

2016

**Sediment Contamination Study of Casco Bay part 2, Ramboll  
Environ PowerPoint 2016**

Ramboll Environ

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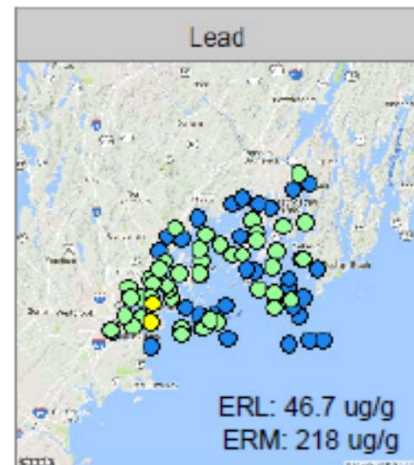
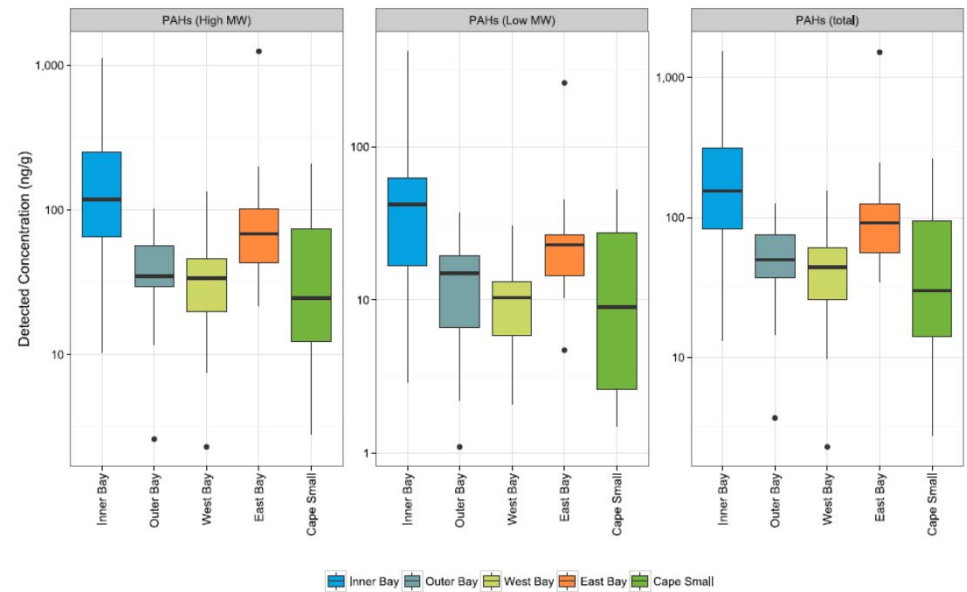
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# DATA ANALYSIS

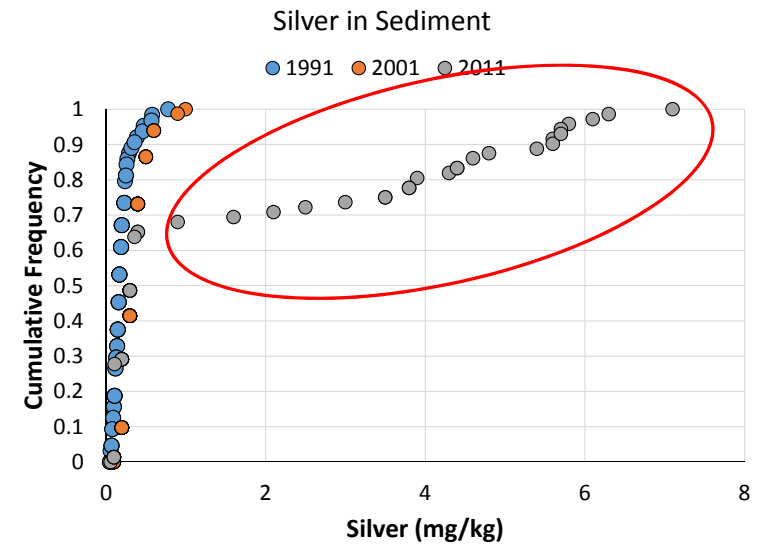
- Integrate data, calculate sums
- Calculate summary statistics (baywide and by region)
  - Focusing on detects
- Plot data (box and whiskers and maps)



