Click here to return to Section 8 and Bookmarks

Section 8 Figures

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

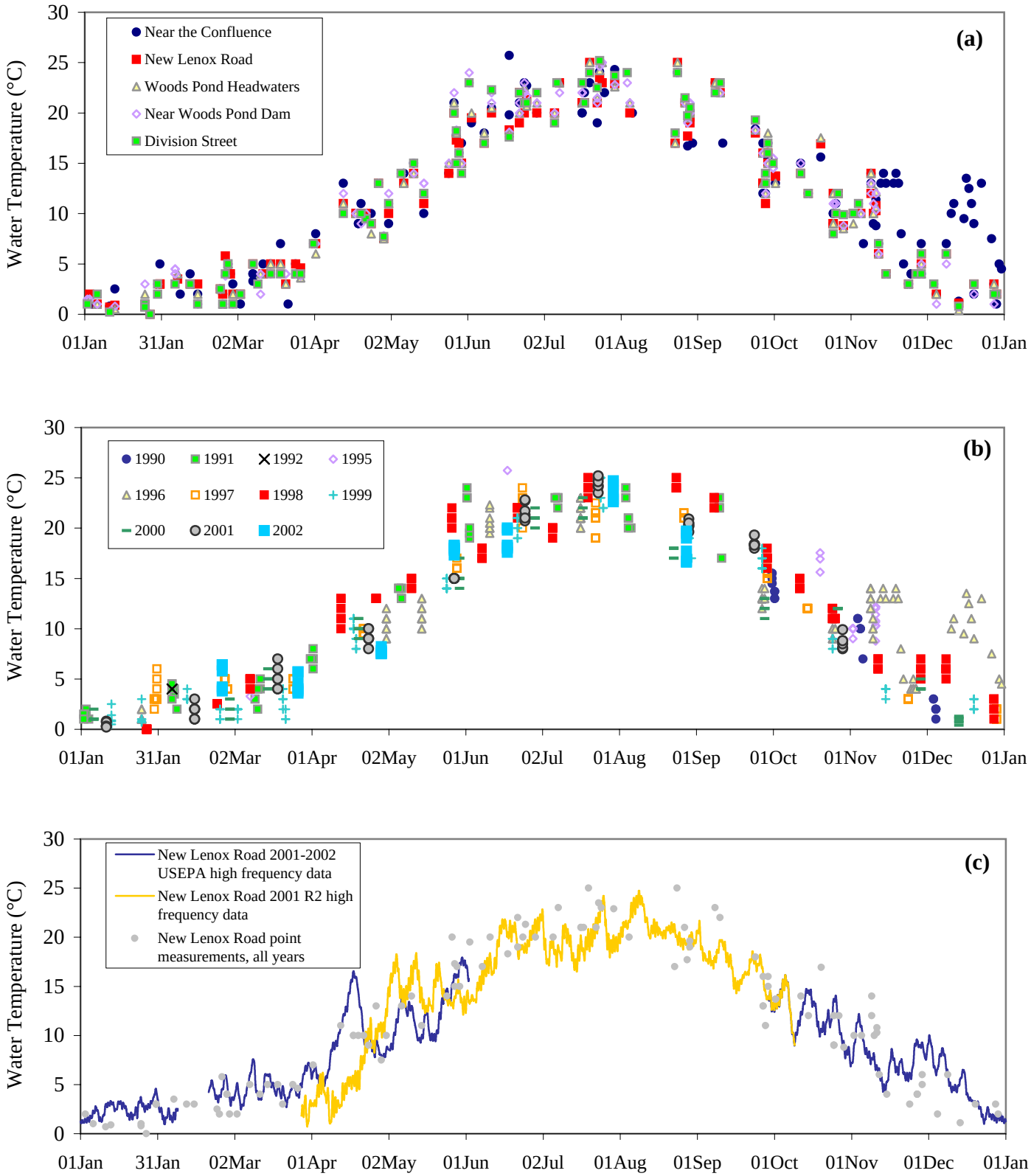


Figure 8-1. Seasonal trend in Housatonic River water temperature data: (a) all years, by major sampling stations; (b) all stations near and downstream of the Confluence, by year; and (c) high frequency measurements at New Lenox Road.

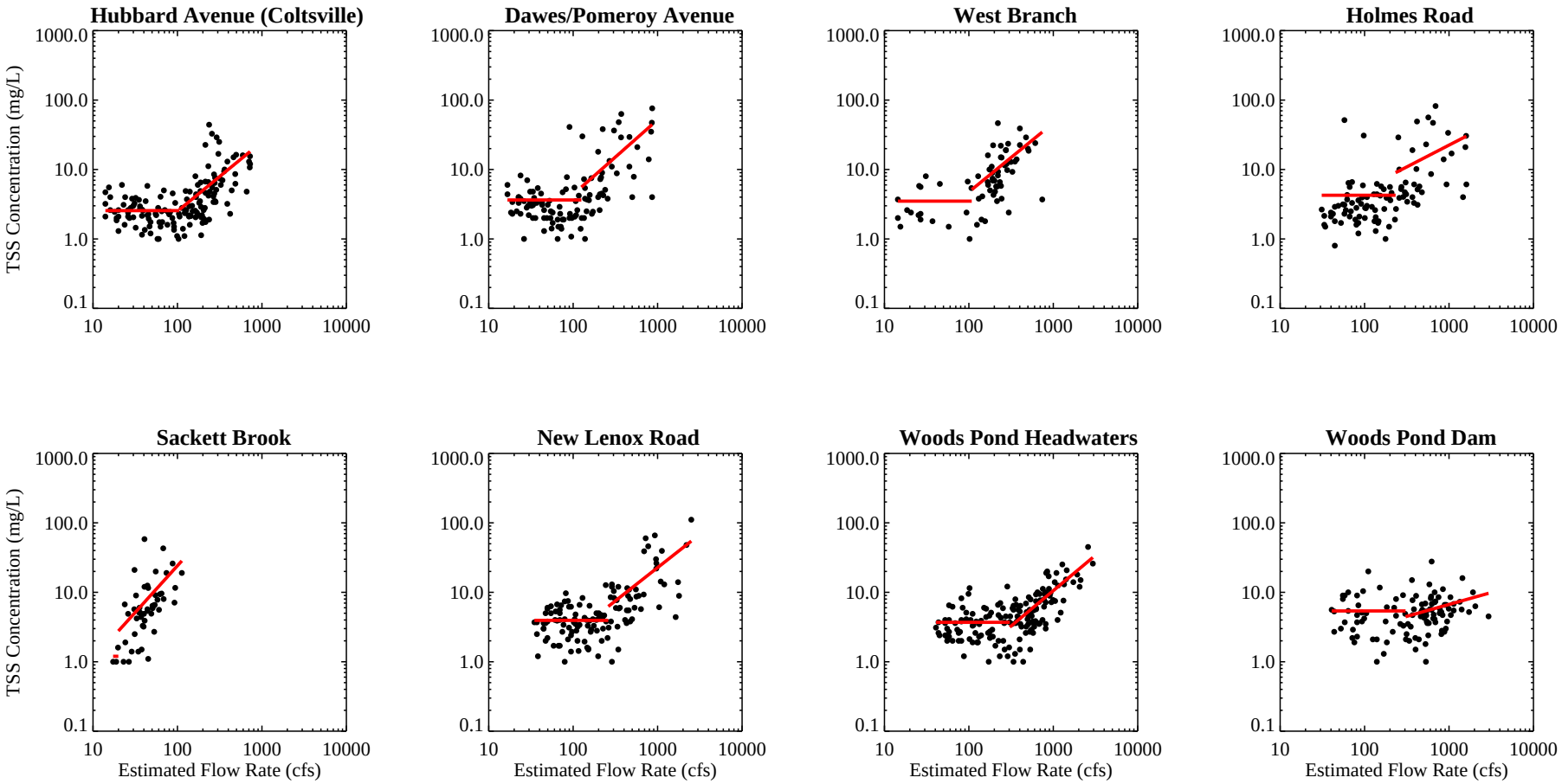


Figure 8-2. Sediment rating curves.

Notes: Solid dots are data and lines are rating curves. Data shown are 1989-2002 GE and 1998-1999 EPA TSS data.

