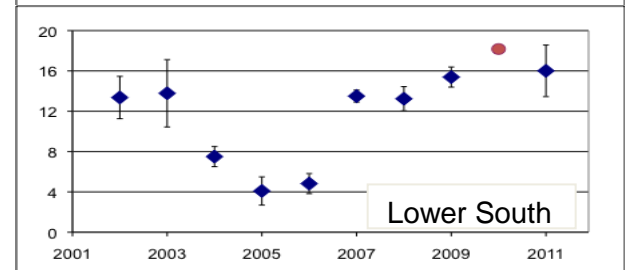
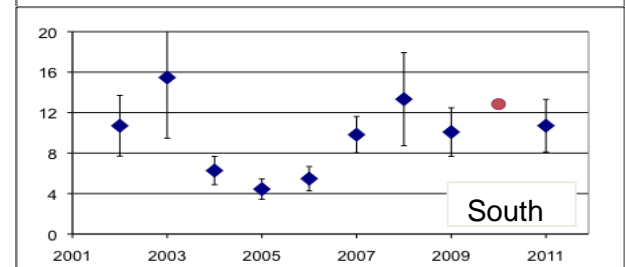
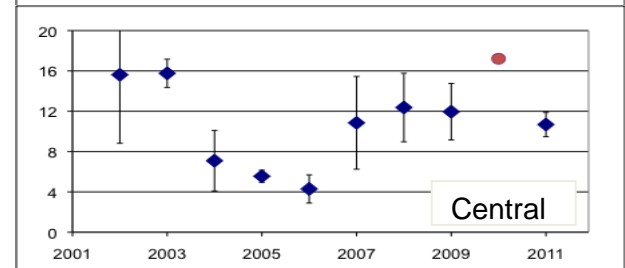
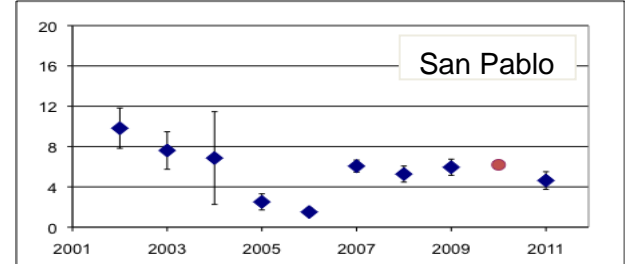
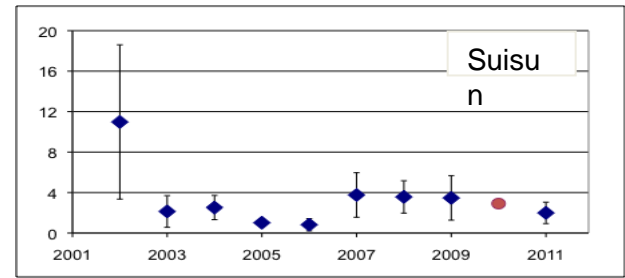
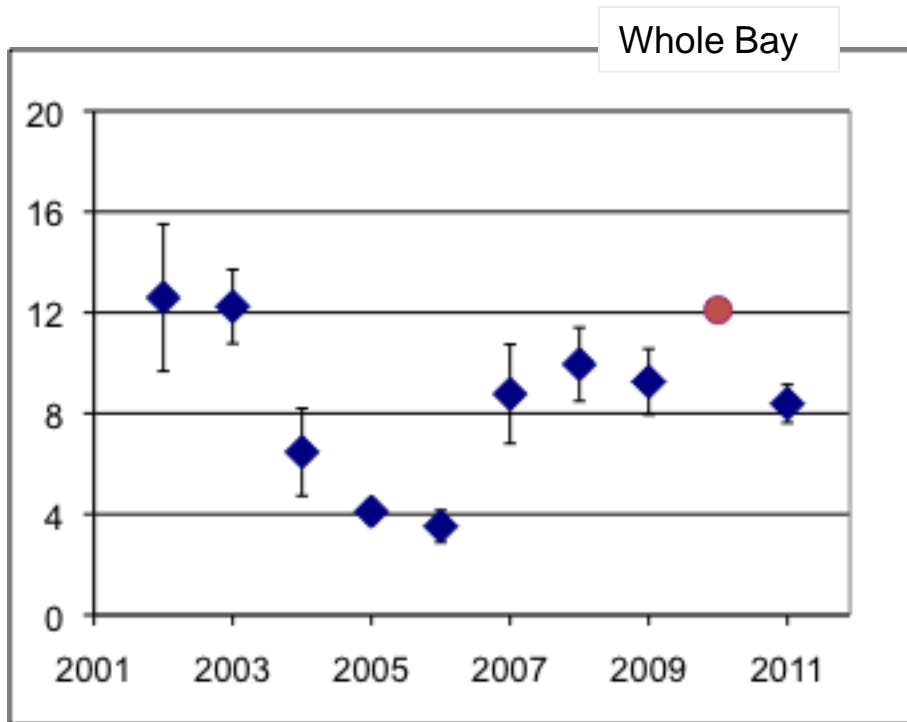


