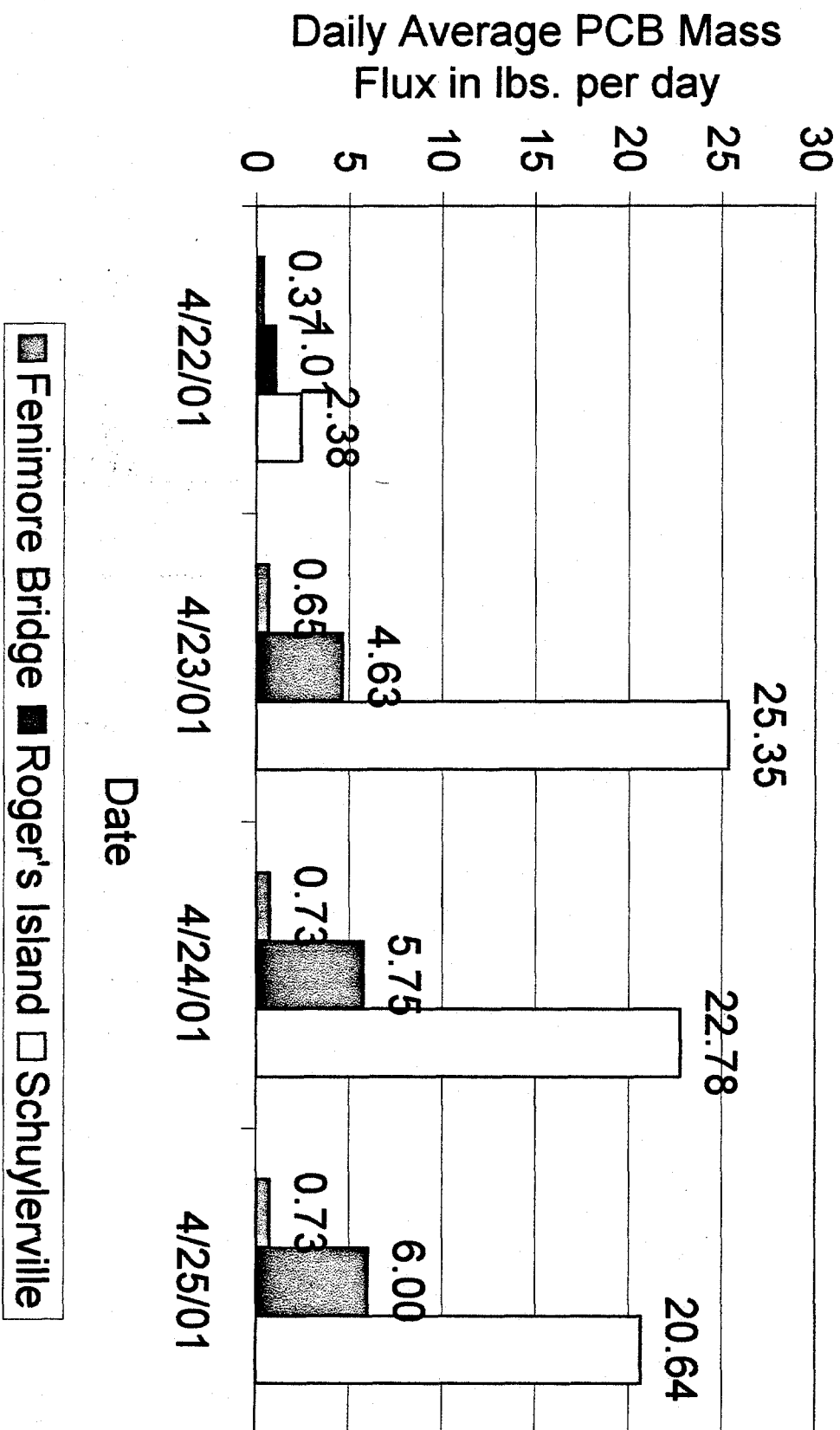


PCB Mass Flux during 2001 High Flow Event (GE PCRDMP)