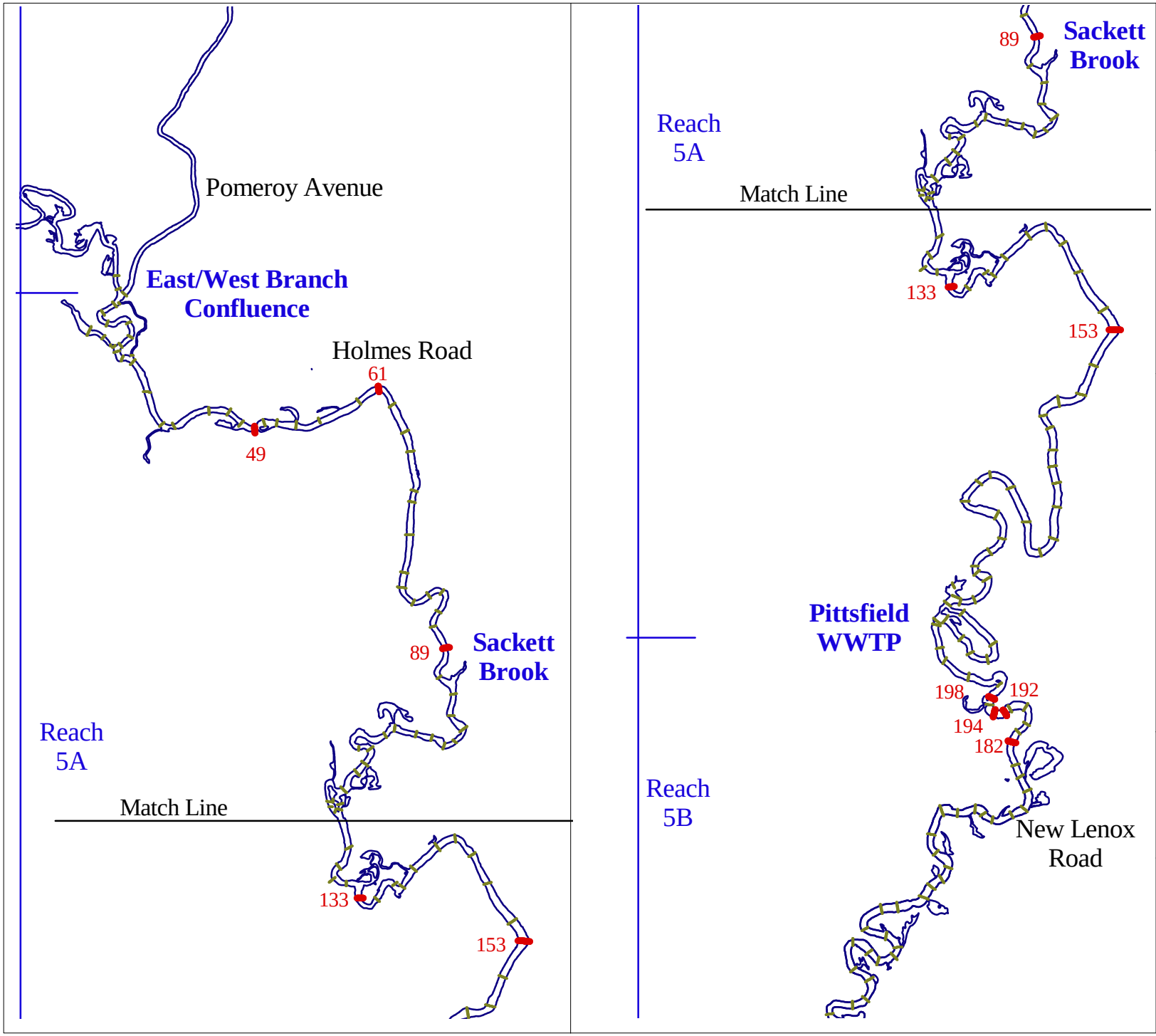


Figure 8-3. Locations of channel cross-sections measured in 1999, 2001 and 2002.

GENhou 134

January 2003

\\chantell\e_drive\GENhou\documents\reports\RFI\Section8\figures\transect_loc_figure8_3.pdf

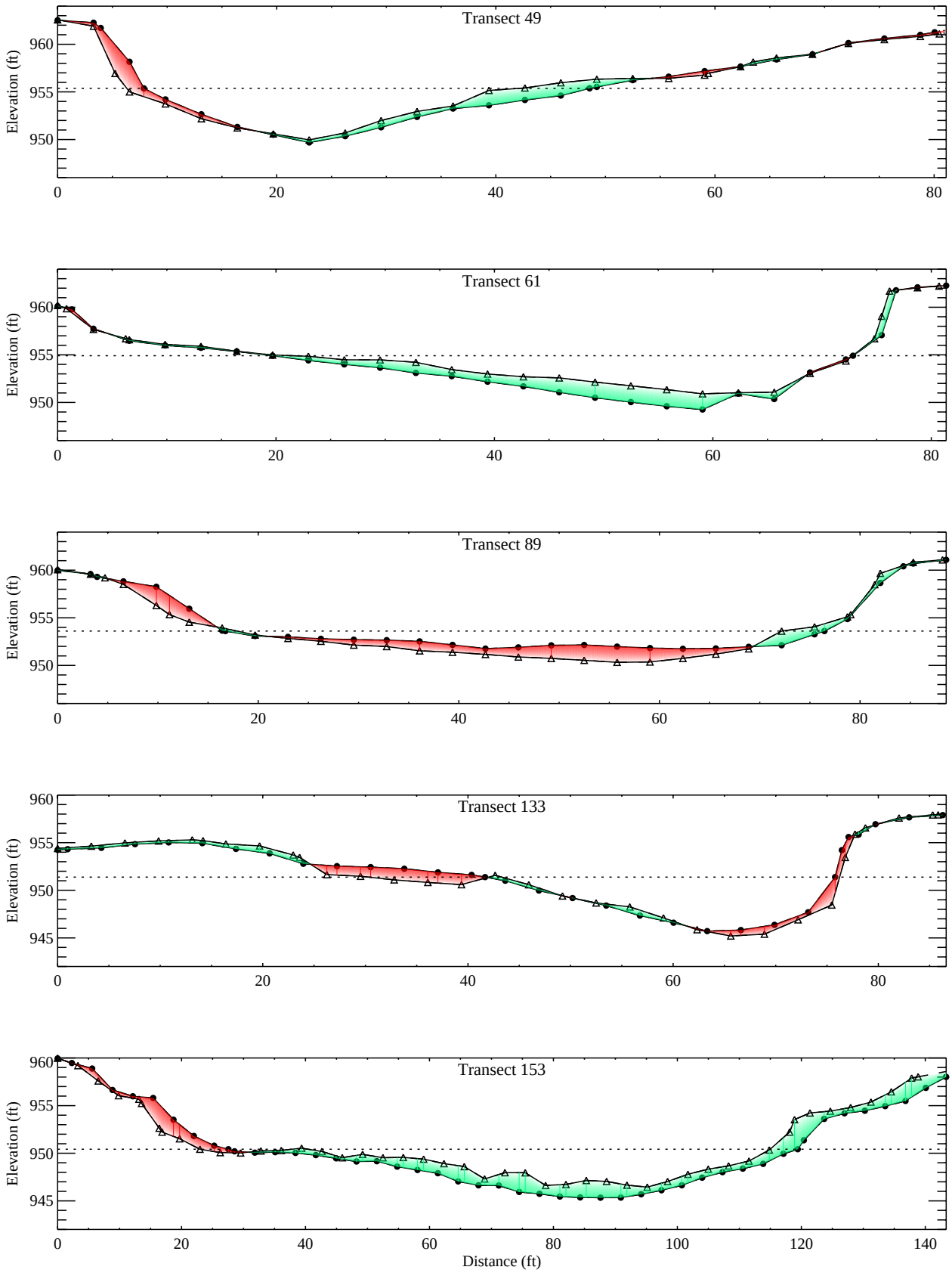


Figure 8-4a. Bed elevation changes between September 2001 and June 2002 at transects within Reach 5A (49, 61, 89, 133 and 153).

Note: Transect orientation is looking upstream.