SEDIMENT ASSESSMENT OF CASCO BAY (1991-2011)  
SEPTEMBER 14, 2016

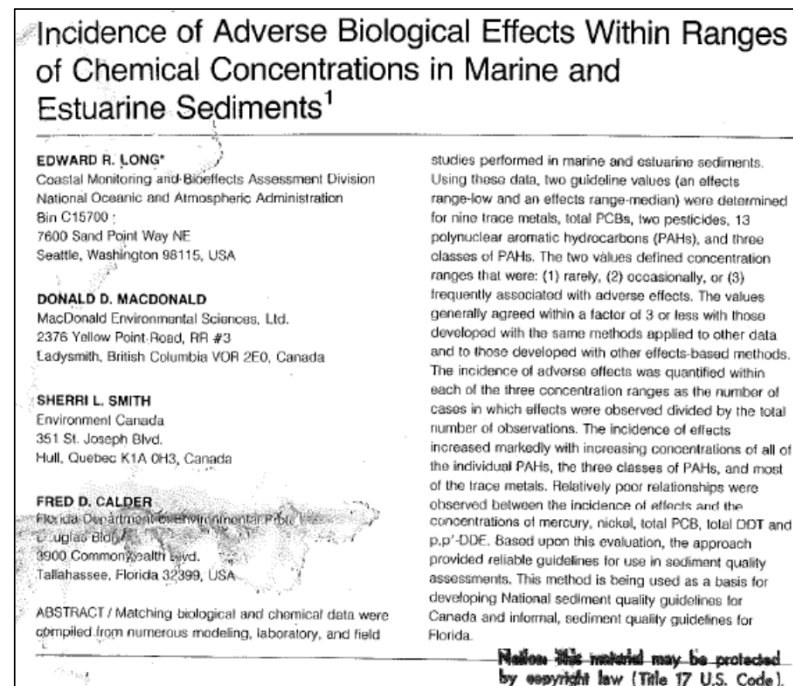
# DATA ANALYSIS

- Integrate data, calculate sums
- Calculate summary statistics (baywide and by region)
  - Focusing on detects
- Plot data (box and whiskers and maps)
- Exploratory analysis (identify data issues)



# DATA ANALYSIS

- Integrate data, calculate sums
- Calculate summary statistics (baywide and by region)
  - Focusing on detects
- Plot data (box and whiskers and maps)
- Exploratory analysis (identify data issues)
- Comparison to screening values



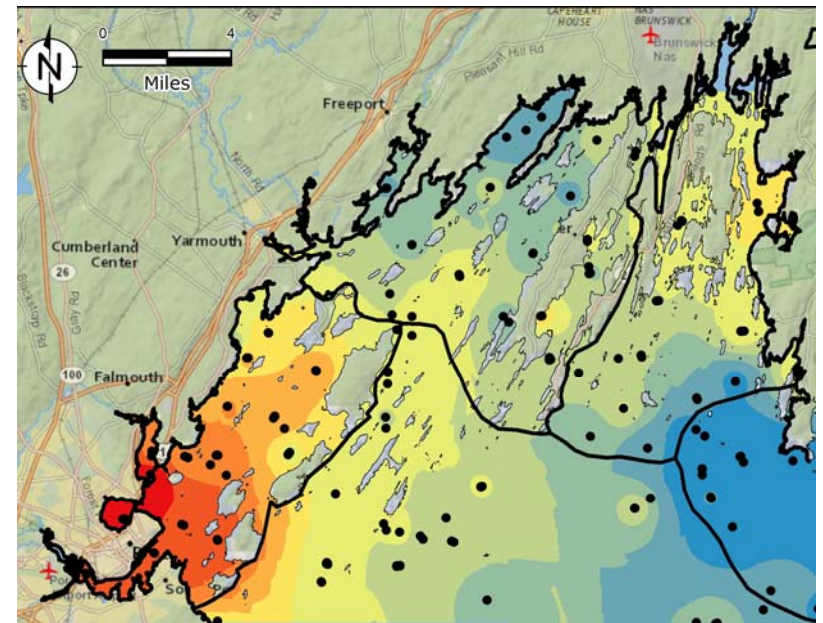
Adverse effects in [aquatic organisms](#) (invertebrates and fish)

