

2016

Sediment Contamination Study of Casco Bay part 5, Ramboll Environ PowerPoint 2016

Ramboll Environ

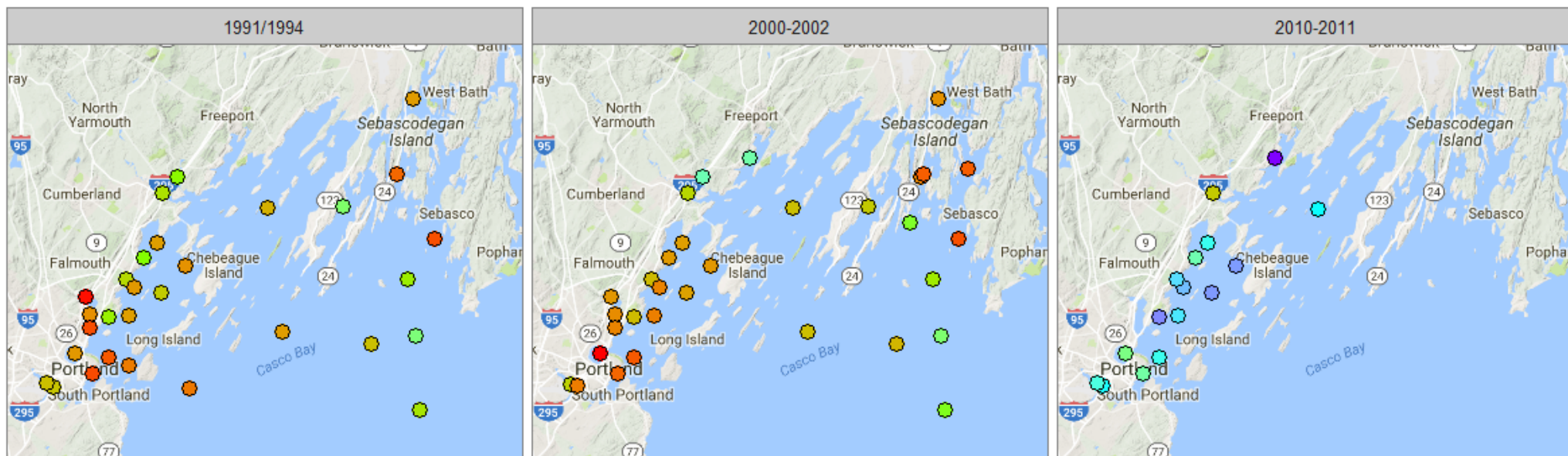
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RESULTS: 1991-2011 CASCO BAY DIOXINS AND FURANS

