

Monitoring Report Summary

Lee County Annual Report

Year 1-A (2004 Permit)

October 2003 through February 2005

Monitoring Data Summary

Lee County's ambient data collected over the period of record was summarized graphically for three constituents of concern: Total Nitrogen, Total Phosphorous and Chlorophyll. The summary was performed using quarterly average values to demonstrate seasonal variation over the period of record.

Graphically, the trends for nutrient related analytes demonstrate distinct downward trends. During the last five years of monitoring (the previous permit period), all evaluated parameters stabilized in their variance and display well defined reductions. The reduction in variability and the improving trend for all three constituents can be attributed to a sound county-wide inspection/enforcement program for construction sites, the household hazardous waste collection efforts of Lee County Solid Waste and the education efforts of the Lee County Pollution Prevention Program. Collectively, the actions and efforts of the three are countering the negative impacts of growth and land use changes from agricultural to residential and commercial uses.

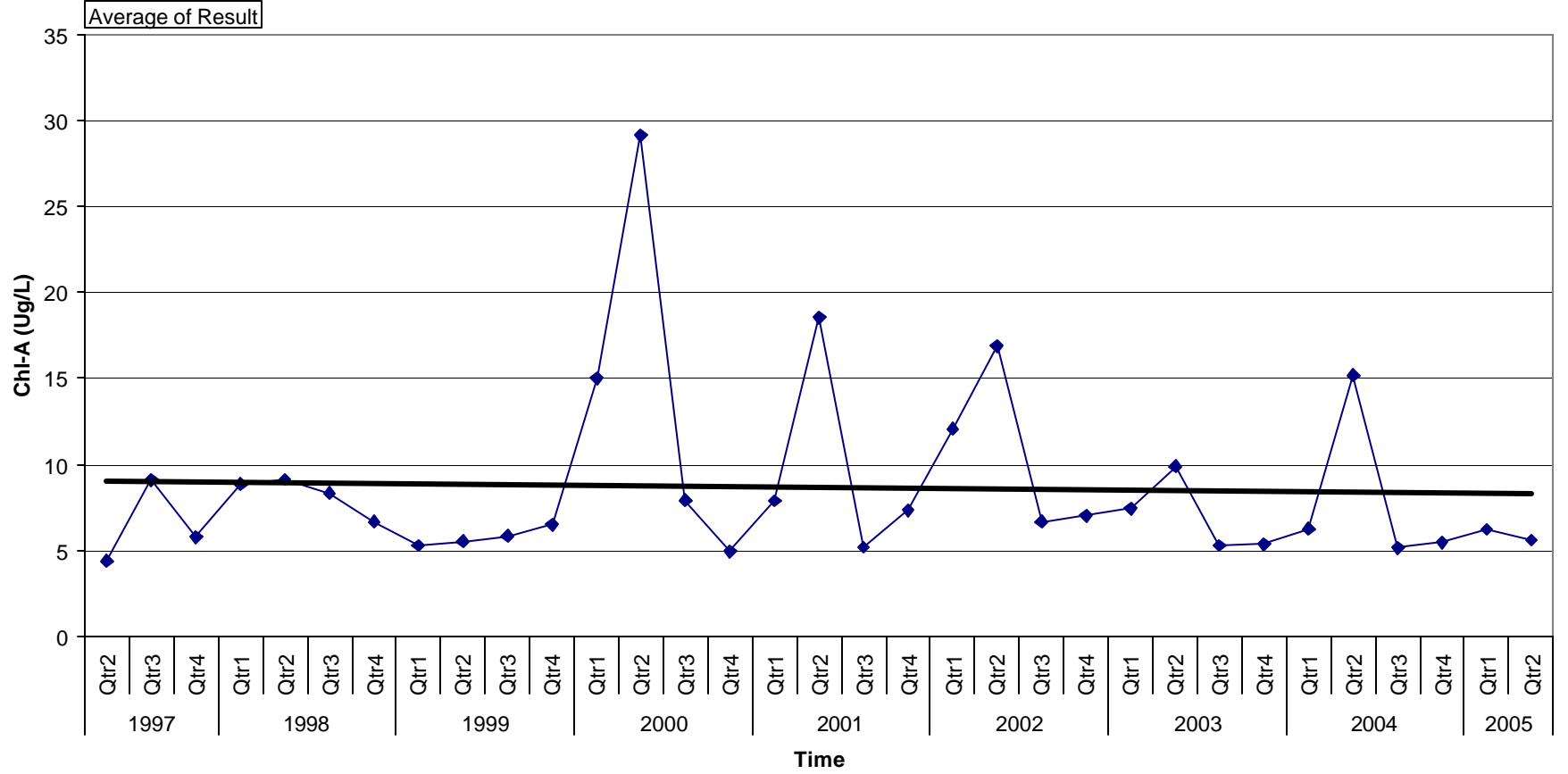
The graphical analyses of the metals (of concern) provided interesting results. Lead continues to decline over the period of record. However, copper has a slight increase over the period of record, yet during the most recent 5 year period declined markedly. Lead trends can be attributed to the 1970's phasing out of leaded gasoline, while the copper variant may be most attributable to herbicide application.