**Effects Range Low (ERL):** Concentration at which effects rarely observed

**Effects Range Median (ERM):** Concentration above which effects are frequently observed

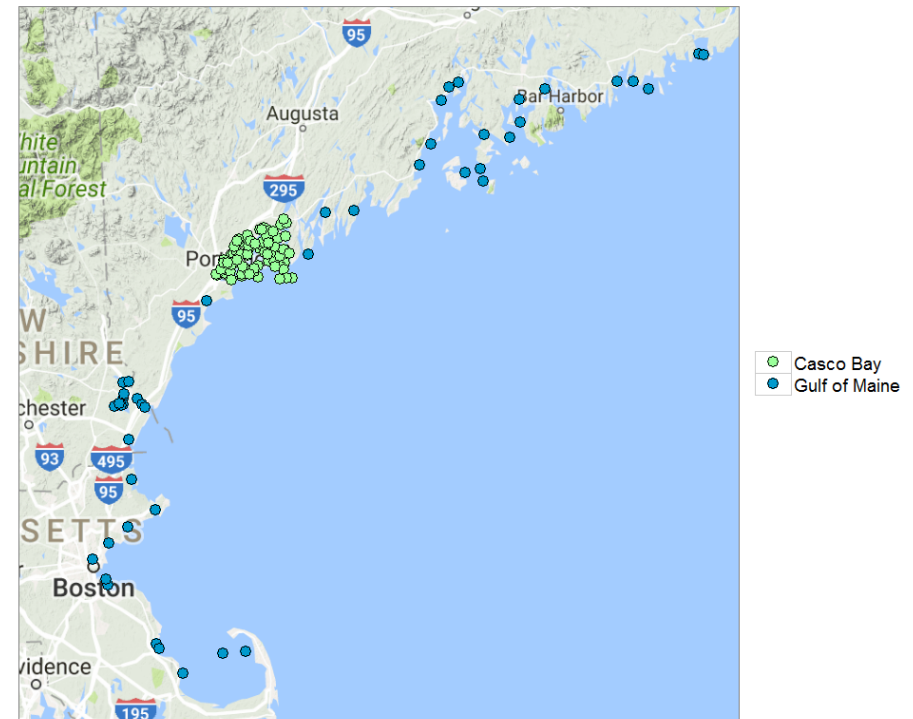
# DATA ANALYSIS

- Integrate data, calculate sums
- Calculate summary statistics (baywide and by region)
  - Focusing on detects
- Plot data (box and whiskers and maps)
- Exploratory analysis (identify data issues)
- Comparison to screening values
- Statistical analysis (by region and time)
- Geospatial analysis to illustrate notable trends