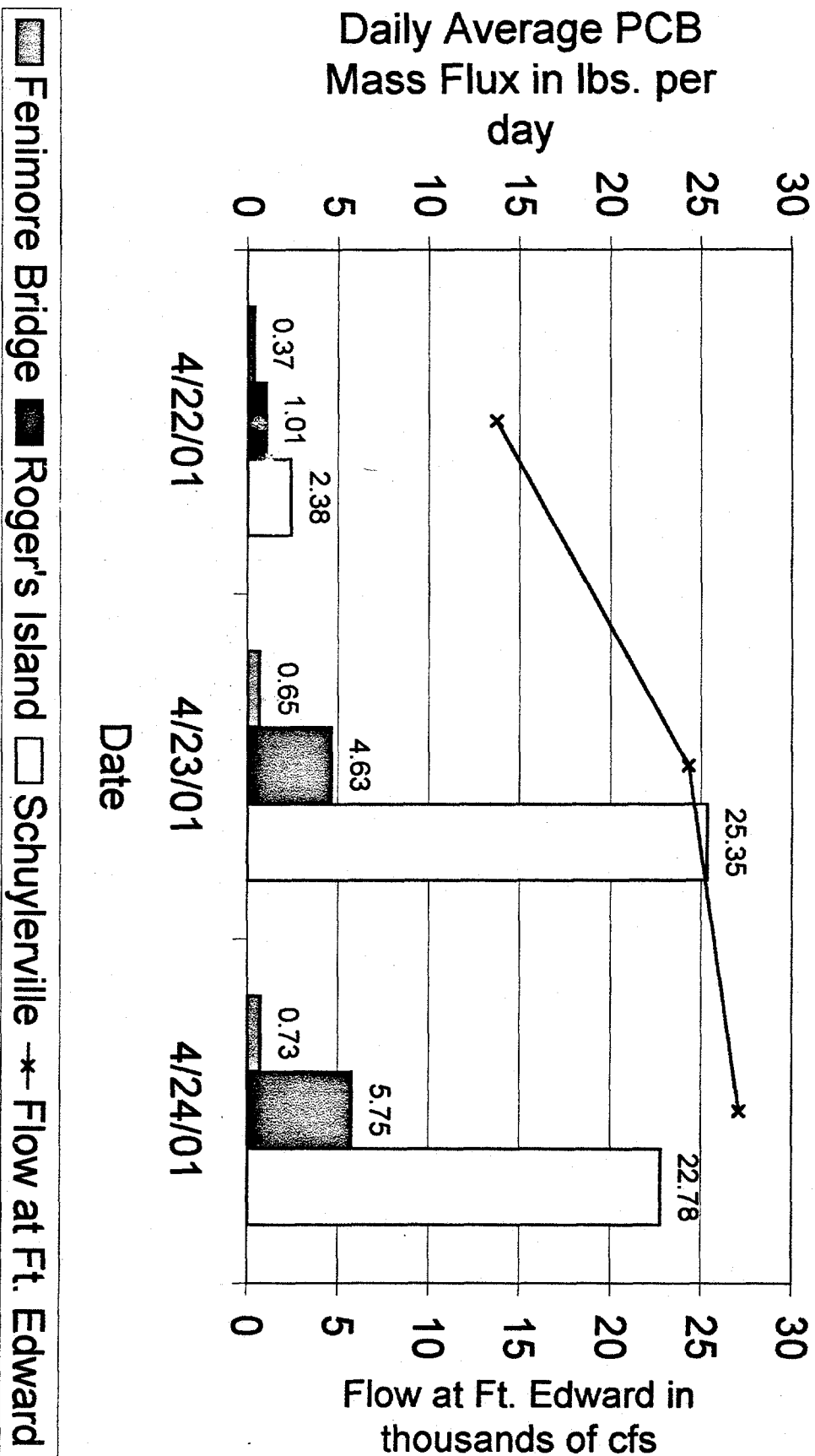


Fenimore Bridge
 Rogers' Island
 Schuylerville
 Flow at Ft. Edward

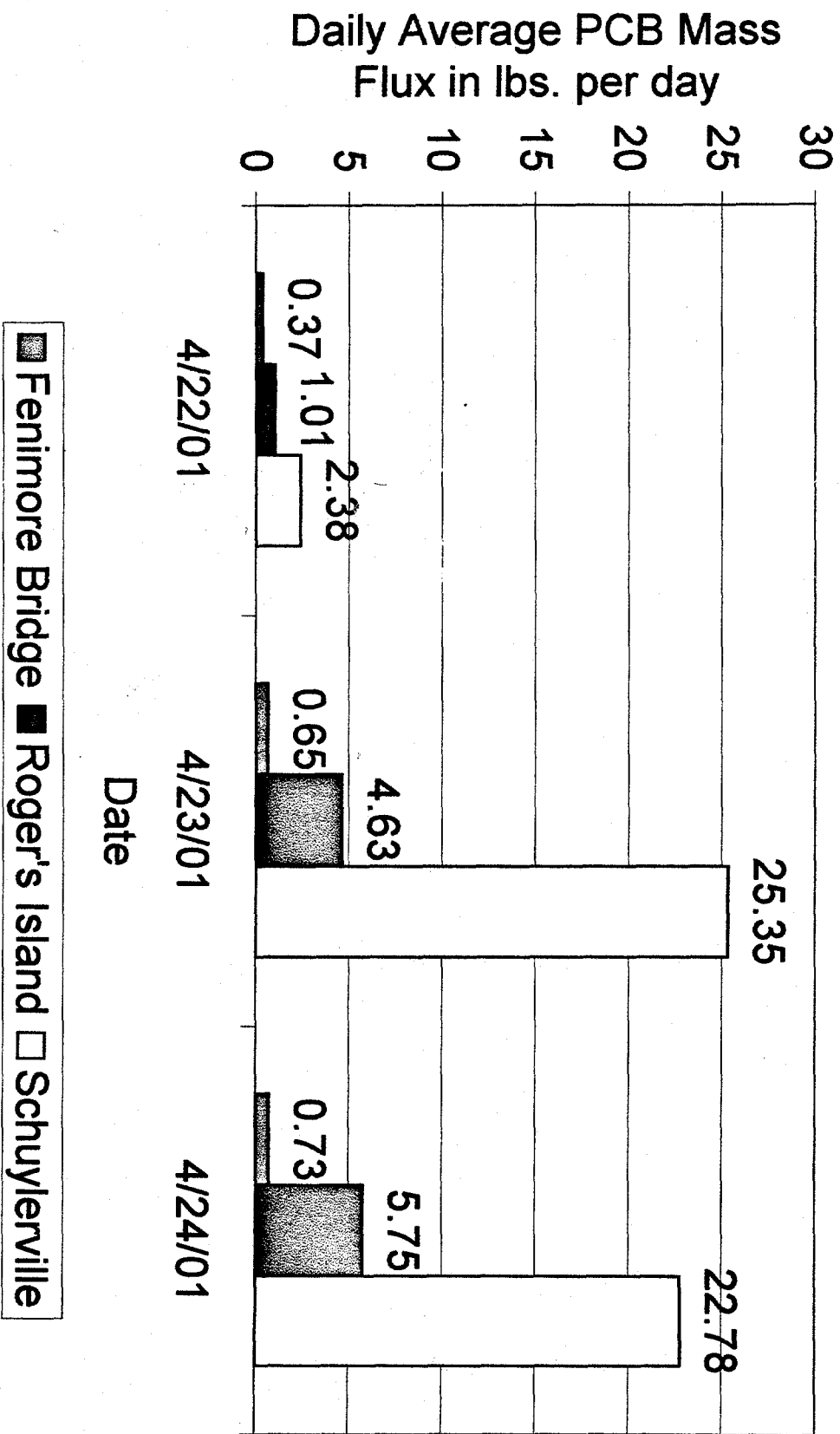
PCB Mass Flux during 2001 High Flow Event (GE PCDMP)



PCB Mass Flux during 2001 High Flow Event (GE PCRDMP)



PCB Mass Flux during 2001 High Flow Event (GE PCRDMP)



	Flow in cfs	RI Conc. in ppt	RI Load in kg/day	RI Load in lb/day	Sch'ville conc. in ppt	Sch'ville Load in kg/day	Sch'ville Load in lb/day
22-Apr	15900	13	0.51	1.11			
22-Apr	15800	10.9	0.42	0.93			
22-Apr	15800				28	1.08	2.38
22-Apr	16800	10.9	0.45	0.99			
22-Apr	17600	10.9	0.47	1.03			
Day avg.			0.46	1.01		1.08	2.38
23-Apr	22200	39	2.12	4.66			
23-Apr	24700	51	3.08	6.78			
23-Apr	24800	27	1.64	3.60			
23-Apr	24800				131	7.95	17.49
23-Apr	25500	44	2.75	6.04			
23-Apr	25400	21	1.31	2.87			
23-Apr	25300				267	16.53	36.36
23-Apr	25300				163	10.09	22.20
23-Apr	25400	28	1.74	3.83			
Day avg.			2.10			11.52	25.35
24-Apr	26700	55	3.52	7.90			
24-Apr	26800	28	1.84	4.04			
24-Apr	28300				106	7.34	16.15
24-Apr	28300	96	6.65	14.62			
24-Apr	28300	56	3.88	8.53			
24-Apr	28300				147	10.18	22.39
24-Apr	28200	62	4.28	9.41			
24-Apr	28100	38	2.61	5.75			
24-Apr	27000				205	13.54	29.79
Day avg.			3.81	8.38		10.35	22.78
25-Apr	27200	41	2.73	6.00	141	9.38	20.64
			Avg flux (kg/d)		Average flux (lb/d)		
		Roger's Island	Schuylerville		Roger's Island	Schuylerville	
	22-Apr	0.46	1.08		1.01	2.38	
	23-Apr	2.10	11.52		4.63	25.35	
	24-Apr	3.81	10.35		5.75	22.78	
	25-Apr	2.73	9.38		6.00	20.64	
	3-day Totals	9.10	32.34		17.39	71.15	