The estuarine sediments tested during June of 2004 for the metals of concern did not demonstrate levels above "natural" in a standard comparative plot against aluminum. This is demonstrated in the Lead plot. The average comparison of metals tested (by event), is plotted and demonstrates graphically the overall trends (by metal) in sediments over time. There appears to be a significant decline in Lead, Cadmium and Zinc over the period of record. Most notably, Lead concentrations in Estero Bay tributary sediments have improved from "enriched" in 1986 and 1995 to "natural" concentrations in 2004.

It may be noted, this summary nor the graphical data below are not intended to represent the trend(s) of any single stream segment nor the impacts from outside the watershed (such as releases into the Caloosahatchee Estuary). There may be problematic areas of concern and these continue to be addressed on a case-by-case basis. However, the quarterly average provides seasonal water quality trends within the County-wide system and is a reasonable barometric summary of water quality. The sediment analyses may be considered indicative of any recent local deposition activity.

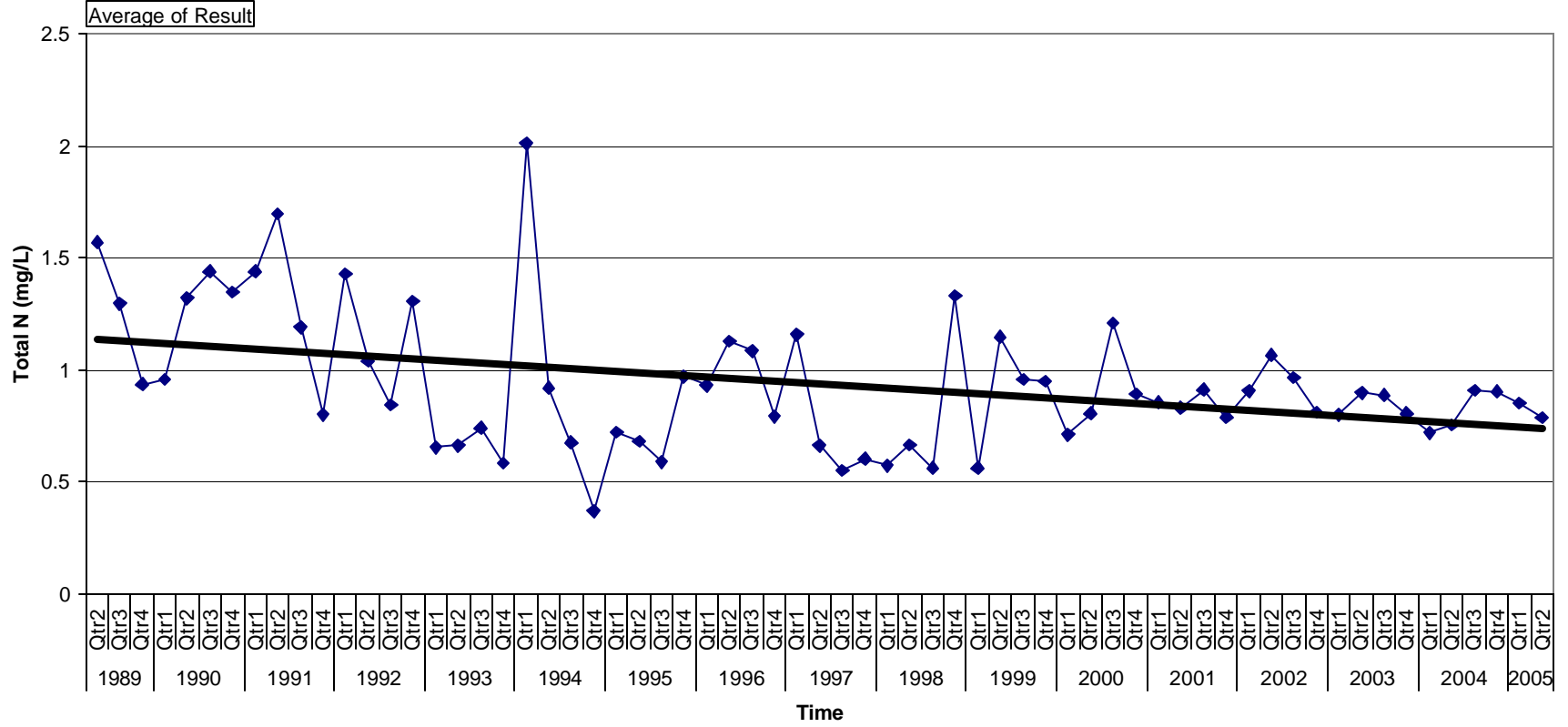
Anl Code \$CHLOROA Loc Code (All)