- Bed Aggradation
- Bed Degradation
- September 2001 Water Level
- September 2001 Measurements
- June 2002 Measurements

CO - E:\GENhou\Analysis\Cross_sections\hr_cross_section_spatials_0109_0206.pro
Thu Jan 02 11:19:35 2003

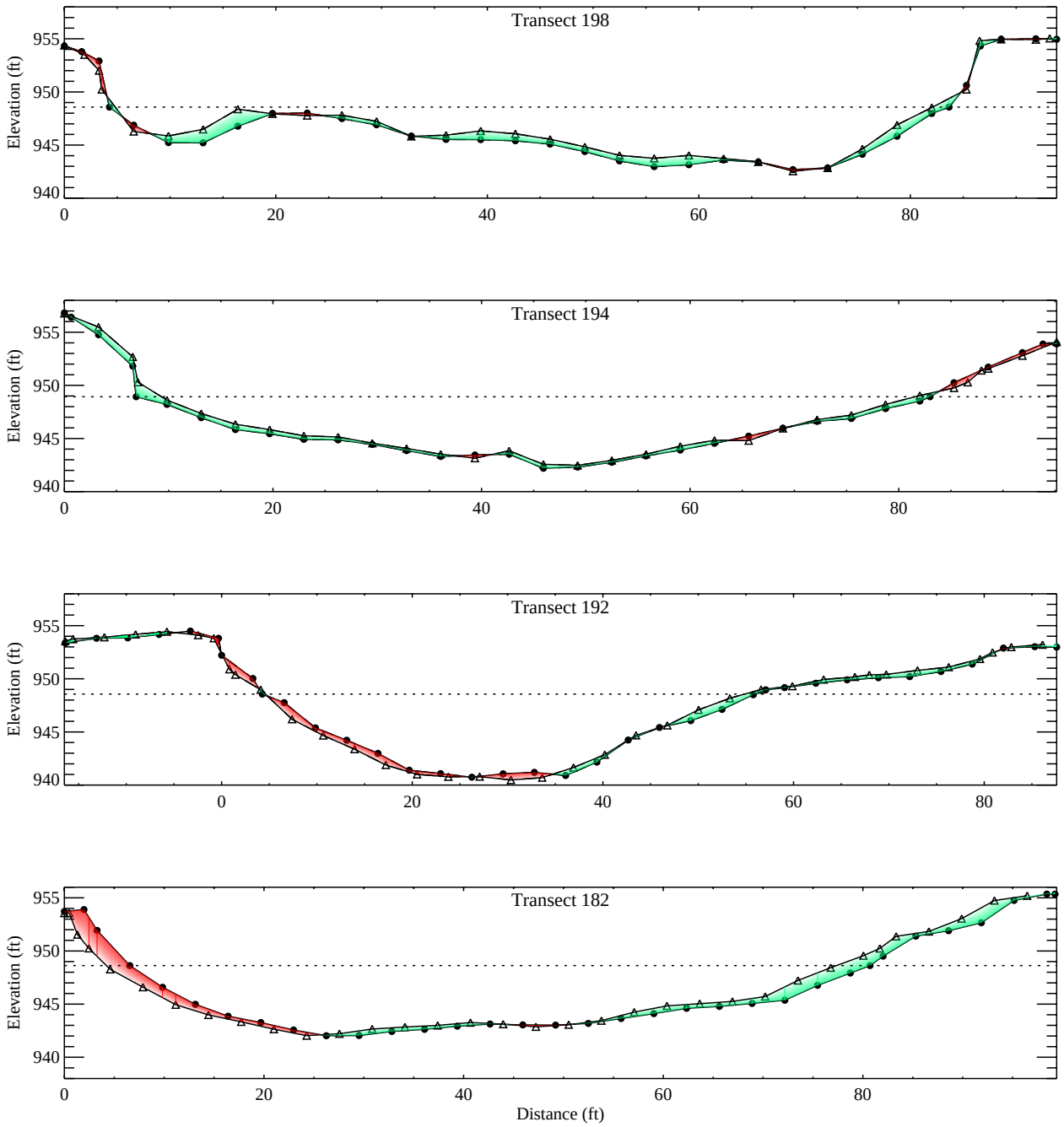


Figure 8-4b. Bed elevation changes between September 2001 and June 2002 at transects within Reach 5B (198, 194, 192 and 182).

Note: Transect orientation is looking upstream.

Bed Aggradation
Bed Degradation
September 2001 Water Level
September 2001 Measurements
June 2002 Measurements

CO - E:\GENhou\Analysis\Cross_sections\hr_cross_section_spatials_0109_0206.pro
Thu Jan 02 11:19:37 2003

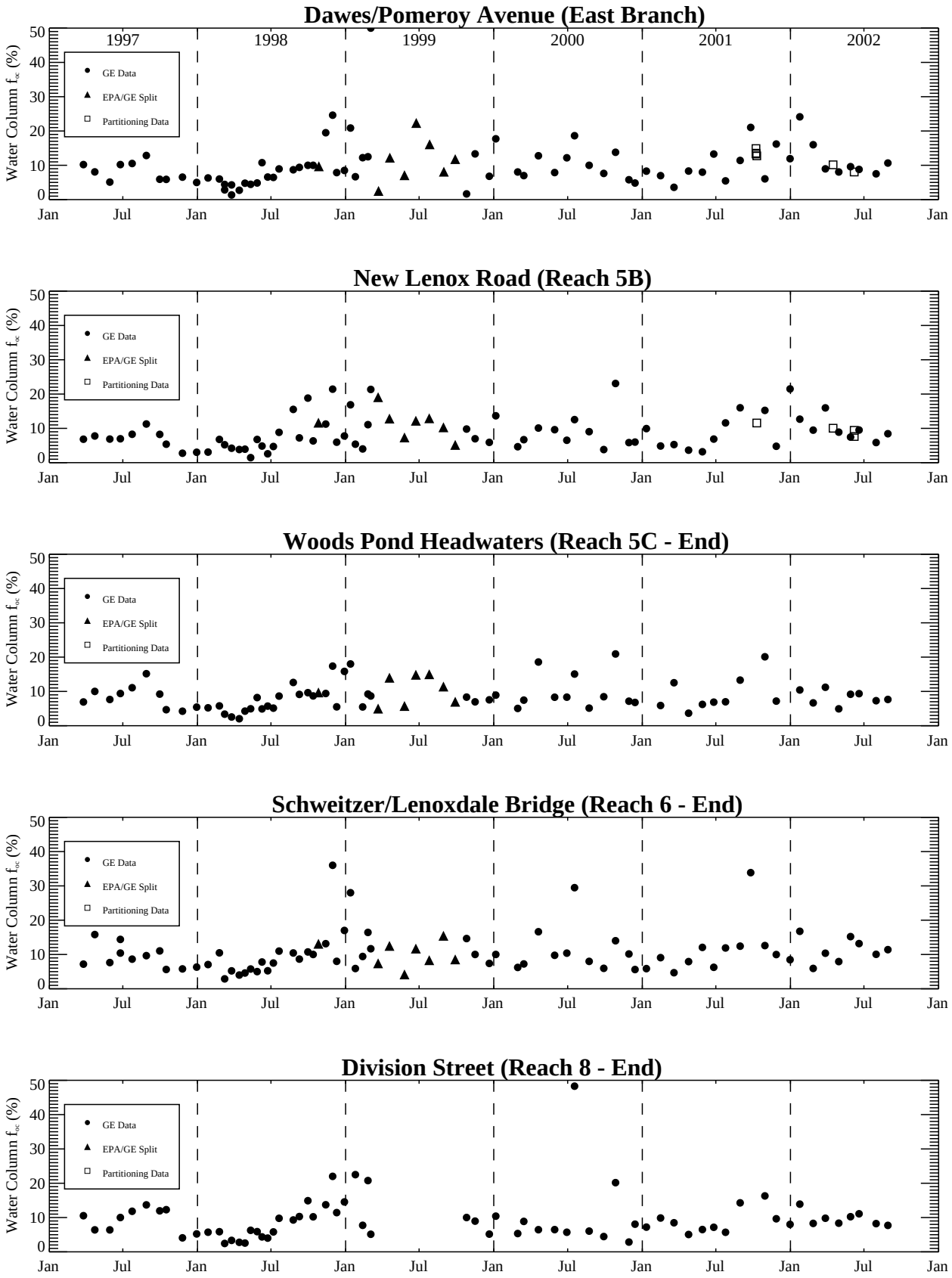


Figure 8-5. Temporal profiles of water column organic carbon fractions.

Note: Data shown are 1997-2002 GE, EPA/GE splits, and 2001-2002 EPA/GE partitioning data.