# RMP QAQC Update: Organics Reanalyses

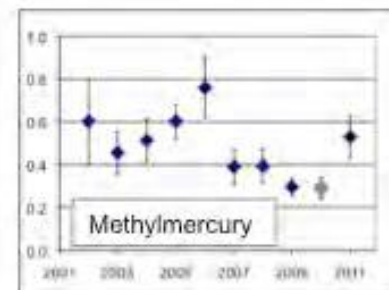
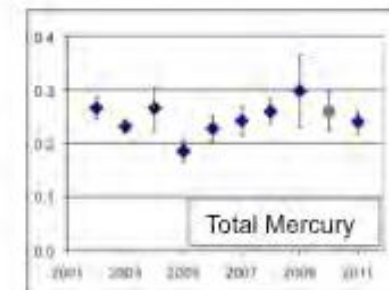
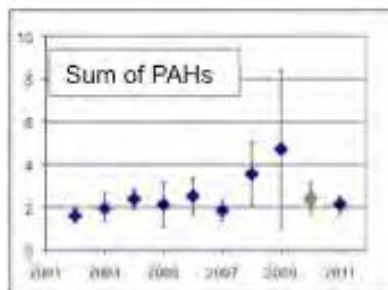
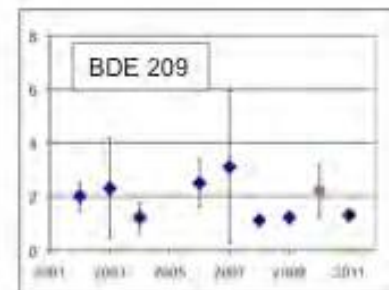
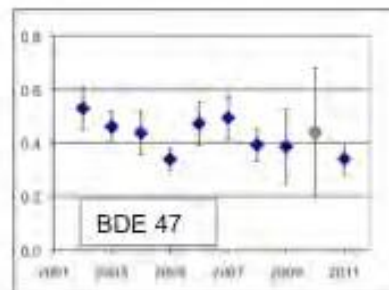
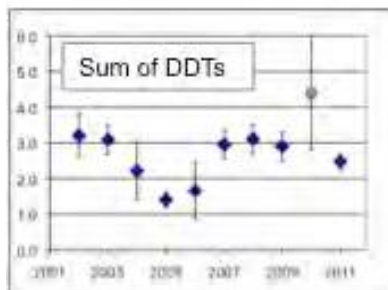
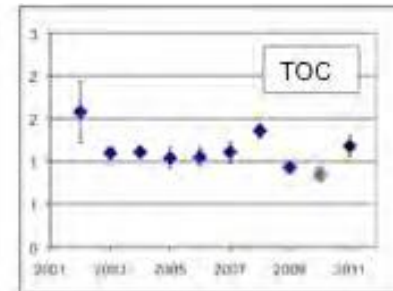
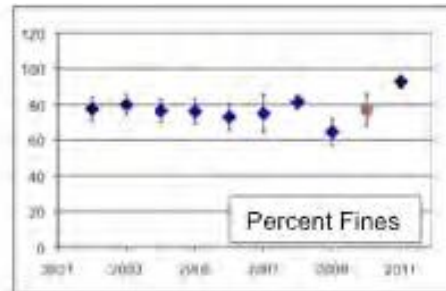
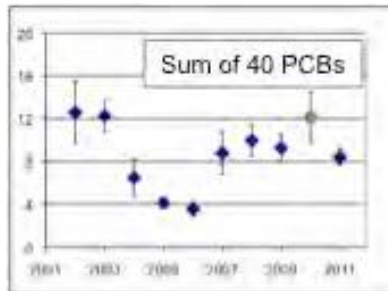
RMP TRC Dec 12 2013

