Figures

Figure 1. Map of the Assessment Area.

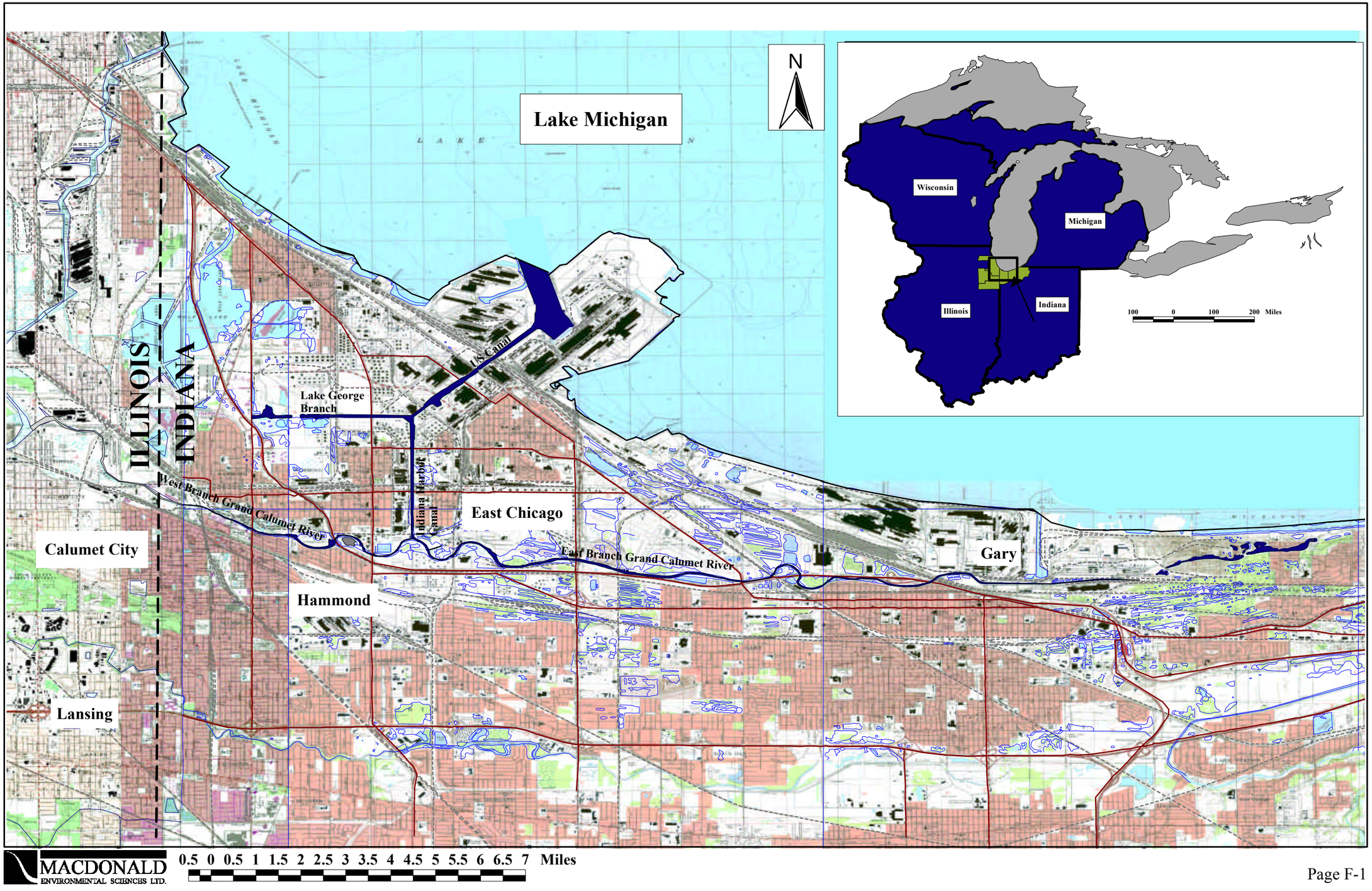

Figure 2. Map of the Assessment Area showing reach boundaries.

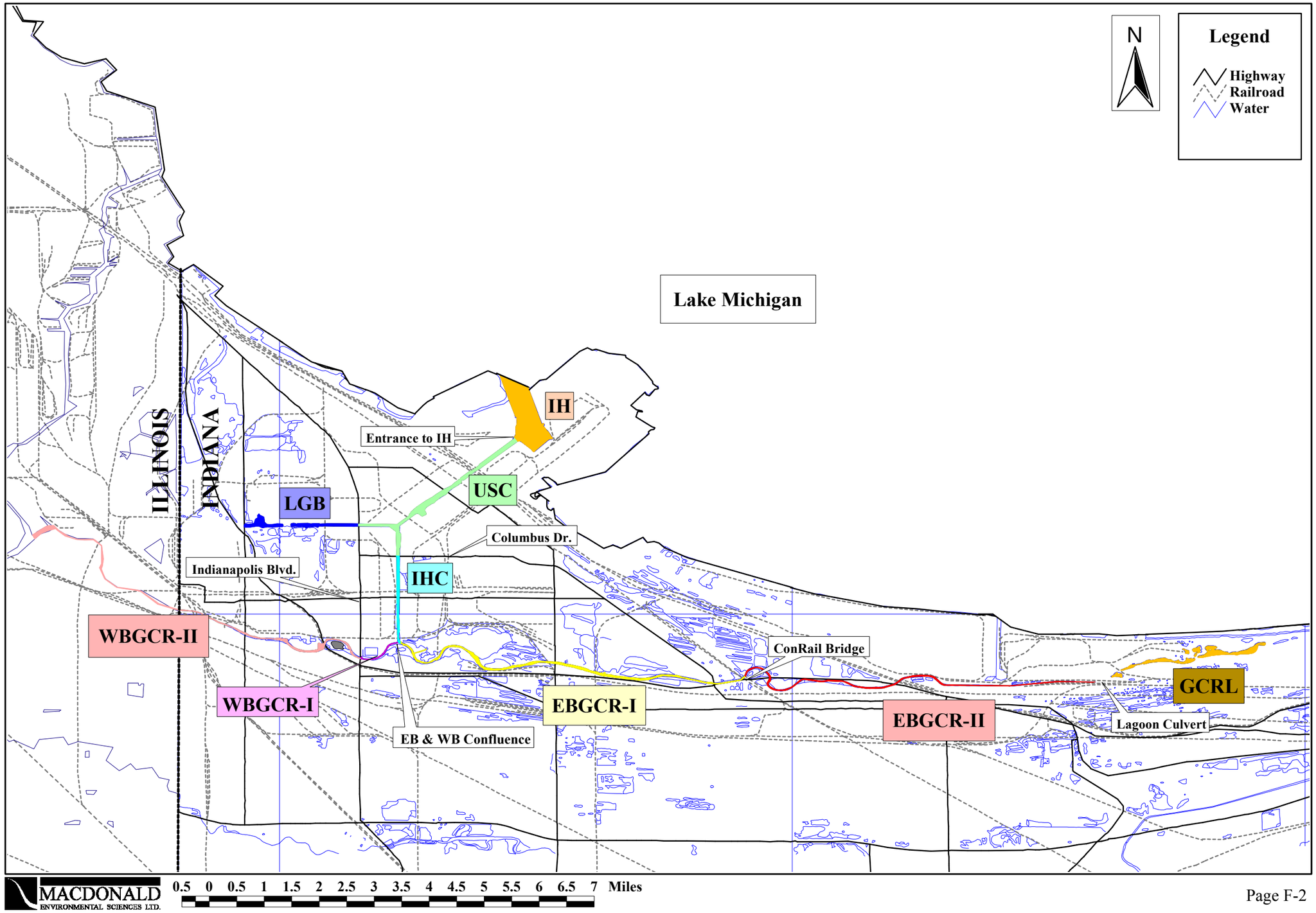

Figure 3. Map of Assessment Area showing the three geographical areas.

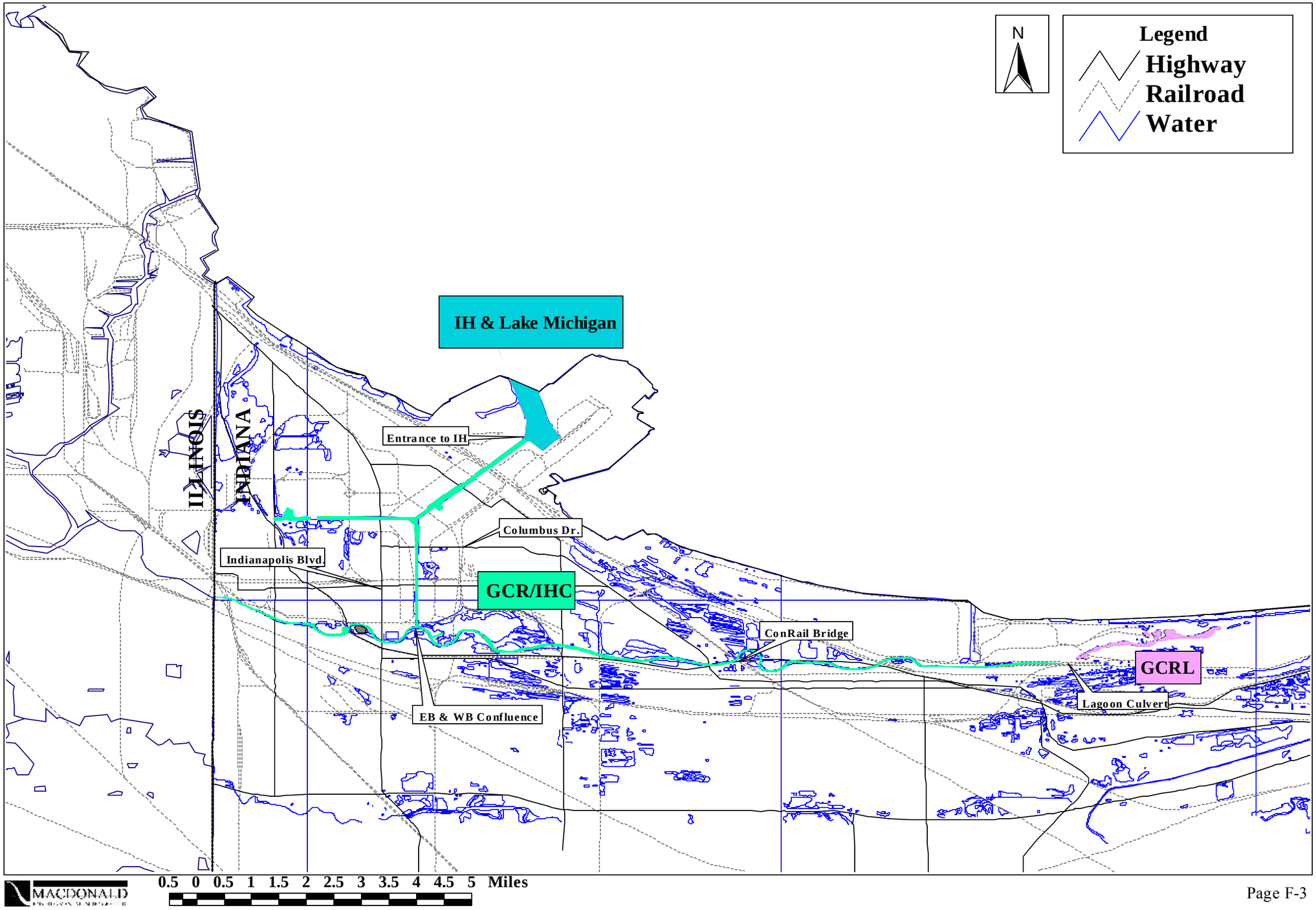

Figure 4. Map of the Assessment Area showing the locations of discharges to receiving waters.

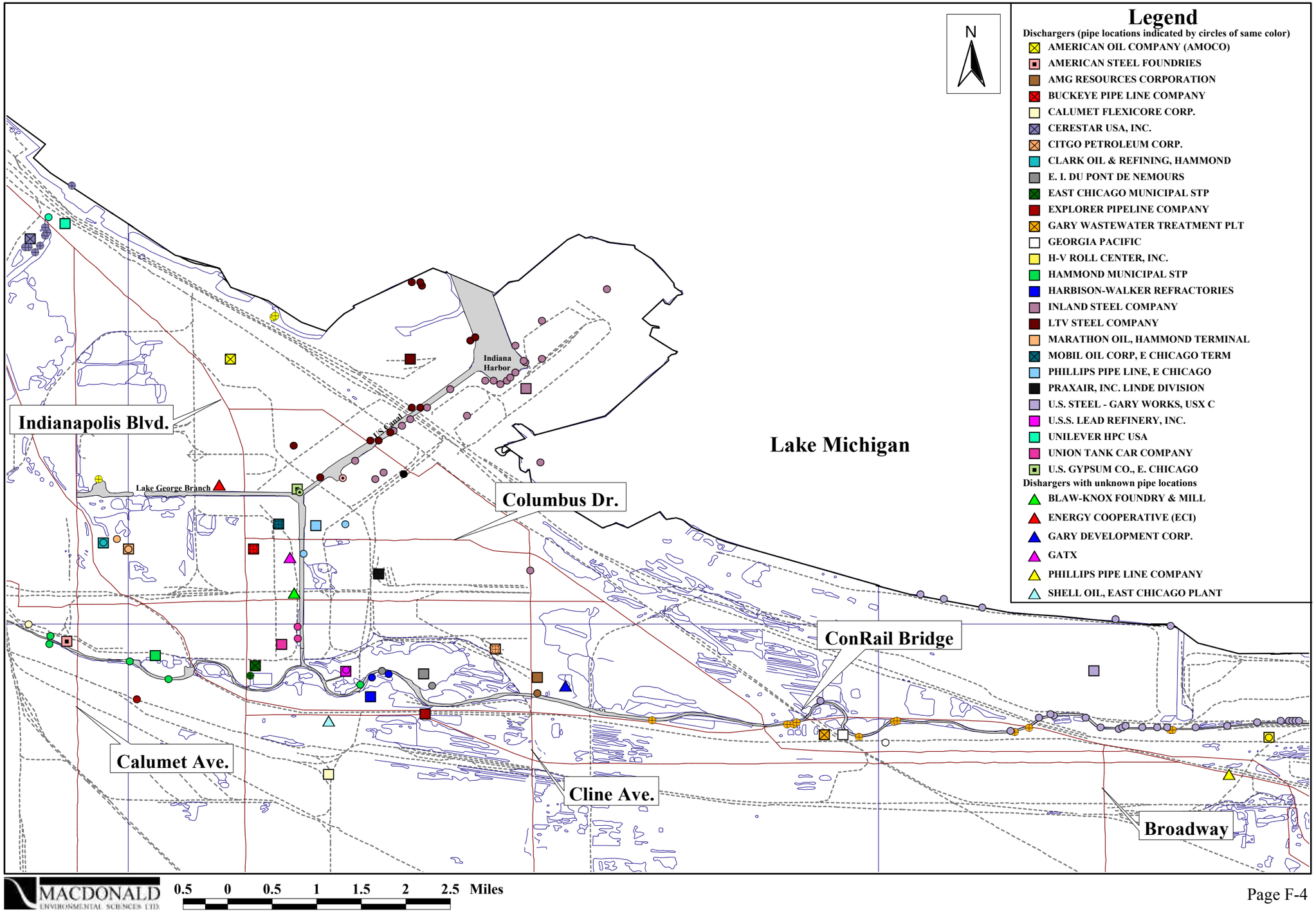

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Figure 5. Location of surficial whole sediment samples with concentrations of one or more COPCs in excess of the selected chemical benchmarks.

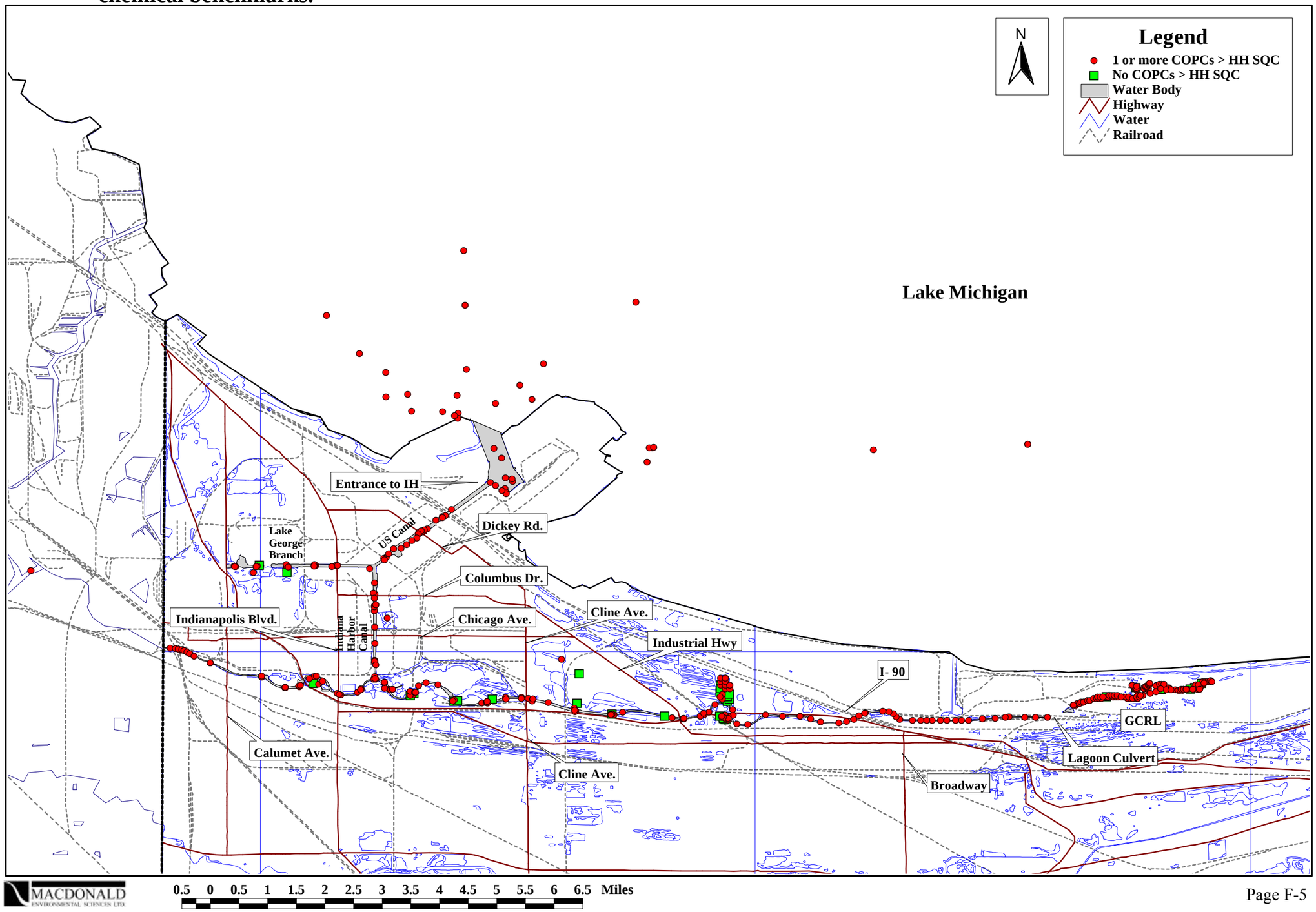

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Figure 6. Location of sub-surface whole sediment samples with concentrations of one or more COPCs in excess of the selected chemical benchmarks.

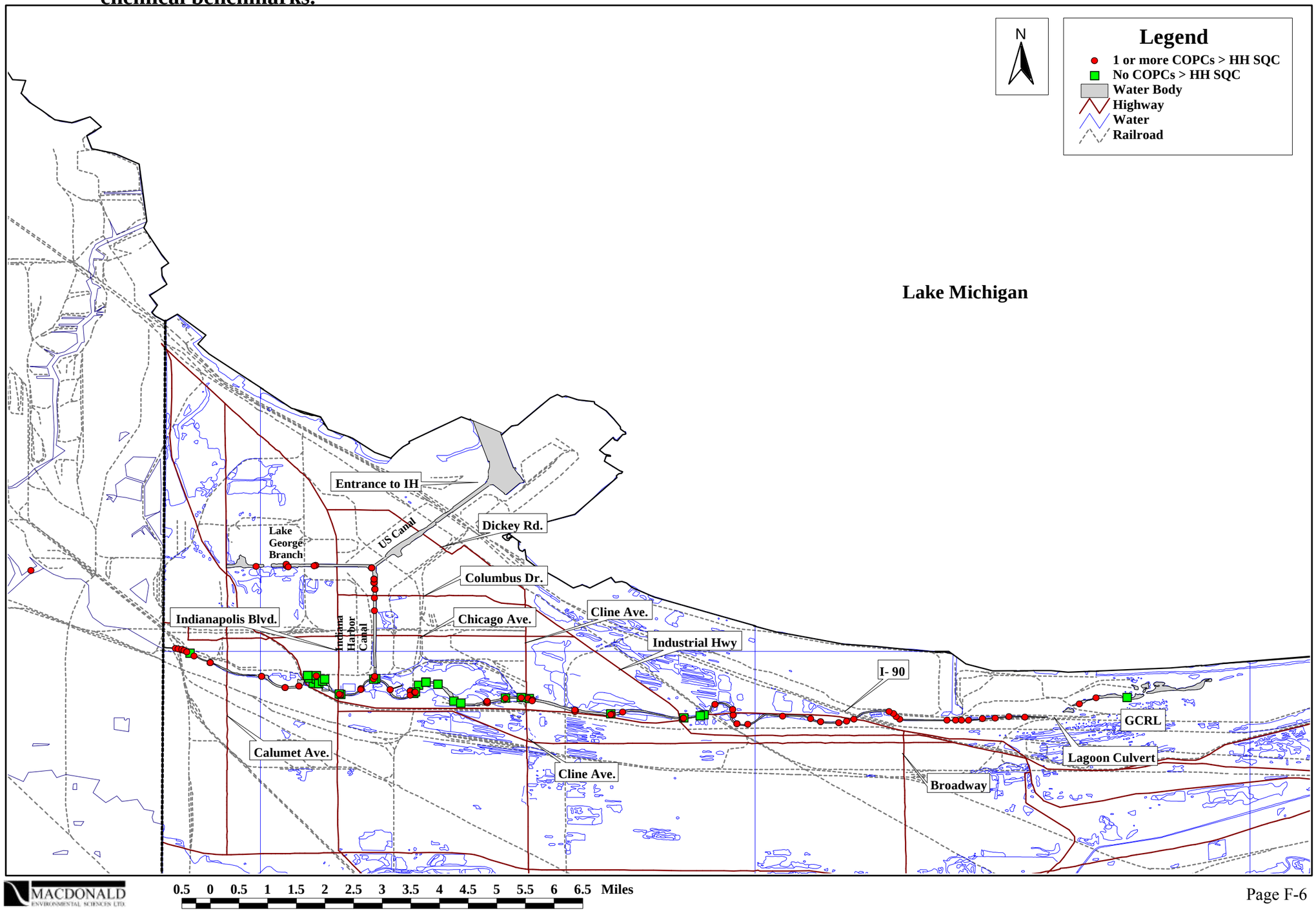

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Figure 7. Location of fish tissue samples with concentrations of one or more COPCs in excess of the USFDA tolerance levels or action levels.

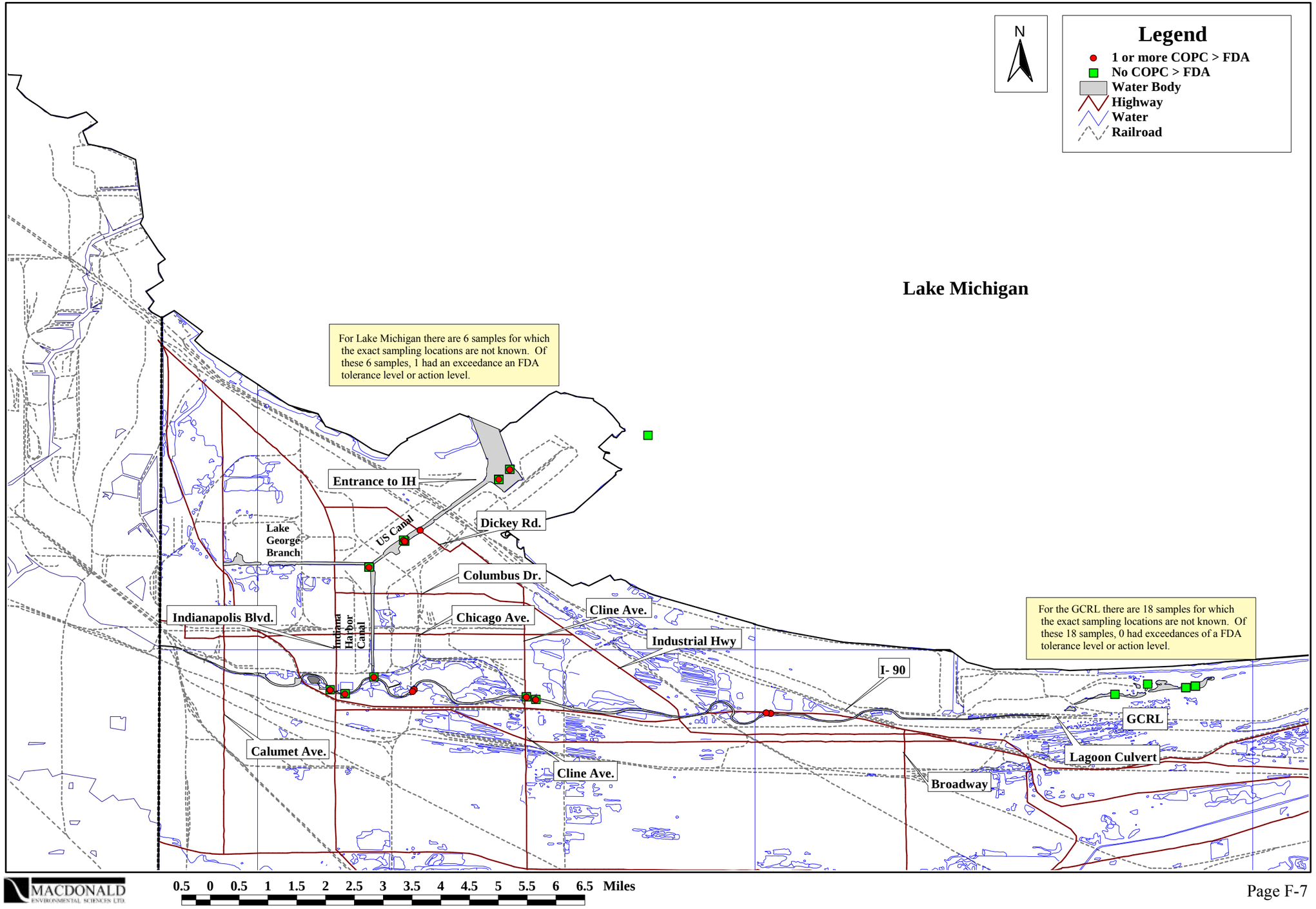

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Figure 8. Location of fish tissue samples with concentrations of one or more COPCs in excess of the ISDH Group 1 threshold levels.