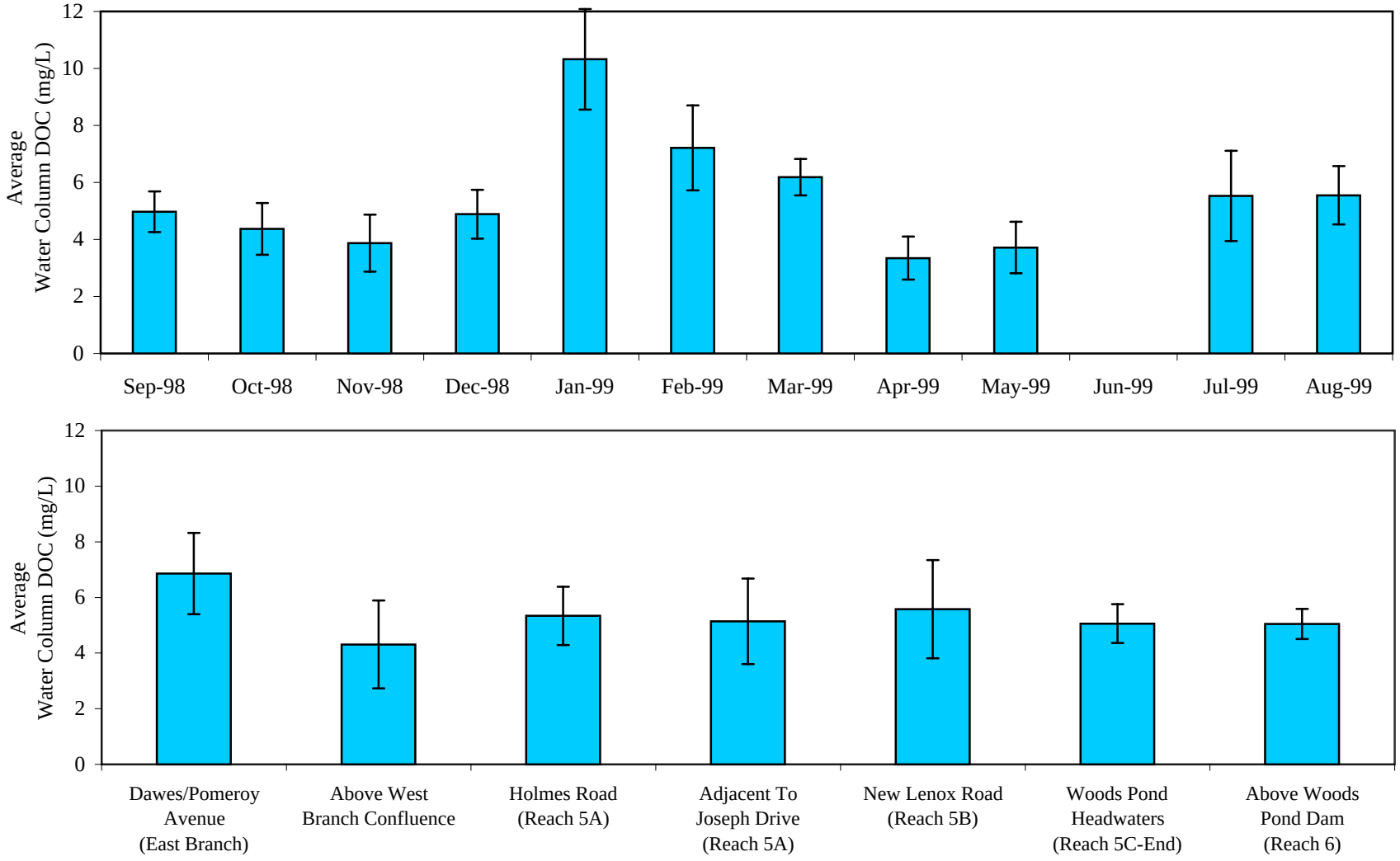


Figure 8-6. Spatial and temporal profiles of EPA average water column DOC data.

Notes: Error bars represent 2 standard errors of the mean. Duplicate and estimated results omitted. Includes routine (non-storm event) monitoring data only.

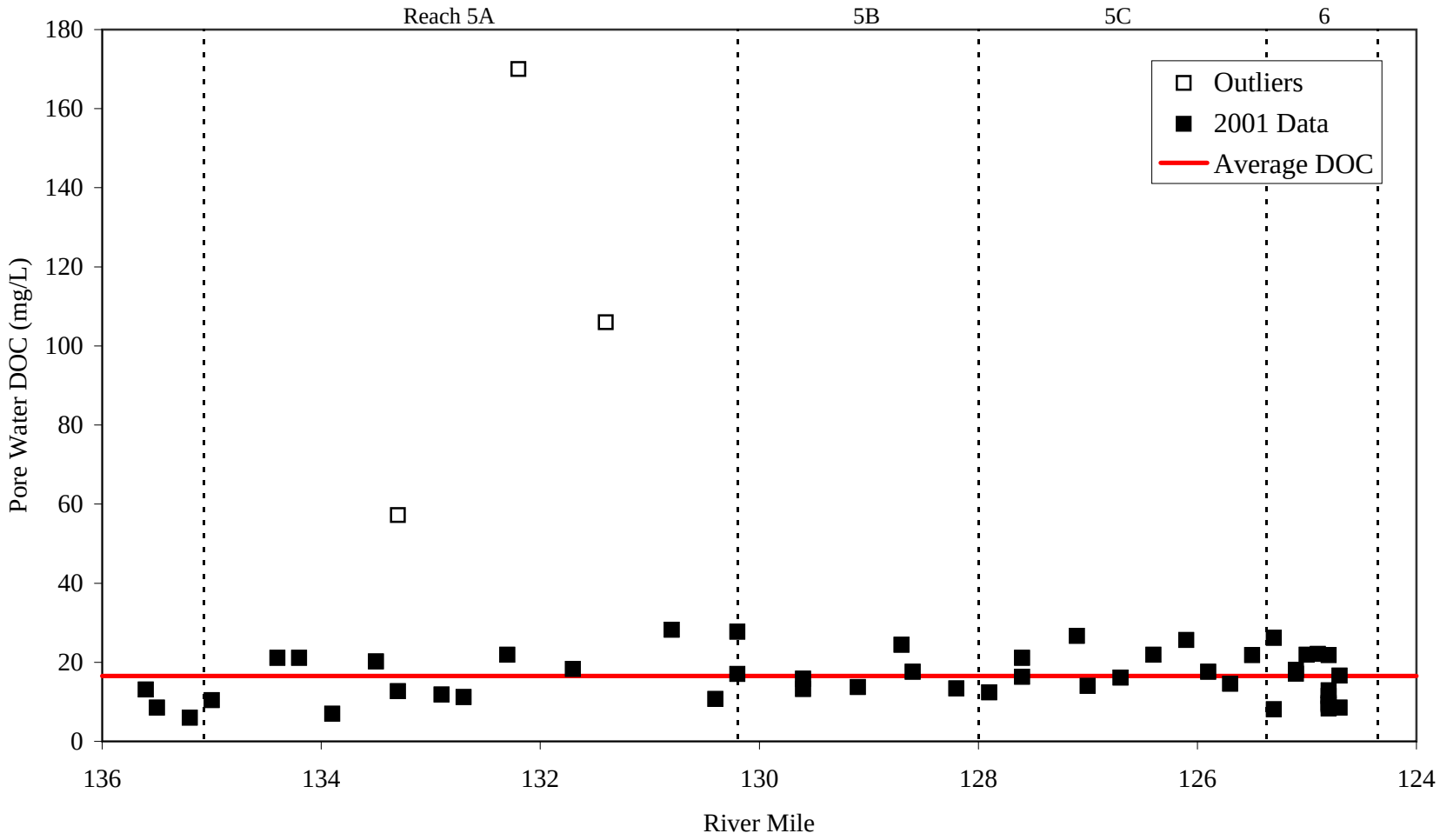


Figure 8-7. Spatial profile of 2001 EPA/GE sediment pore water DOC data.

Note: Open squares represent outliers based on outlier test utilizing "studentized deviation" at a 1% level of significance.