Seasonal County-wide Chlorophyll-A in Surfacewaters



Anl Code TN Loc Code (All)

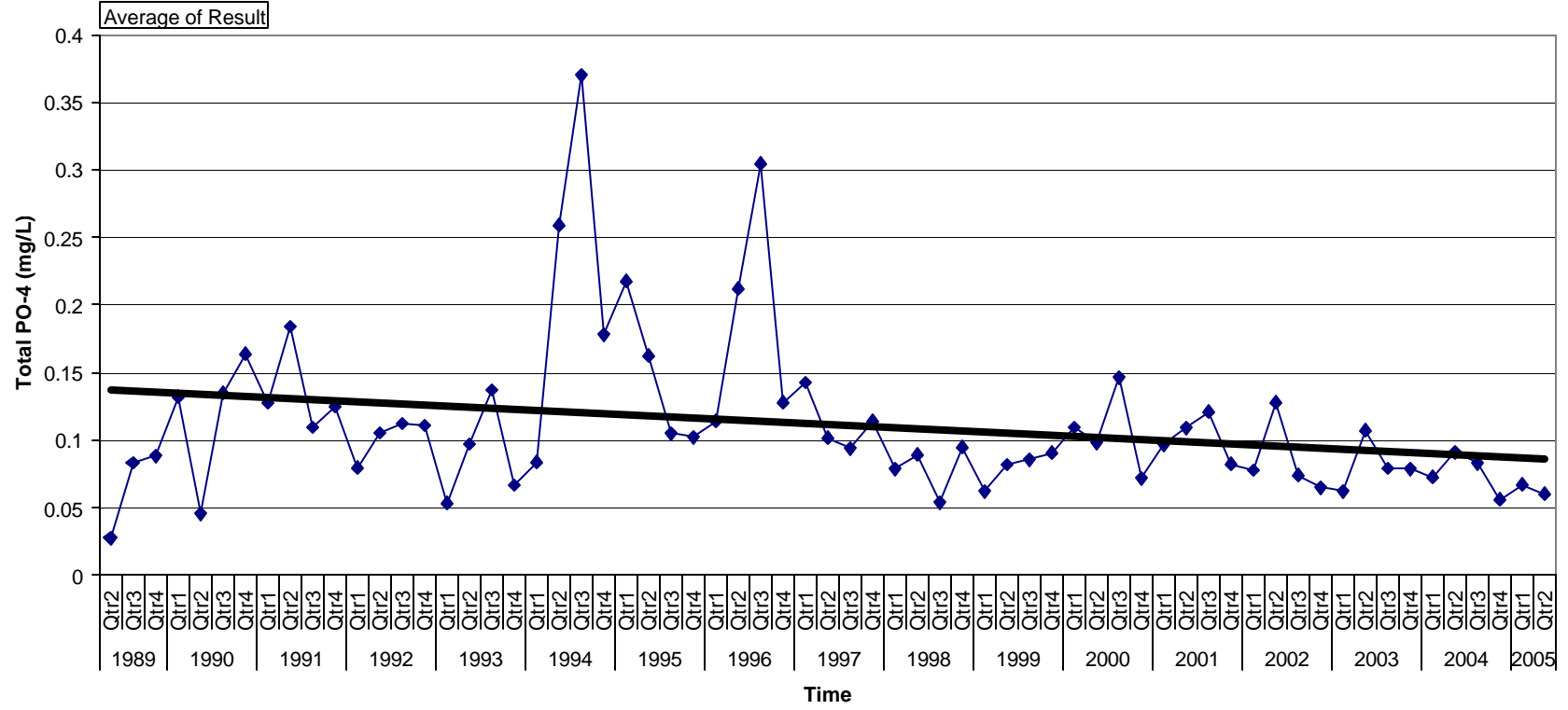
Seasonal County-wide Total Nitrogen in Surfacewaters