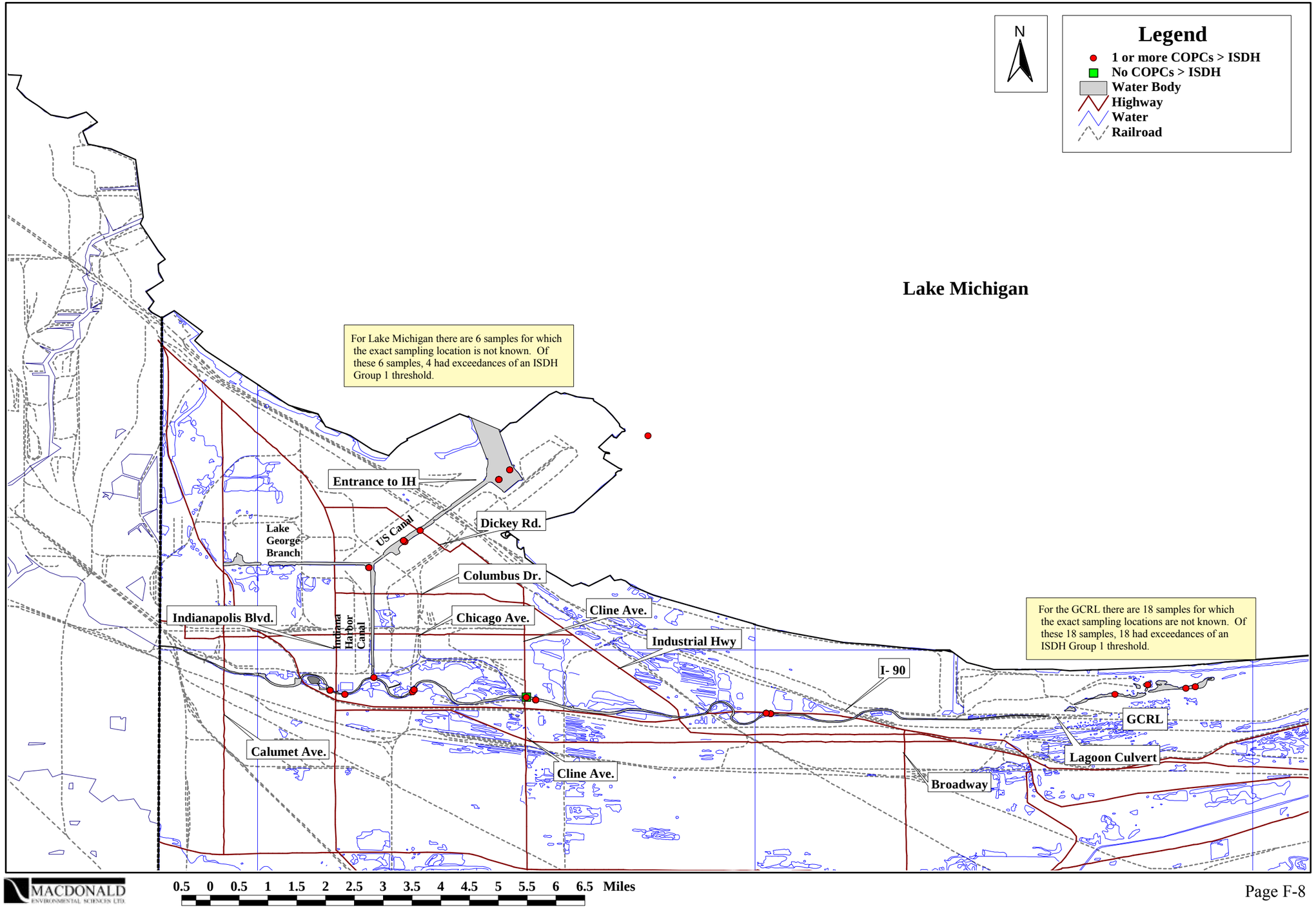

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Figure 9. Summary of the available data on the concentrations of mercury in the edible tissues of fish collected from the Grand Calumet River and Indiana Harbor Canal (USFDA Action Level is 1.0 mg/kg WW; see Section 3.2 for a description of data treatment).

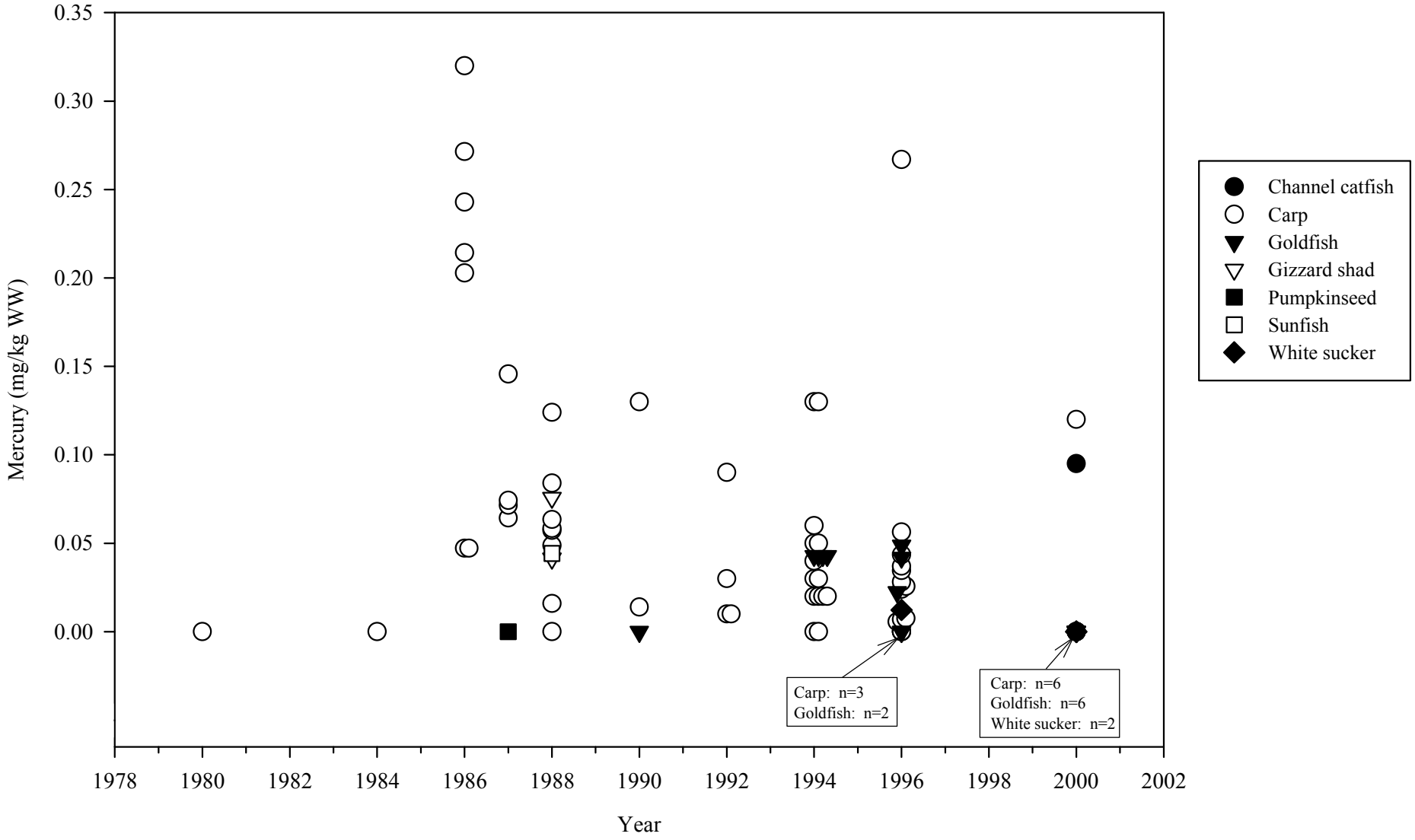

Figure 10. Summary of the available data on the concentrations of aldrin in the edible tissues of fish collected from the Grand Calumet River and Indiana Harbor Canal (dashed line indicates the USFDA Action Level; see Section 3.2 for a description of data treatment).

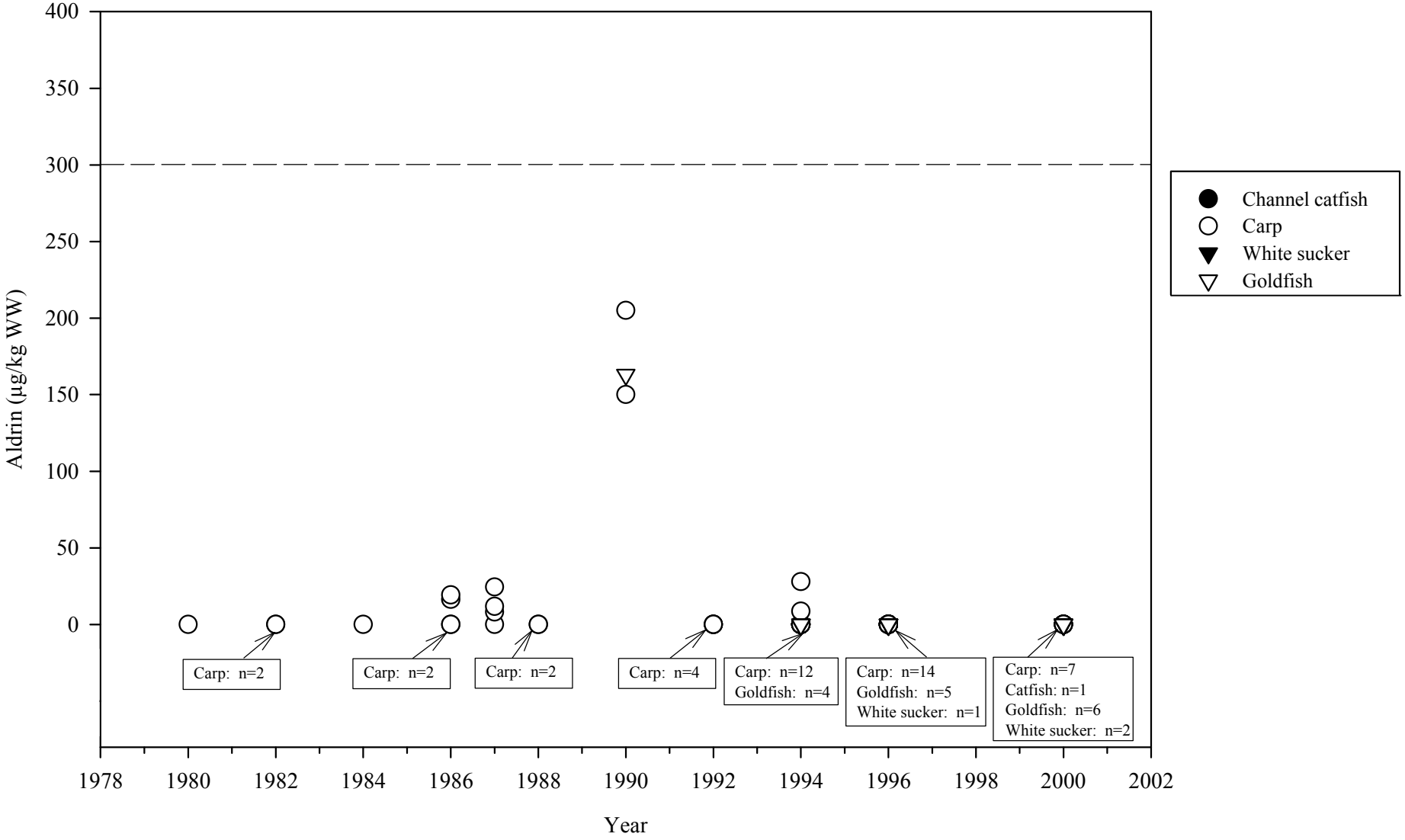

Figure 11. Summary of the available data on the concentrations of dieldrin in the edible tissues of fish collected from the Grand Calumet River and Indiana Harbor Canal (dashed line indicates the USFDA Action Level; see Section 3.2 for a description of data treatment).

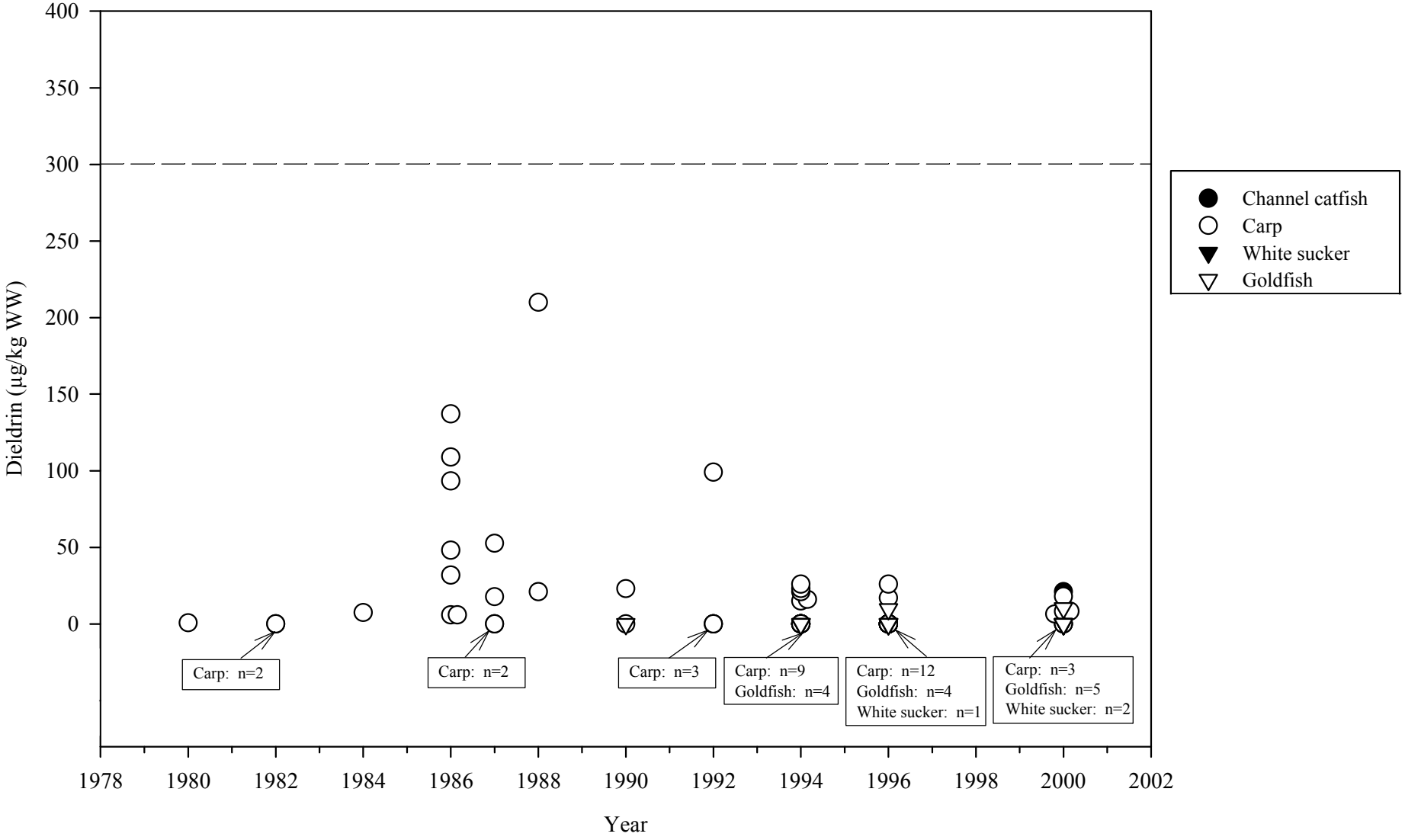

Figure 12. Summary of the available data on the concentrations of dieldrin + aldrin in the edible tissues of fish collected from the Grand Calumet River and Indiana Harbor Canal (dashed line indicates the USFDA Action Level; see Section 3.2 for a description of data treatment).

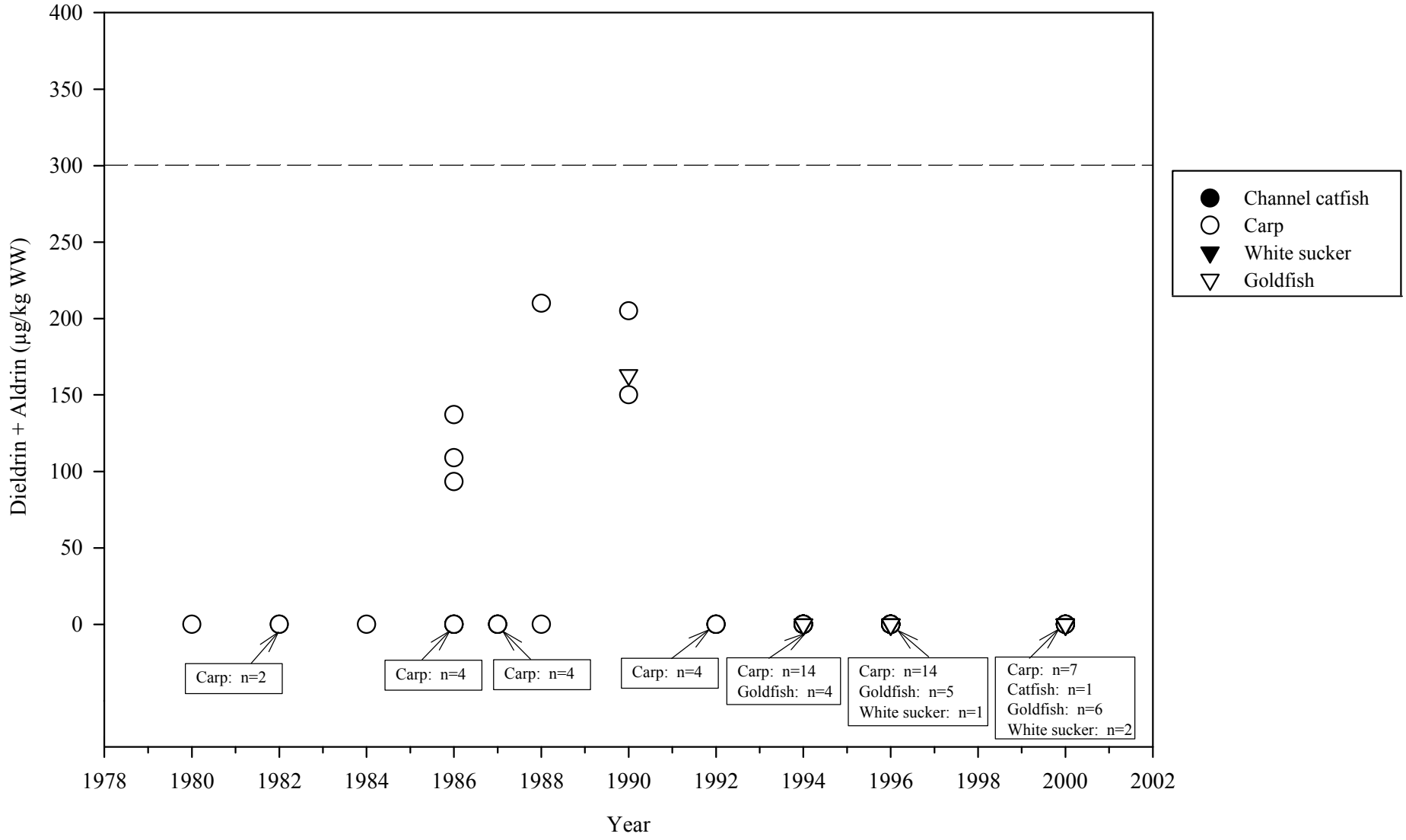

Figure 13. Summary of the available data on the concentrations of sum DDD in the edible tissues of fish collected from the Grand Calumet River and Indiana Harbor Canal (USFDA Action Level is 5000 µg/kg WW; see Section 3.2 for a description of data treatment).

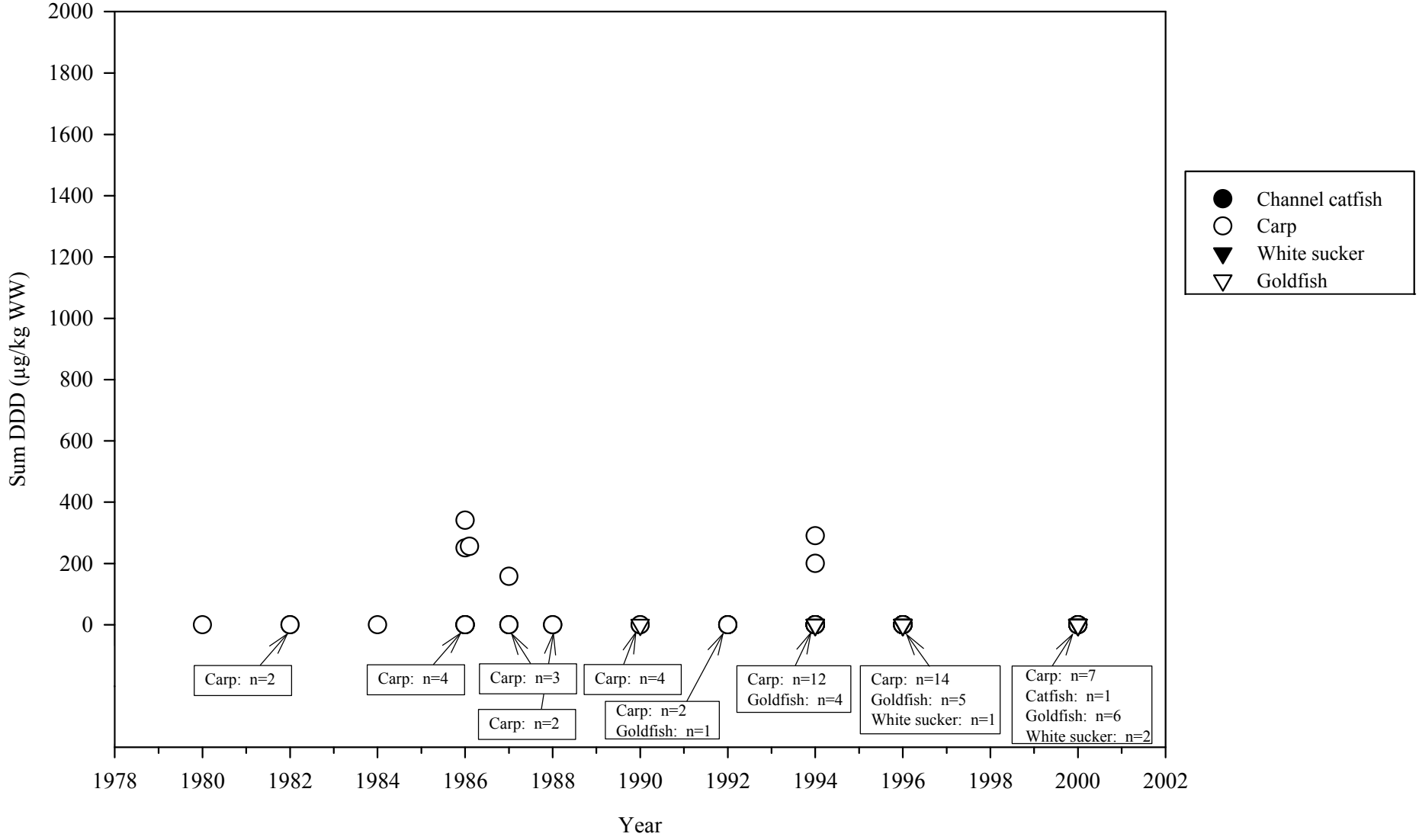

Figure 14. Summary of the available data on the concentrations of sum DDE in the edible tissues of fish collected from the Grand Calumet River and Indiana Harbor Canal (USFDA Action Level is 5000 µg/kg WW; see Section 3.2 for a description of data treatment).