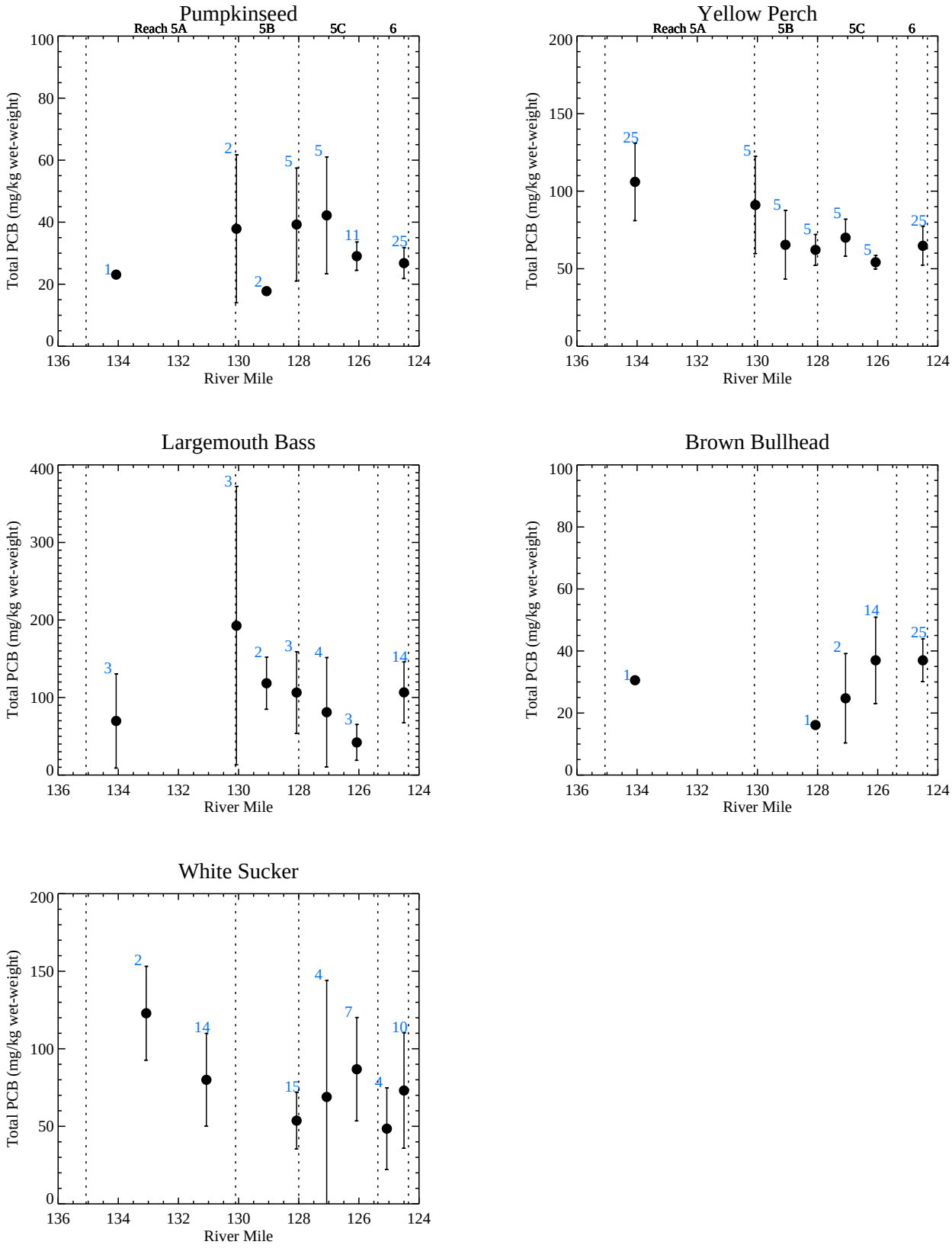


Figure 8-8. Spatial distribution of wet-weight PCB levels in large fish collected in Reaches 5 and 6 of the Housatonic River.

Data: EPA(Released: August, 2002). Whole body samples for white sucker, reconstructed whole body samples for all other species.
One outlier (low lipid value) for White Sucker in Woods Pond was removed; total PCB=44.7 mg/kg wet-weight, lipid = 0.1%.
Values are Mean +/-2*StdErr with number of observations indicated. All fish were collected in 1998 except White Sucker collected in 2000.
Split samples were not included.

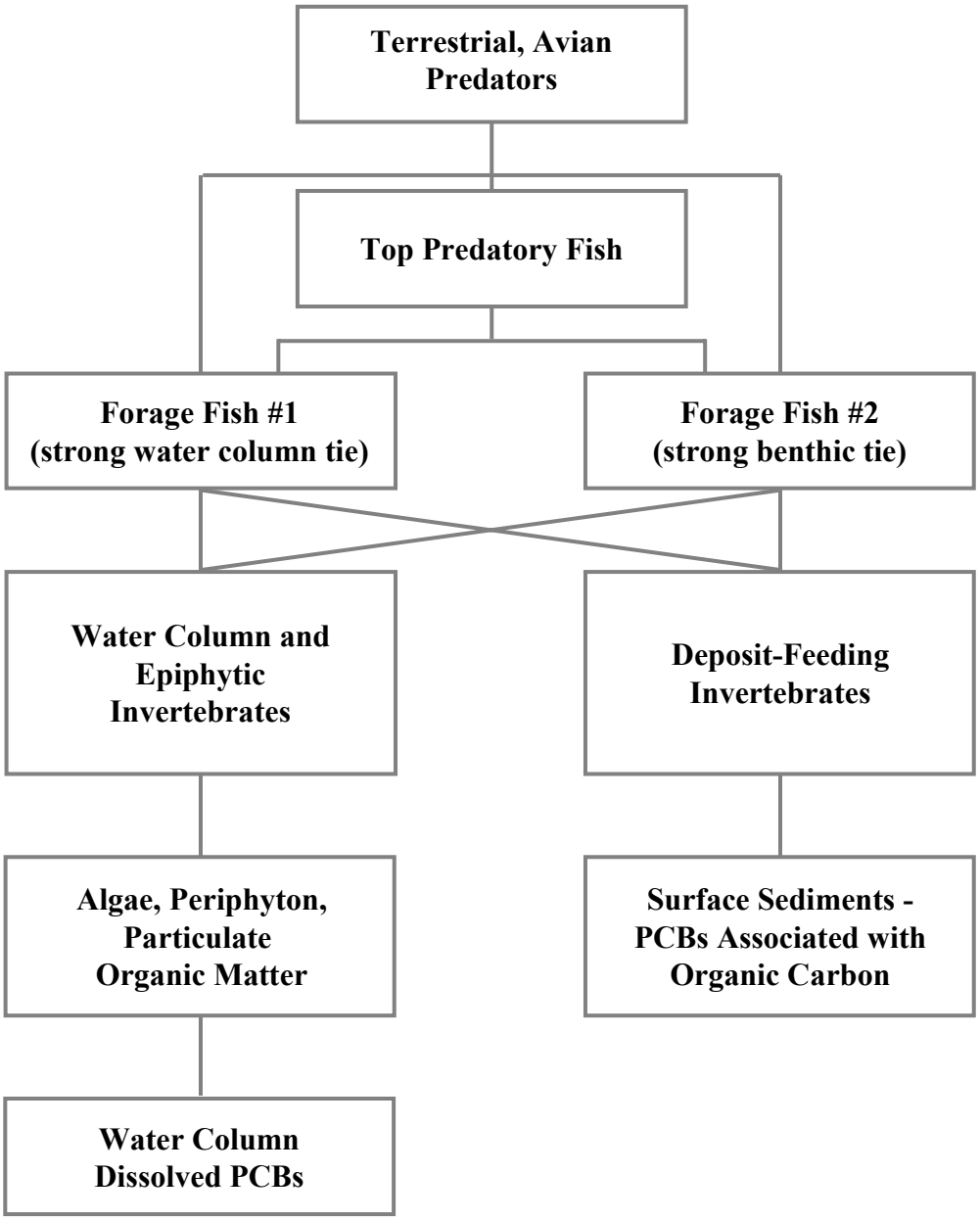


Figure 8-9. Schematic of a riverine food web determining the fate of PCBs in various organisms.

Note: At the forage fish level, diets are mixed, with differing relative proportions of water column or benthic prey.

BBL® BLASLAND, BOUCK & LEE, INC. engineers & scientists

QEA Quantitative Environmental Analysis, LLC

GENhou:134 January 2003

\\Kevin\d_drive\GENhou\documents\reports\RFI_report\Section8\figures\Fig8_10__foodweb.ppt