Years Col Date

Loc Code (All) Anl Code T-PO4

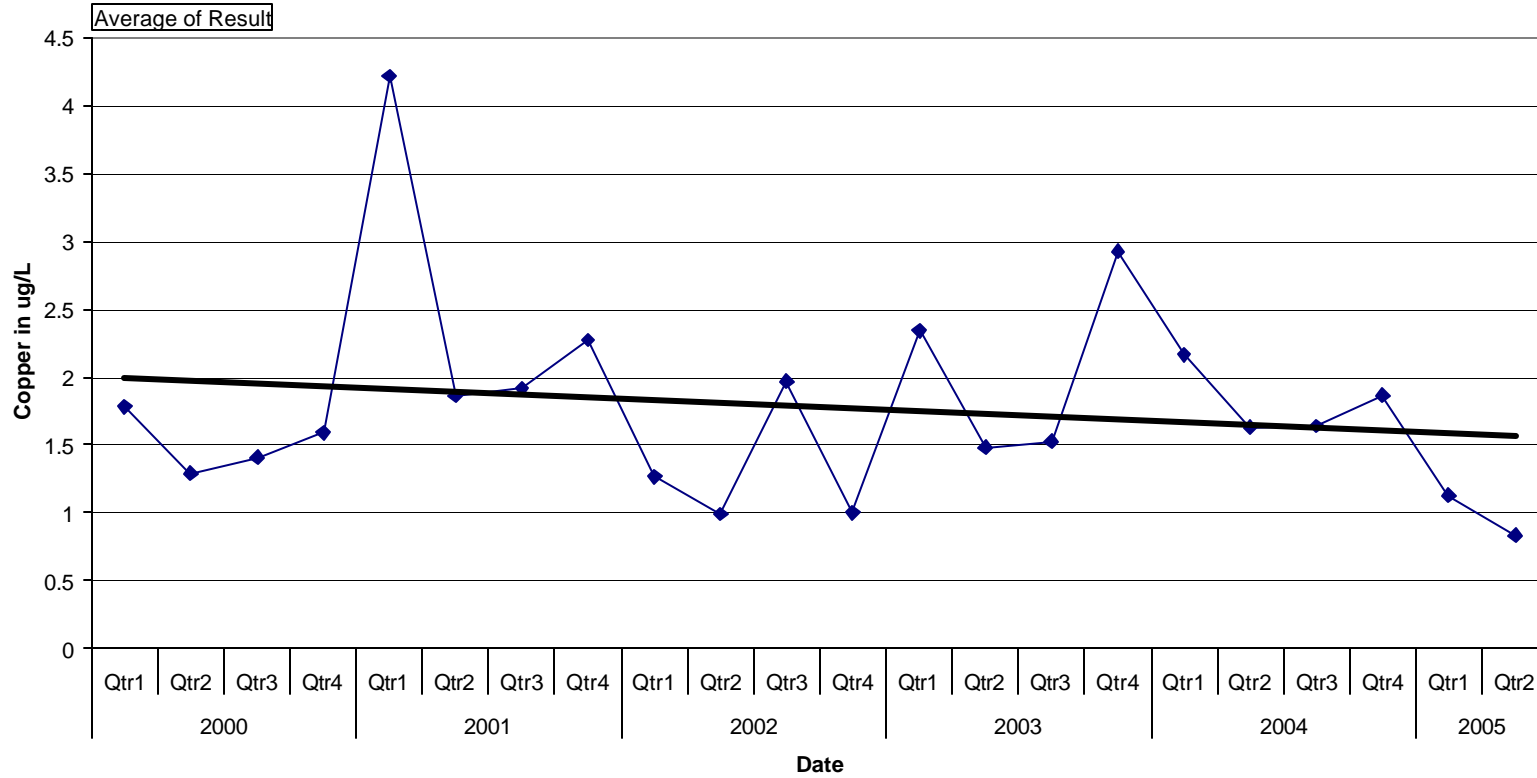
Seasonal County-wide Total Phosphate in Surfacewaters