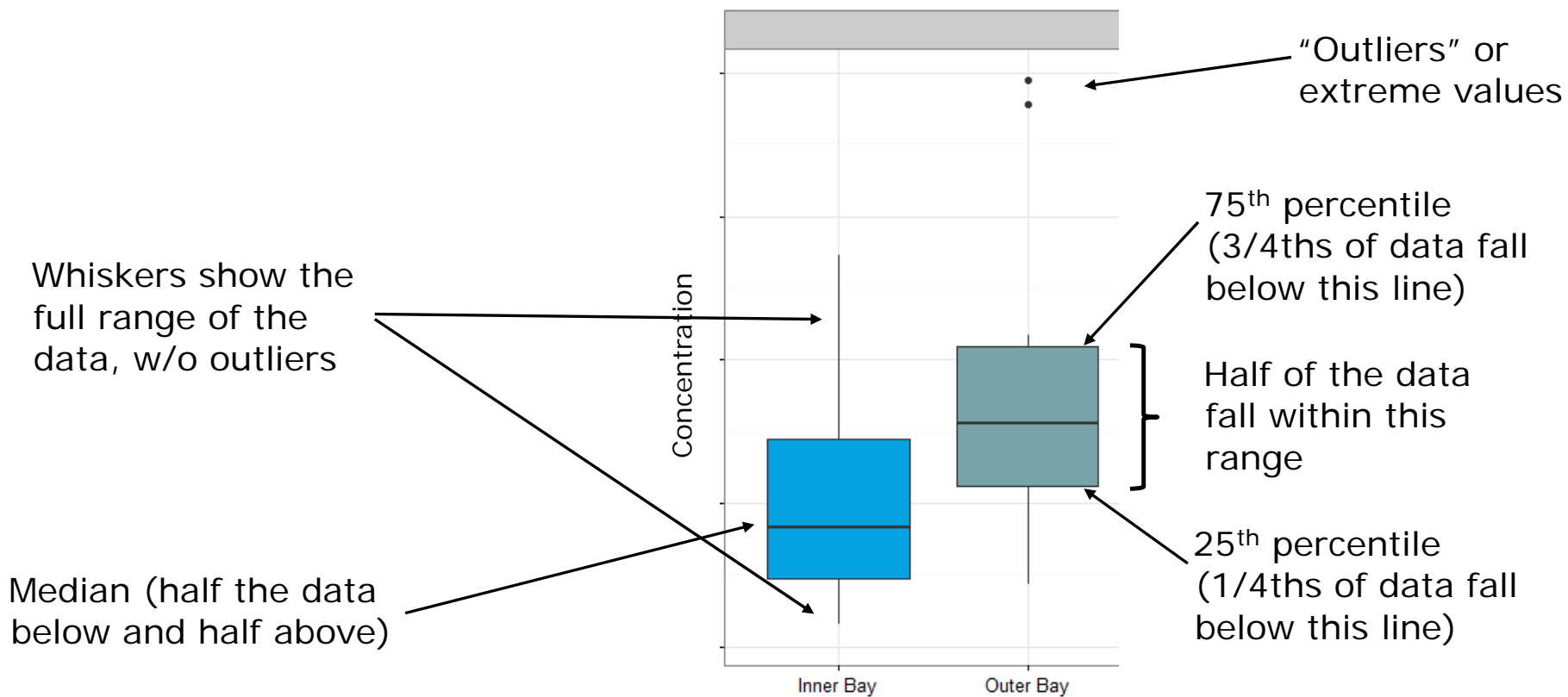


# DATA ANALYSIS

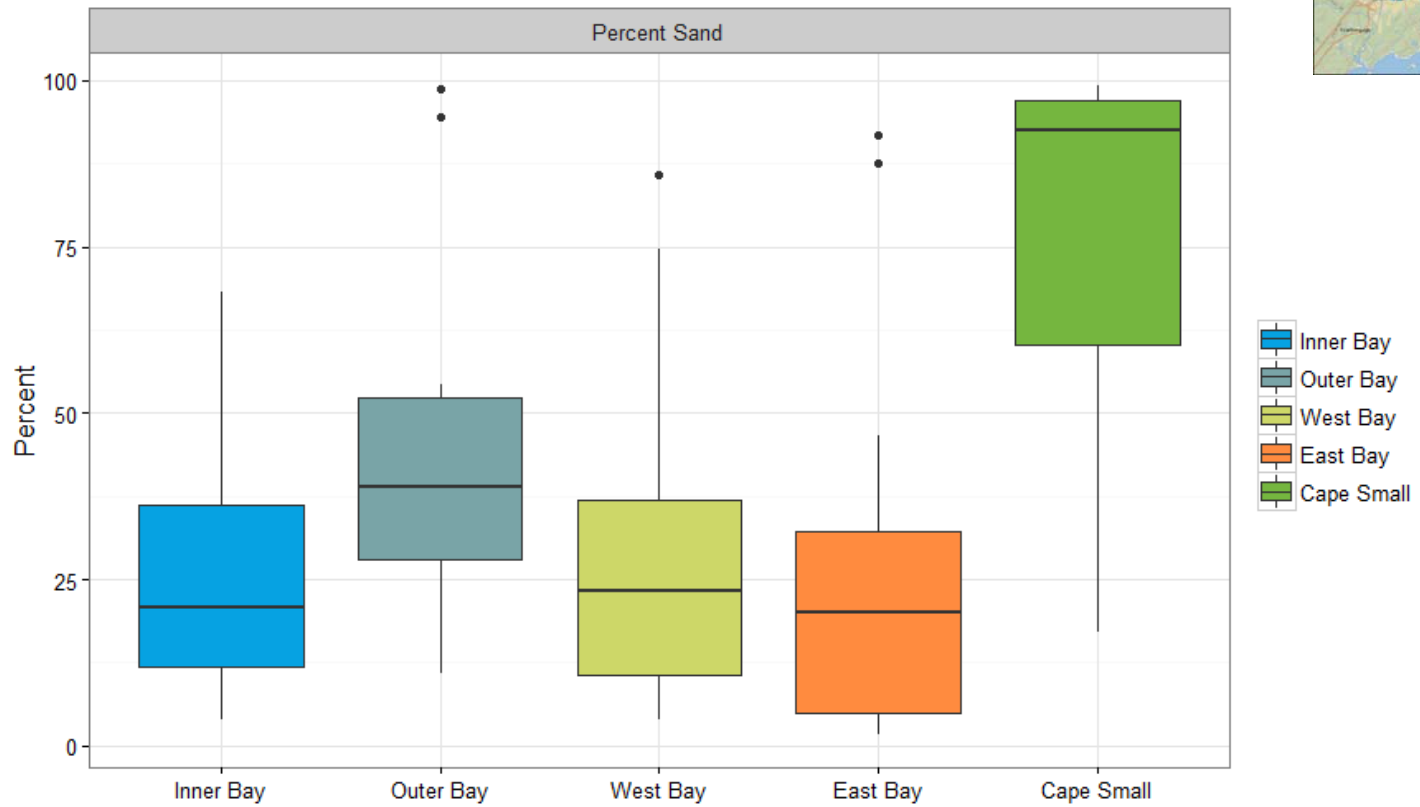
- Integrate data, calculate sums
- Calculate summary statistics (baywide and by region)
  - Focusing on detects
- Plot data (box and whiskers and maps)
- Exploratory analysis (identify data issues)
- Comparison to screening values
- Statistical analysis (by region and time)
- Geospatial analysis to illustrate notable trends
- Comparison to rest of Gulf of Maine