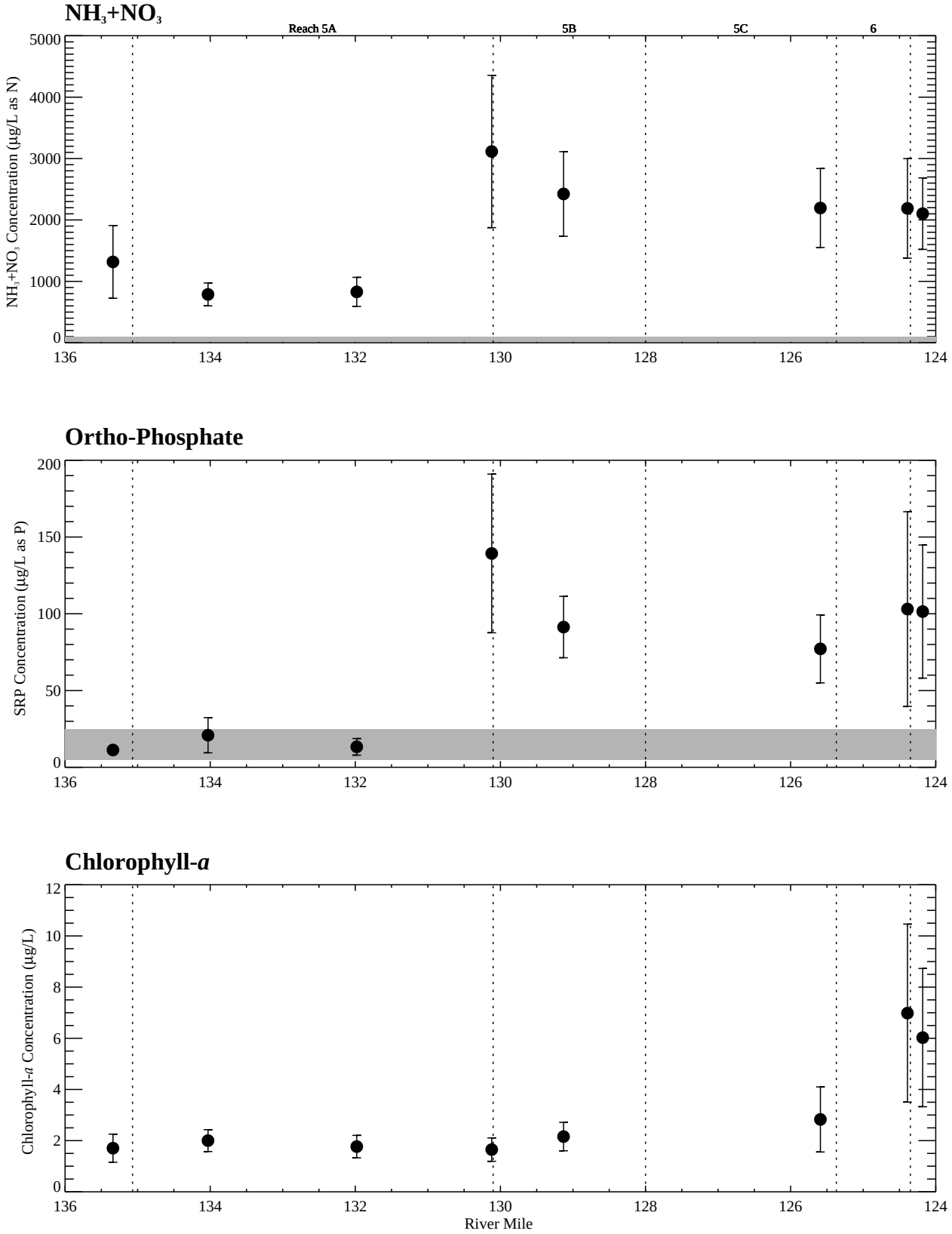
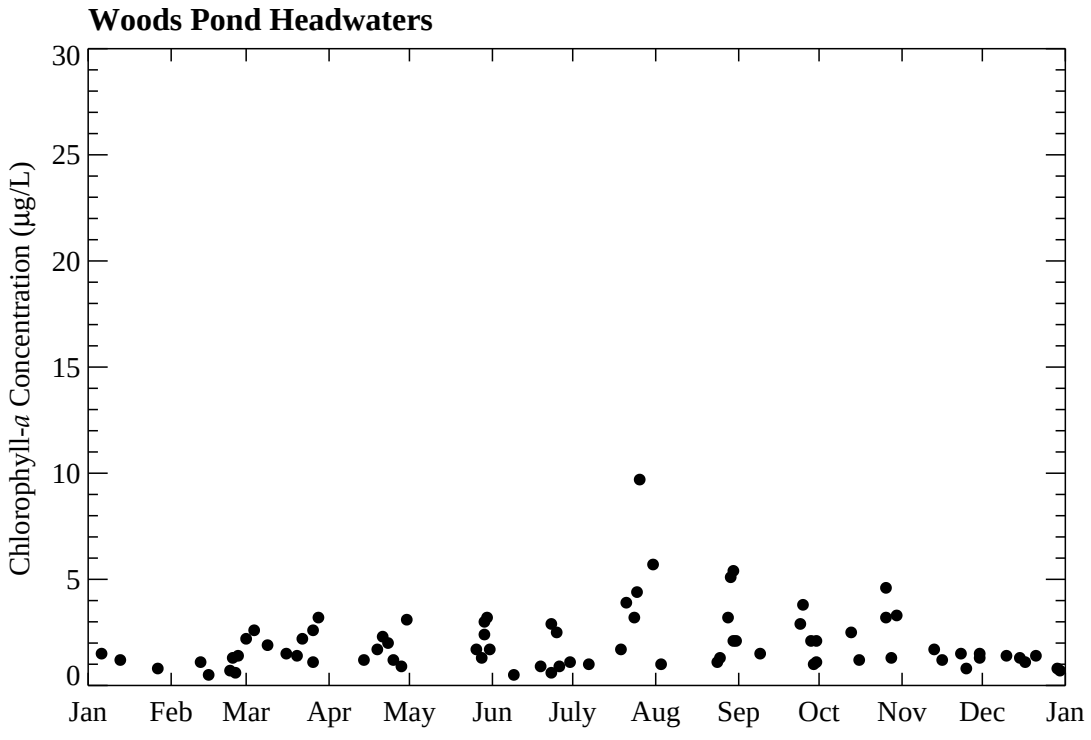


Figure 8-10. Spatial profiles of average nitrogen, phosphorus, and chlorophyll-*a* concentrations.

Data set shown: 1998-1999 EPA routine water column samples.

Note: Shaded area represents range of concentrations that are limiting to algal growth (Chapra 1997).
Error bars represent 2 standard errors of the mean. One outlier sample with non-detect SRP reported at 200 µg/L omitted.



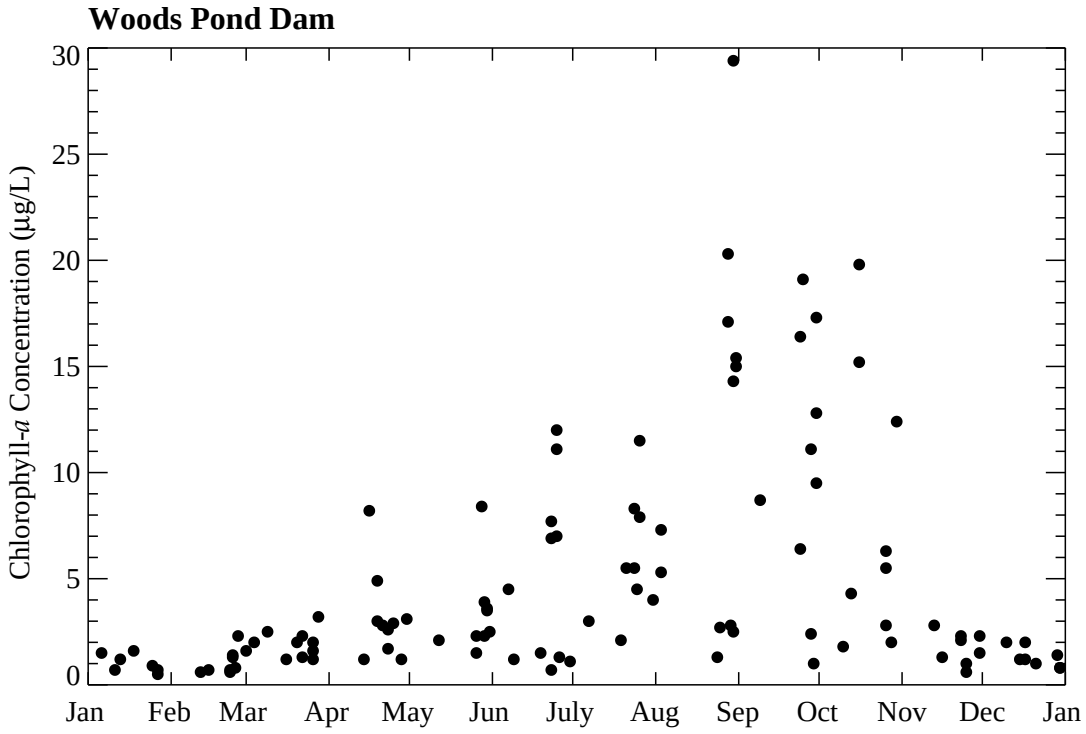


Figure 8-11. Temporal overlay of chlorophyll-*a* concentrations.

Data sets included: 1997-2002 GE/EPA routine water column samples.

Note: Woods Pond Dam plot contains samples collected at the Woods Pond Footbridge, and Schweitzer/ Lenoxdale Bridge.