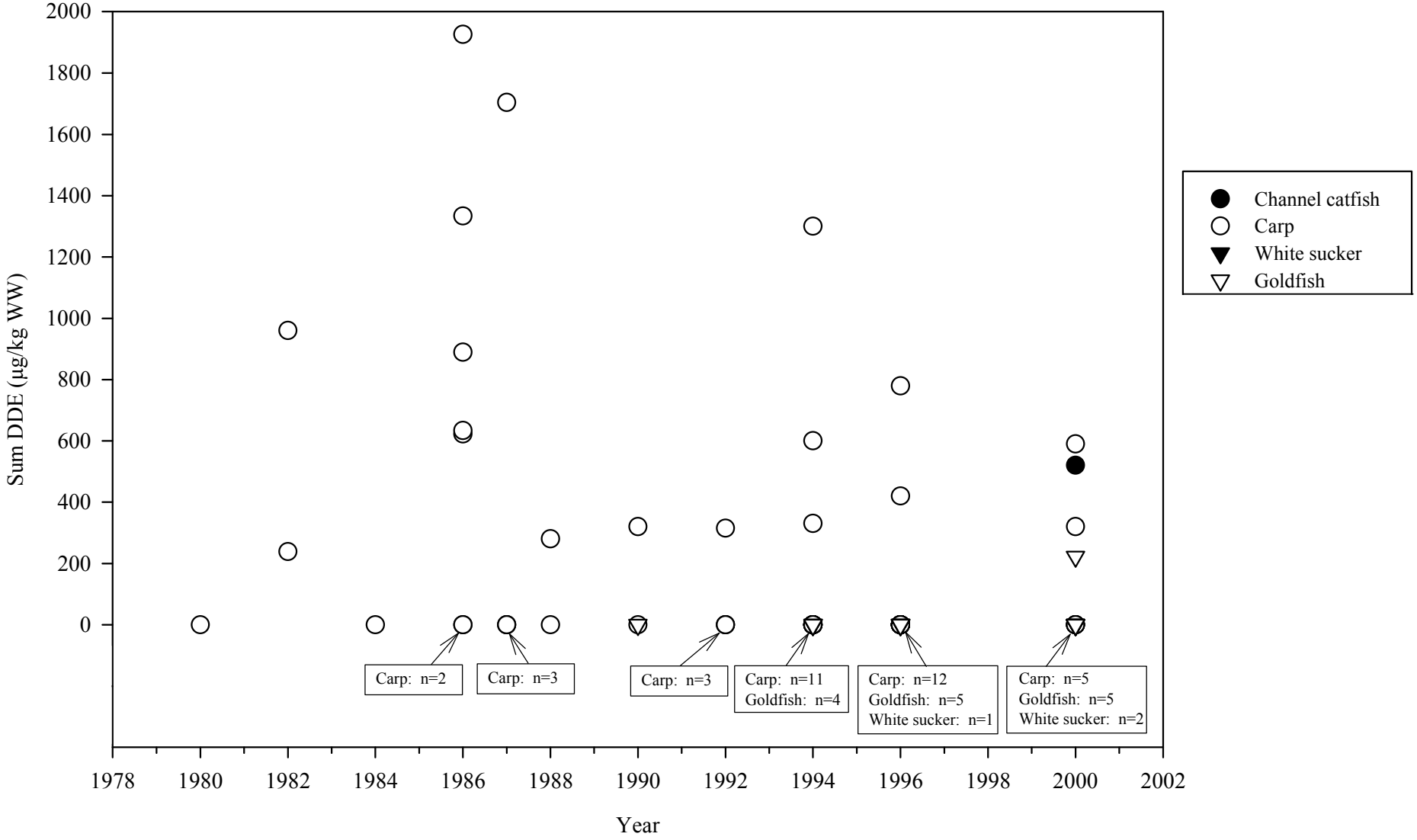

Figure 15. Summary of the available data on the concentrations of sum DDT in the edible tissues of fish collected from the Grand Calumet River and Indiana Harbor Canal (USFDA Action Level is 5000 µg/kg WW; see Section 3.2 for a description of data treatment).

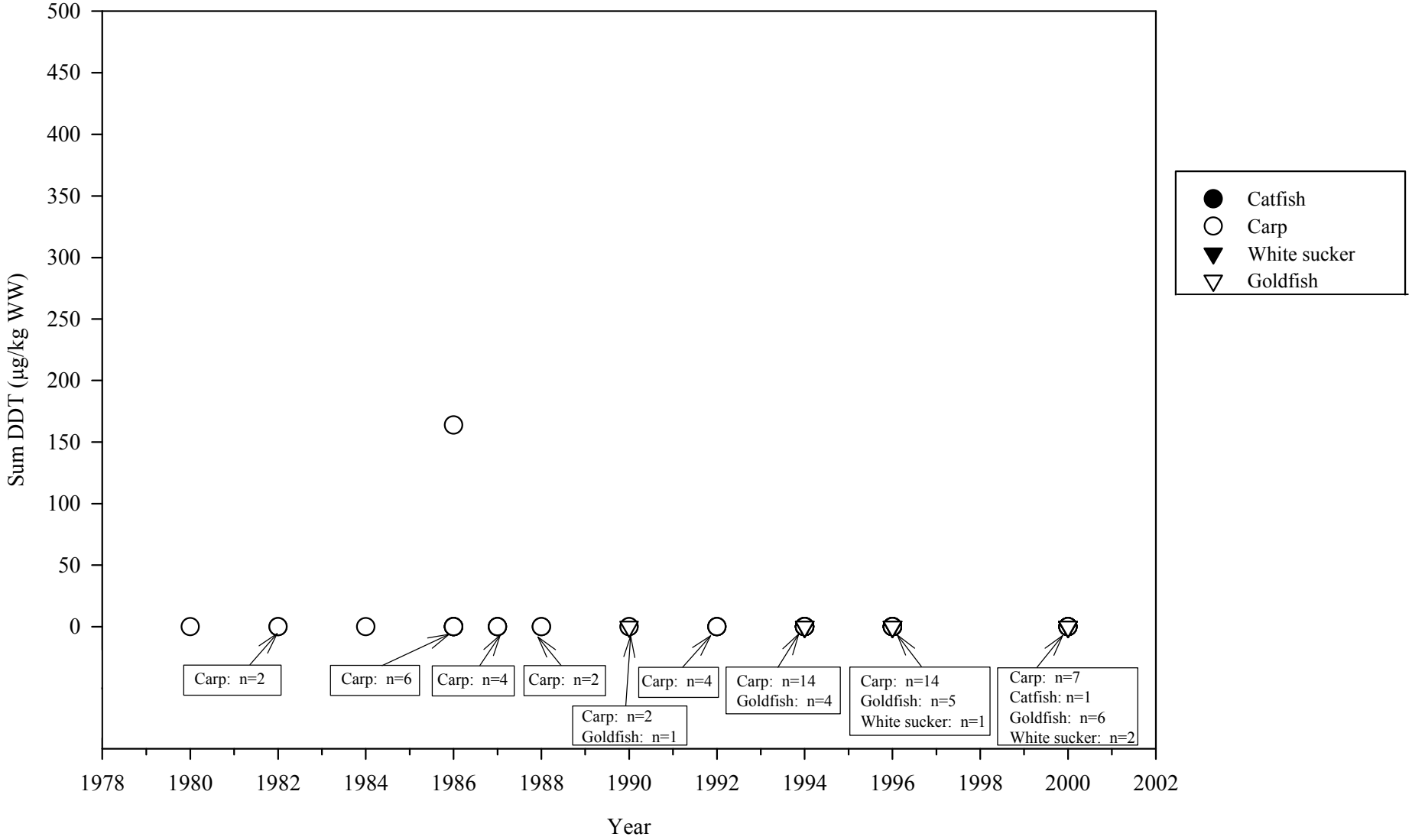

Figure 16. Summary of the available data on the concentrations of total DDT in the edible tissues of fish collected from the Grand Calumet River and Indiana Harbor Canal (USFDA Action Level is 5000 µg/kg WW; see Section 3.2 for a description of data treatment).

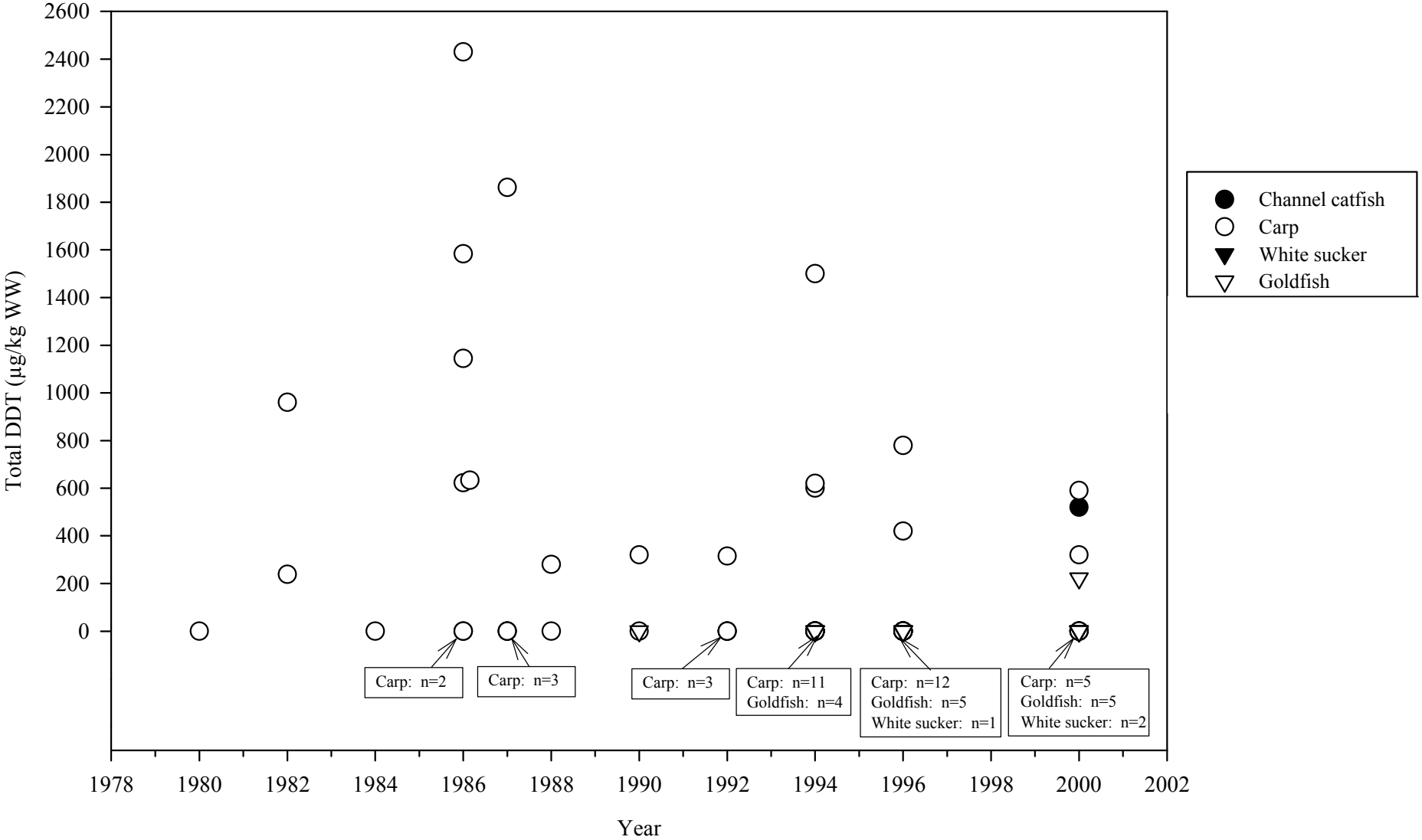

Figure 17. Summary of the available data on the concentrations of heptachlor in the edible tissues of fish collected from the Grand Calumet River and Indiana Harbor Canal (USFDA Action Level is 300 µg/kg WW; see Section 3.2 for a description of data treatment).

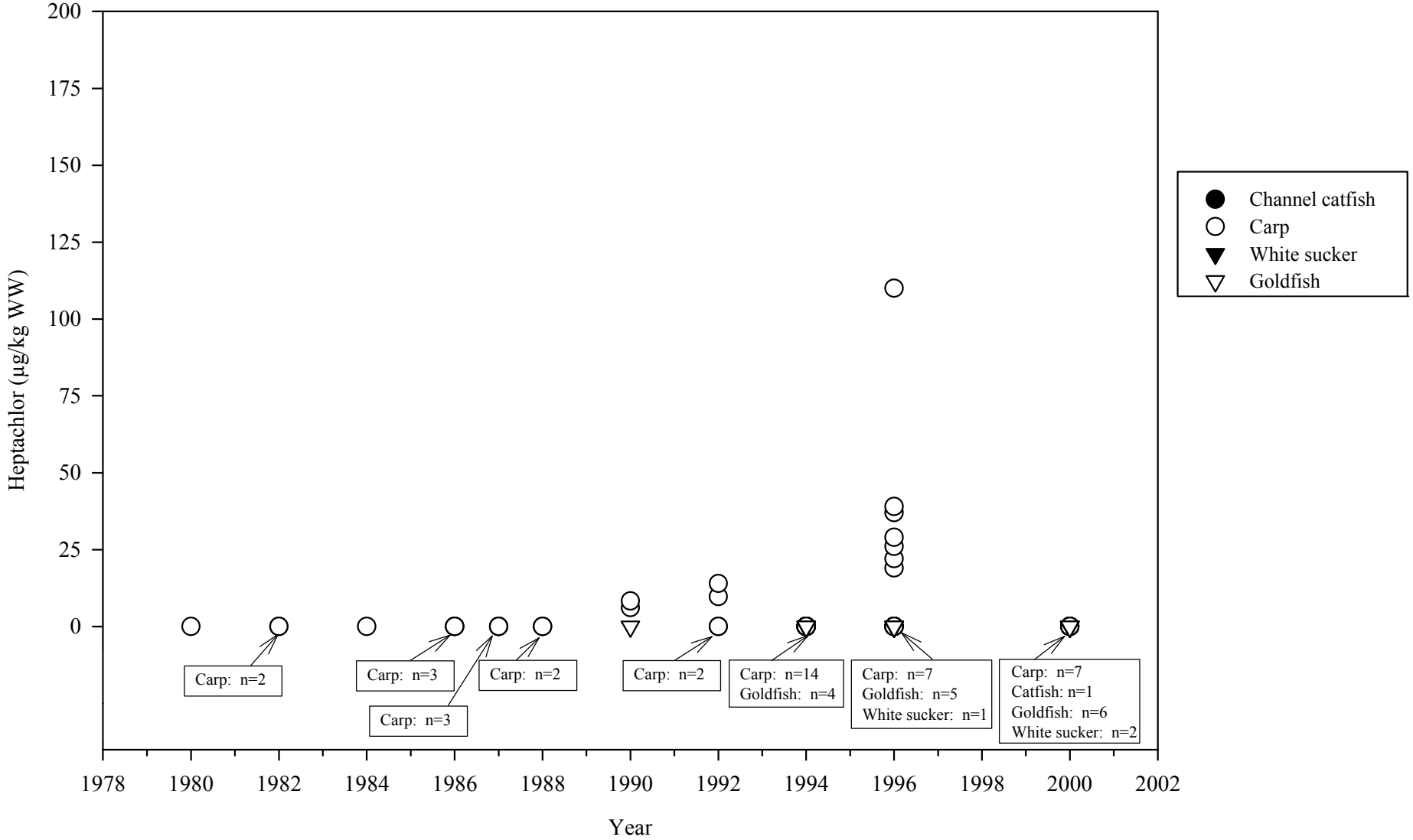

Figure 18. Summary of the available data on the concentrations of heptachlor epoxide in the edible tissues of fish collected from the Grand Calumet River and Indiana Harbor Canal (USFDA Action Level is 300 µg/kg WW; see Section 3.2 for a description of data treatment).

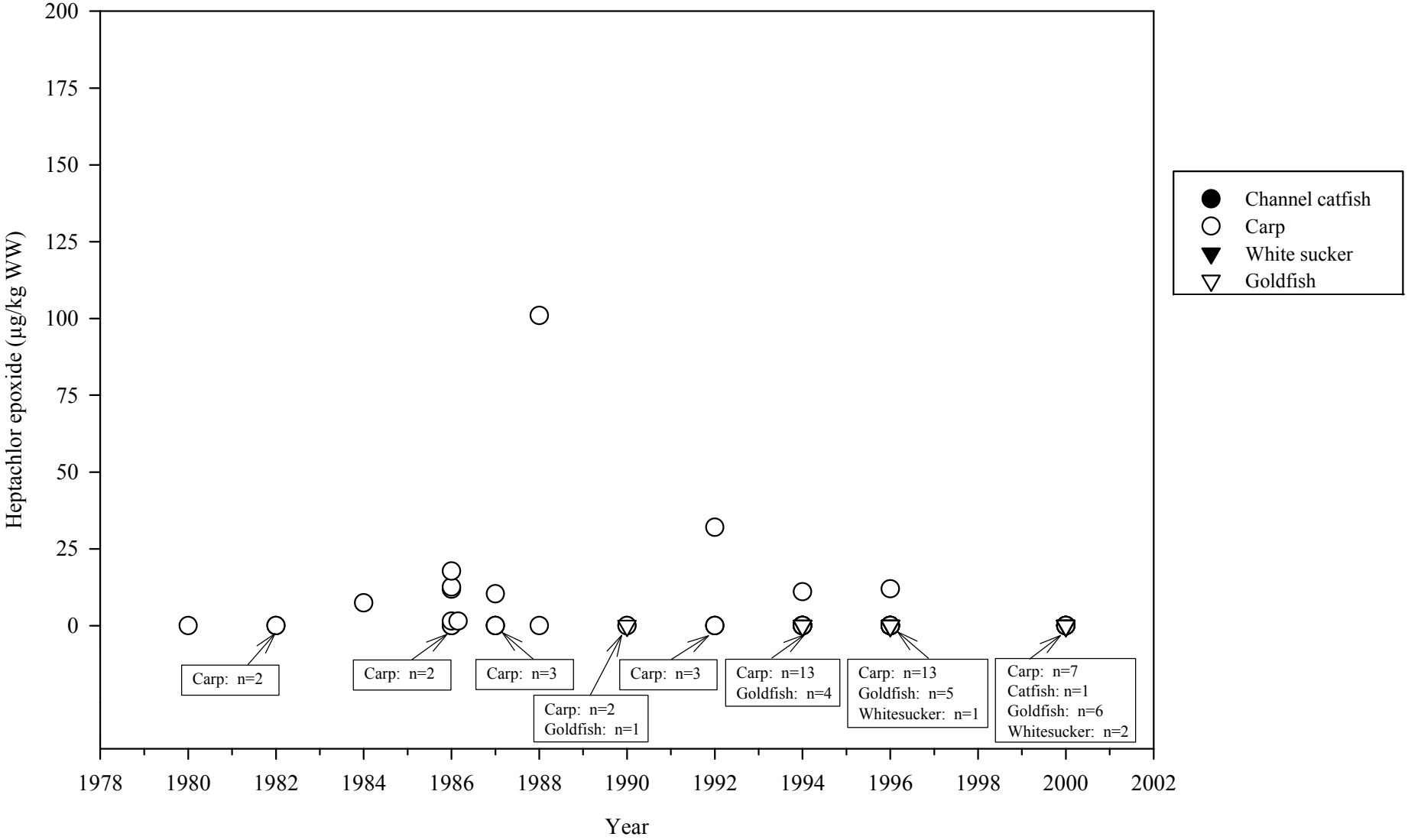

Figure 19. Summary of the available data on the concentrations of heptachlor + heptachlor epoxide in the edible tissues of fish collected from the Grand Calumet River and Indiana Harbor Canal (USFDA Action Level is 300 µg/kg WW; see Section 3.2 for a description of data treatment).

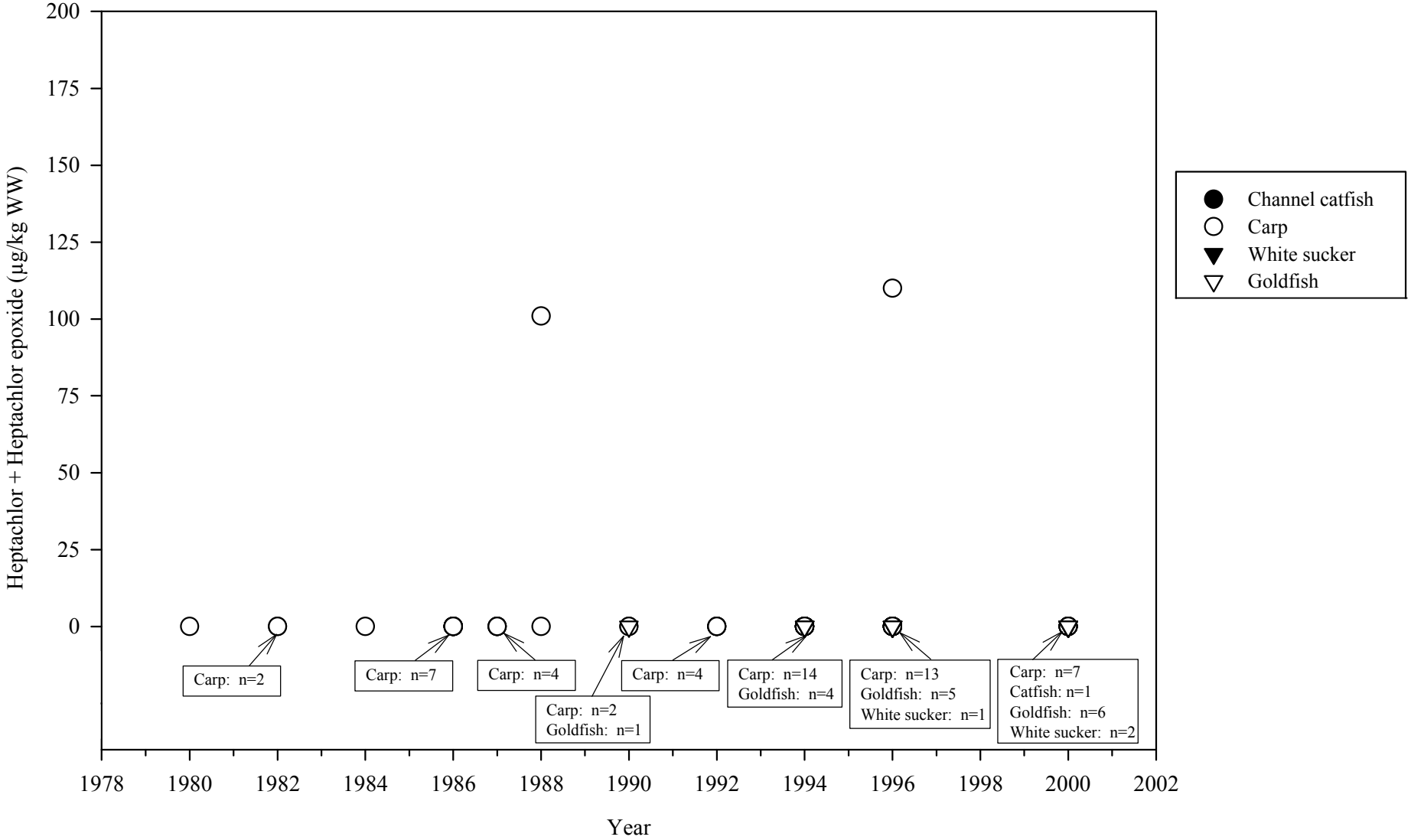

Figure 20. Summary of the available data on the concentrations of total chlordane in the edible tissues of fish collected from the Grand Calumet River and Indiana Harbor Canal (dashed line indicates the USFDA Action Level; see Section 3.2 for a description of data treatment).

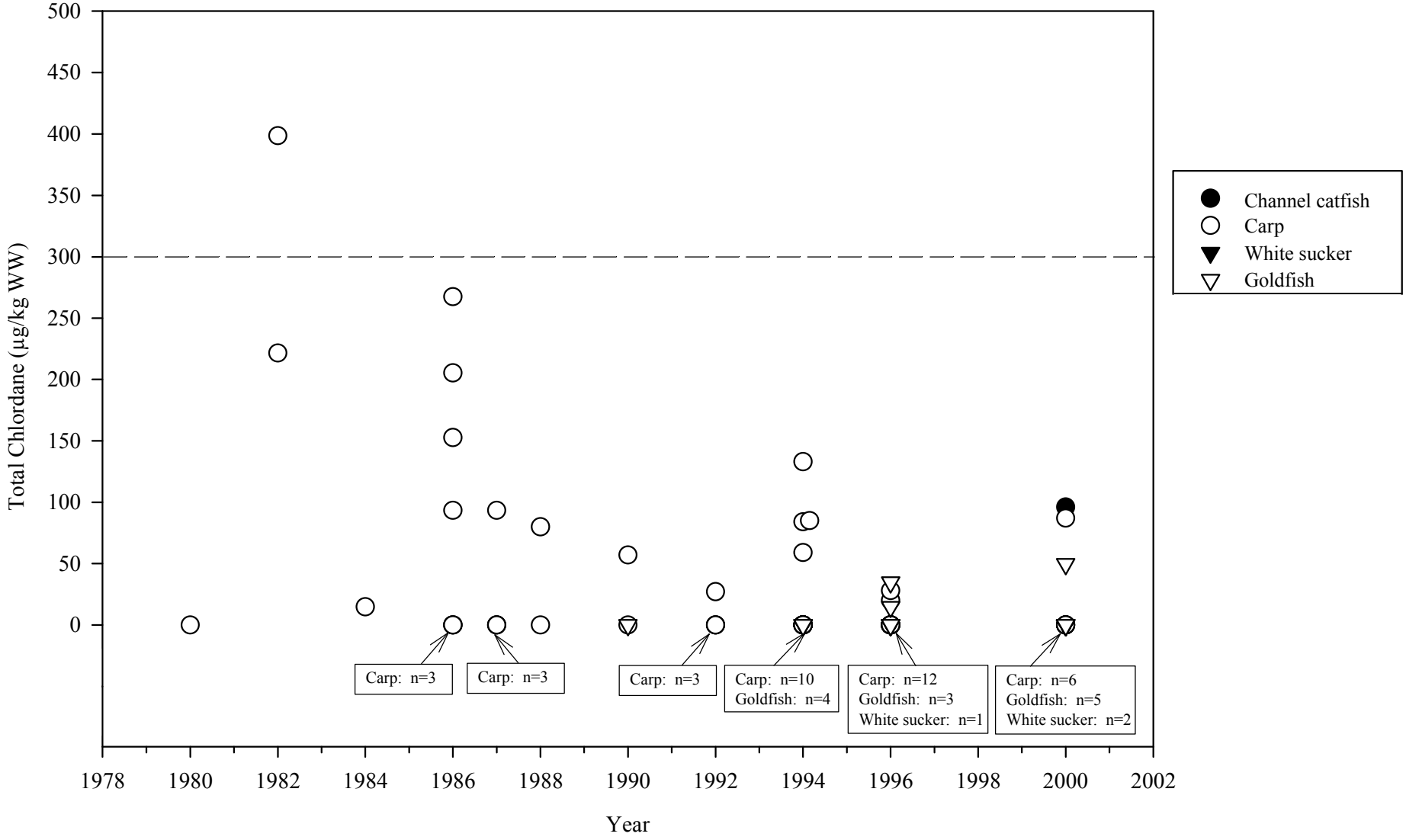

Figure 21. Summary of the available data on the concentrations of total PCBs in the edible tissues of fish collected from the Grand Calumet River and Indiana Harbor Canal (dashed line indicates the USFDA Tolerance Level; see Section 3.2 for a description of data treatment).