# RESULTS: 2010-2011 DATA BOX PLOTS



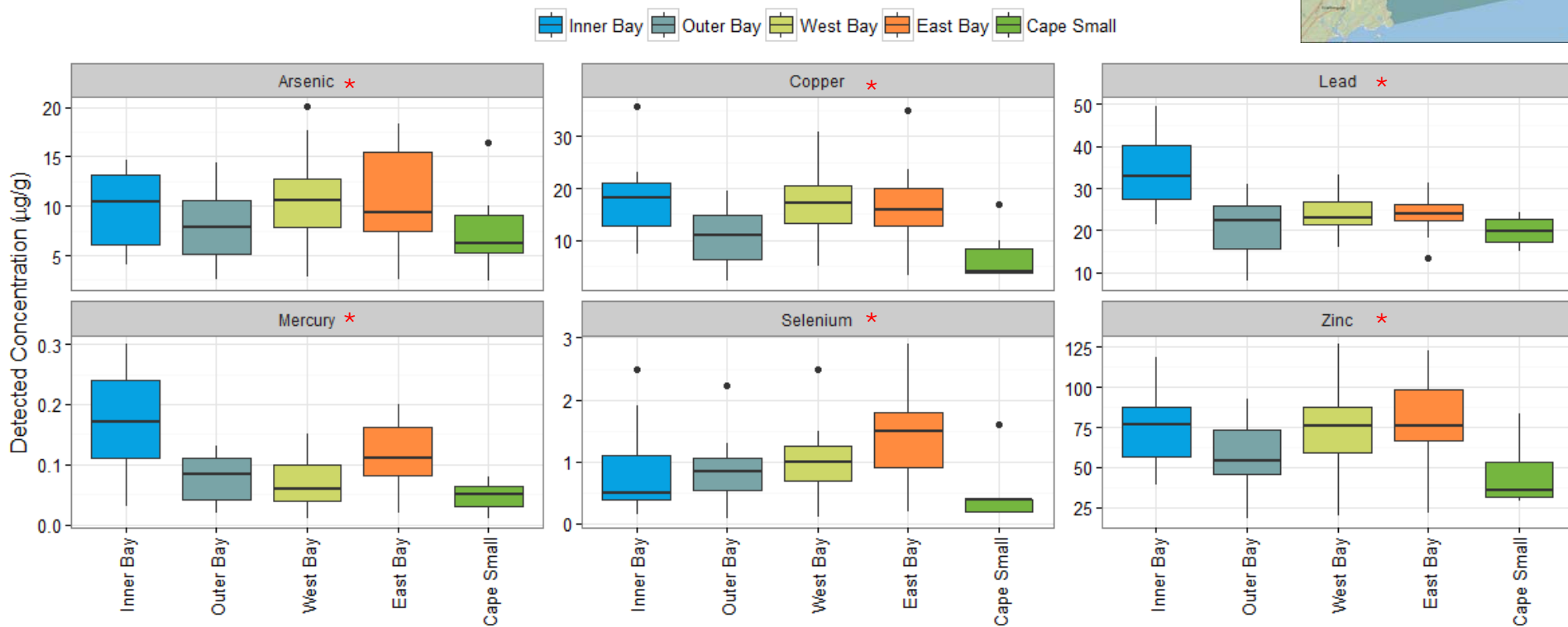
# RESULTS: 2010-2011 DATA SEDIMENT GRAIN SIZE