# PCBs : 2004-2006

## Mystery Dip



# No/Less Dip for Other Organics

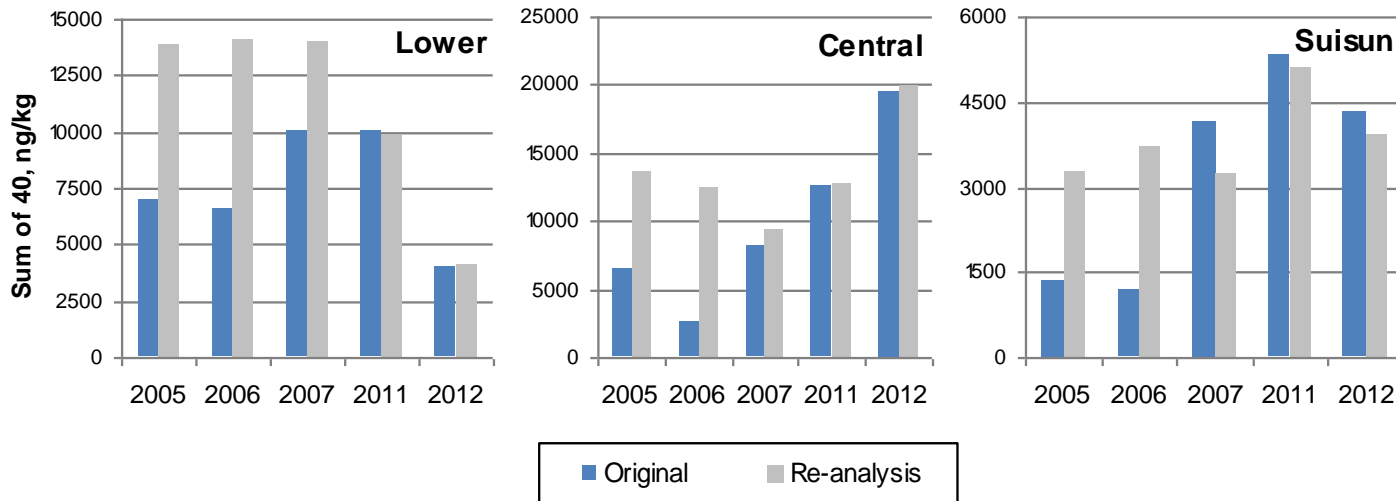


# EBMUD Review

- Possible causes of change were improved sample drying and GPC cleanup
  - MS & CRM recoveries seem unaffected
  - Cleanup surrogate recoveries consistently high, likely minimal impact of GPC changes
- Sample drying method change most likely cause

# Sample Reanalysis

- Samples from BA10, BC11, BF21
- Years 2005, 2006, 2007, 2011, 2012
- Reanalyzed by current method