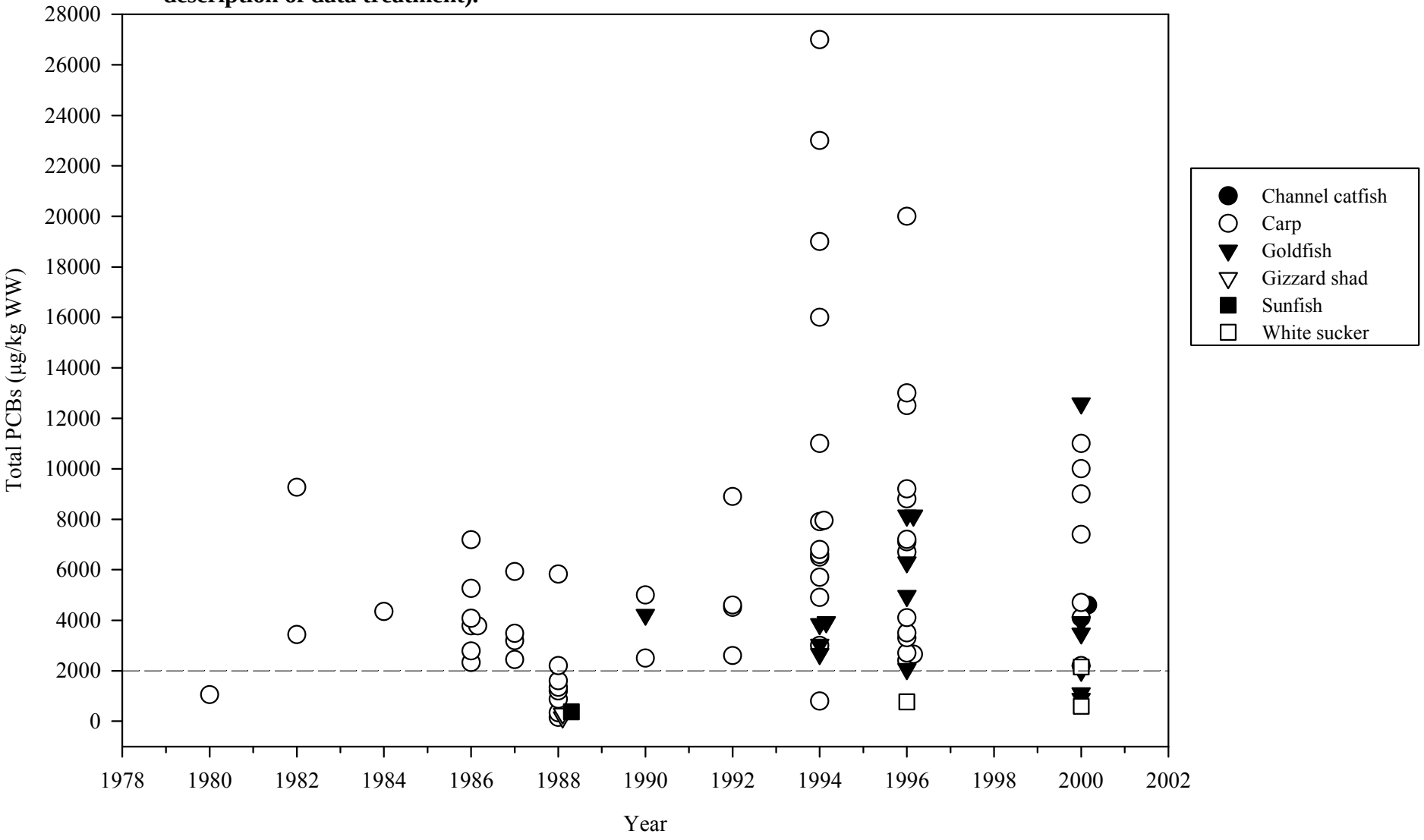

Figure 22. Summary of the available data on the concentrations of mercury in the edible tissues of fish collected from the Grand Calumet River and Indiana Harbor Canal [solid line indicates the ISDH Group 1 threshold (0.16 mg/kg WW); see Section 3.2 for a description of data treatment].

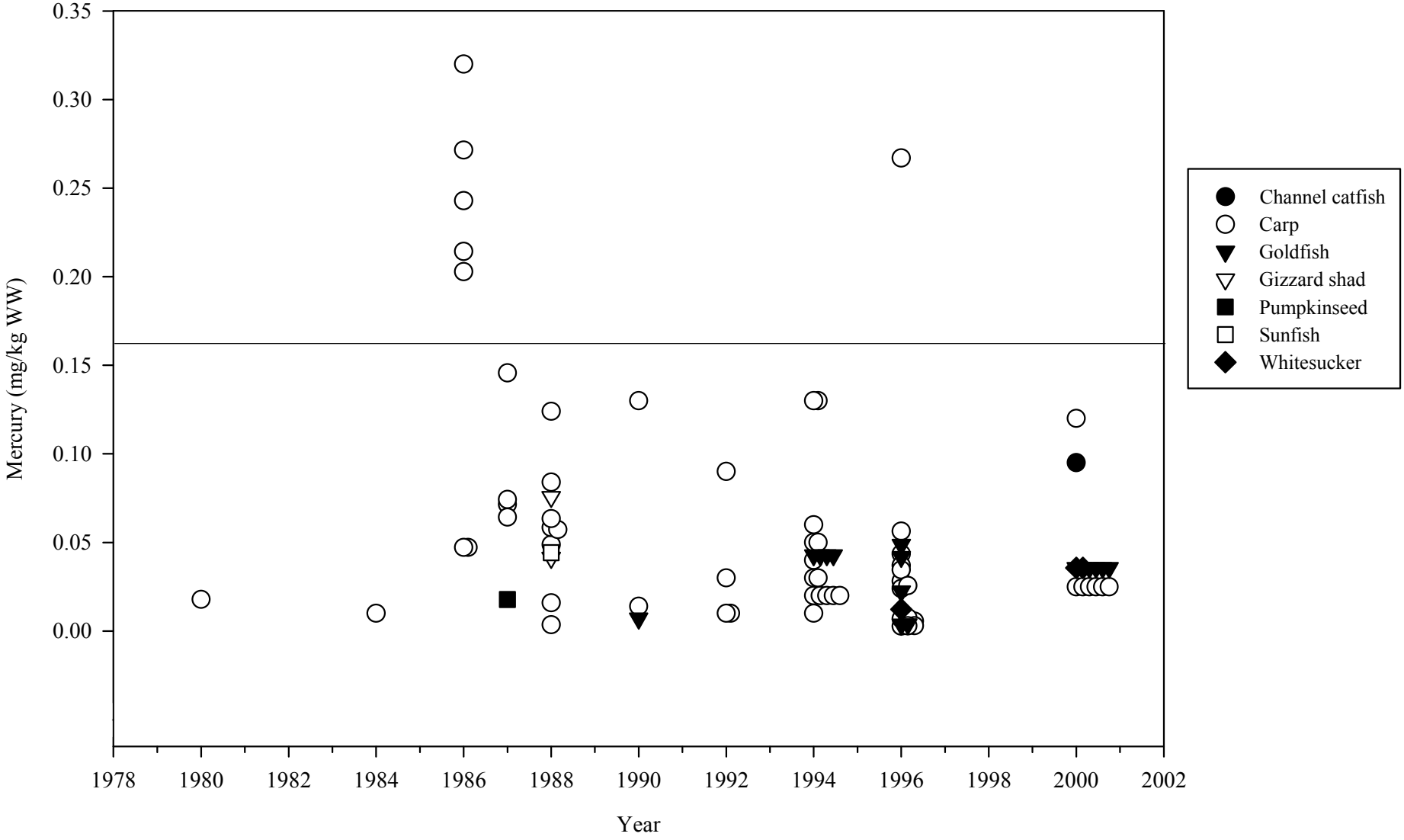

Figure 23. Summary of the available data on the concentrations of total PCBs in the edible tissues of fish collected from the Grand Calumet River and Indiana Harbor Canal [solid line indicates the ISDH Group 1 threshold for skin-on scaleless fillets (50 µg/kg WW); see Section 3.2 for a description of data treatment].

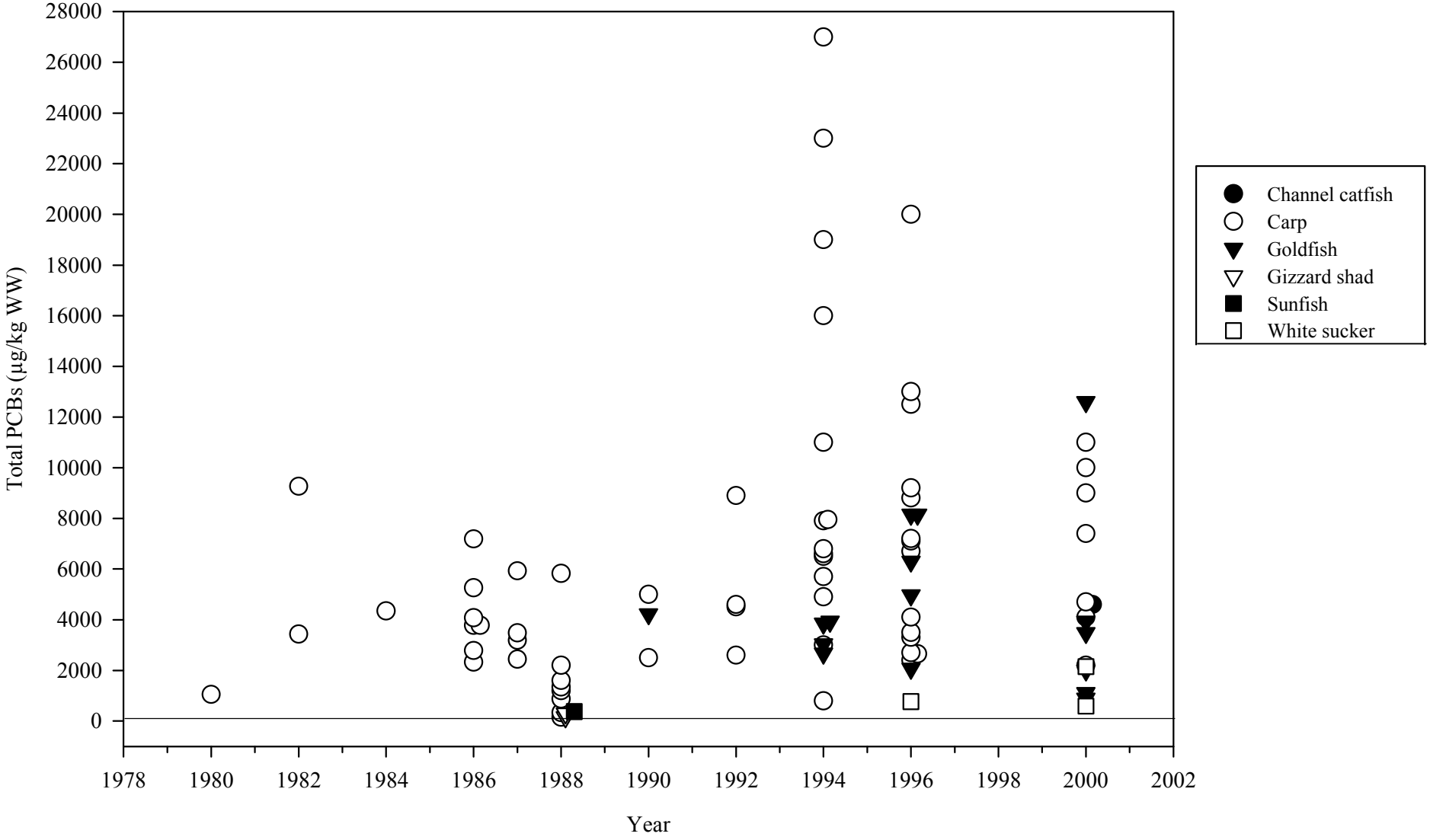

Figure 24. Summary of the available data on the concentrations of mercury in the edible tissues of fish collected from the Grand Calumet River Lagoons (USFDA Action Level is 1.0 mg/kg WW; see Section 3.2 for a description of data treatment).

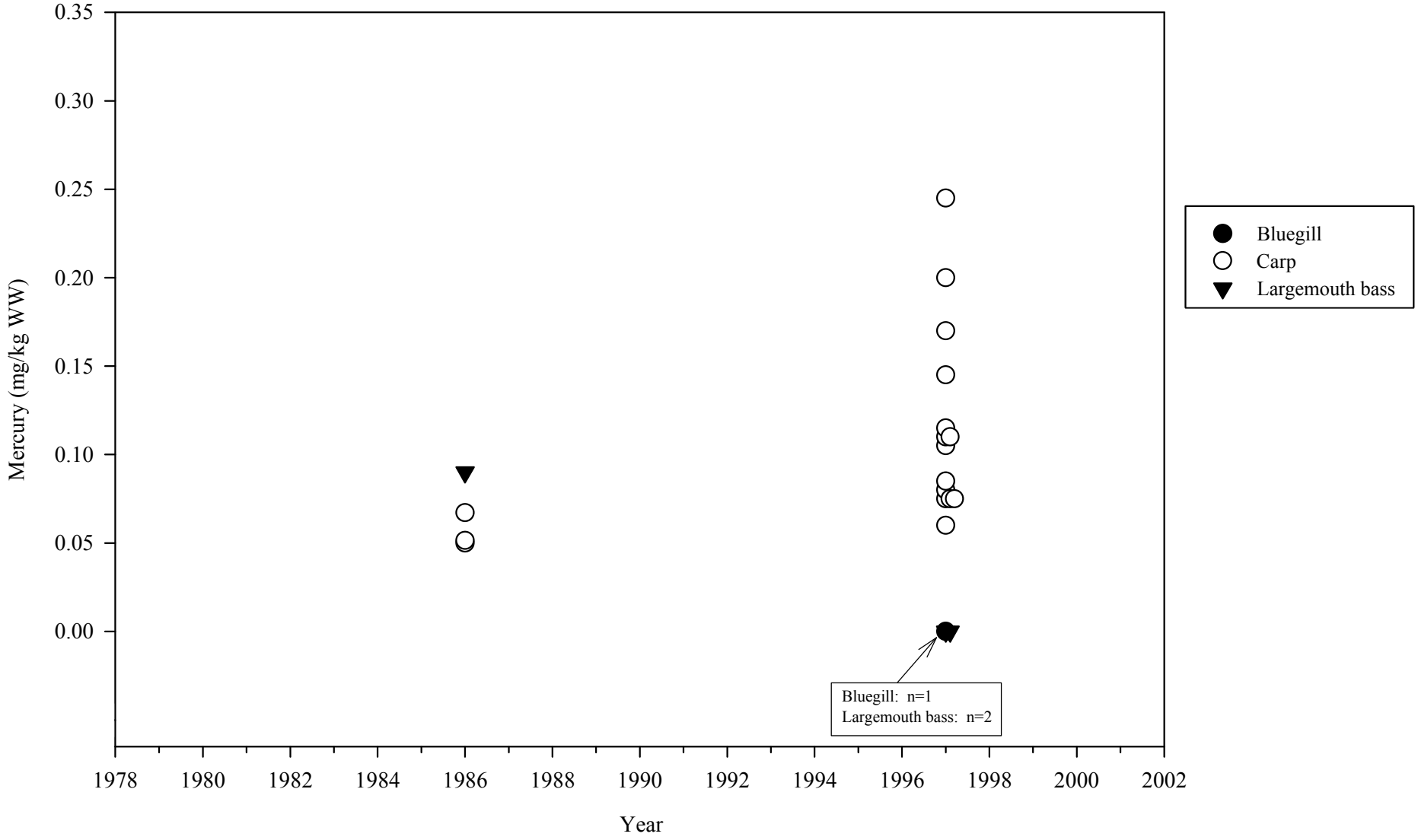

Figure 25. Summary of the available data on the concentrations of aldrin in the edible tissues of fish collected from the Grand Calumet River Lagoons (dashed line indicates the USFDA Action Level; see Section 3.2 for a description of data treatment).

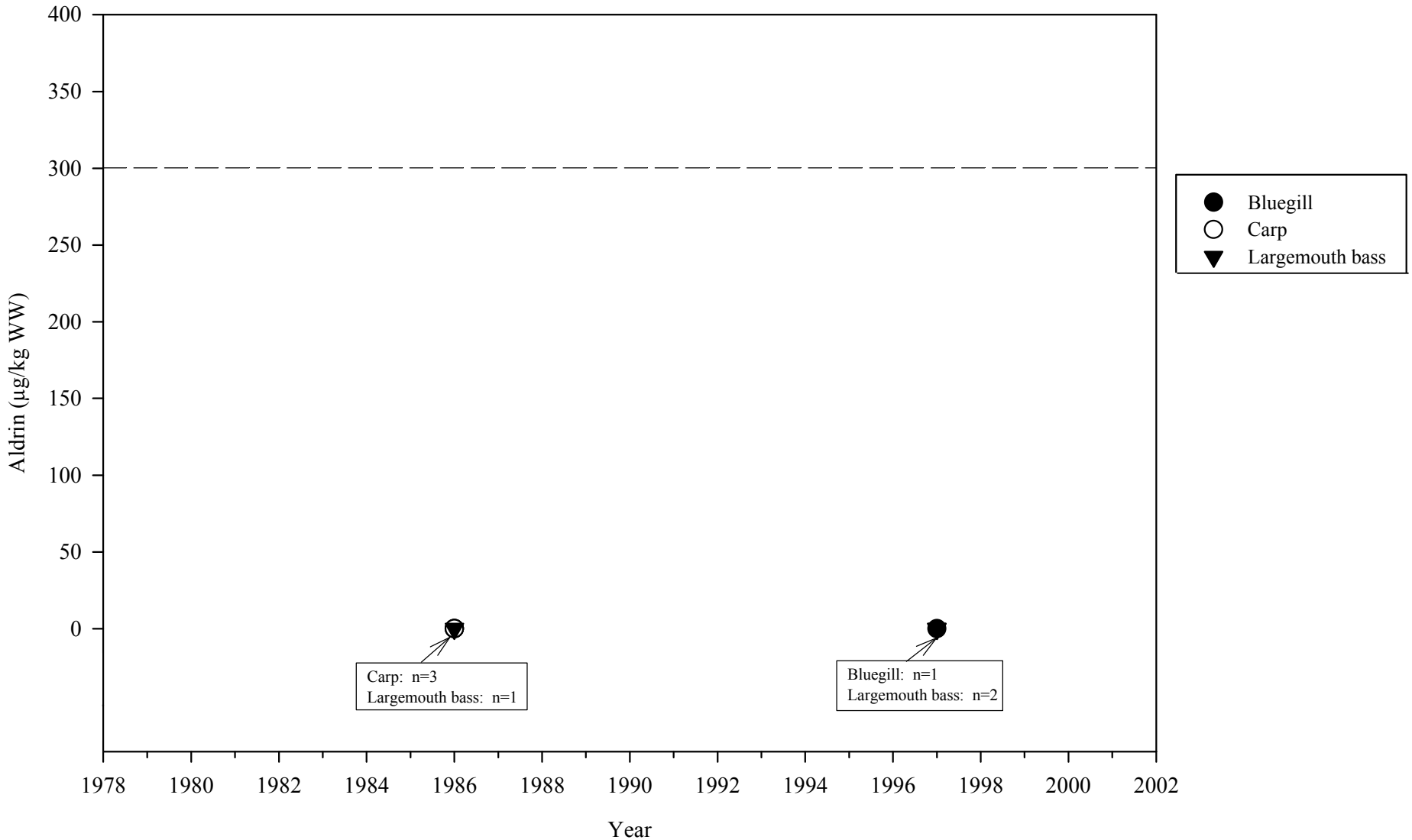

Figure 26. Summary of the available data on the concentrations of dieldrin in the edible tissues of fish collected from the Grand Calumet River Lagoons (dashed line indicates the USFDA Action Level; see Section 3.2 for a description of data treatment).

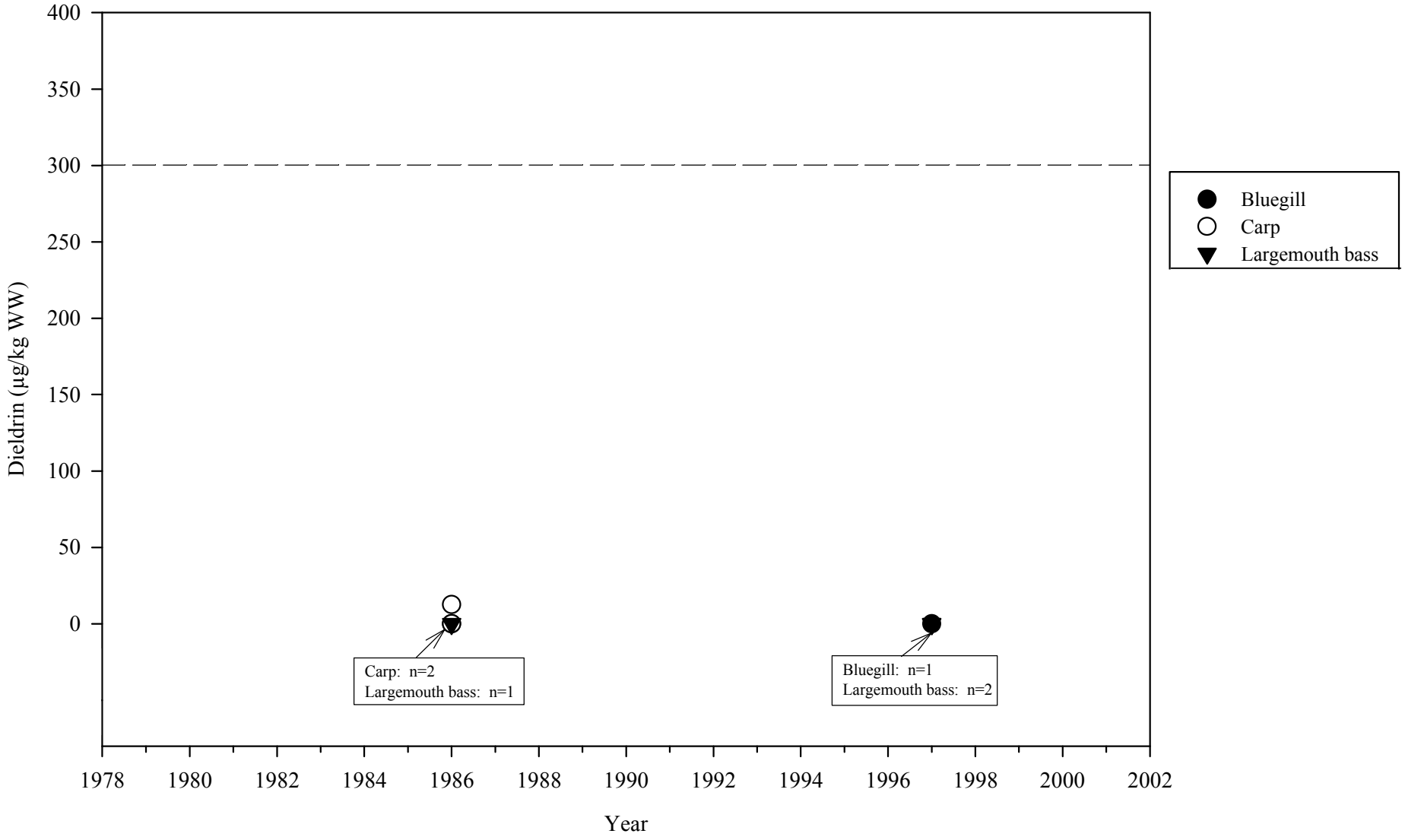

Figure 27. Summary of the available data on the concentrations of dieldrin + aldrin in the edible tissues of fish collected from the Grand Calumet River Lagoons (dashed line indicates the USFDA Action Level; see Section 3.2 for a description of data treatment).

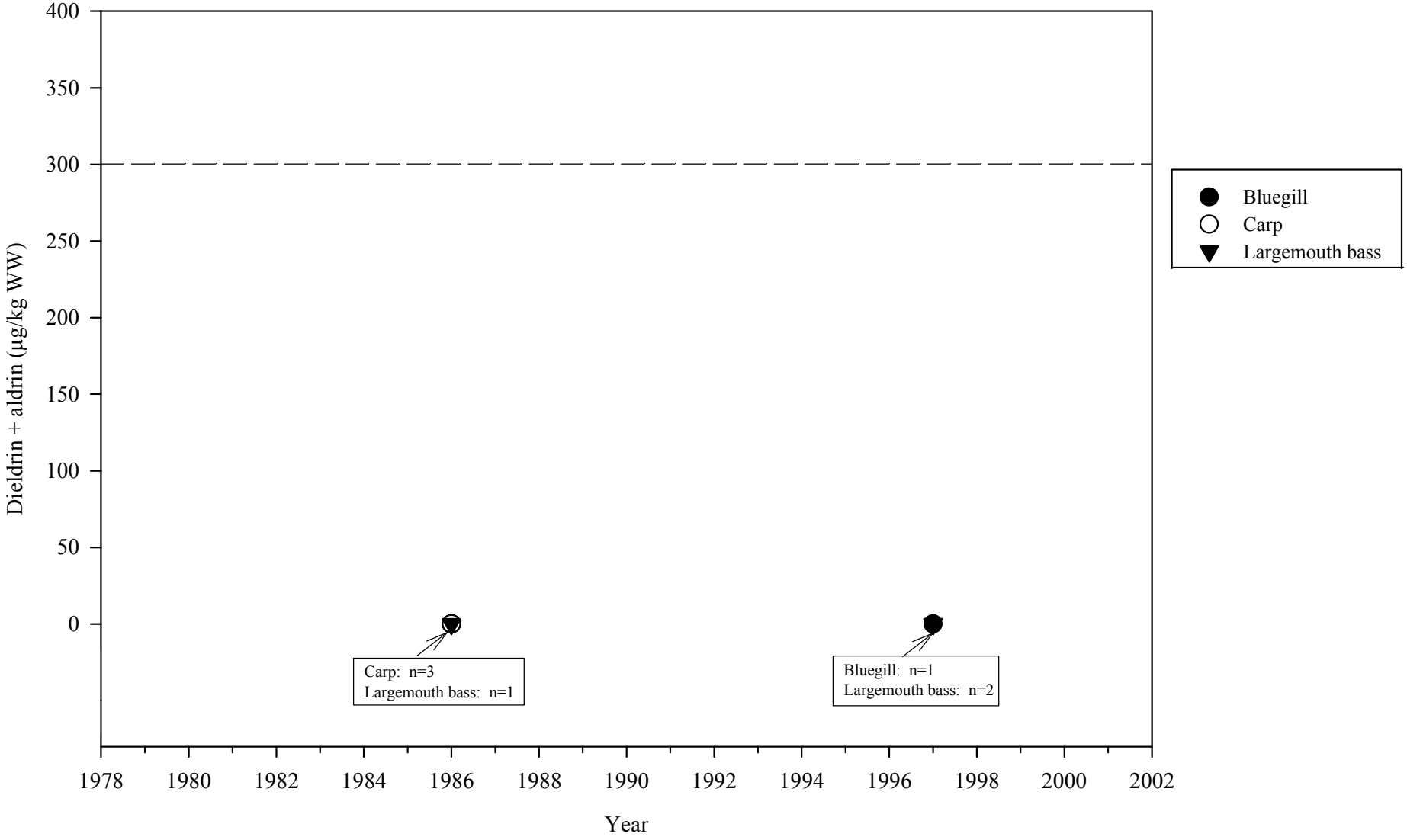

Figure 28. Summary of the available data on the concentrations of sum DDD in the edible tissues of fish collected from the Grand Calumet River Lagoons (USFDA Action Level is 5000 µg/kg WW; see Section 3.2 for a description of data treatment).