Years Col Date

Loc Code (All) Anl Code CUUGL

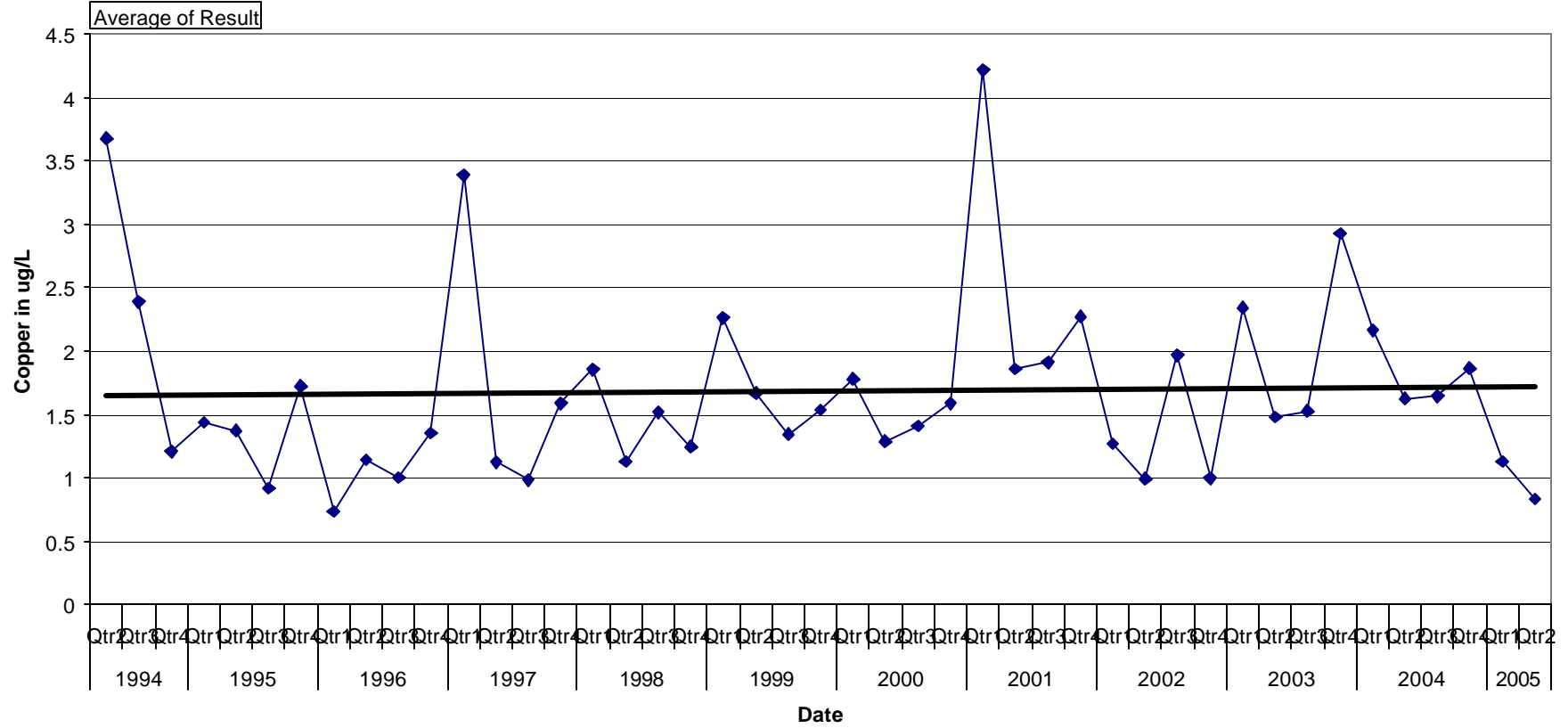