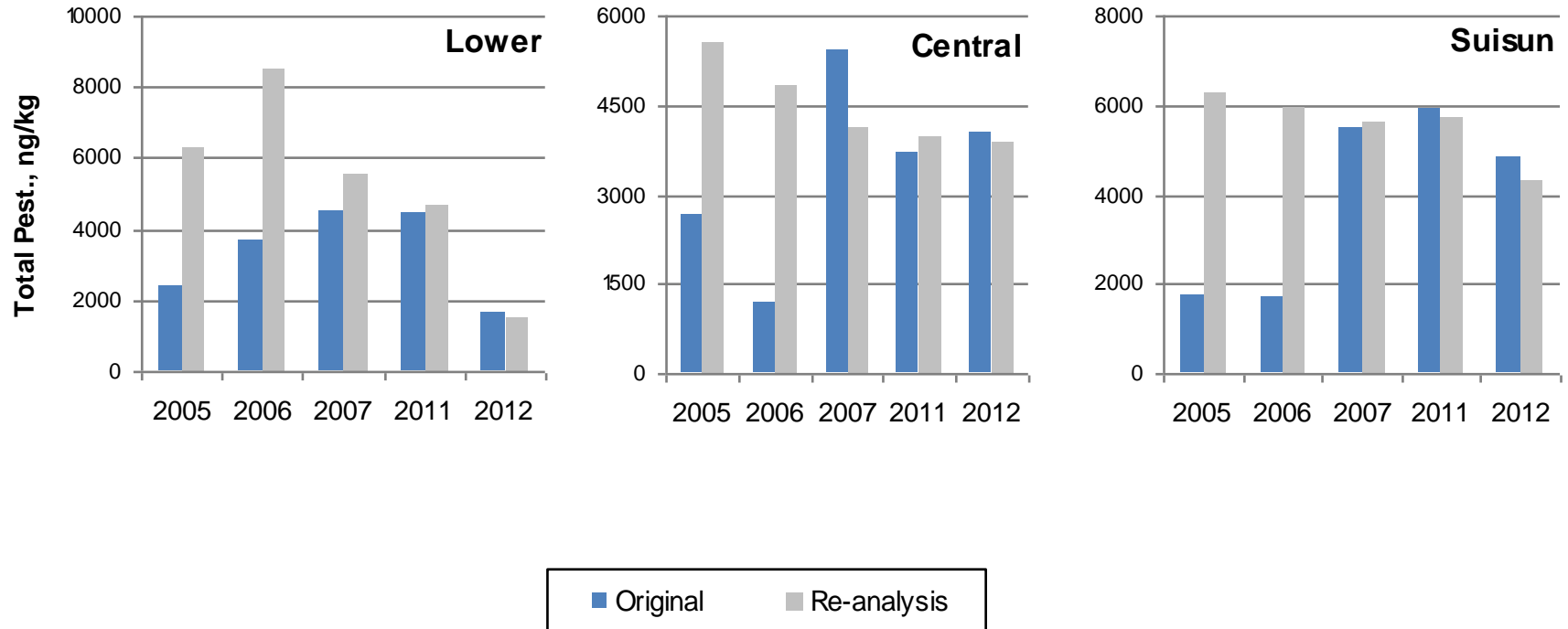


# Reanalysis Summary

- Results of 2005 & 2006 samples by current method consistently higher
- Drying modification disproportionately affects field samples vs CRMs and MSs
  - Lower concentrations?
  - Lower percentage of total PCB mass embedded within matrix for MSs?
    - soluble PCBs spiked, no extended equilibration
  - CRM has 1.3% moisture, unaffected by drying mod