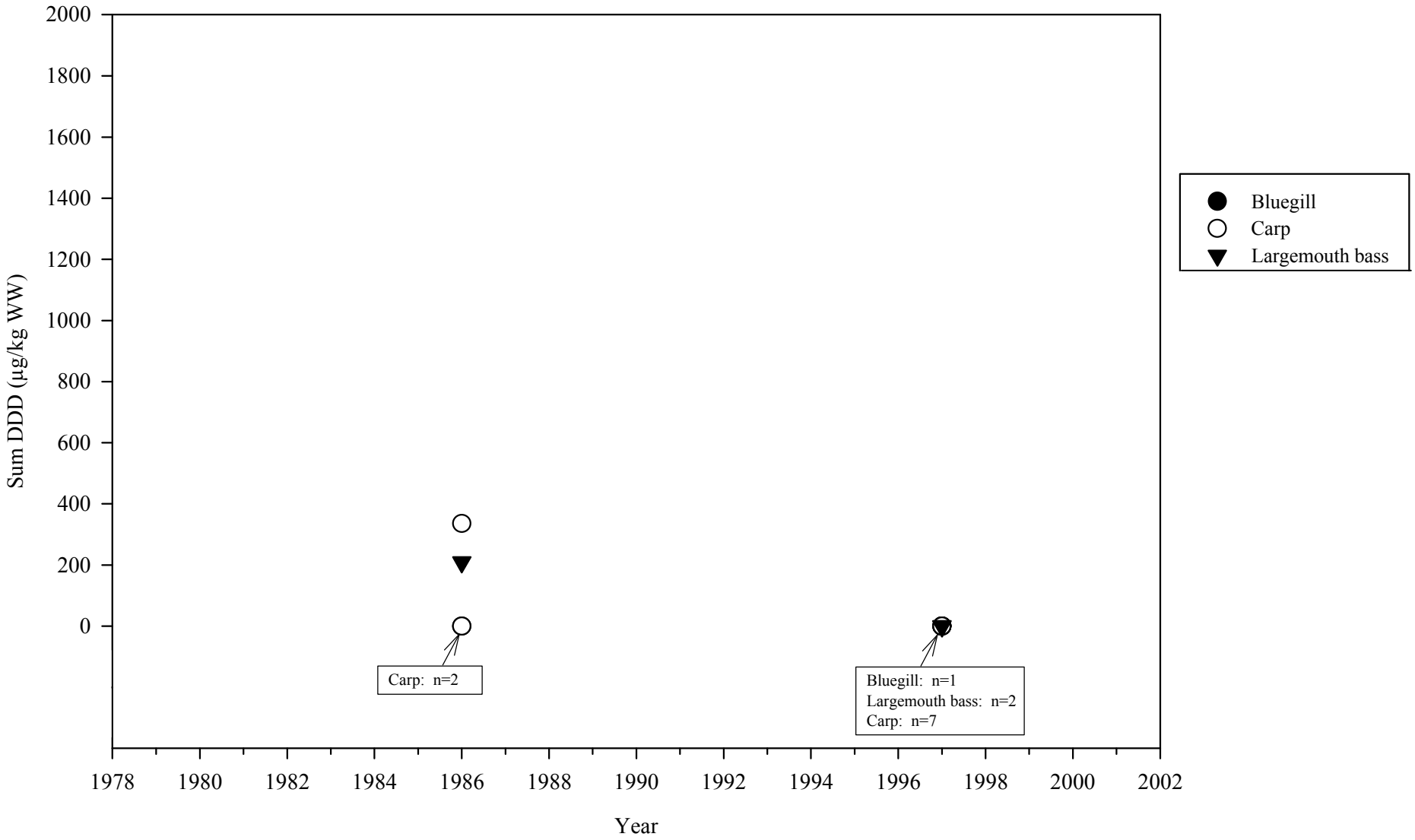

Figure 29. Summary of the available data on the concentrations of sum DDE in the edible tissues of fish collected from the Grand Calumet River Lagoons (USFDA Action Level is 5000 µg/kg WW; see Section 3.2 for a description of data treatment).

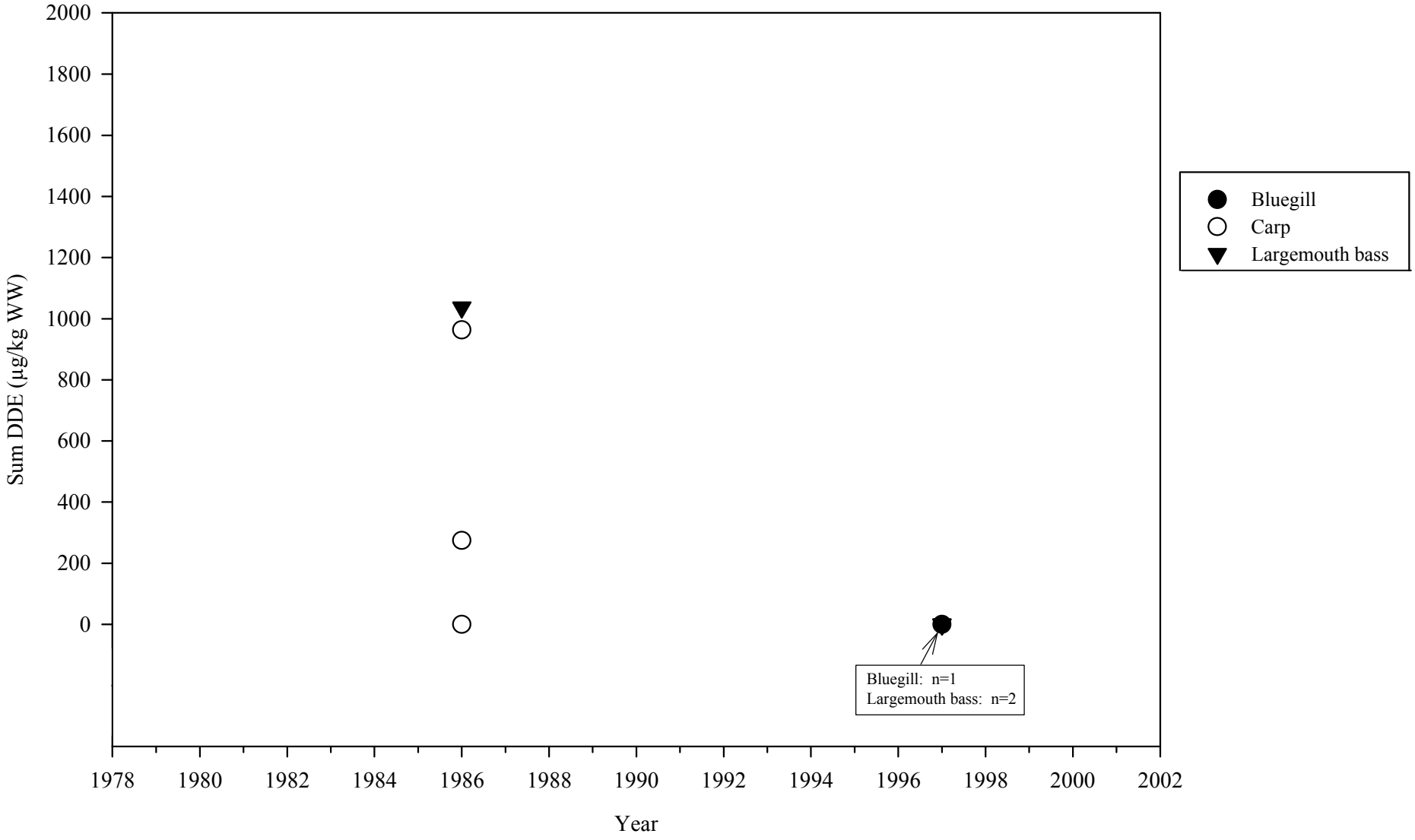

Figure 30. Summary of the available data on the concentrations of sum DDT in the edible tissues of fish collected from the Grand Calumet River Lagoons (USFDA Action Level is 5000 µg/kg WW; see Section 3.2 for a description of data treatment).

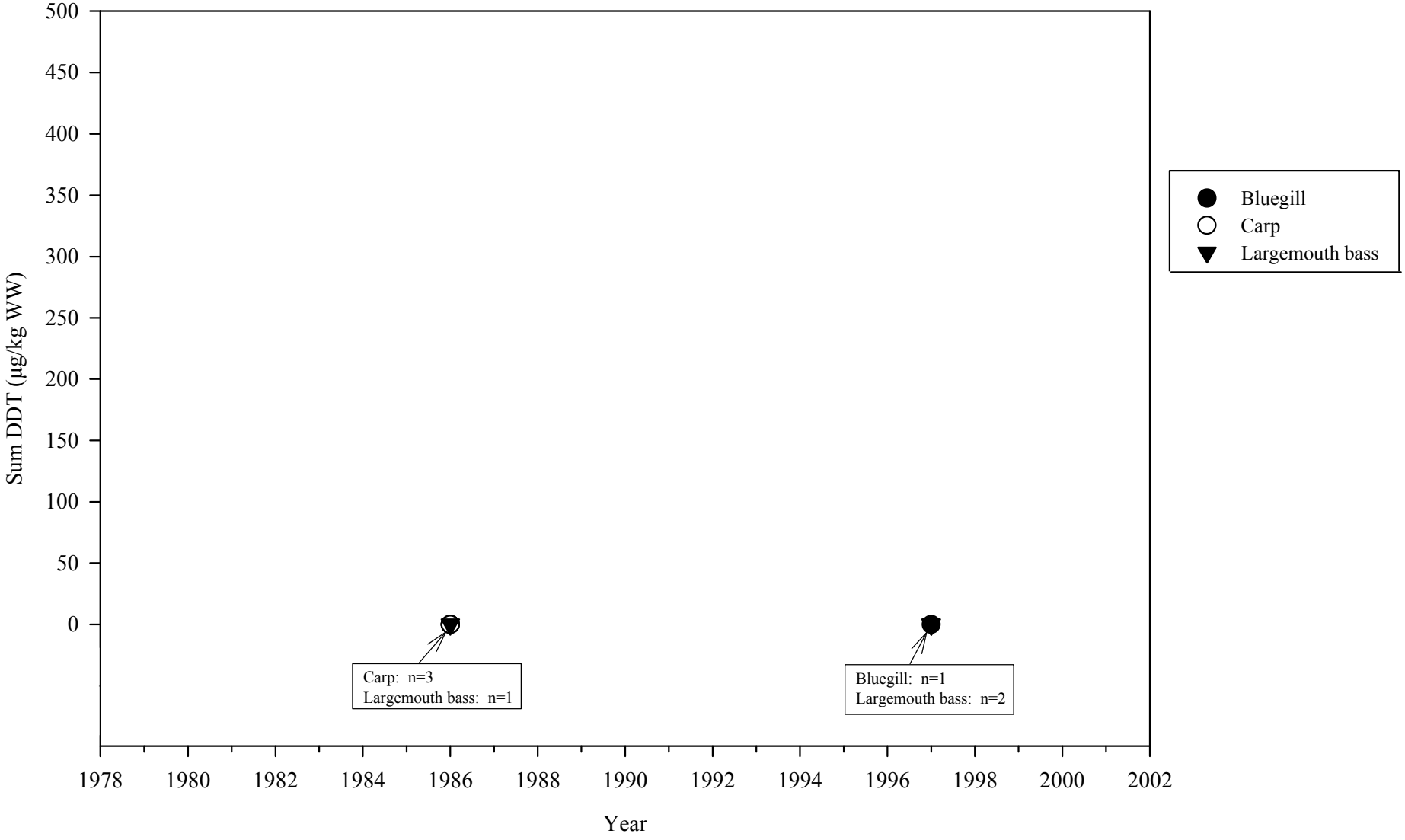

Figure 31. Summary of the available data on the concentrations of total DDT in the edible tissues of fish collected from the Grand Calumet River Lagoons (USFDA Action Level is 5000 µg/kg WW; see Section 3.2 for a description of data treatment).

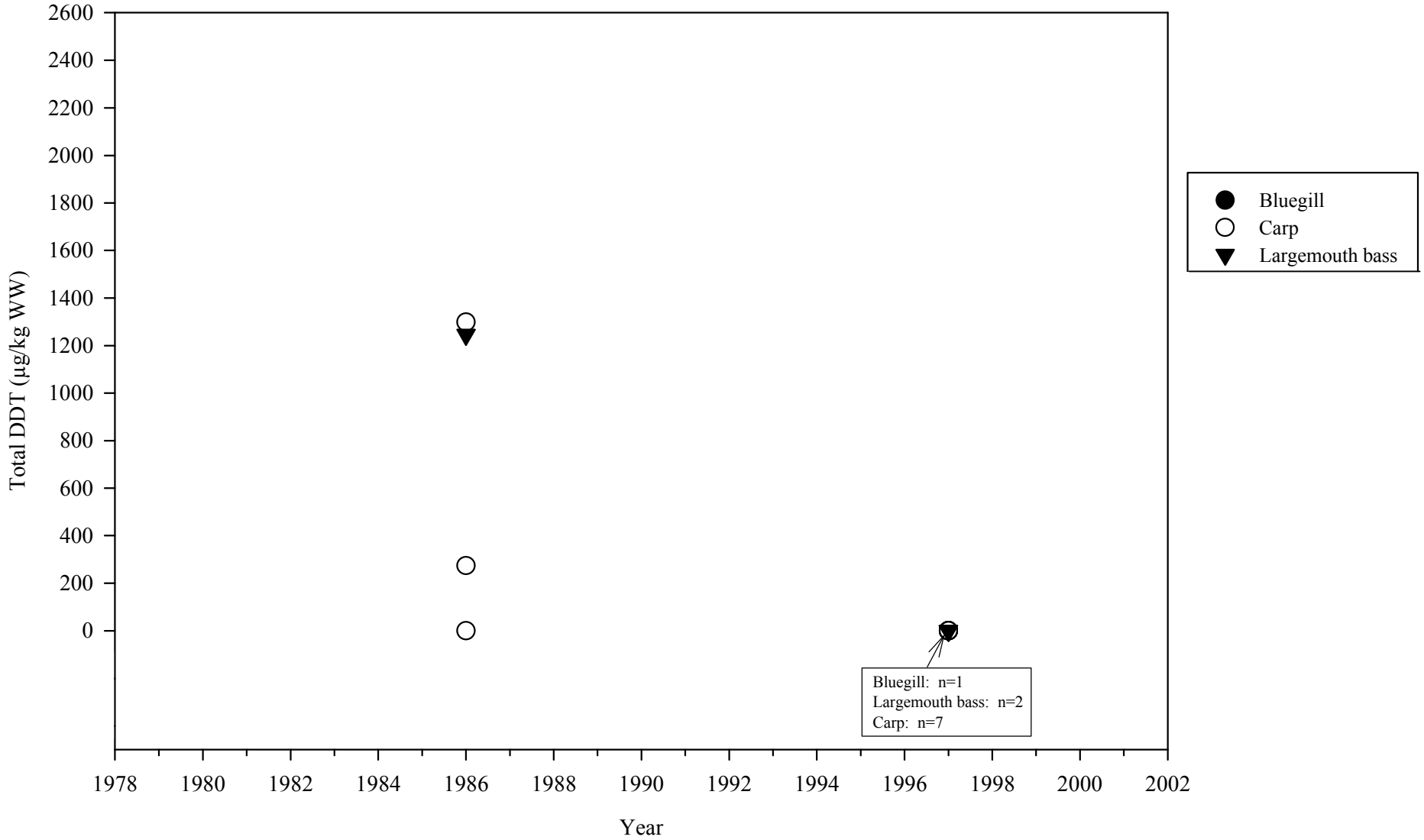

Figure 32. Summary of the available data on the concentrations of heptachlor in the edible tissues of fish collected from the Grand Calumet River Lagoons (USFDA Action Level is 300 µg/kg WW; see Section 3.2 for a description of data treatment).

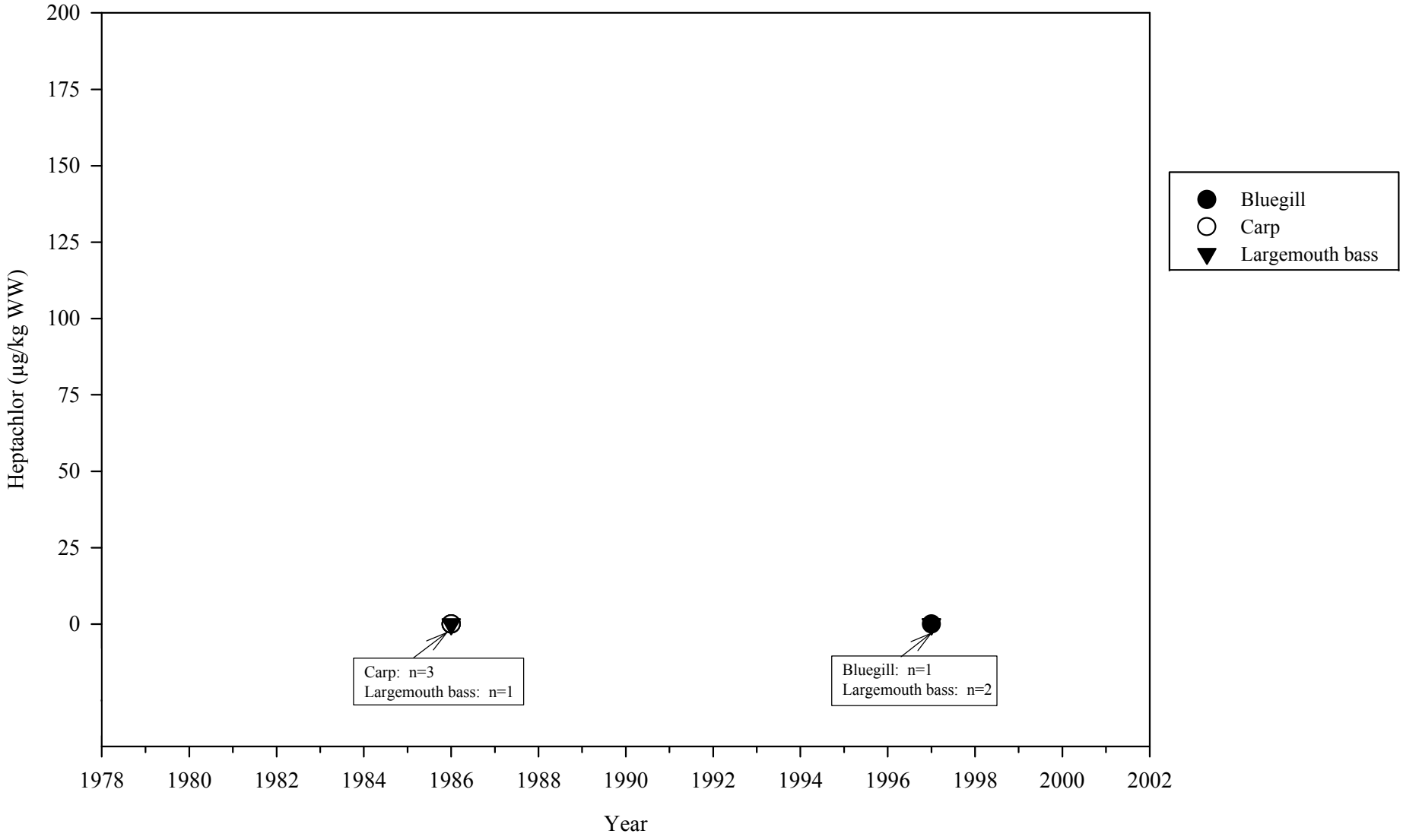

Figure 33. Summary of the available data on the concentrations of heptachlor epoxide in the edible tissues of fish collected from the Grand Calumet River Lagoons (USFDA Action Level is 300 µg/kg WW; see Section 3.2 for a description of data treatment).

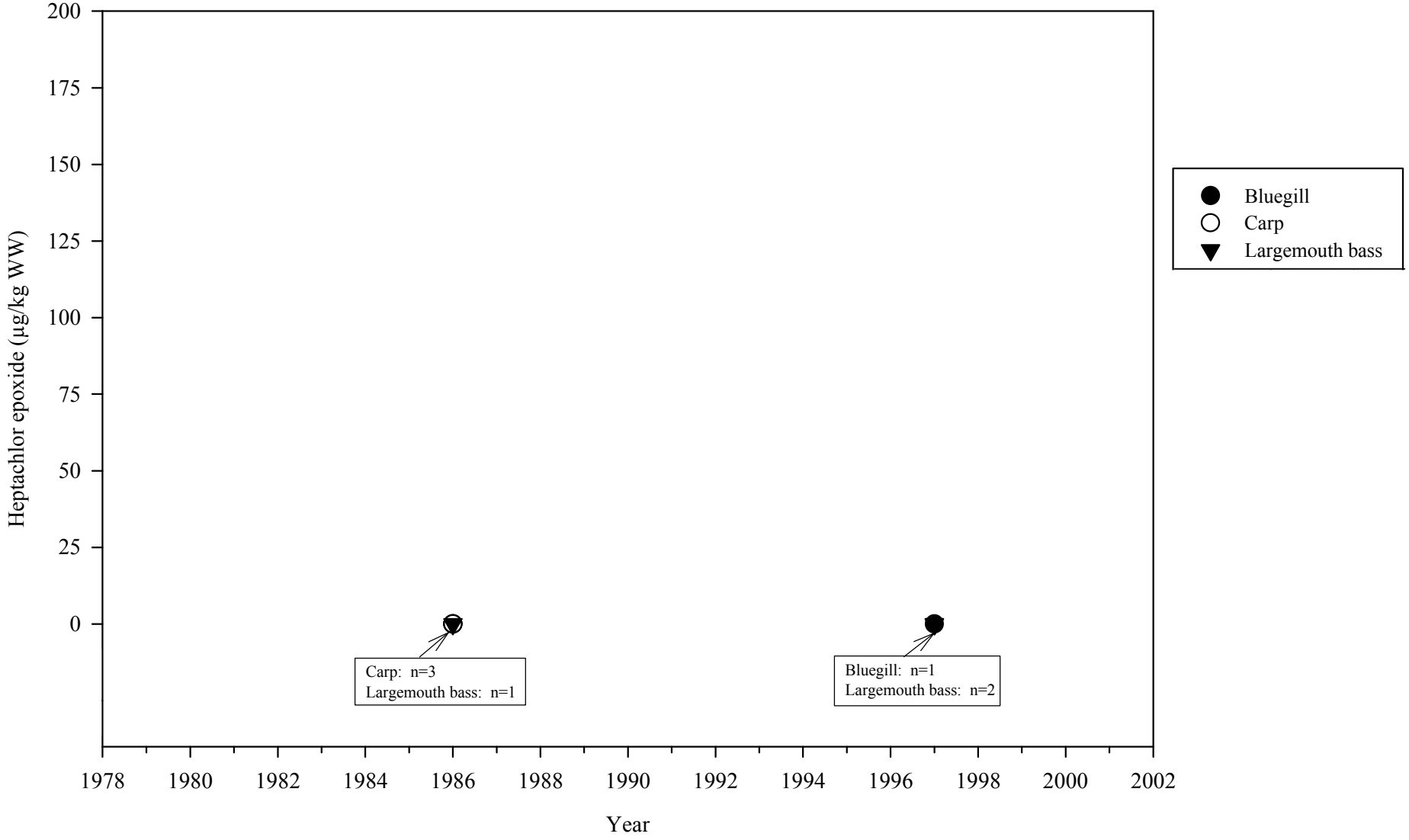

Figure 34. Summary of the available data on the concentrations of heptachlor + heptachlor epoxide in the edible tissues of fish collected from the Grand Calumet River Lagoons (USFDA Action Level is 300 µg/kg WW; see Section 3.2 for a description of data treatment).