County-wide Seasonal Copper



Years Col Date

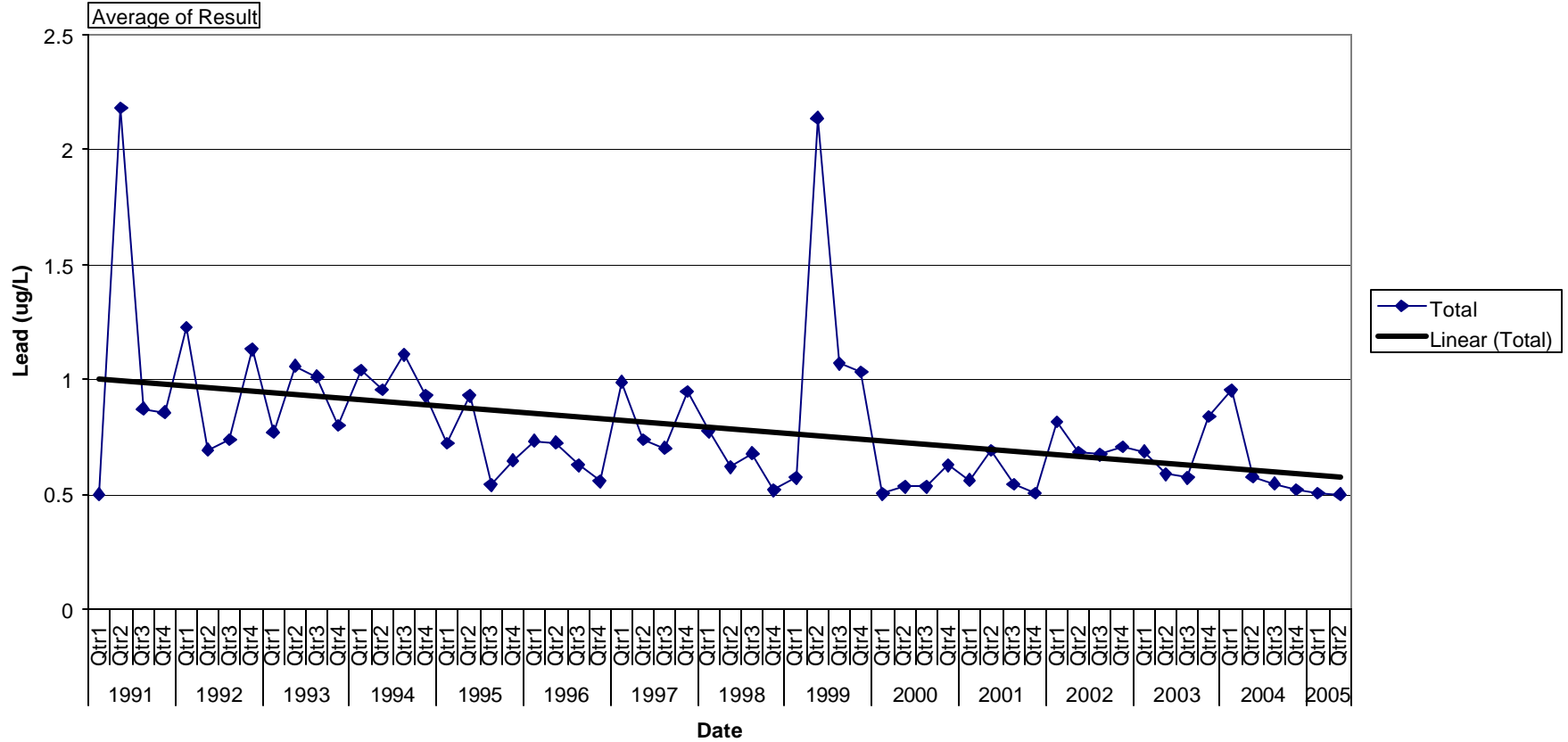
Loc Code (All) Anl Code CUUGL