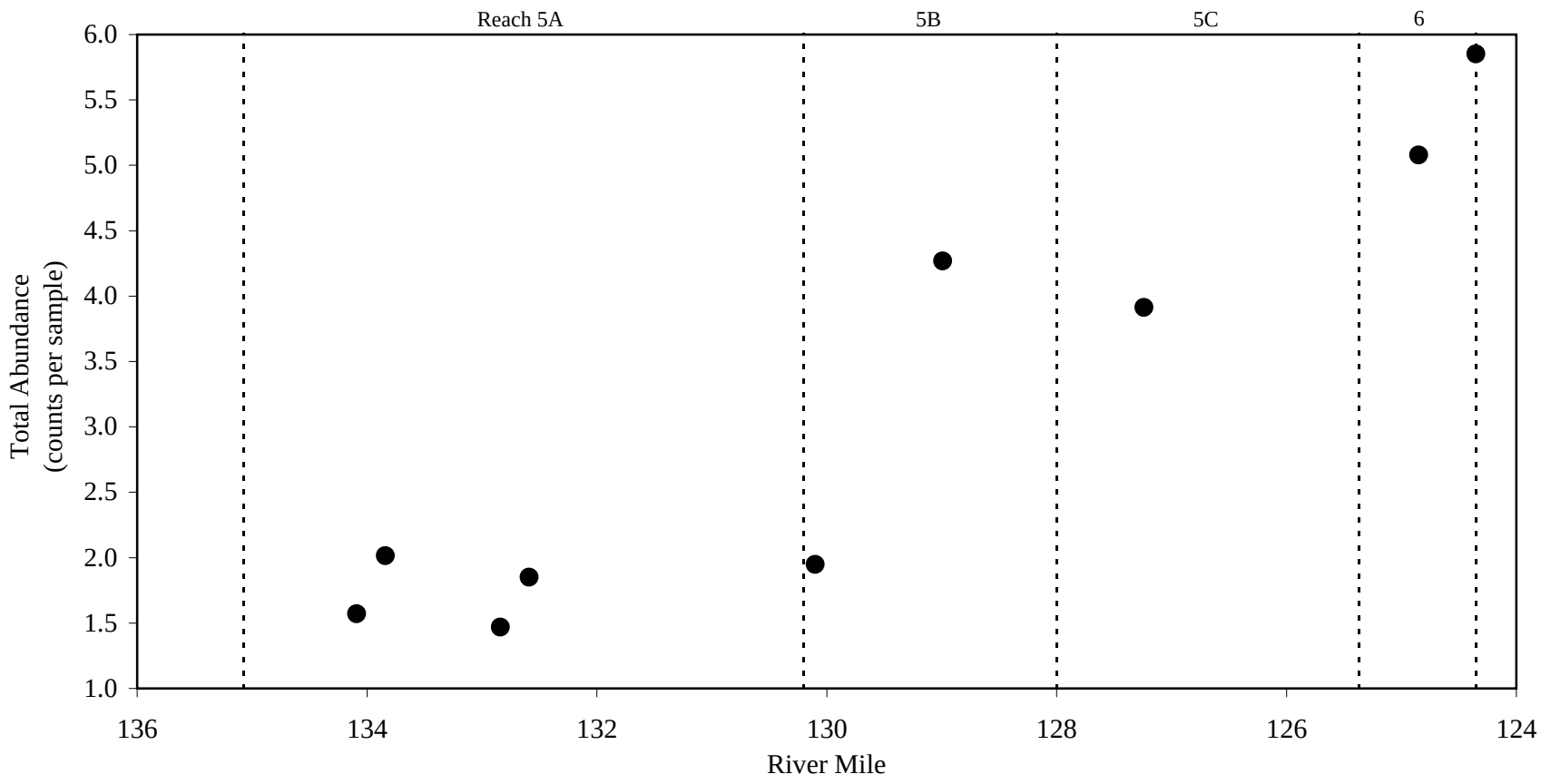


Figure 8-12. Spatial distribution of the abundance of invertebrates in Reaches 5 and 6.

Note: Samples were taken with a 6" square Ponar grab.

Predators (Trophic Level 3)	**Invertebrate-Feeders** (Trophic Level 2)	**Bottom-Feeders** (Trophic Level 2)
Largemouth bass	Pumpkinseed	Brown bullhead
Brown trout	Yellow perch	White sucker
Smallmouth bass	Bluegill	Common carp
Rock bass	Goldfish	Yellow bullhead
Chain pickerel	Bluntnose minnow	Longnose sucker
Rainbow trout	Fallfish	Creek chubsucker
Northern pike	Golden shiner	Redhorse sucker
Grass pickerel	Redbreasted sunfish	Slimy sculpin
Brook trout	Green sunfish	
Black crappie	Redear sunfish	
White crappie	Tessellated darter	
Muskellunge	Trout perch	
	Blacknose dace	
	Bridle shiner	
	Common shiner	
	Creek chub	
	Fathead minnow	
	Longnose dace	
	Spottail shiner	
	Killifish	
	Banded killifish	

Figure 8-13. Fish species reported in the Massachusetts reaches of the Housatonic River.

BBL® BLASLAND, BOUCK & LEE, INC. engineers & scientists

QEA Quantitative Environmental Analysis, LLC

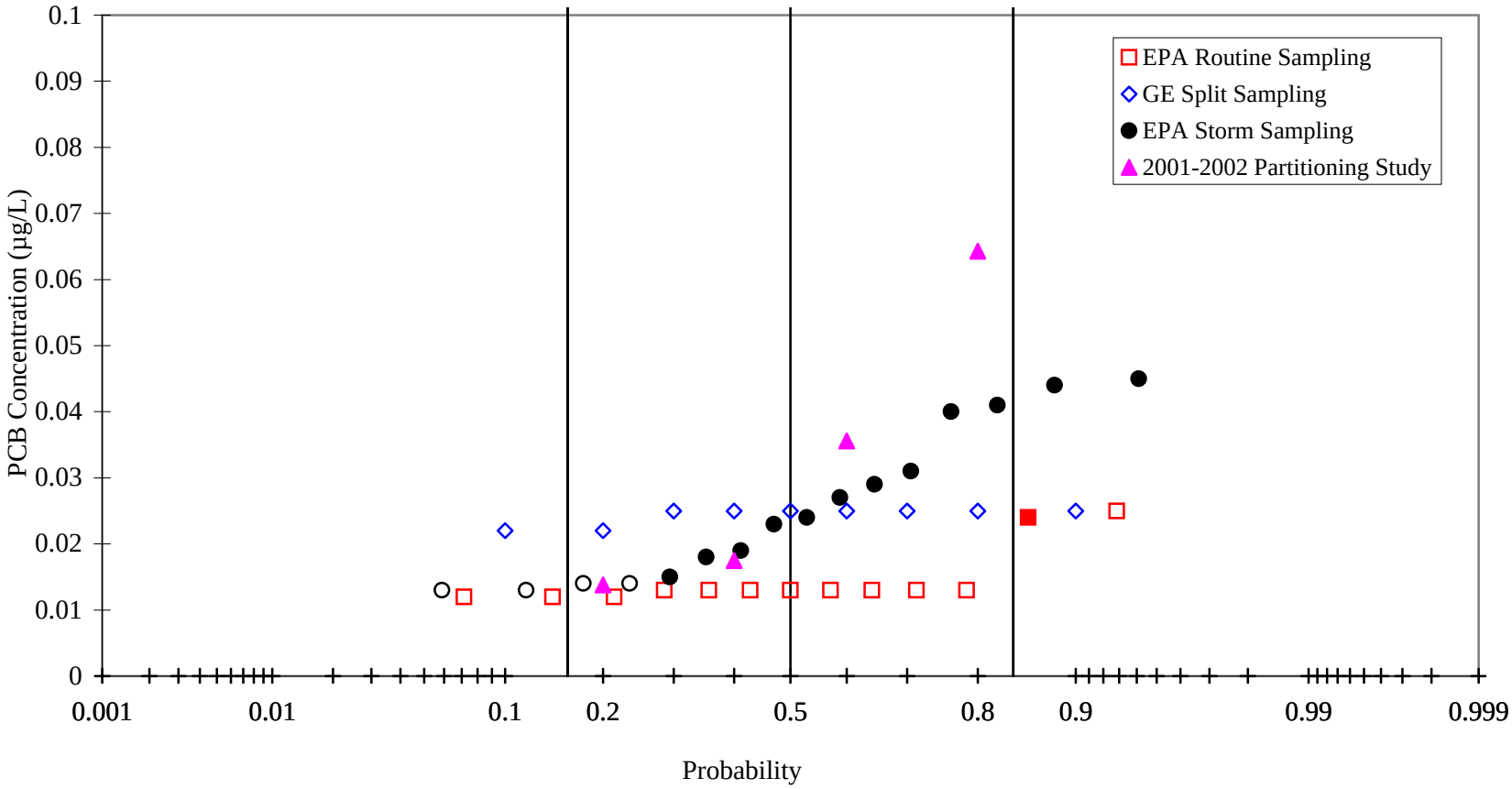


Figure 8-14. Probability plot of water column PCB concentrations in the West Branch Housatonic River since 1998.