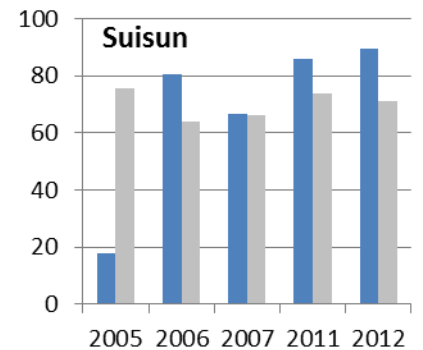
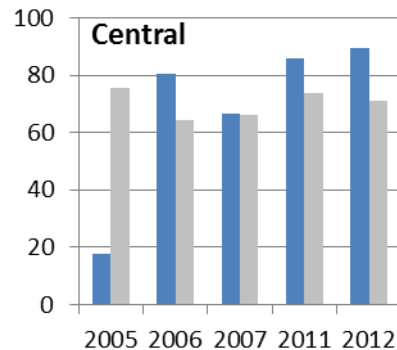
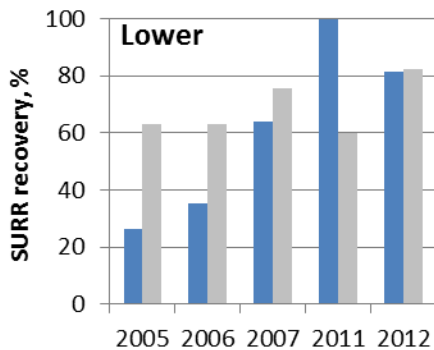
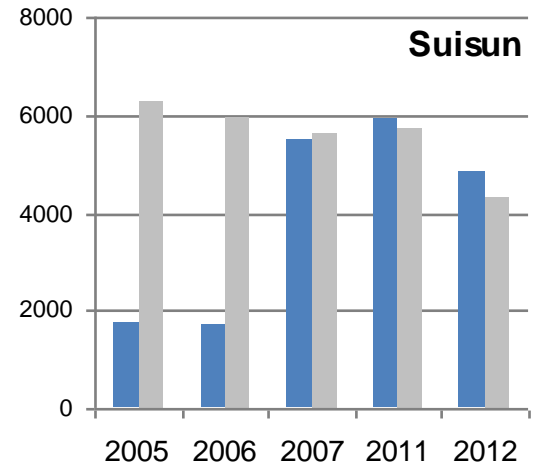
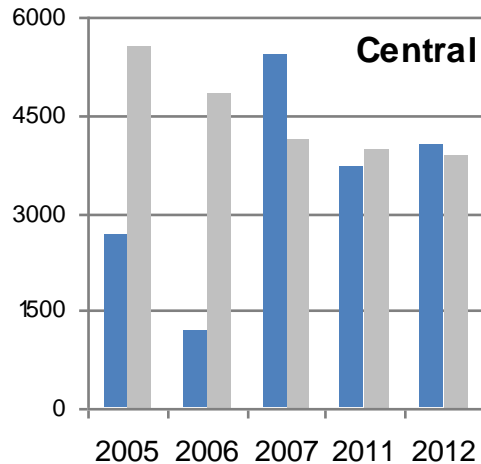
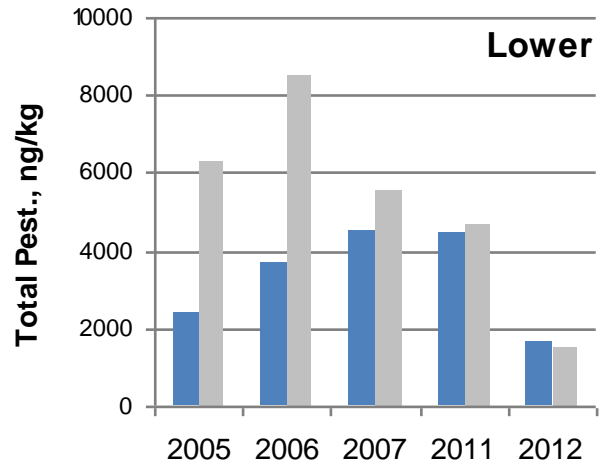
# Pesticides