County-wide Seasonal Copper

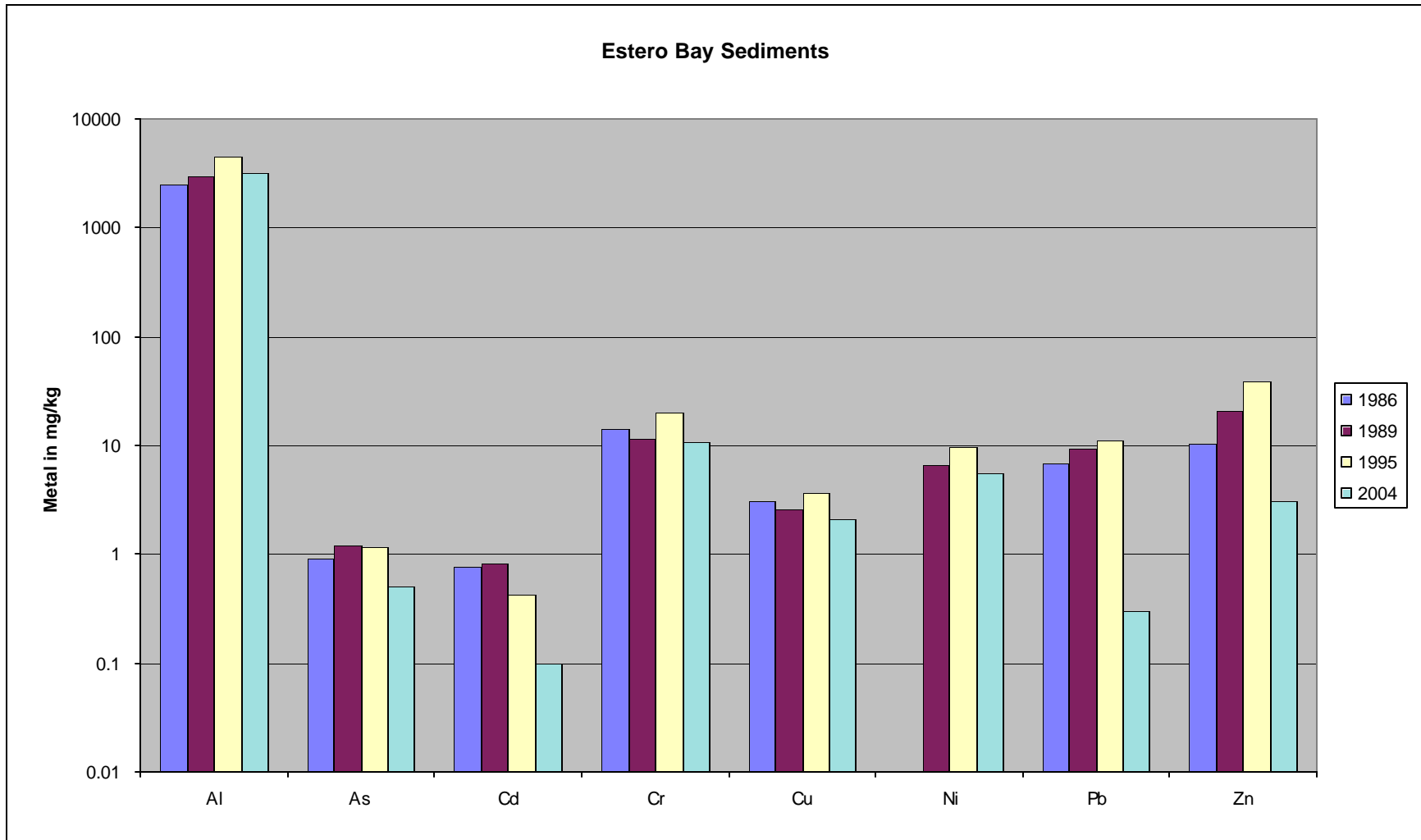


Anl Code PBUGL Loc Code (All)