Note: Filled symbols represent detected PCBs, non-detects are plotted as open symbols at the detection limit.

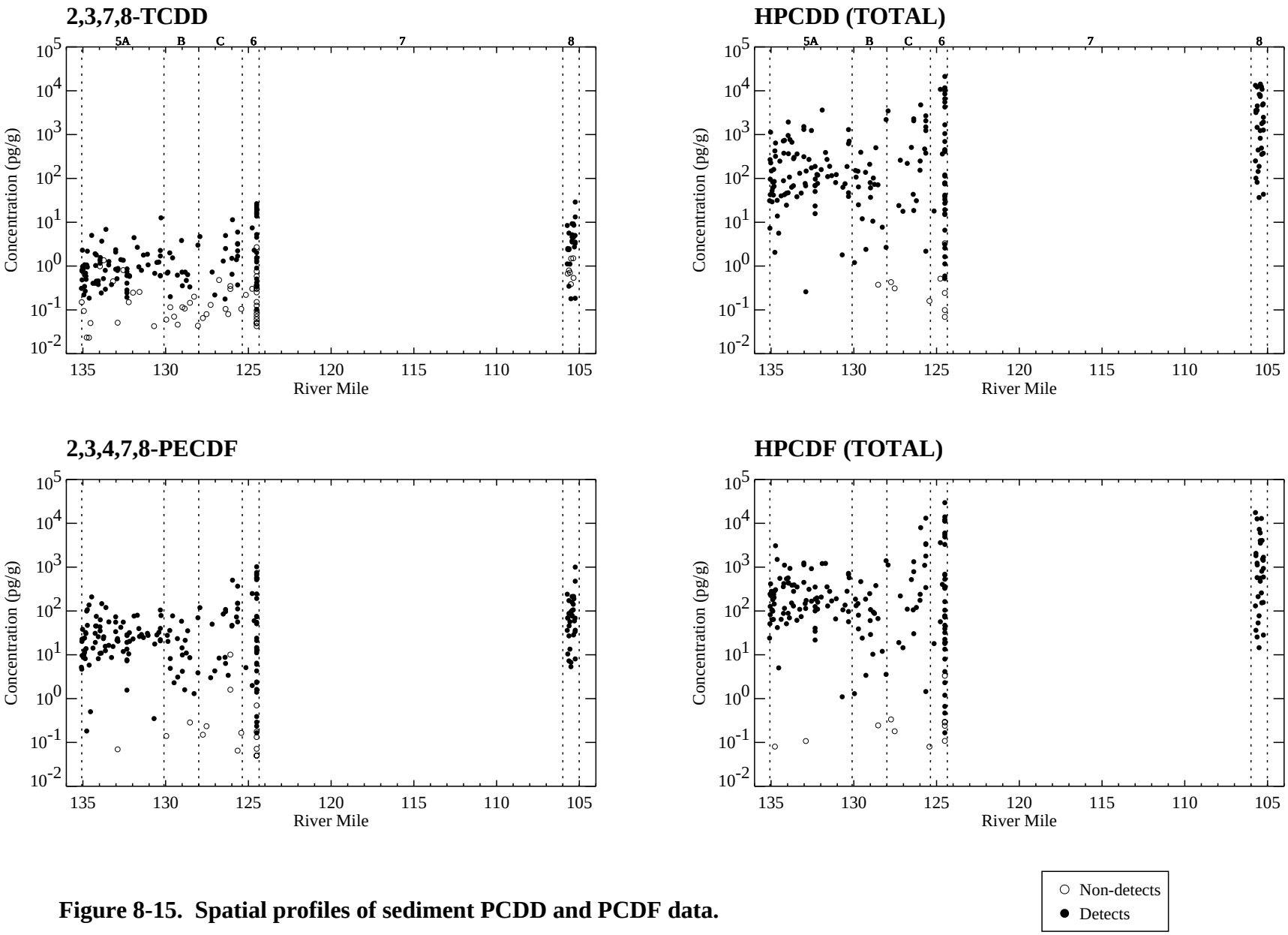


Figure 8-15. Spatial profiles of sediment PCDD and PCDF data.

Note: Non-detect samples plotted at 1/2 MDL. Plot shows EPA data from all depths.

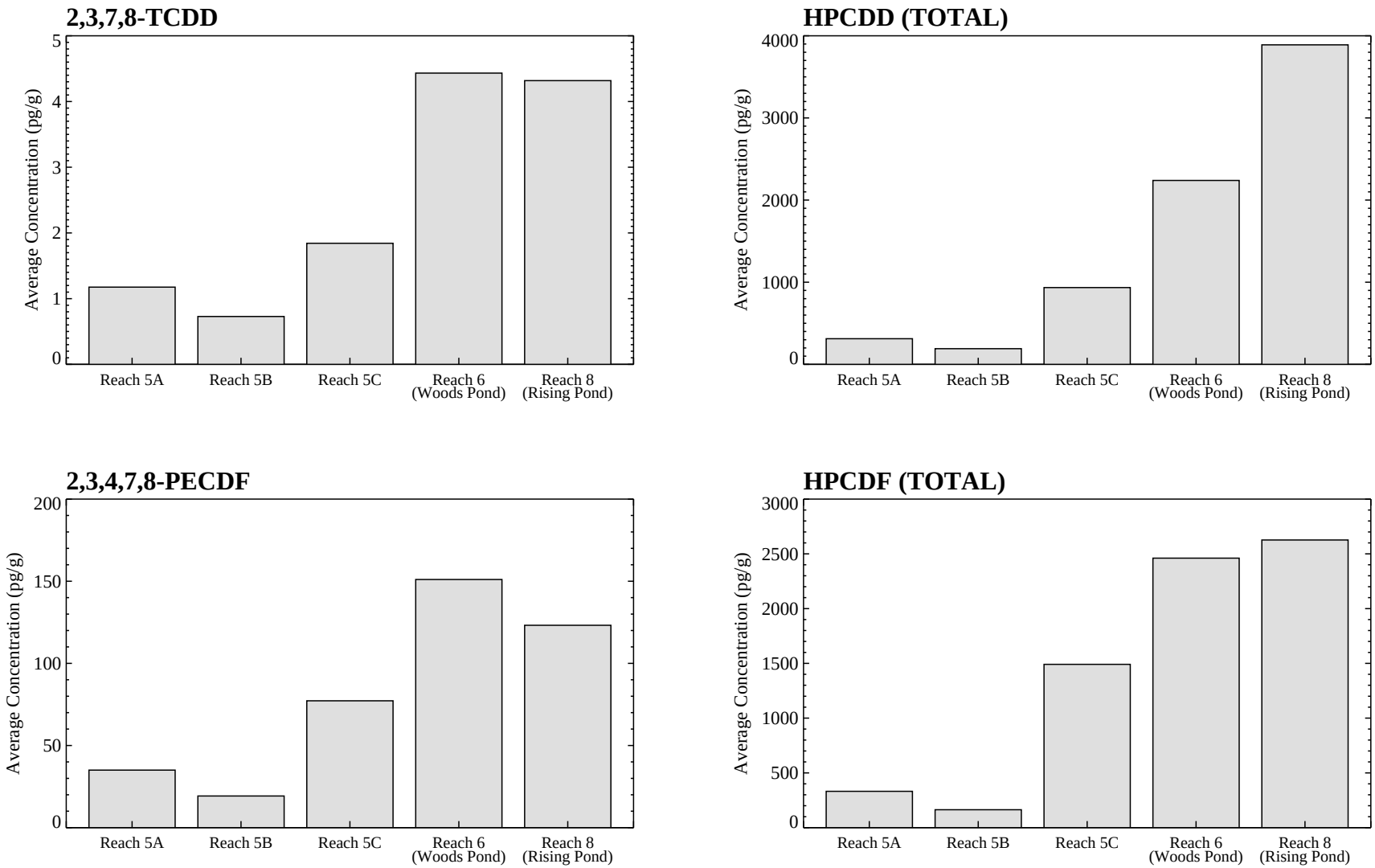


Figure 8-16. Average sediment PCDD and PCDF data by reach.

Note: Non-detect samples included at 1/2 MDL. Plot shows EPA data from all depths.