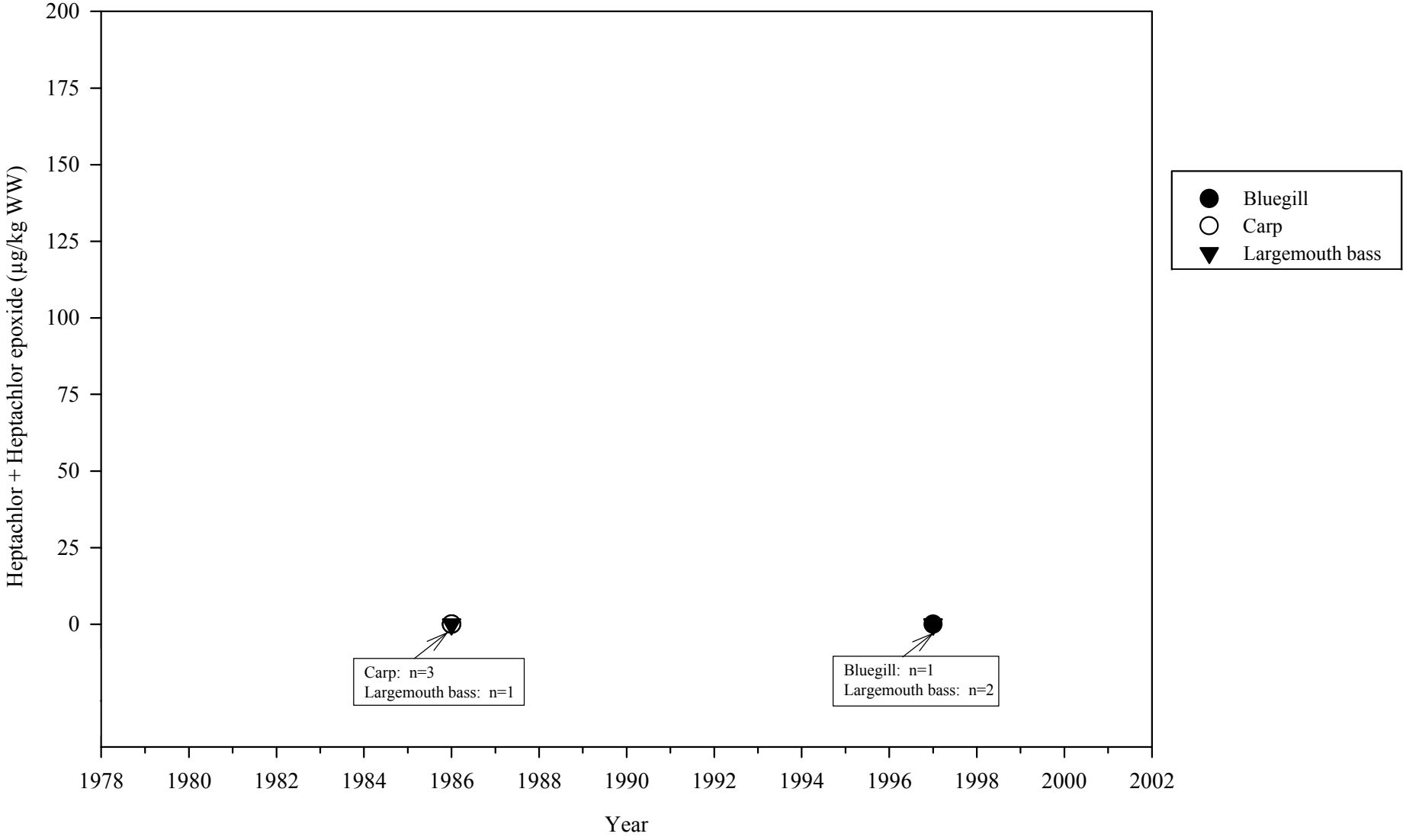

Figure 35. Summary of the available data on the concentrations of total chlordane in the edible tissues of fish collected from the Grand Calumet River Lagoons (dashed line indicates the USFDA Action Level; see Section 3.2 for a description of data treatment).

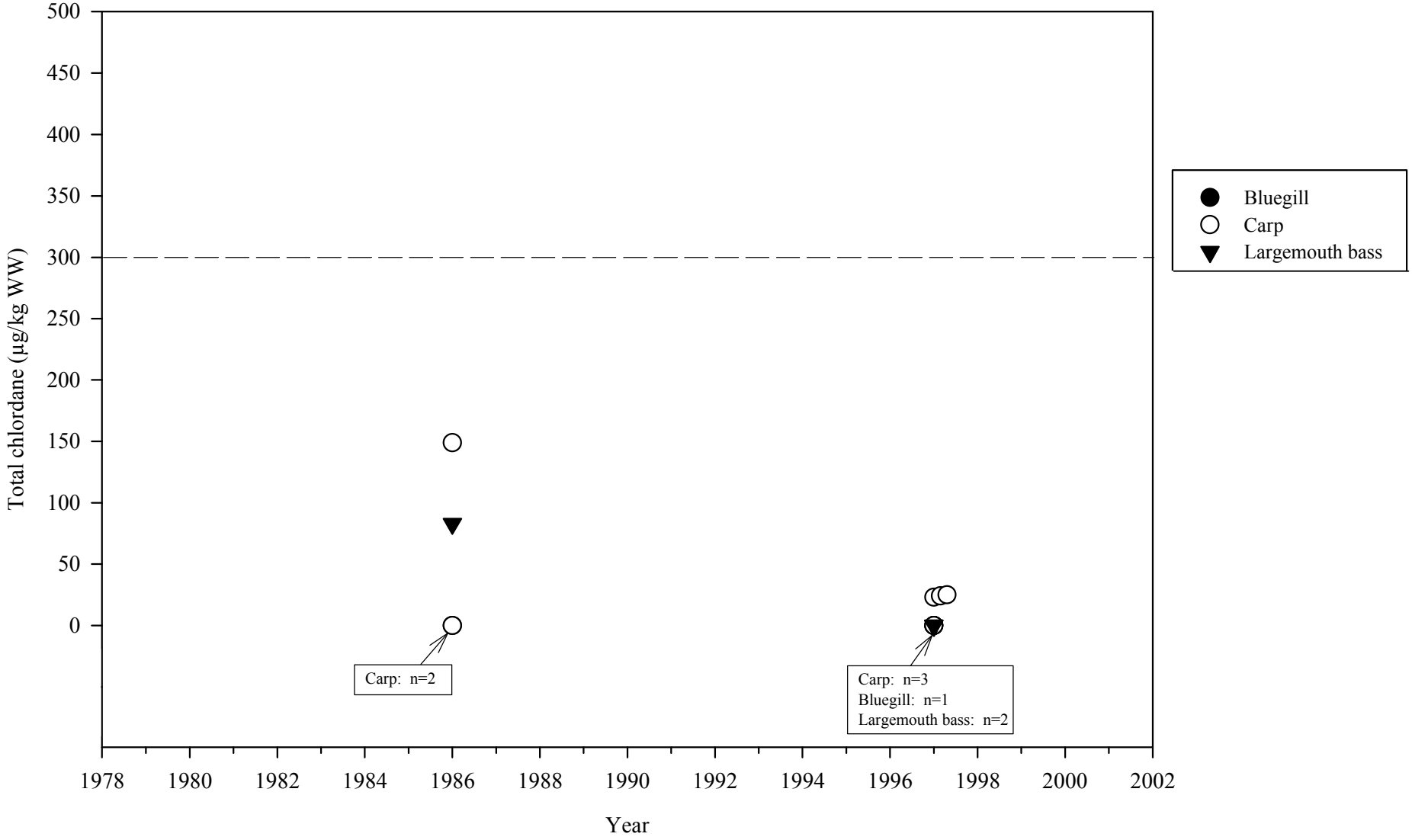

Figure 36. Summary of the available data on the concentrations of total PCBs in the edible tissues of fish collected from the Grand Calumet River Lagoons (USFDA Tolerance Level is 2000 µg/kg WW; see Section 3.2 for a description of data treatment].

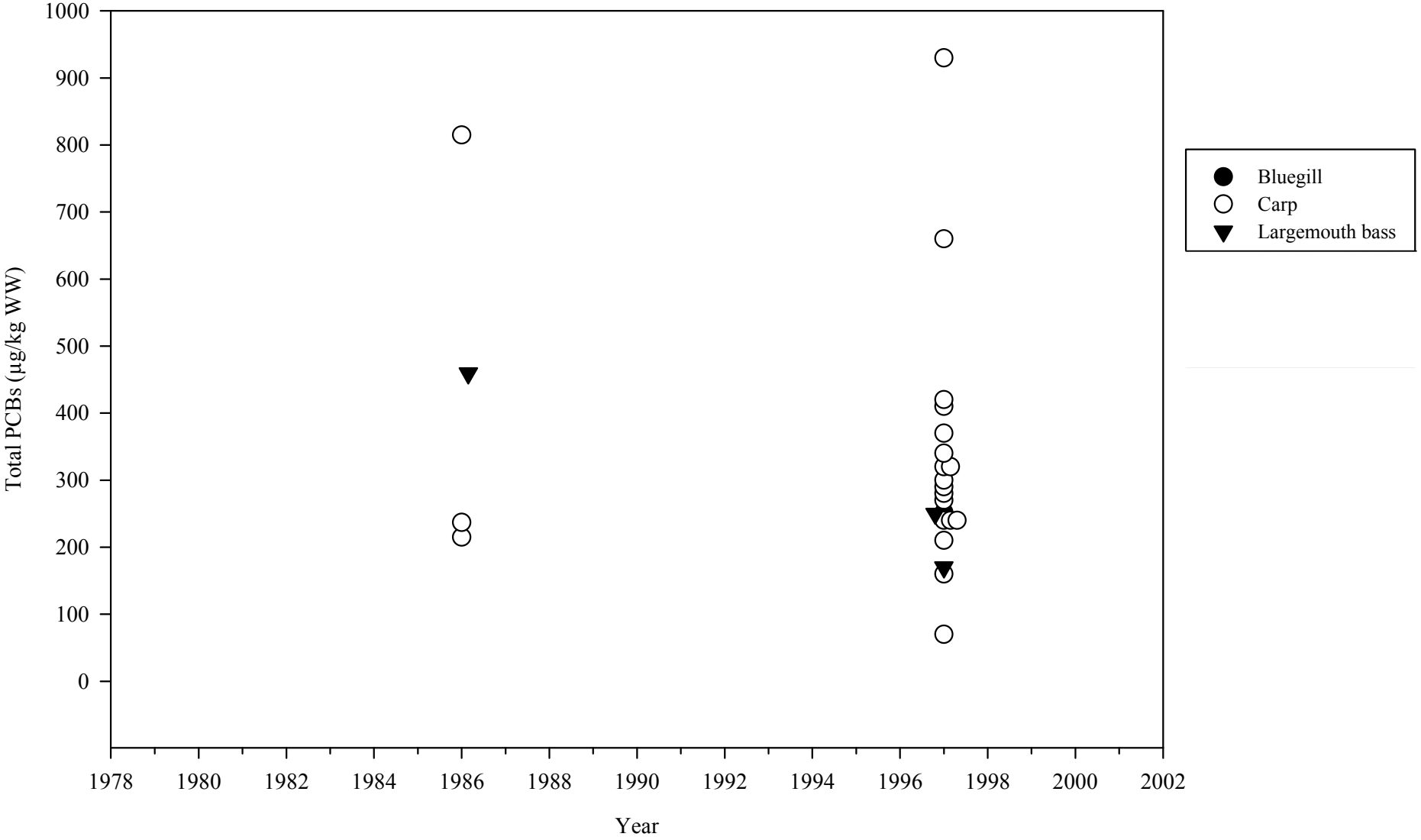

Figure 37. Summary of the available data on the concentrations of mercury in the edible tissues of fish collected from the Grand Calumet River Lagoons [solid line indicates the ISDH Group 1 threshold (0.16 mg/kg WW); see Section 3.2 for a description of data treatment].

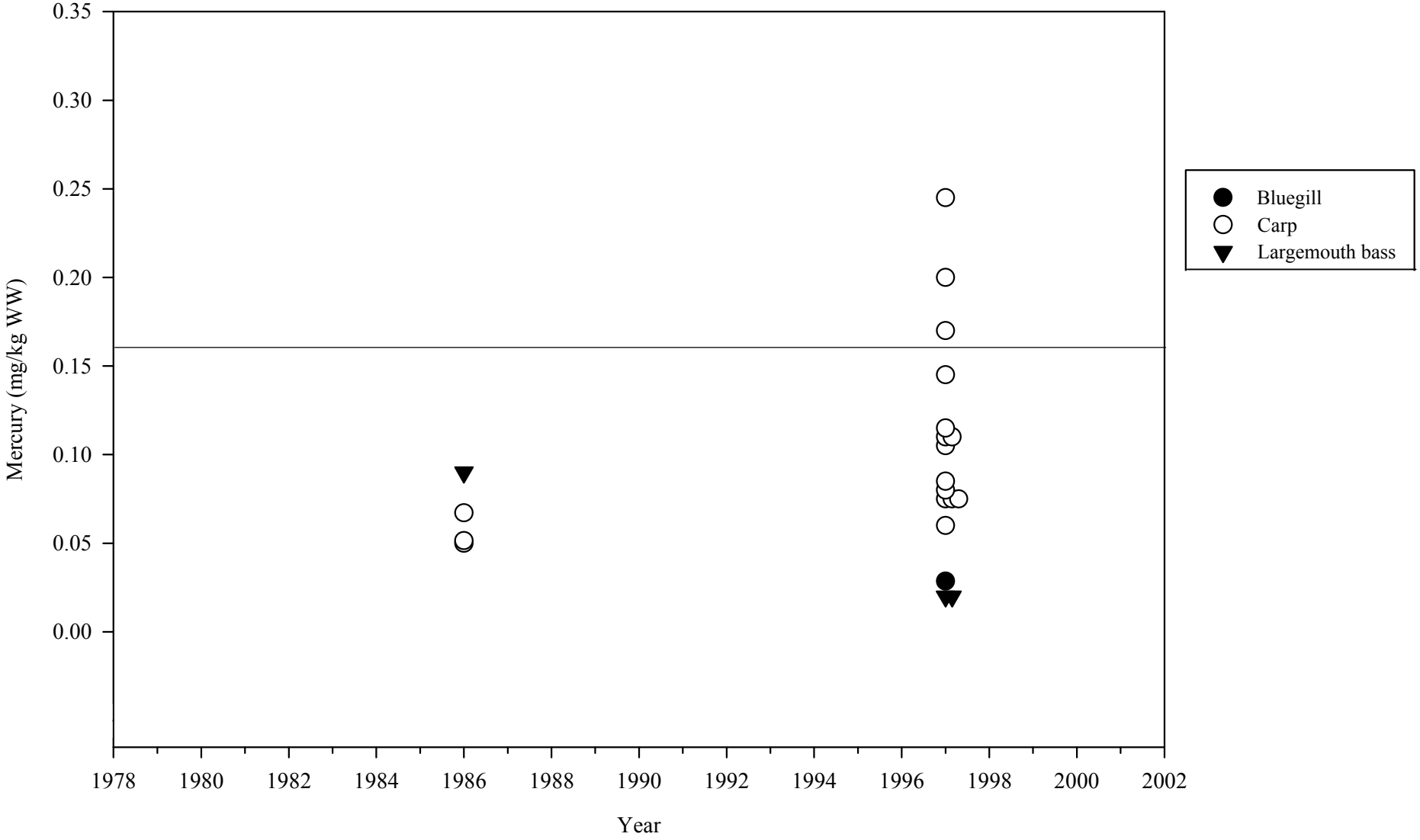

Figure 38. Summary of the available data on the concentrations of total PCBs in the edible tissues of fish collected from the Grand Calumet River Lagoons [solid line indicates the ISDH Group 1 threshold for skin-on scaleless fillets (50 µg/kg WW); dotted line indicates the ISDH Group 1 threshold for skin-off fillets (36 µg/kg WW); see Section 3.2 for a description of data treatment].

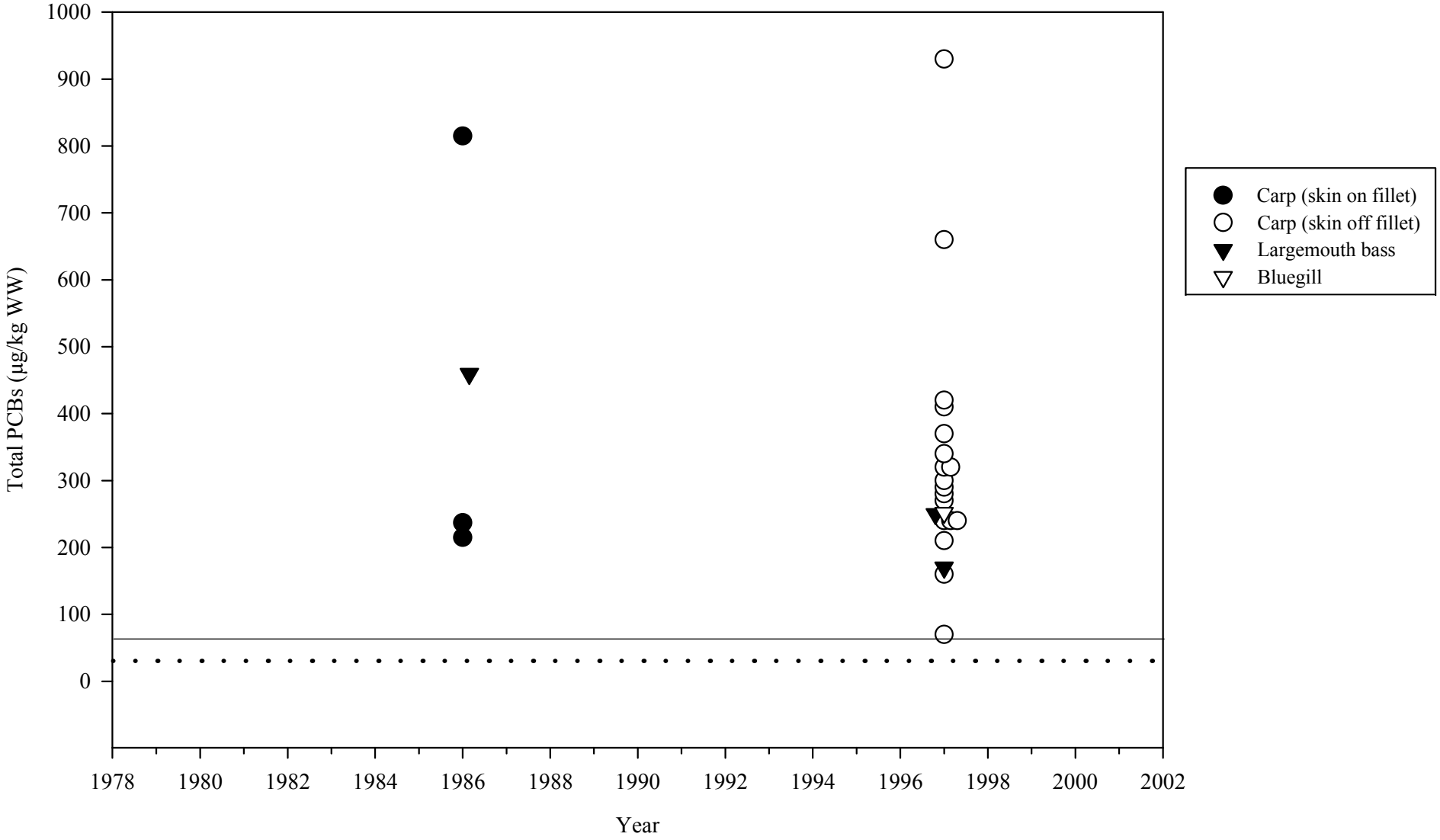

Figure 39. Summary of the available data on the concentrations of mercury in the edible tissues of fish collected from Indiana Harbor and Lake Michigan (USFDA Action Level is 1.0 mg/kg WW; see Section 3.2 for a description of data treatment).

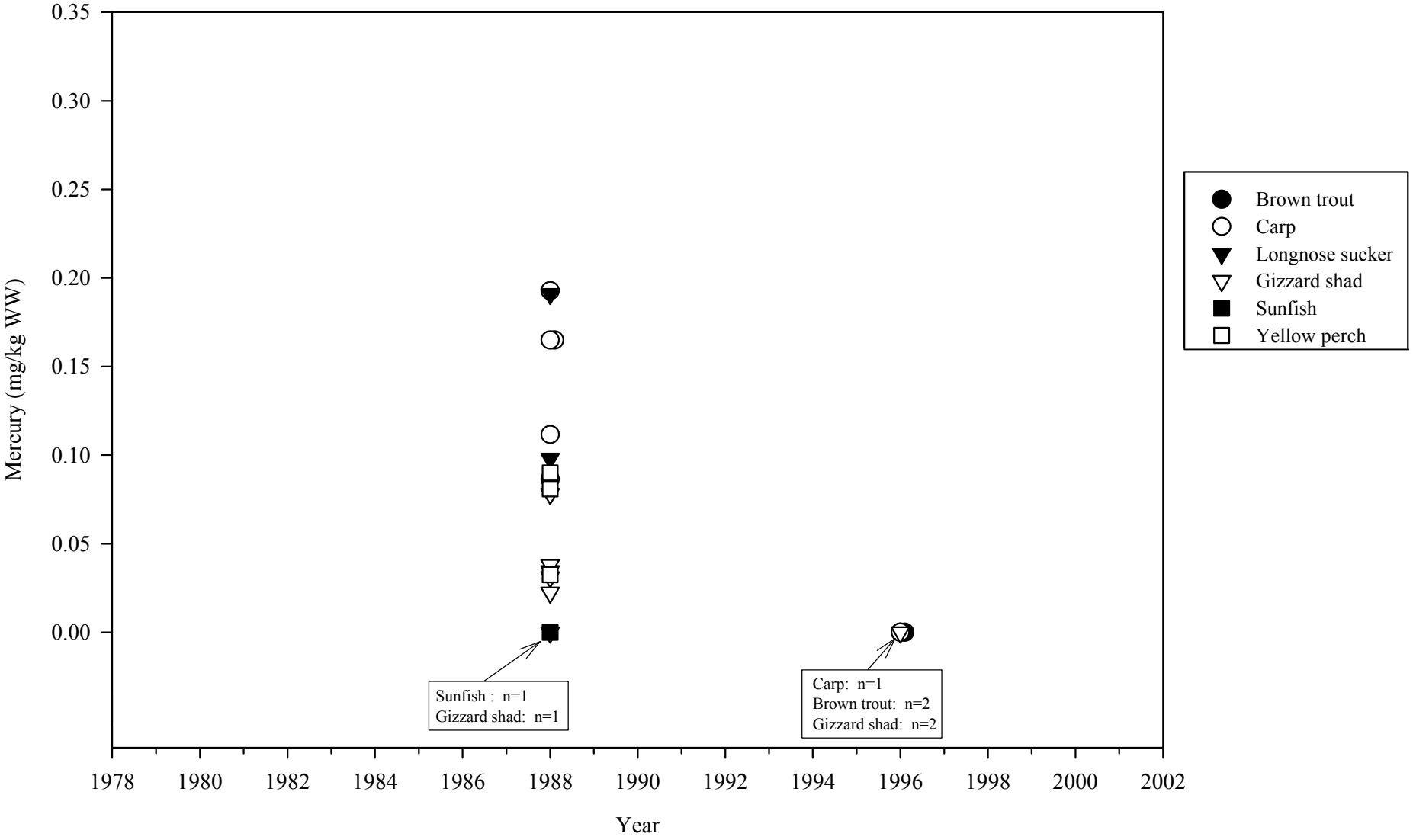

Figure 40. Summary of the available data on the concentrations of aldrin in the edible tissues of fish collected from Indiana Harbor and Lake Michigan (dashed line indicates the USFDA Action Level; see Section 3.2 for a description of data treatment).

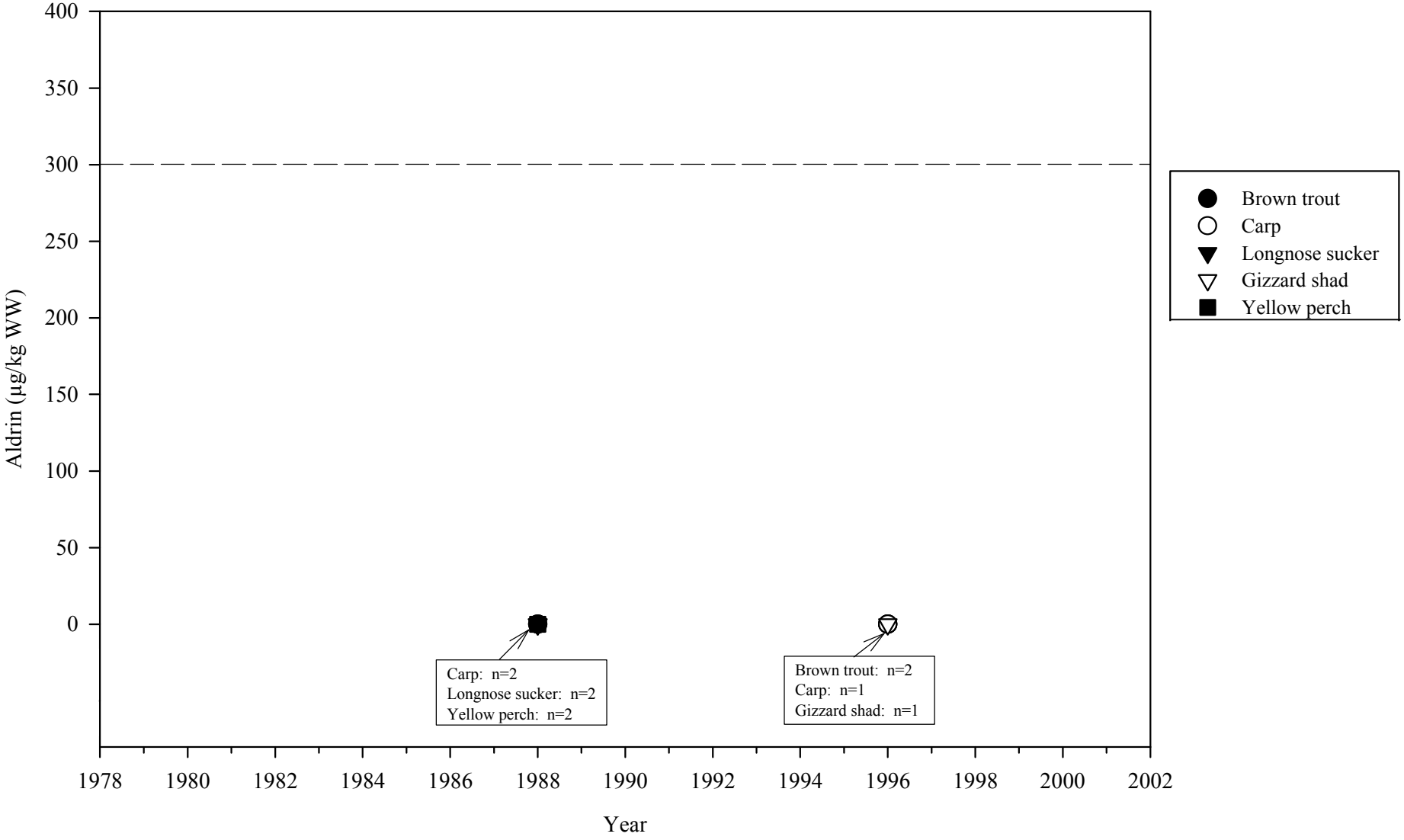

Figure 41. Summary of the available data on the concentrations of dieldrin in the edible tissues of fish collected from Indiana Harbor and Lake Michigan (dashed line indicates the USFDA Action Level; see Section 3.2 for a description of data treatment).