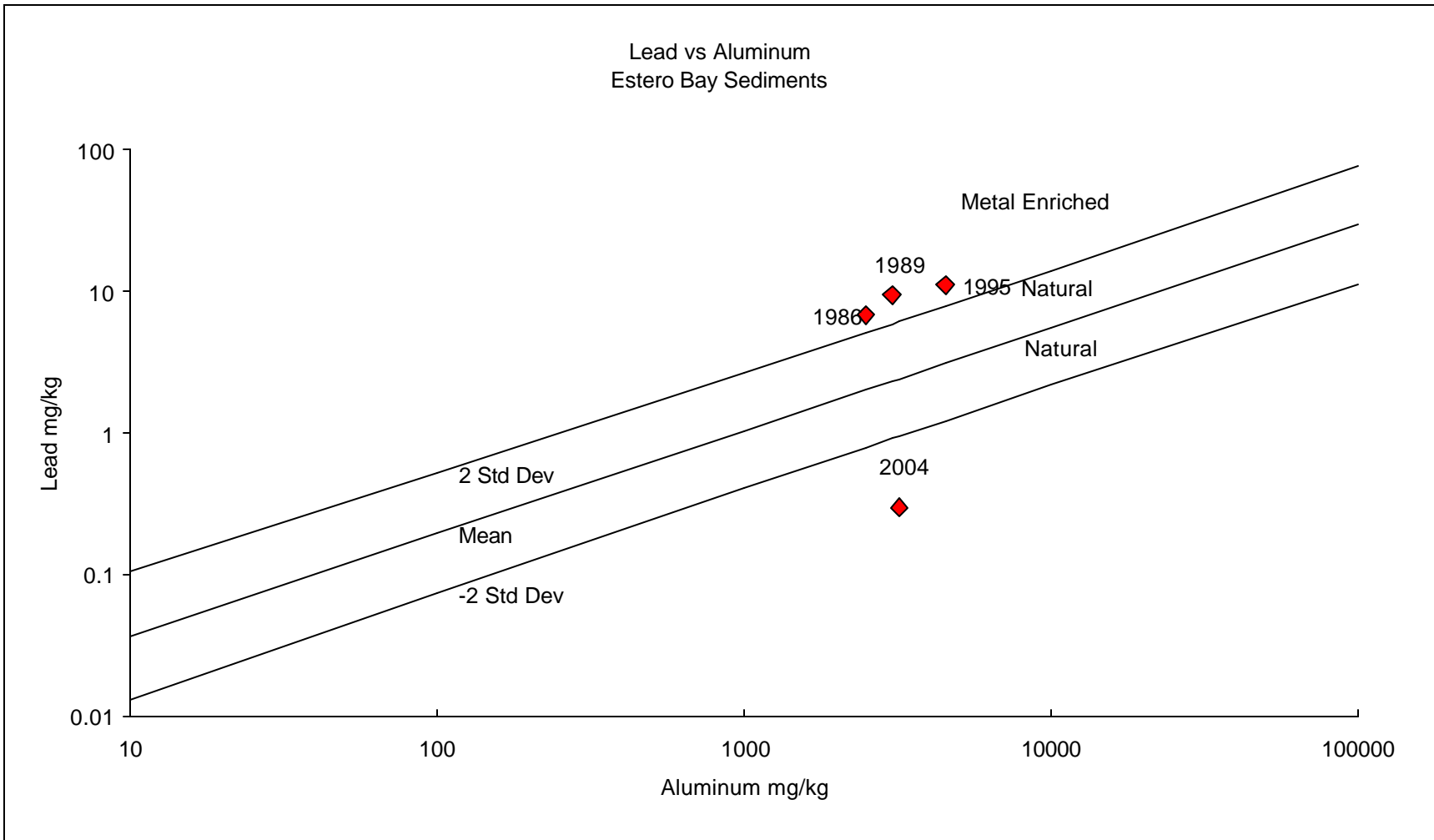
Seasonal County-wide Lead



Years Col Date



Average metal analyses for the period of record for Estero Bay sediments



Lead results for the four sediment stations collected in June 2004