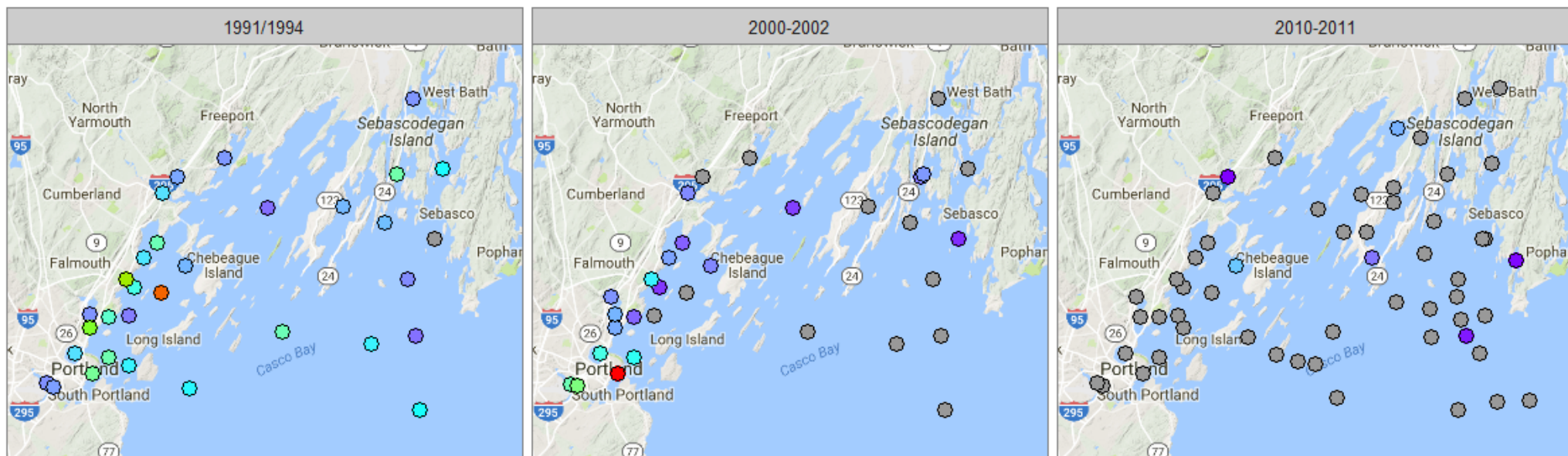


Total PCDD/PCDFs (ng/kg)

100 1000

Note: gray points are not detected

RESULTS: 1991-2011 CASCO BAY BUTYLTINS

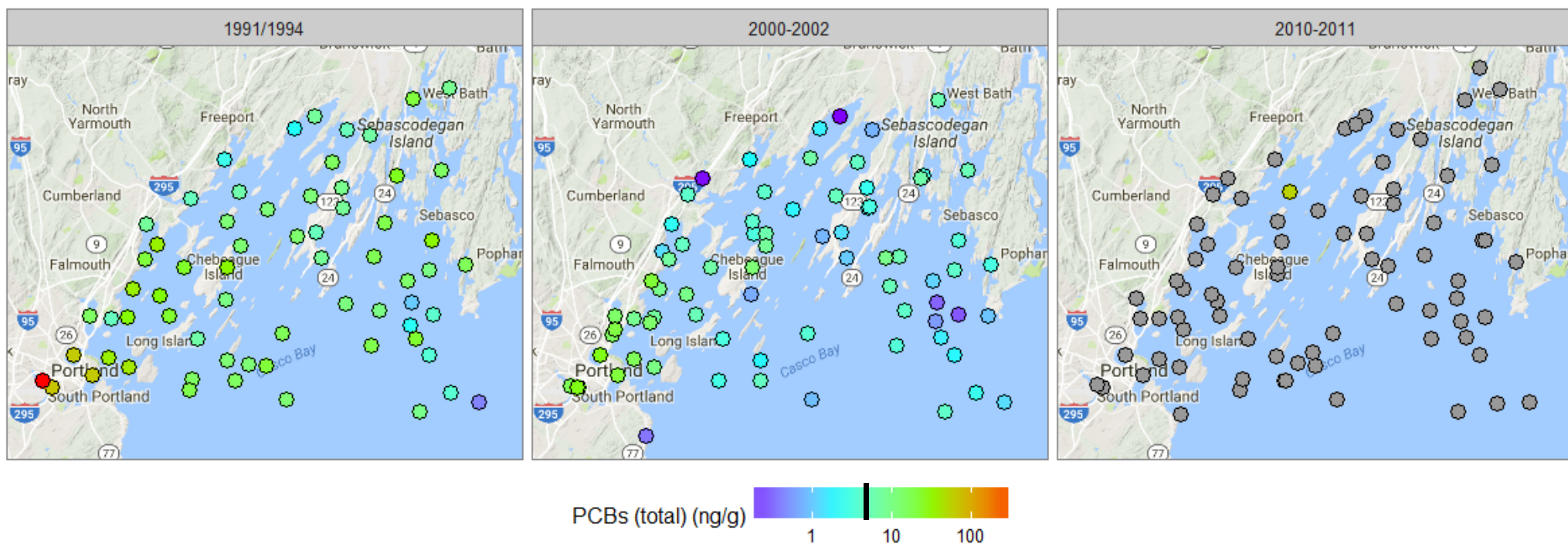


Butyltin (mono+di+tri) (ng/g)