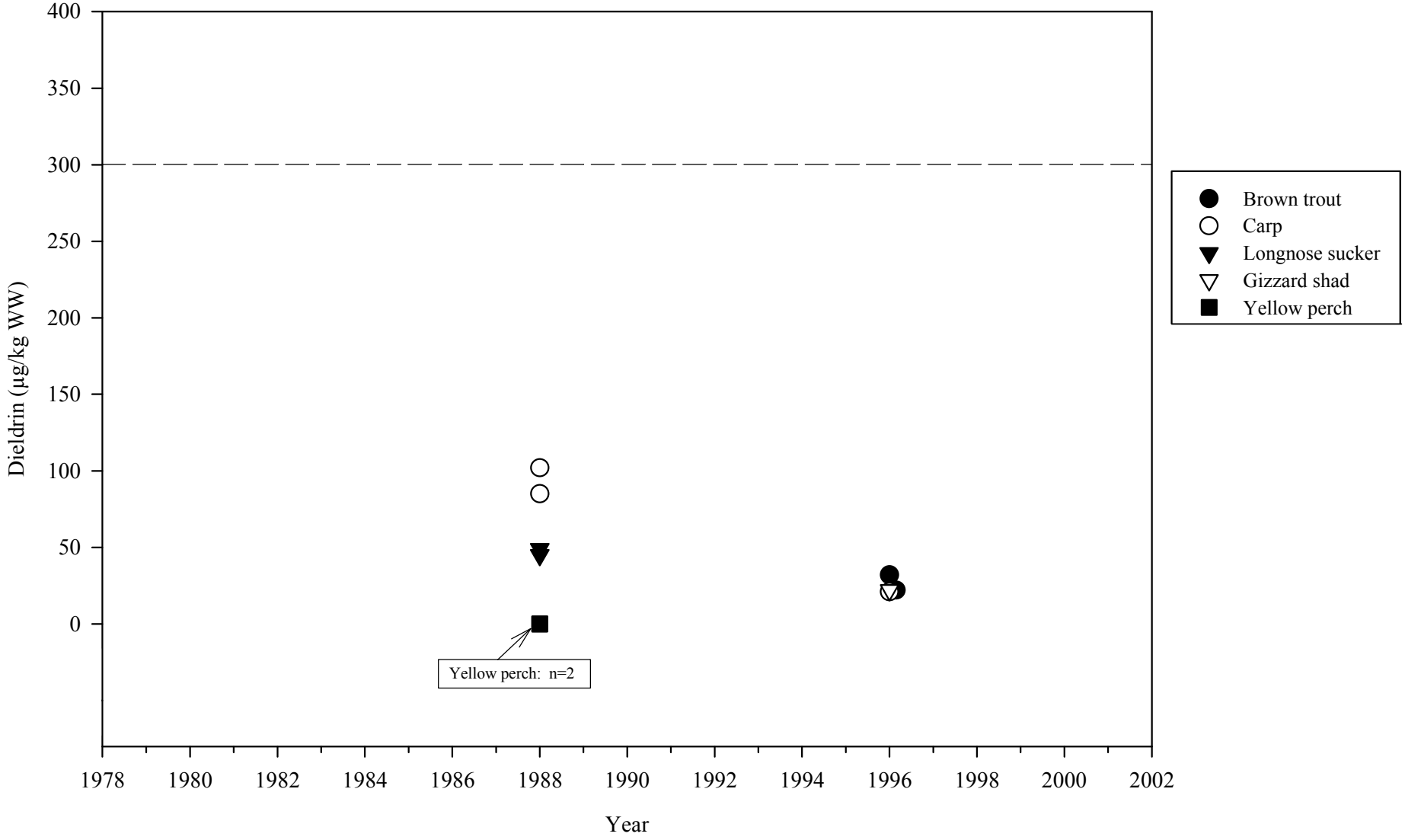

Figure 42. Summary of the available data on the concentrations of dieldrin + aldrin in the edible tissues of fish collected from Indiana Harbor and Lake Michigan (dashed line indicates the USFDA Action Level; see Section 3.2 for a description of data treatment).

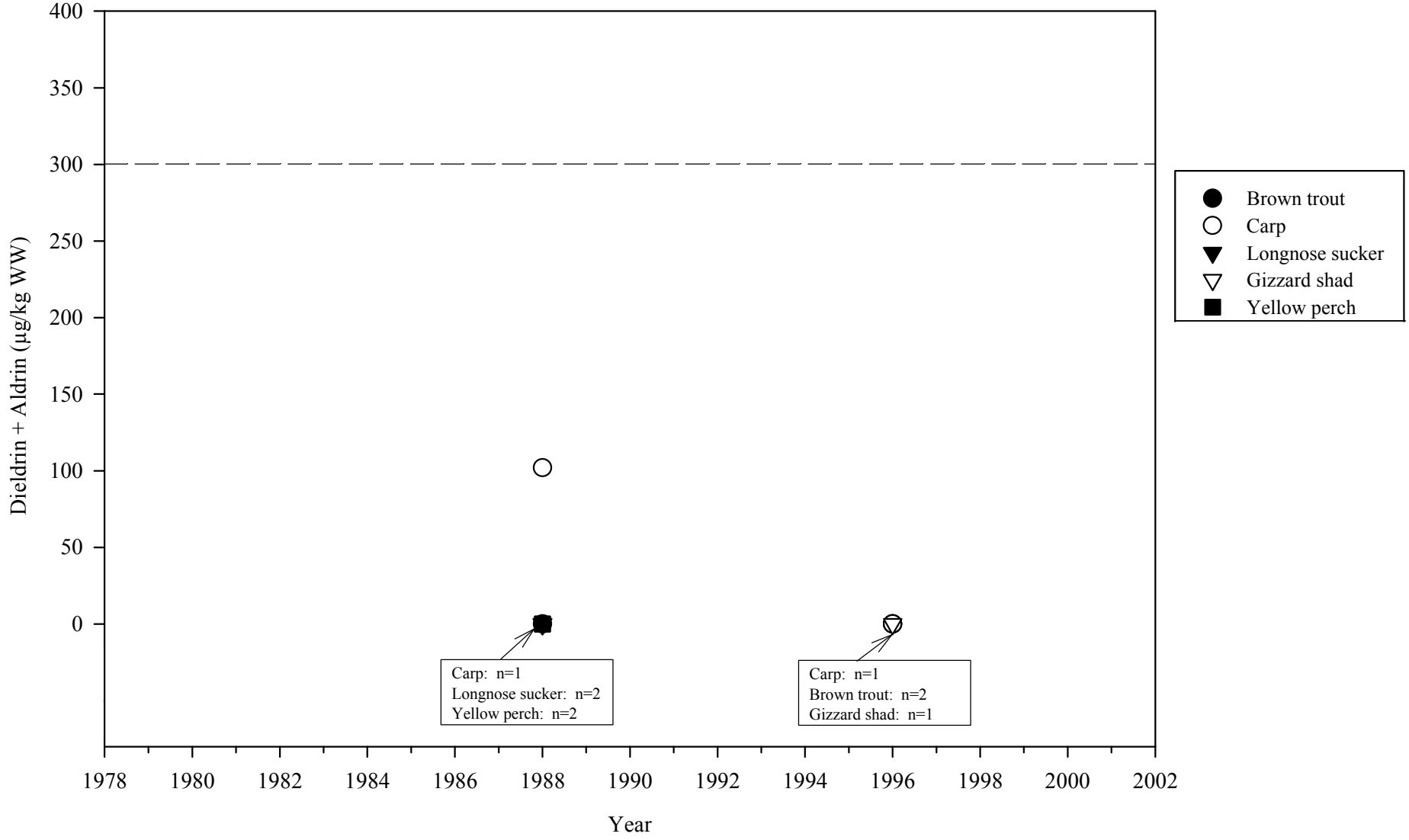

Figure 43. Summary of the available data on the concentrations of sum DDD in the edible tissues of fish collected from Indiana Harbor and Lake Michigan (USFDA Action Level is 5000 µg/kg WW; see Section 3.2 for a description of data treatment).

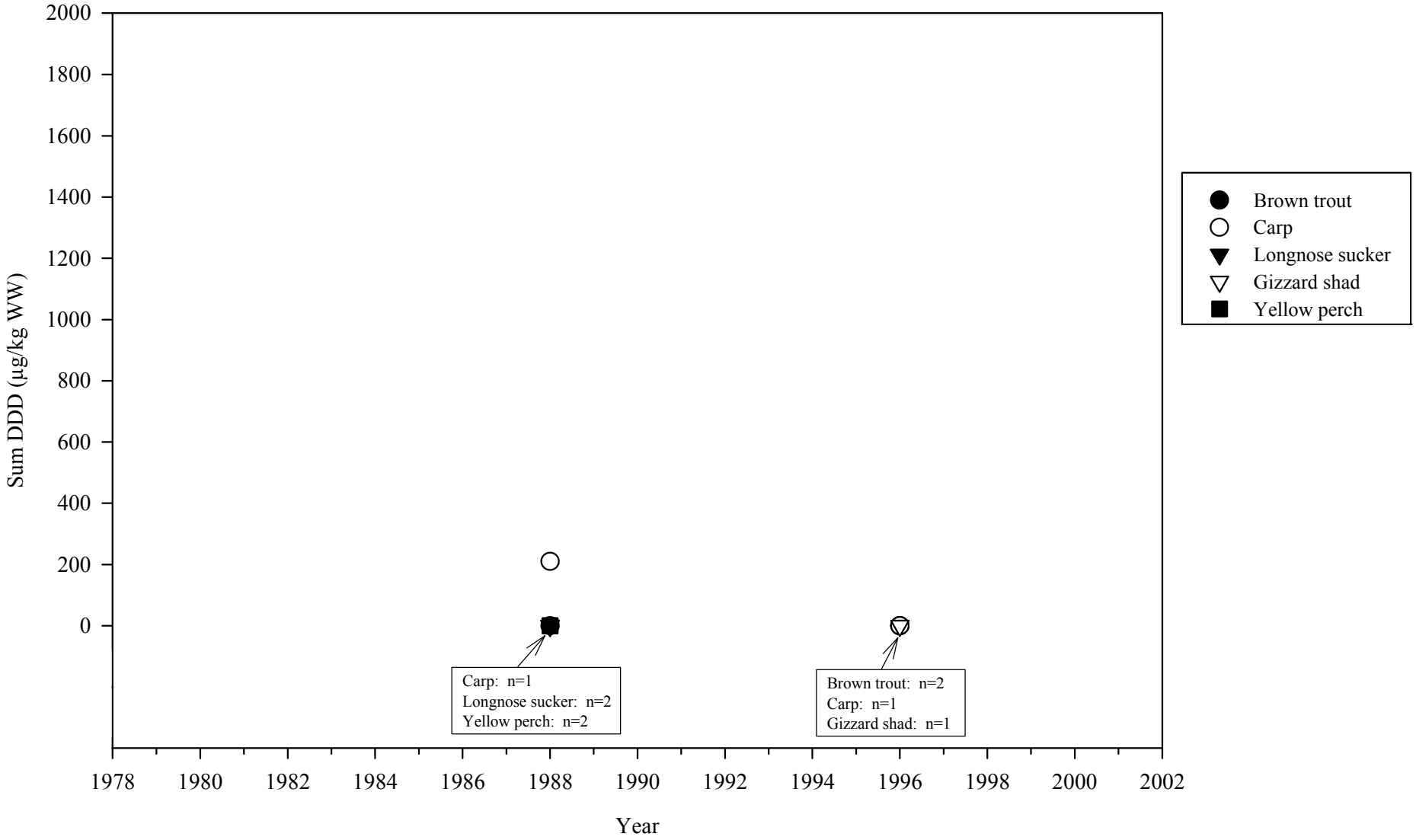

Figure 44. Summary of the available data on the concentrations of sum DDE in the edible tissues of fish collected from Indiana Harbor and Lake Michigan (USFDA Action Level is 5000 µg/kg WW; see Section 3.2 for a description of data treatment).

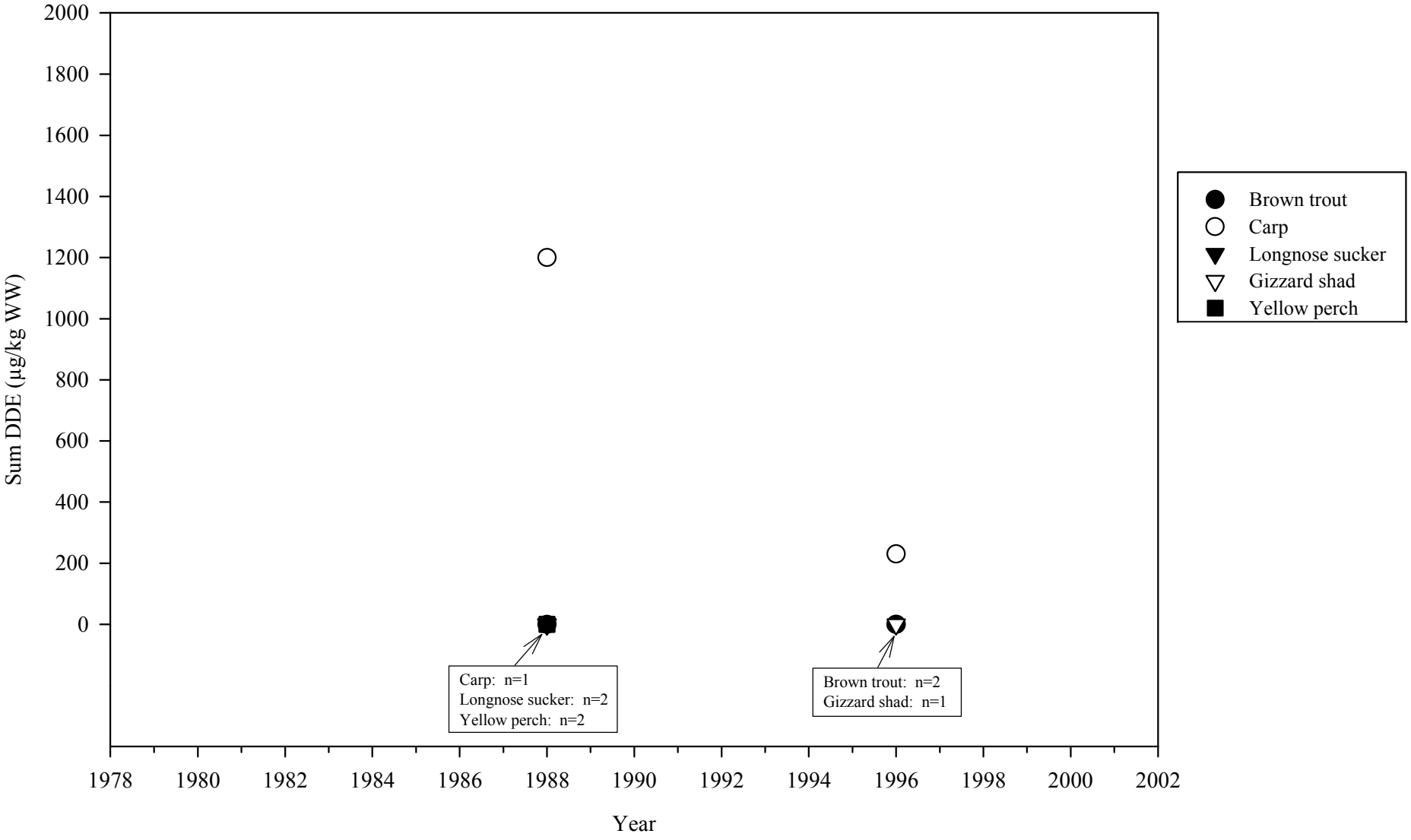

Figure 45. Summary of the available data on the concentrations of sum DDT in the edible tissues of fish collected from Indiana Harbor and Lake Michigan (USFDA Action Level is 5000 µg/kg WW; see Section 3.2 for a description of data treatment).

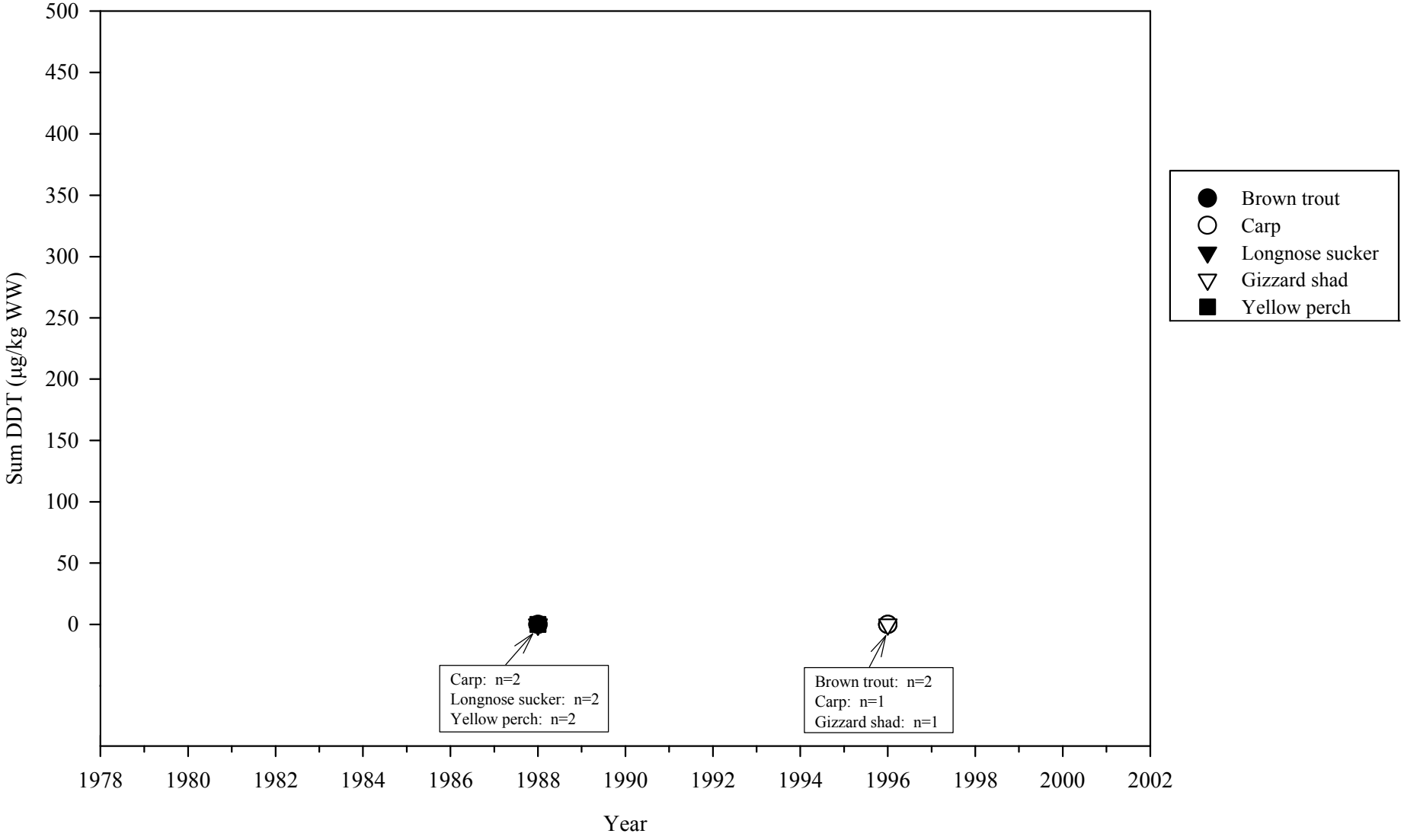

Figure 46. Summary of the available data on the concentrations of total DDT in the edible tissues of fish collected from Indiana Harbor and Lake Michigan (USFDA Action Level is 5000 µg/kg WW; see Section 3.2 for a description of data treatment).

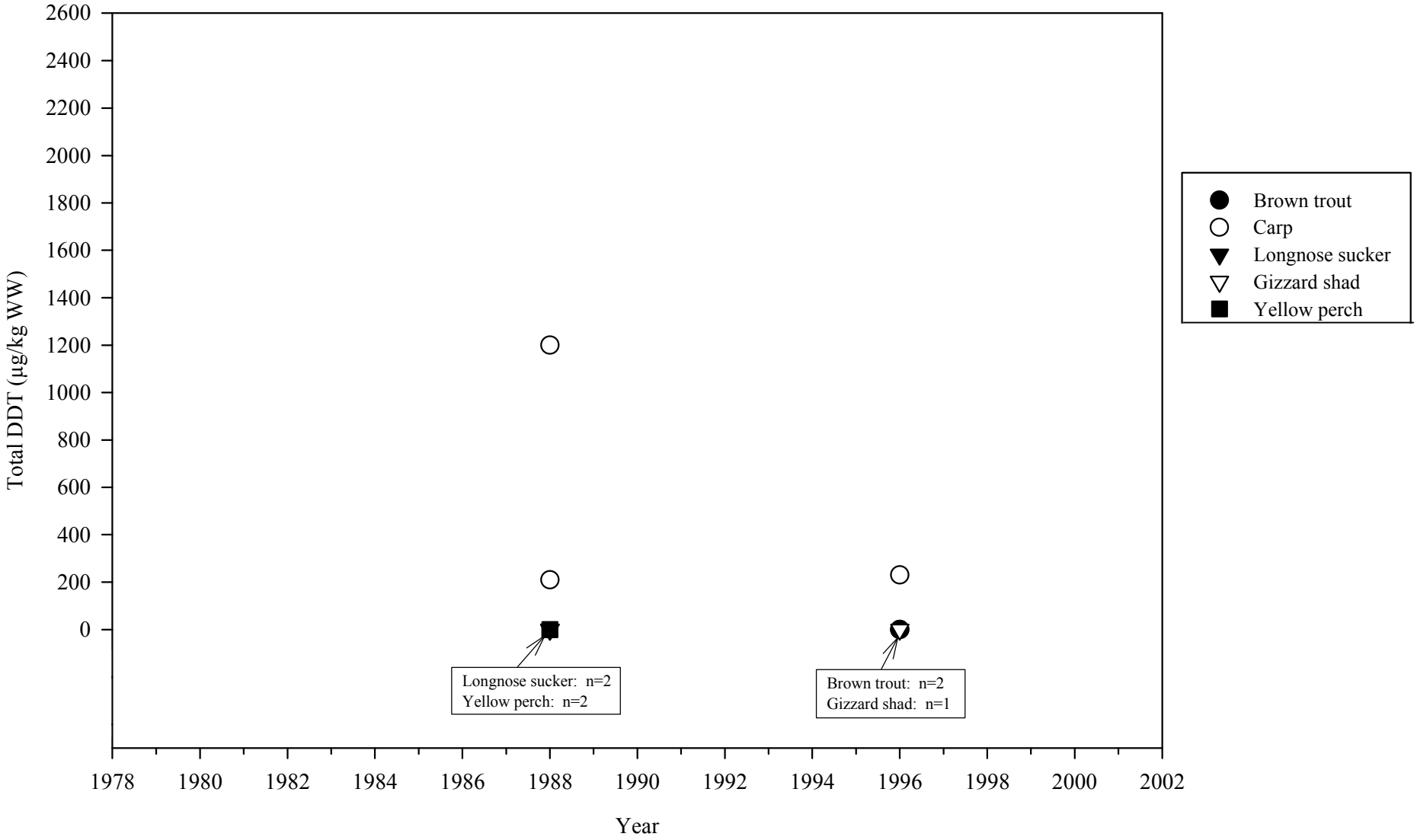

Figure 47. Summary of the available data on the concentrations of heptachlor in the edible tissues of fish collected from Indiana Harbor and Lake Michigan (USFDA Action Level is 300 µg/kg WW; see Section 3.2 for a description of data treatment).