- 2005-2006 2-4x higher in reanalysis



# Pesticides

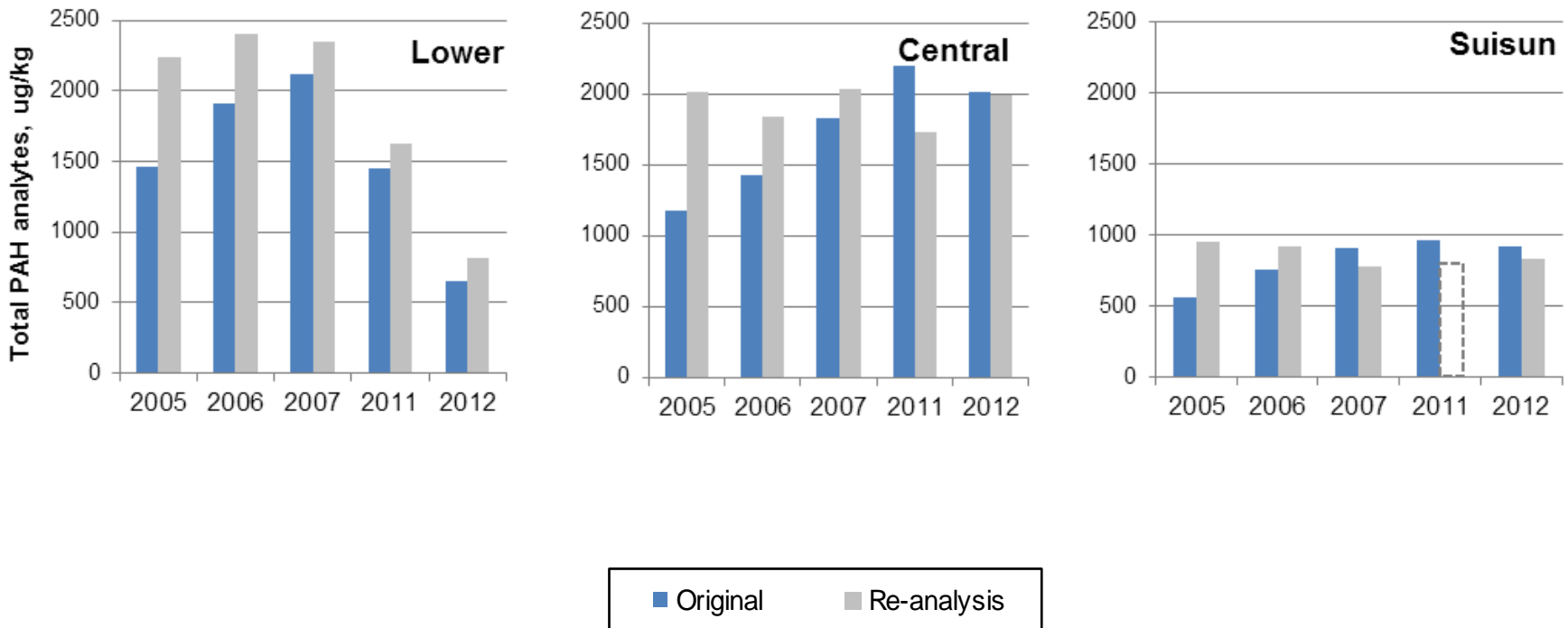
- Spike recoveries not cause/diagnostic





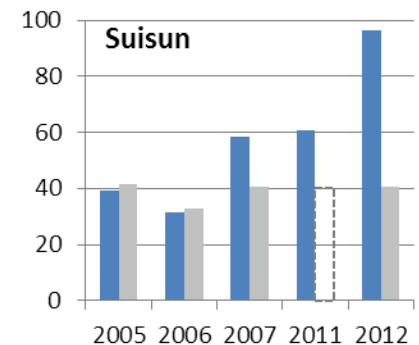
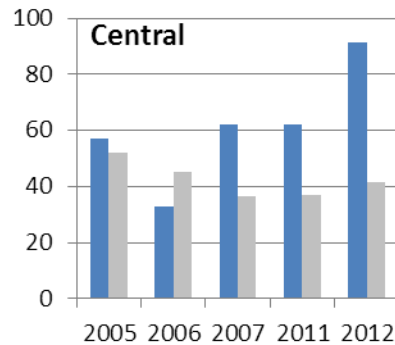
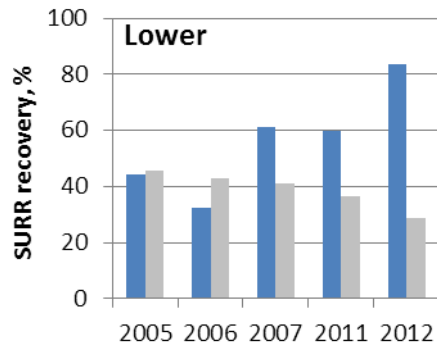
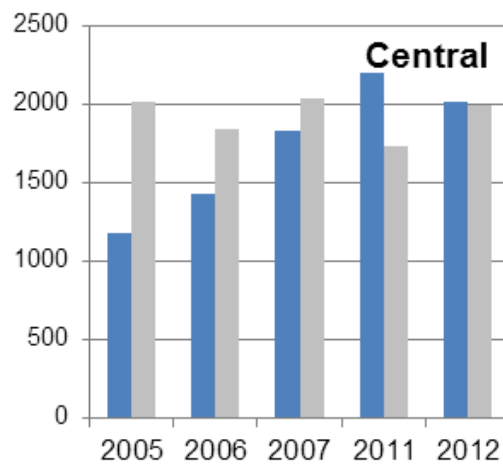
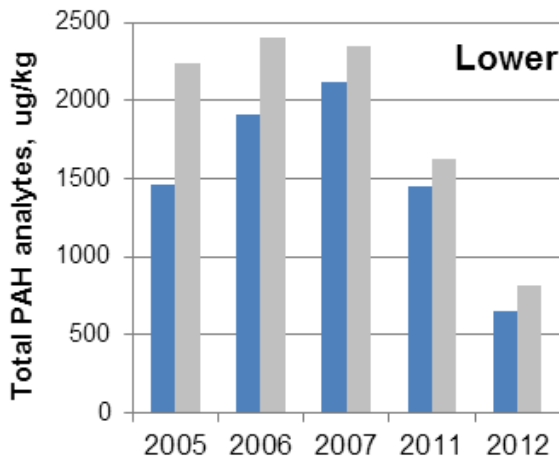
# PAHs