20 40 60

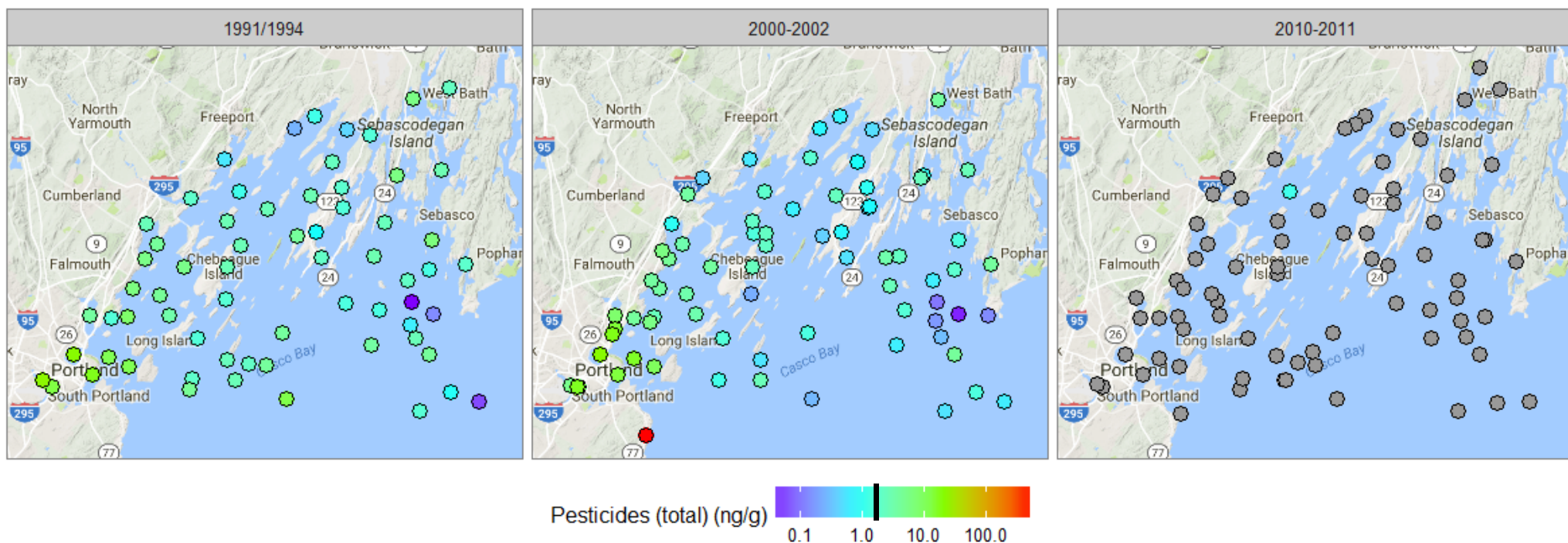
Note: gray points are not detected

RESULTS: 1991-2011 CASCO BAY PCBS



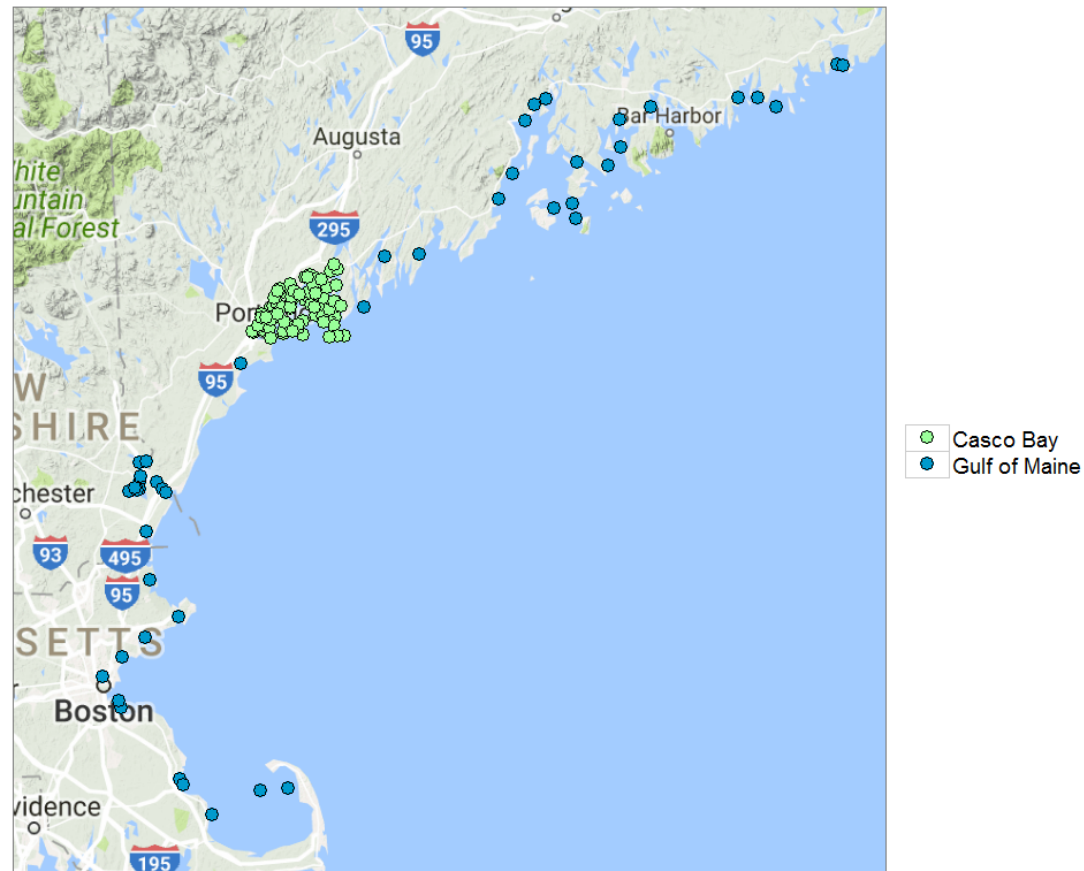
Note: gray points are not detected

RESULTS: 1991-2011 CASCO BAY TOTAL PESTICIDES

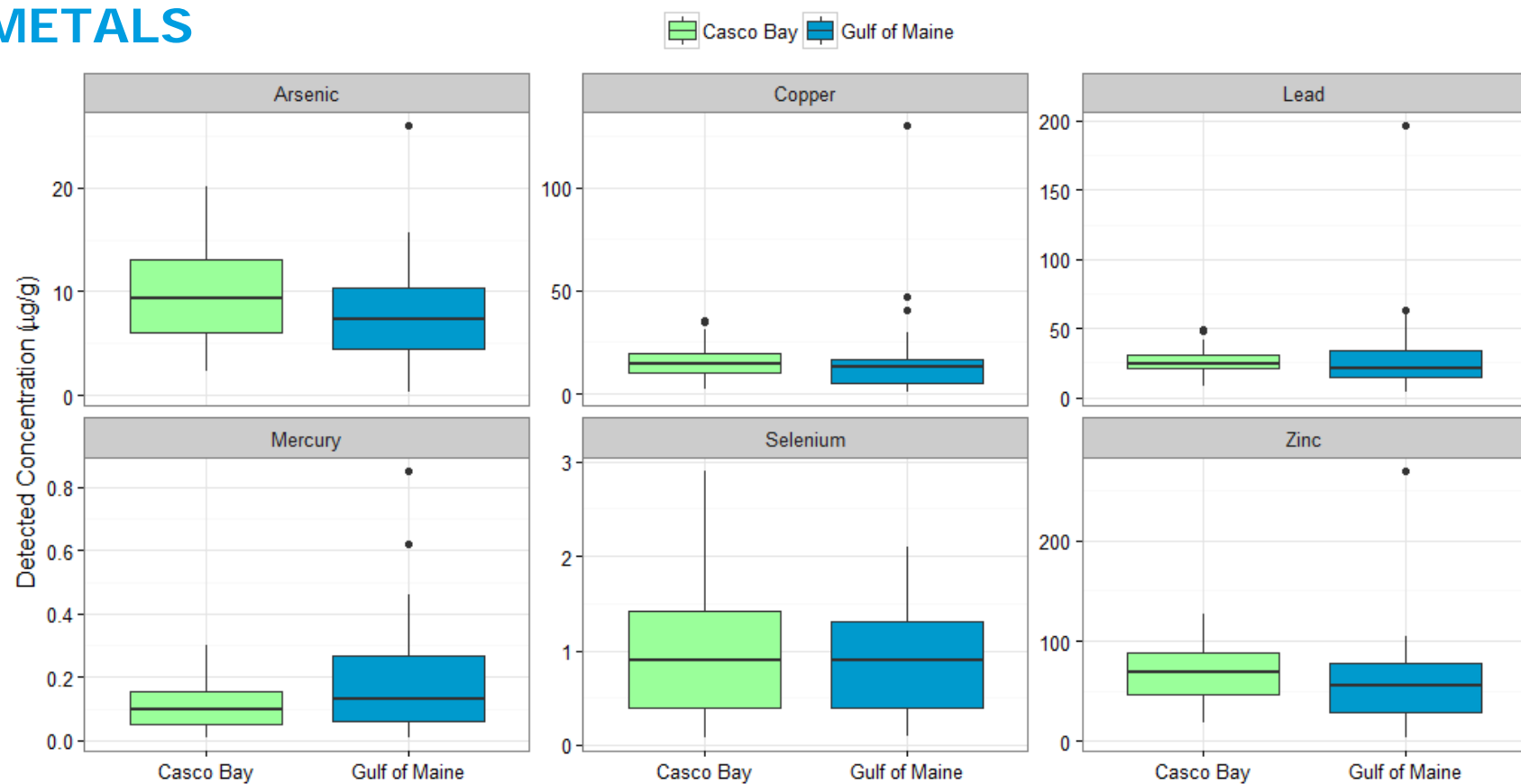