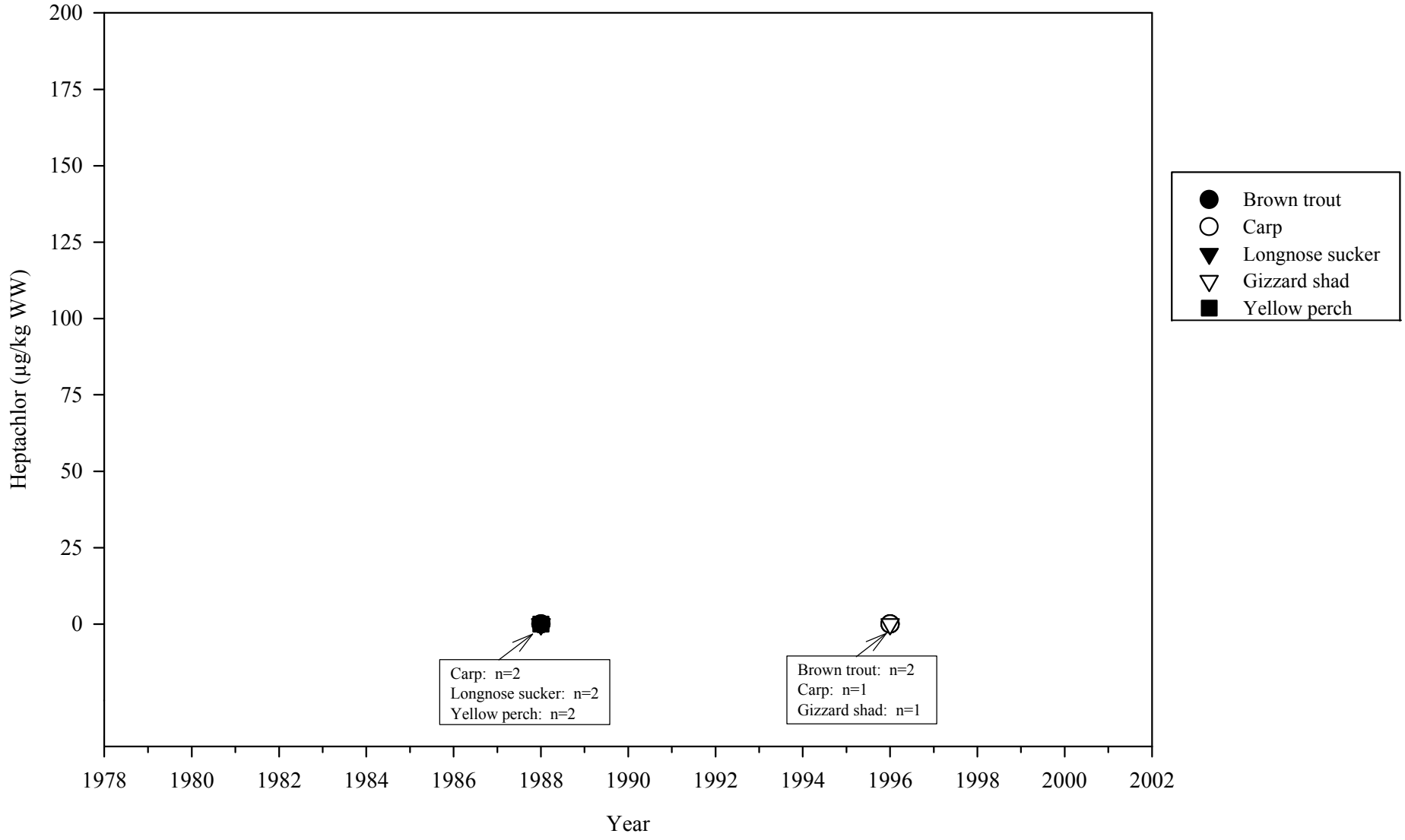

Figure 48. Summary of the available data on the concentrations of heptachlor epoxide in the edible tissues of fish collected from Indiana Harbor and Lake Michigan (USFDA Action Level is 300 µg/kg WW; see Section 3.2 for a description of data treatment).

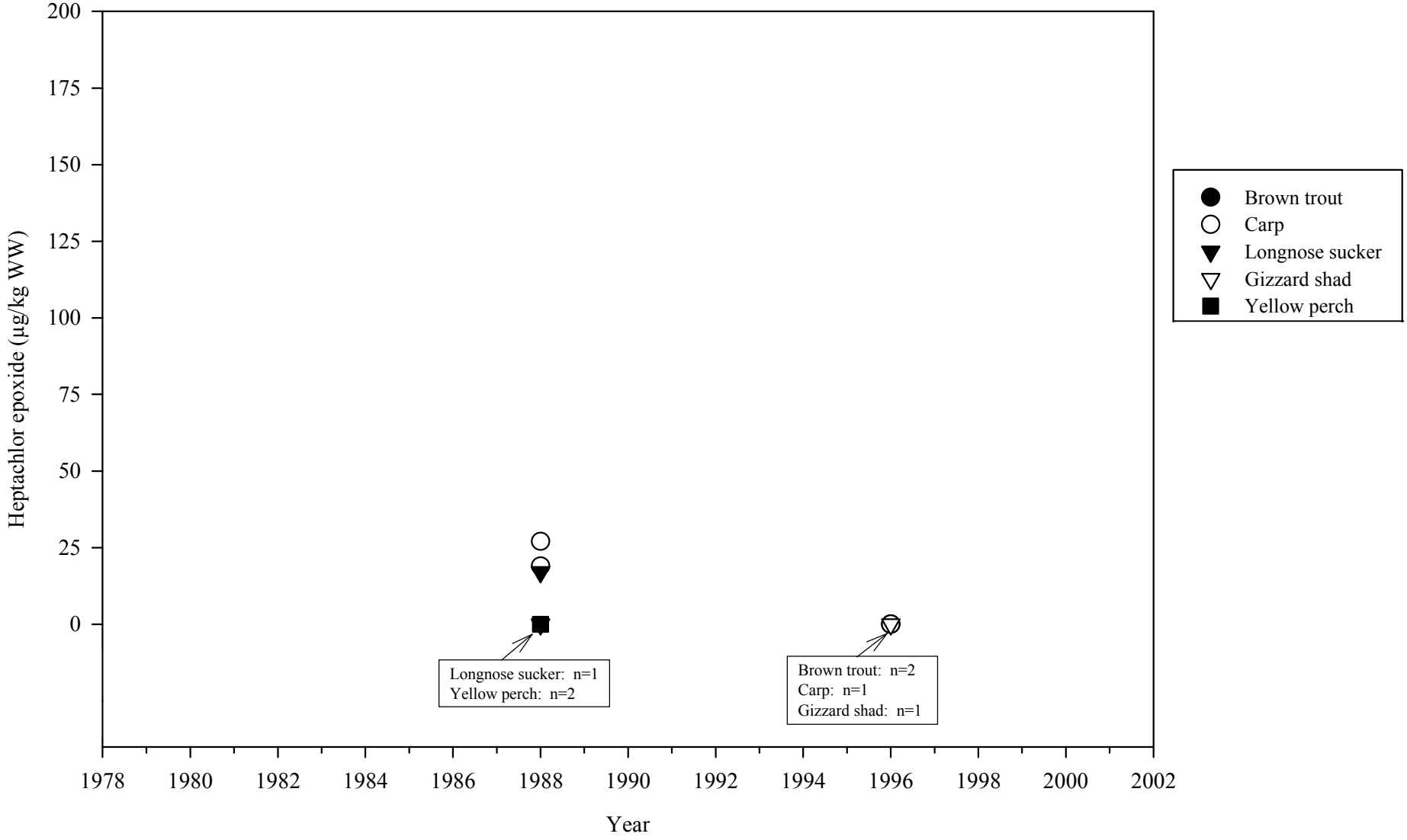

Figure 49. Summary of the available data on the concentrations of heptachlor + heptachlor epoxide in the edible tissues of fish collected from Indiana Harbor and Lake Michigan (USFDA Action Level is 300 µg/kg WW; see Section 3.2 for a description of data treatment).

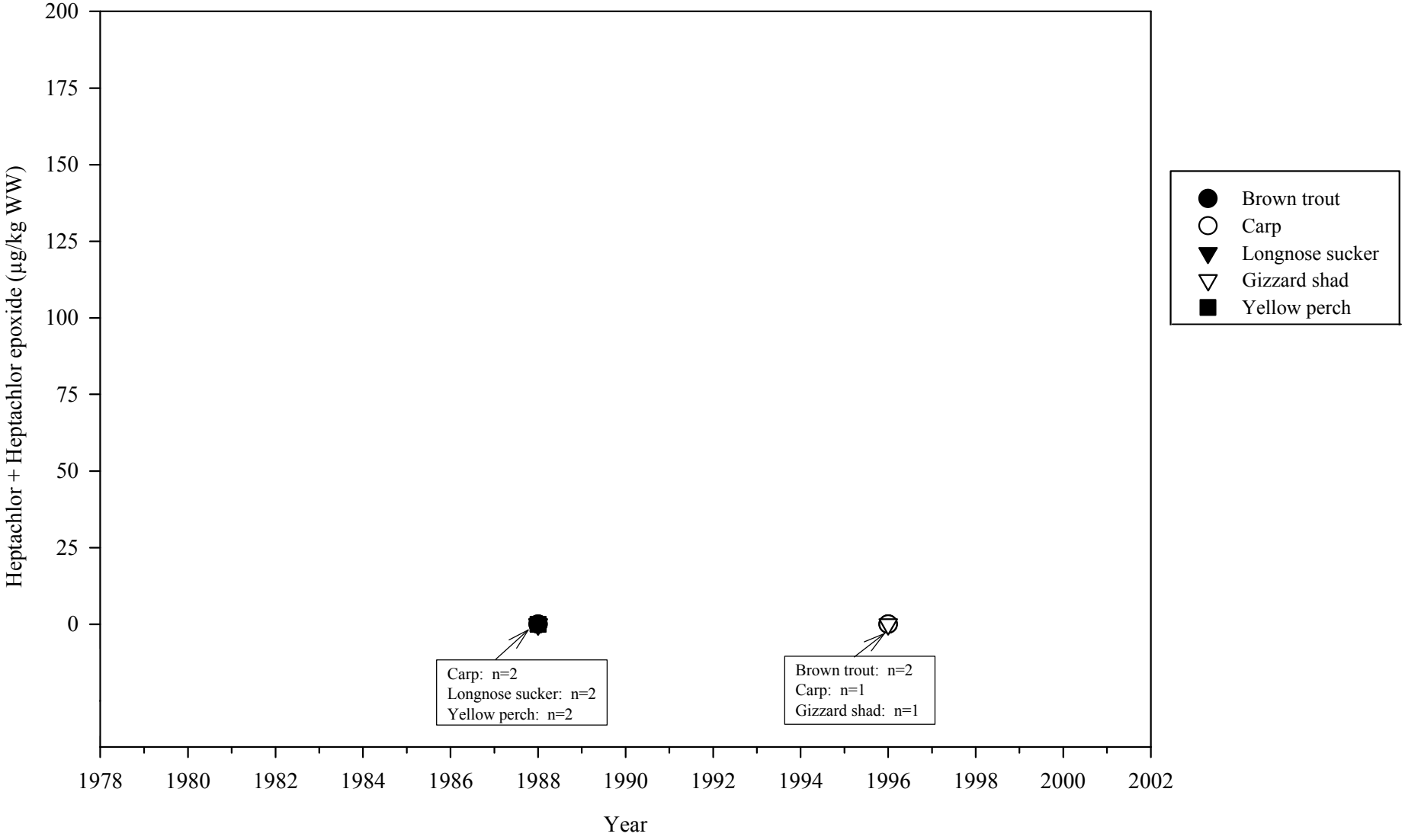

Figure 50. Summary of the available data on the concentrations of total chlordane in the edible tissues of fish collected from Indiana Harbor and Lake Michigan (dashed line indicates the USFDA Action Level; see Section 3.2 for a description of data treatment).

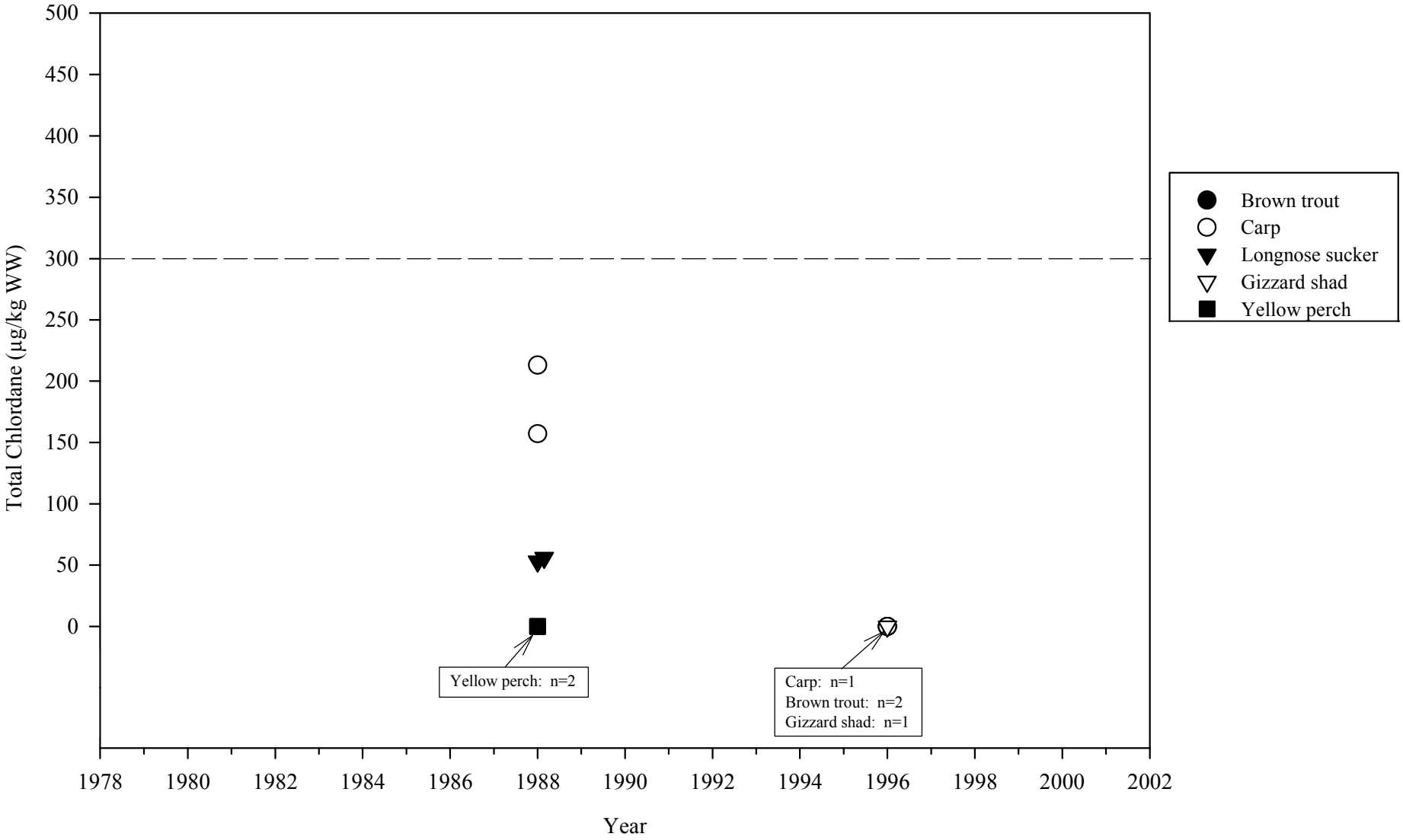

Figure 51. Summary of the available data on the concentrations of total PCBs in the edible tissues of fish collected from Indiana Harbor and Lake Michigan (dashed line indicates the USFDA Tolerance Level; see Section 3.2 for a description of data treatment).

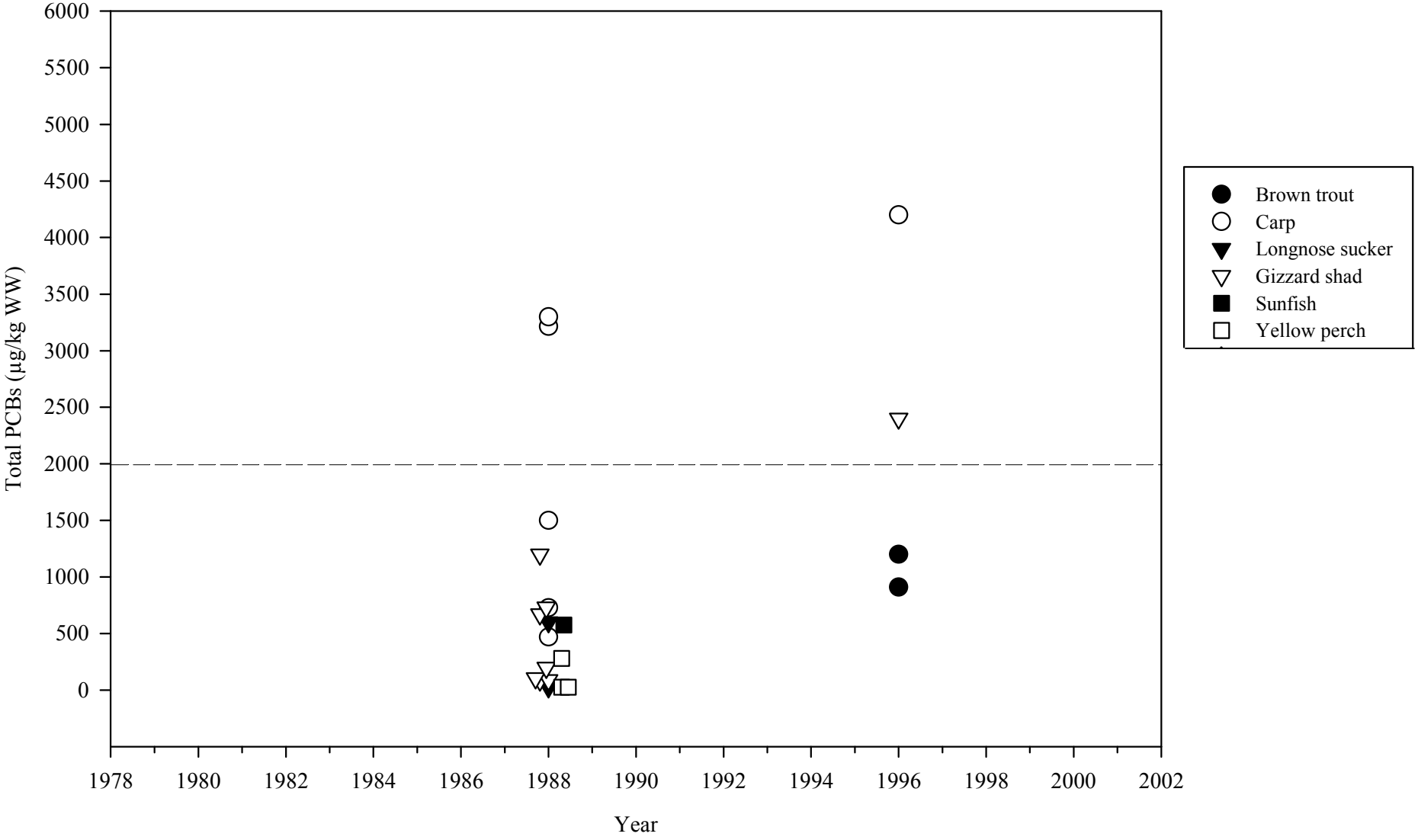

Figure 52. Summary of the available data on the concentrations of mercury in the edible tissues of fish collected from Indiana Harbor and Lake Michigan [solid line indicates the ISDH Group 1 threshold (0.16 mg/kg WW); see Section 3.2 for a description of data treatment].

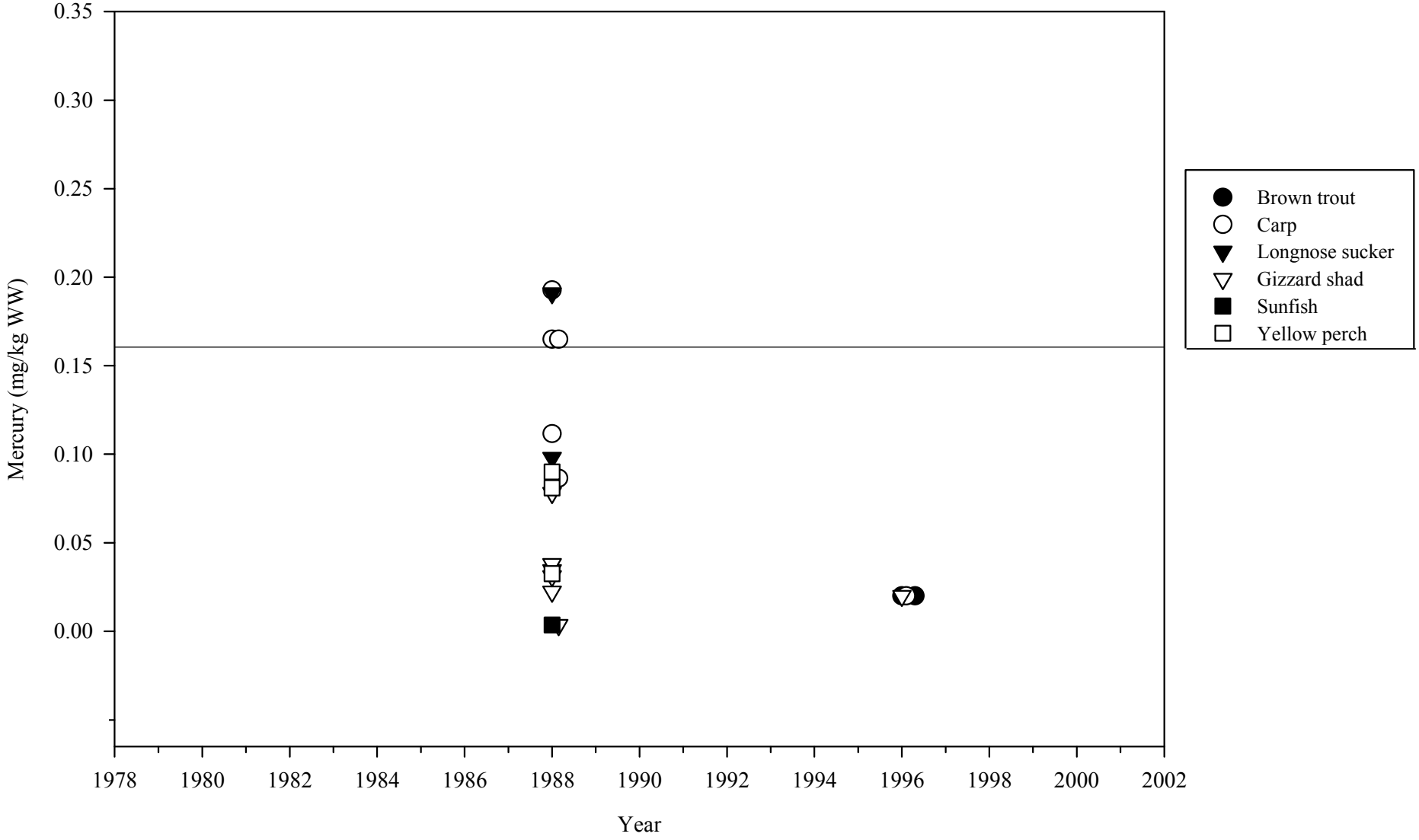
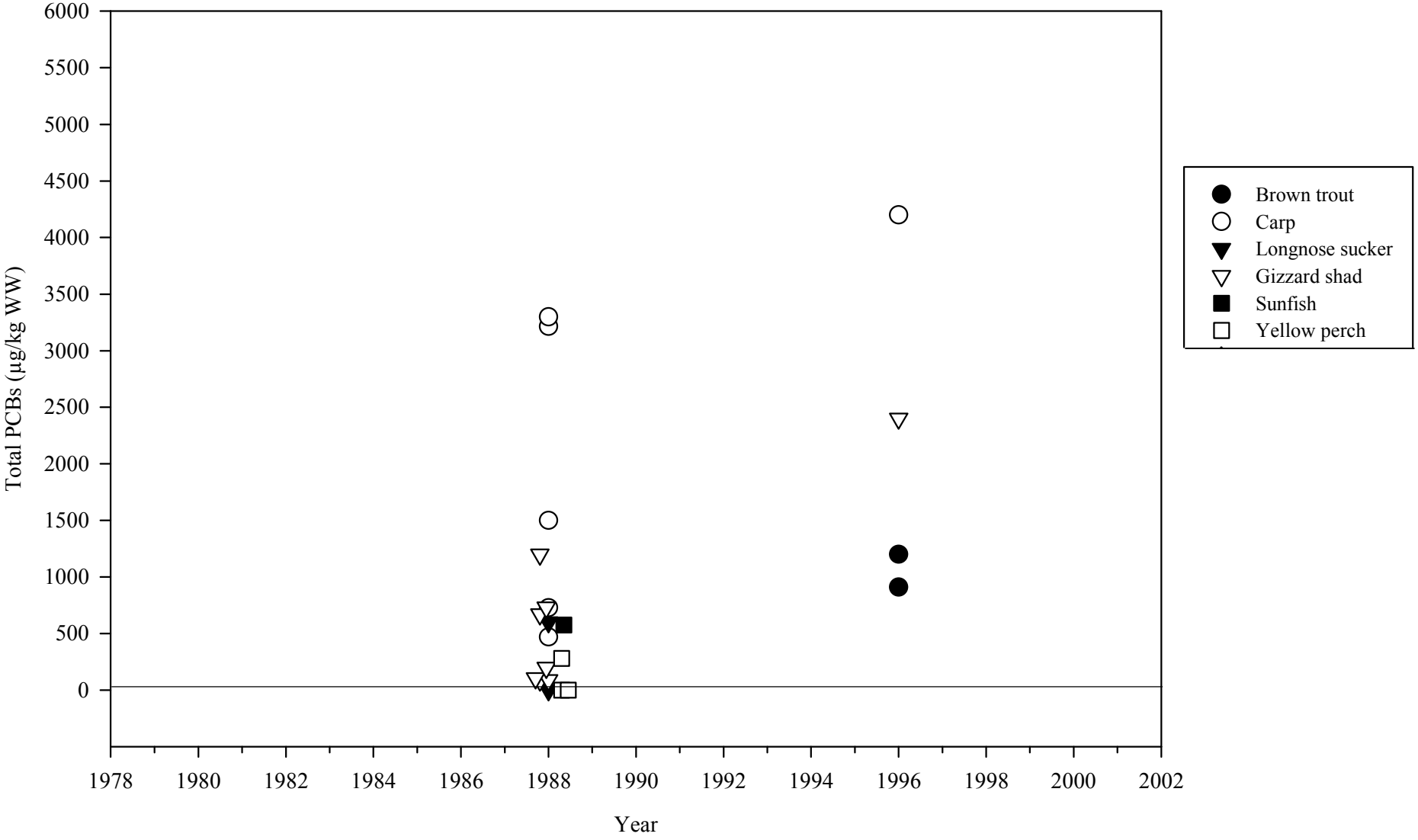
Figure 53. Summary of the available data on the concentrations of total PCBs in the edible tissues of fish collected from Indiana Harbor and Lake Michigan [solid line indicates the ISDH Group 1 threshold for skin-on scaleless fillets (50 µg/kg WW); see Section 3.2 for a description of data treatment].