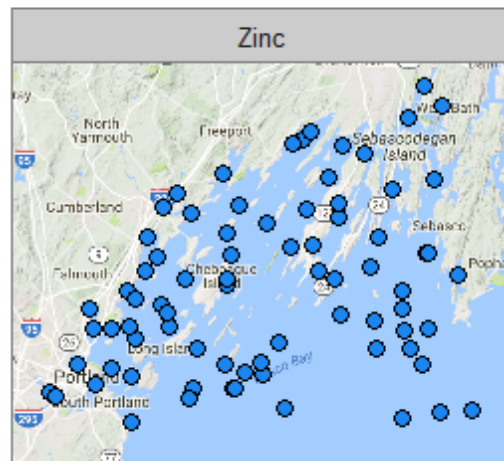
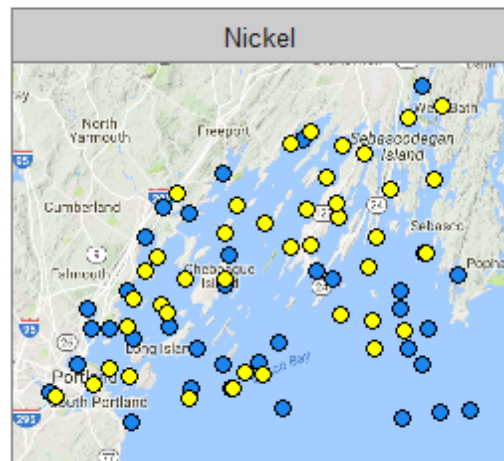
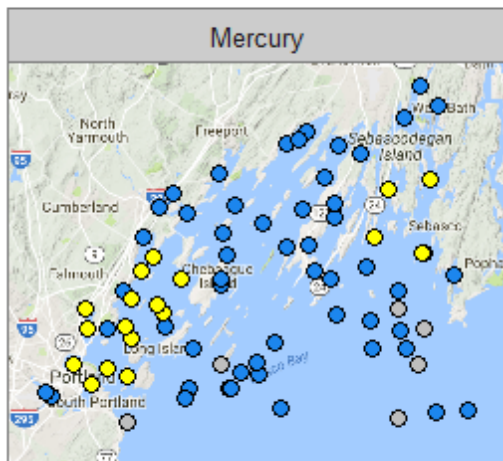
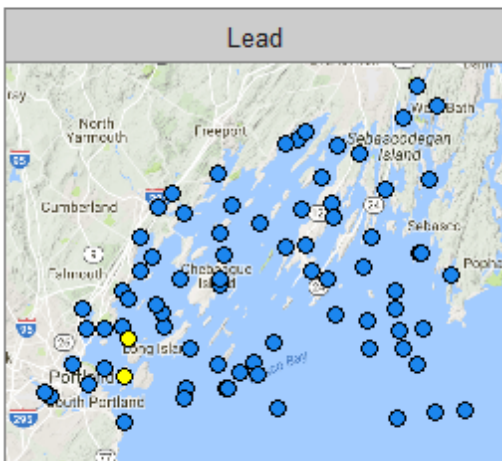
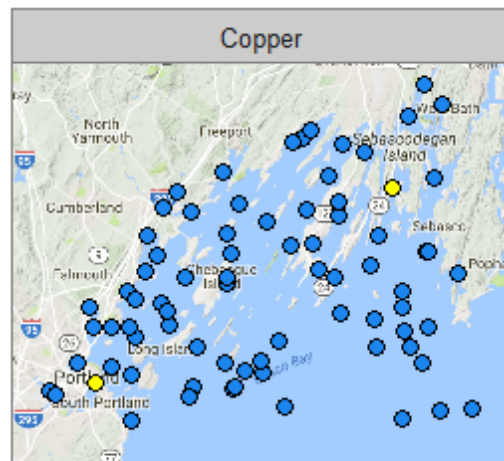
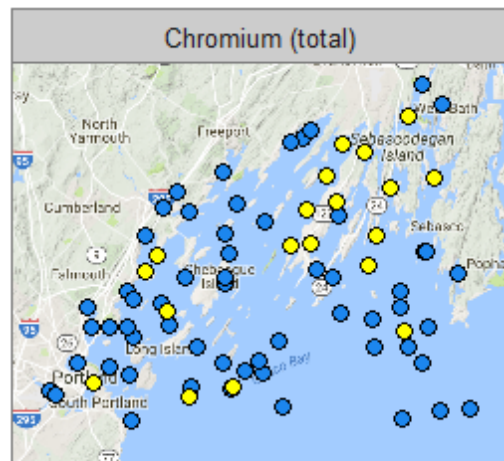
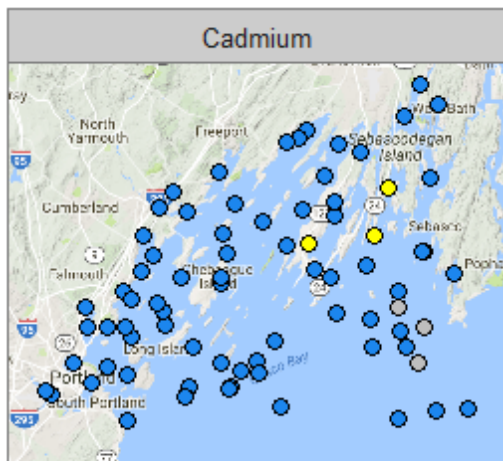
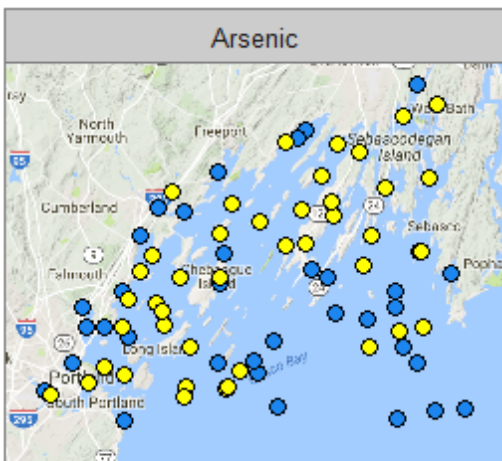