Note: gray points are not detected

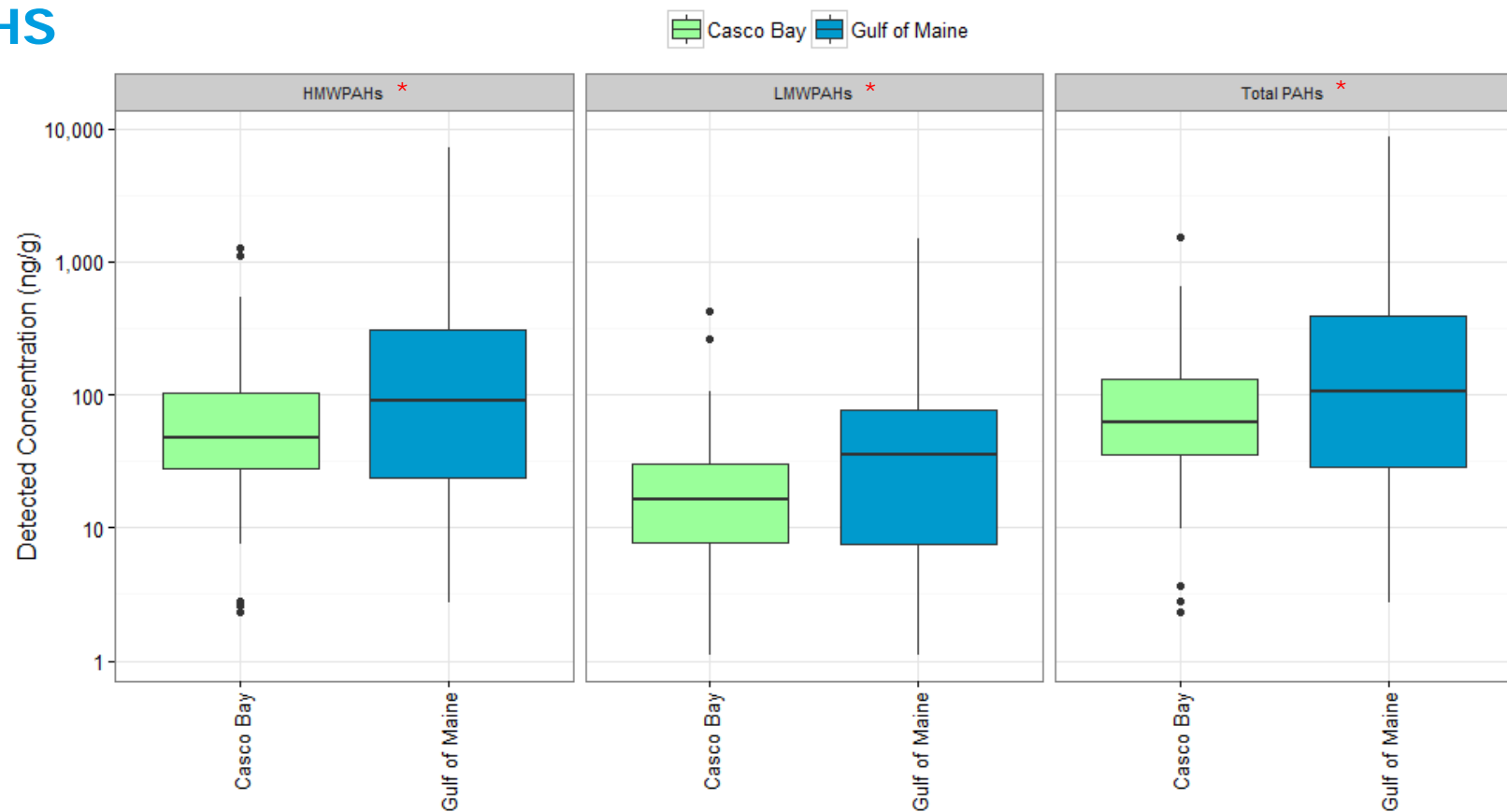
RESULTS: 2010 GULF OF MAINE



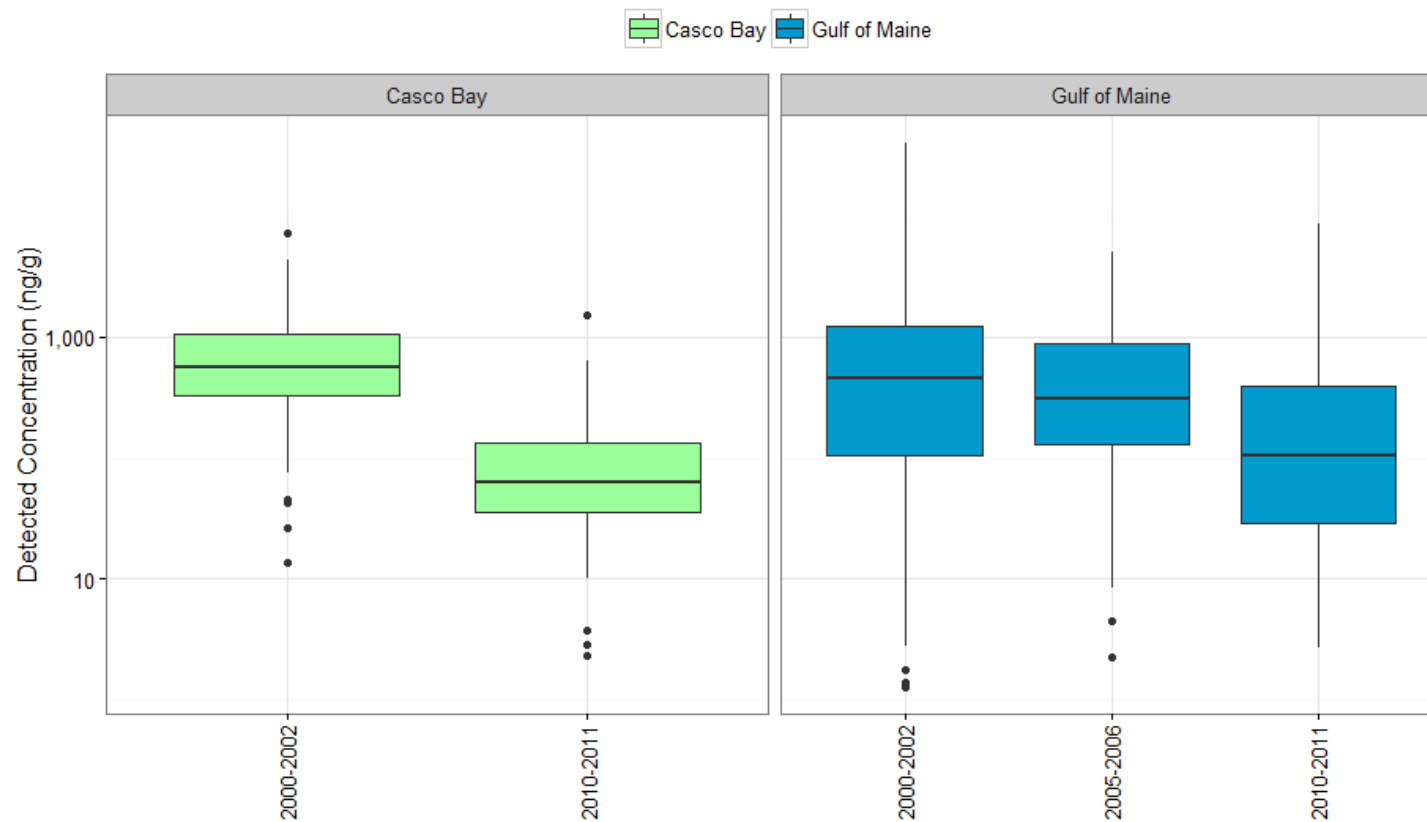
RESULTS: 2010 GULF OF MAINE METALS



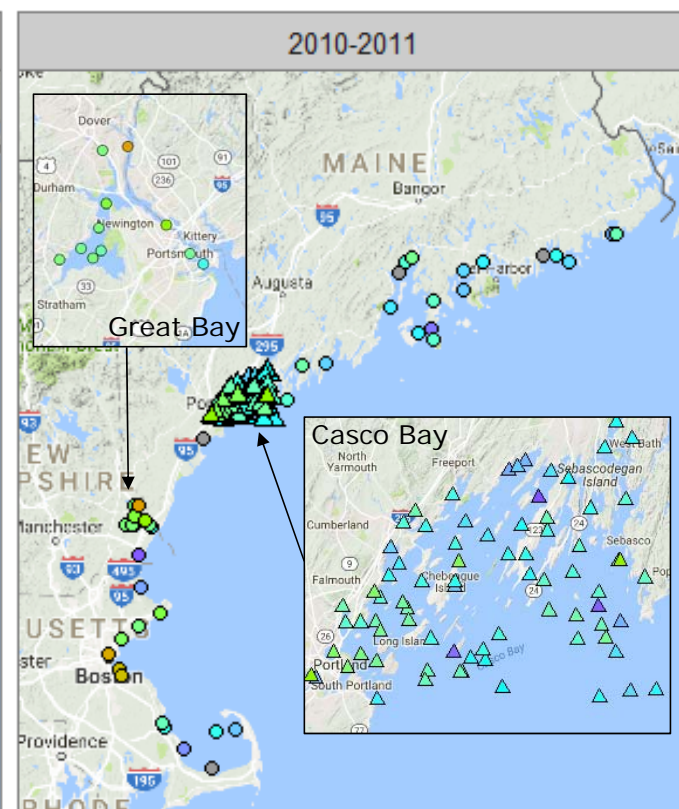
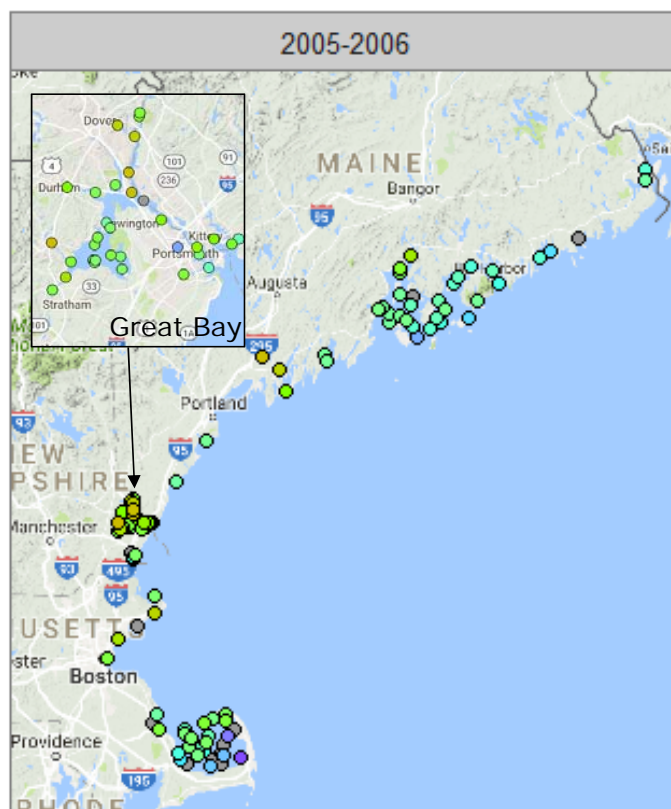
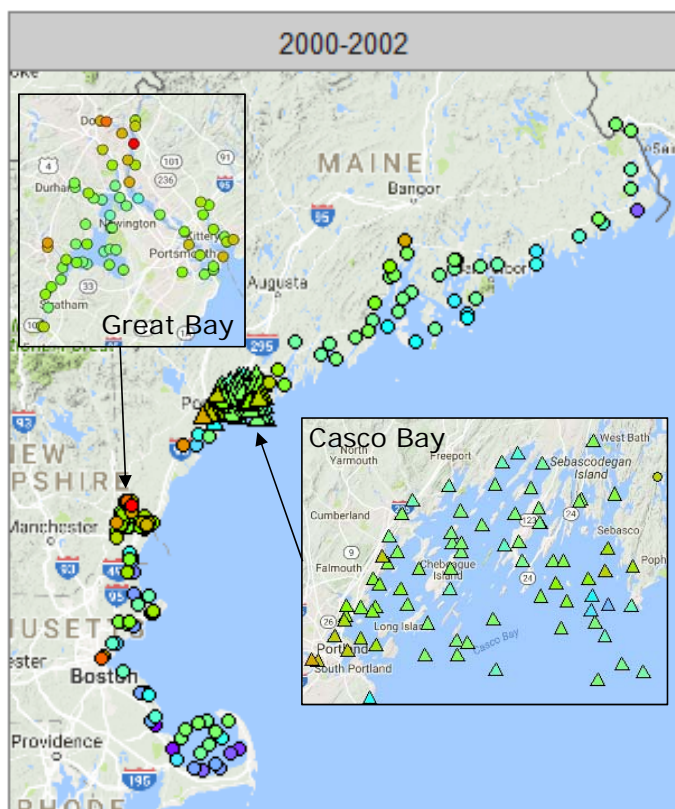