- 2005-2006 20-70% higher on reanalysis



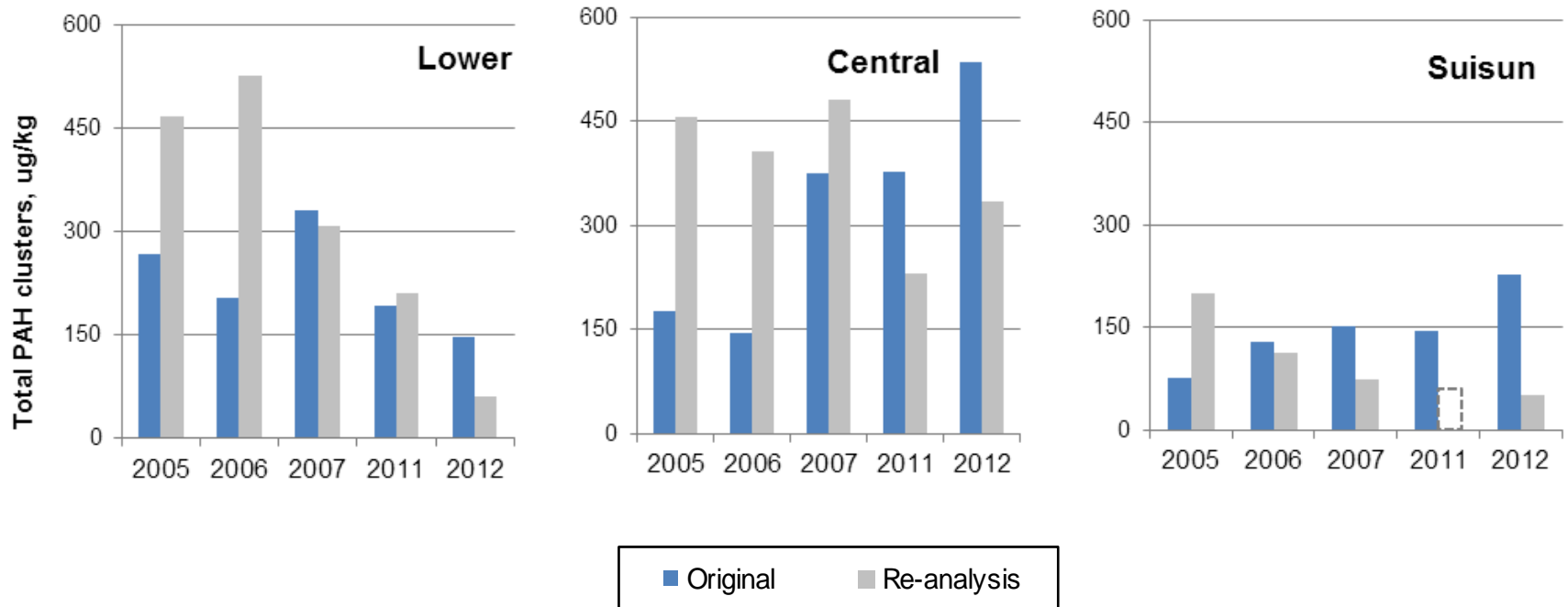
# PAHs

- Spike recoveries not cause/diagnostic



# Alkylated-PAHs

- 2005-2006 2-3x higher in reanalysis



# Lessons Learned

- Typical QC samples such as CRMs and MSs may not show some inter-lab and inter-year differences despite acceptable performance
  - Unaltered local samples needed to compare, despite challenges of homogeneity and possibly low concentrations
- Analyses in future years will include some retained samples for inter-year verification
  - Viable only for persistent analytes

# 2004-2006 Alternatives Discussion

- Data flagged as estimated with a likely low bias flag
- Data censored and not shown
  - (PCBs, Pests - yes? PAHs? PBDEs pending?)
- Only 2005 data reanalyzed (currently sediment on 2 year cycle).
  - will improved quantitation on old data change anything?
  - Pre 2002 data may have similar discontinuities from lab/sampling method differences