# RESULTS: 2010-2011 DATA

## EXAMPLE METALS



\*: statistically significant differences between regions



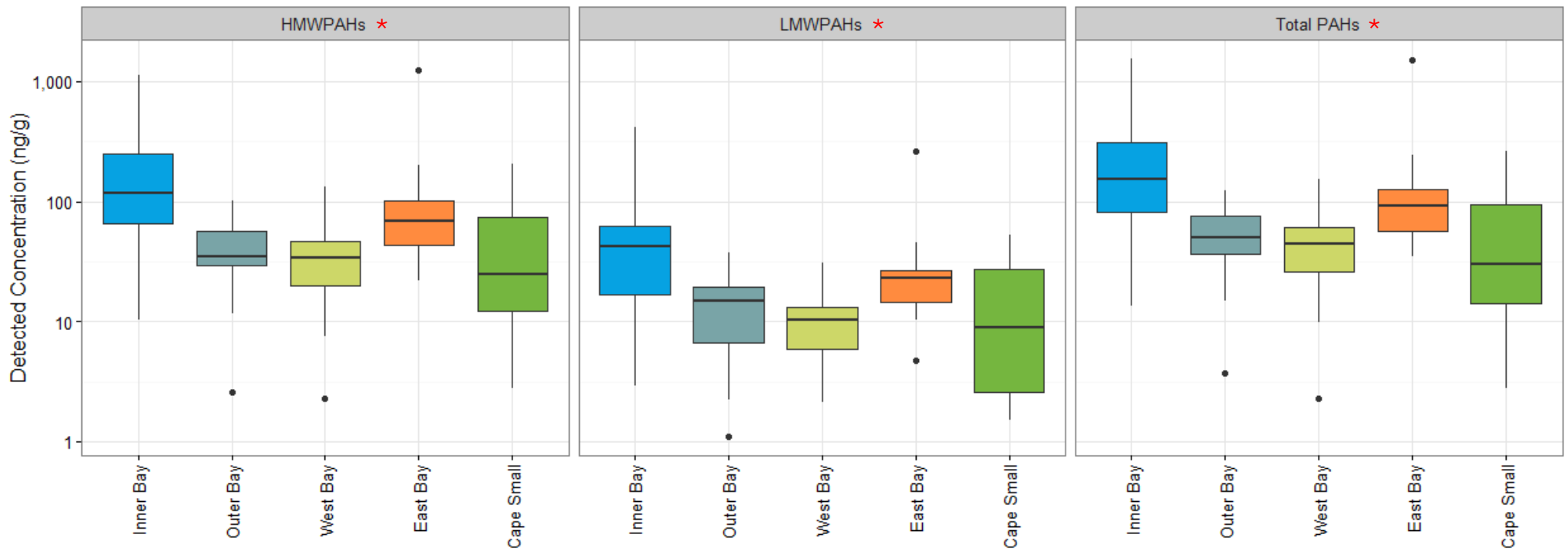
- Above ERM
- Between ERM and ERL
- Below ERL
- Not Detected