RESULTS: 2010 GULF OF MAINE PAHS



RESULTS: 2000 - 2010 GULF OF MAINE PAHS



RESULTS: 2000 - 2010 GULF OF MAINE



RAMBOLL ENVIRON

Total PAHs (ng/g)

10 100 1000 10000

▲ Casco Bay ● Gulf of Maine

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

SUMMARY

| Chemical Group | Casco Bay 2010-2011 | Casco Bay 1991-2011 | Gulf of Maine (GoM) |
|--------------------|----------------------------------|------------------------------------|------------------------|
| Metals | Below screening values* | Declining/stable, <i>selenium?</i> | Consistent with GoM |
| PAHs | Below screening values | Decline since 2000-2002 | Lower than GoM |
| Dioxins and Furans | Concentrations are low | Decline since 2000-2002 | NA |
| Butyltins | Concentrations low, not detected | Decline over all sampling events | NA |
| PCBs | Rarely detected (elevated DL) | Expected continued decline | NA (rarely detected) |
| Pesticides | Rarely detected (elevated DL) | Expected continued decline | NA (rarely detected) |

FUTURE RESEARCH CONSIDERATIONS

- Metals – selenium?
- PAHs – unexpected result, notable response to source reduction?
- Emerging Chemicals/Substances of Concern
 - Pesticides
 - Flame Retardants
 - Microplastics
 - Pharmaceuticals

THANK YOU