# RESULTS: 2010-2011 DATA

## PAHS

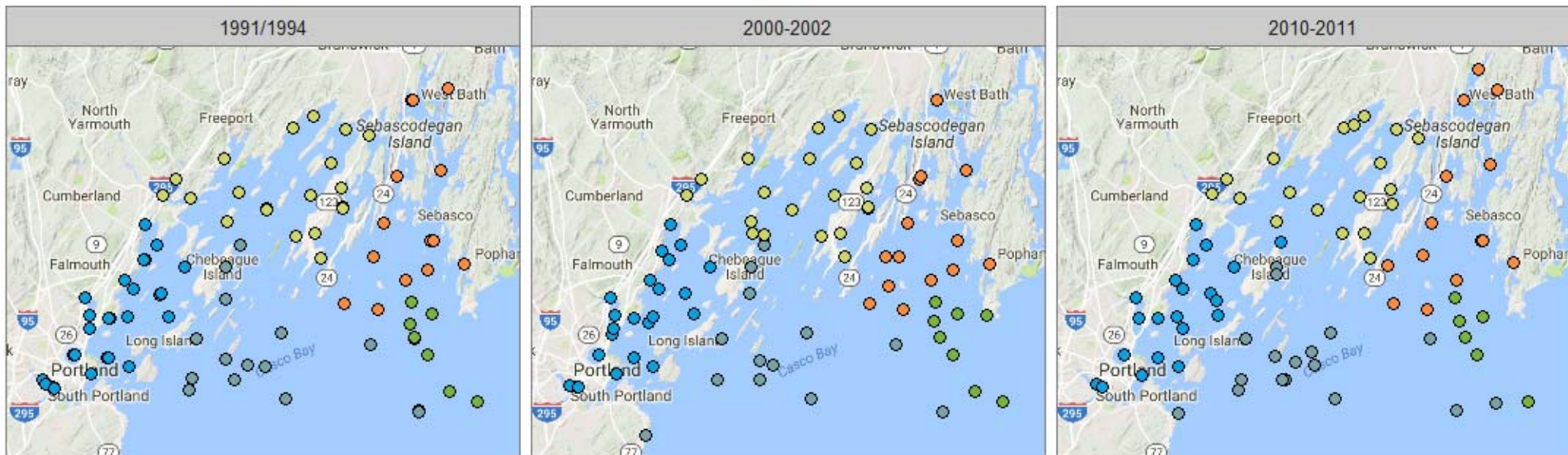


■ Inner Bay 
 ■ Outer Bay 
 ■ West Bay 
 ■ East Bay 
 ■ Cape Small



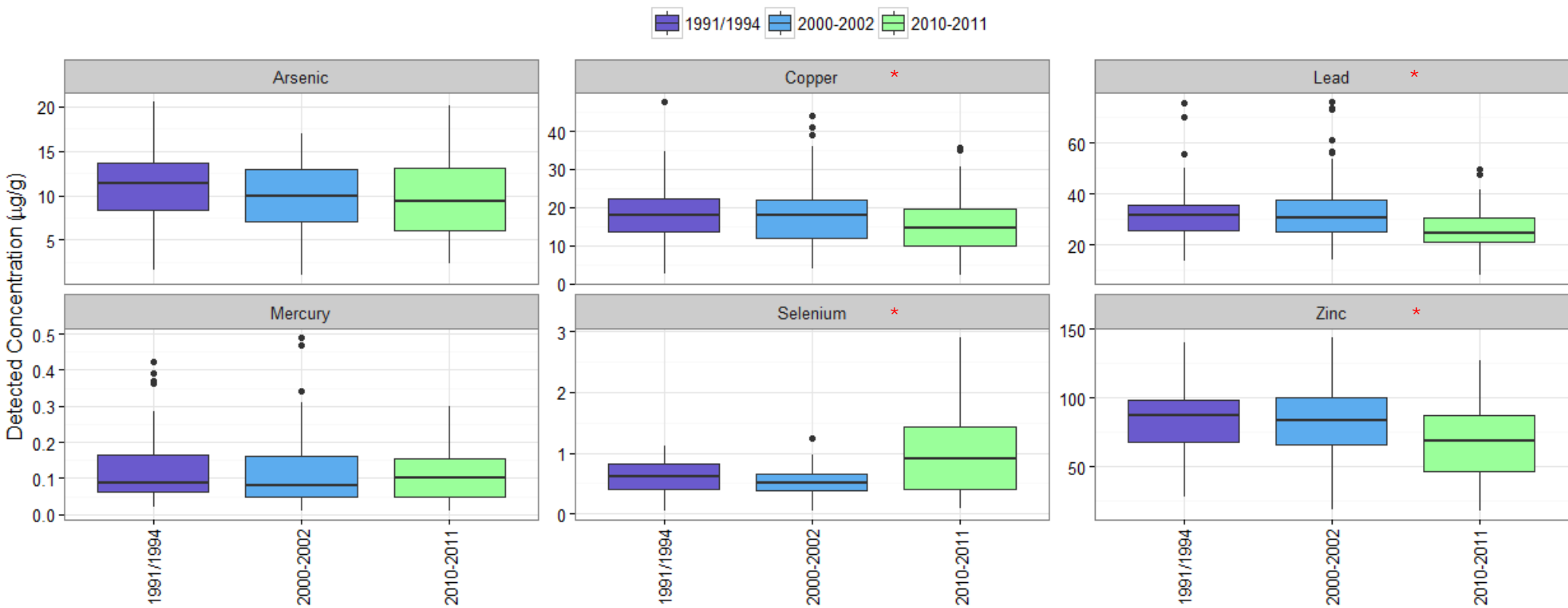
\*: statistically significant differences between regions

# RESULTS: 1991-2011 CASCO BAY



- Inner Bay
- Outer Bay
- West Bay
- East Bay
- Cape Small

# RESULTS: 1991-2011 CASCO BAY METALS



\*: statistically significant trend in concentration by time



# LEAD IN CASCO BAY, 1991-2011

