

**Atlantic Salmon and their Ecosystems**  
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**Poster Abstract**

**Title:** Environmental Contaminants in Fillets of Sea-run Atlantic Salmon from the Gulf of Maine DPS

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**Abstract:** Between 2008 and 2010, skin-on fillets from seven dead sea-run Atlantic salmon from the Gulf of Maine DPS were analyzed for organochlorine compounds, PBDE, and trace metals. Five fish were collected from the Penobscot River and single fish were recovered from the Narraguagus and Dennys rivers. TCDD-TEQ concentrations in fillets ranged from 0.04 pg/g to 0.62 pg/g (mean  $0.21 \pm 0.23$  pg/g; all conc. expressed as wet weight). Seventeen dioxin and furan congeners were below detection limits in all fish, while several *non-ortho* and *mono-ortho* dioxin-like PCB congeners were frequently detected. The dominant PCB congener contributor to the TCDD-TEQ varied. The PCB congener pattern in the Dennys and Narraguagus fish was similar and dominated by PCB#118. No consistent PCB congener pattern was evident among the five Penobscot fish. Mean  $\Sigma$ PCB in salmon fillets was  $56.8 \pm 13.2$  ng/g with a range of 41.5 to 77.5 ng/g. PCB levels in GOM DPS salmon appeared higher than concentrations reported in other wild and farmed salmon studies.  $\Sigma$ PBDE ranged from 0.4 to 4.7 ng/g ( $1.7 \pm 1.4$  ng/g). BDE#47 was the dominant PBDE congener in all samples. DDE ranged from 3.2 to 10.9 ng/g with a mean of  $6.3 \pm 2.6$  ng/g. Mercury concentrations in GOM DPS salmon fillets were low ( $0.07 \pm 0.04$   $\mu$ g/g, range: <0.03 – 0.14  $\mu$ g/g) compared to levels reported in freshwater state and regional bio-monitoring programs. Contaminant concentrations in returning GOM DPS Atlantic salmon would trigger state and federal fish consumption advisories for several organochlorine compounds and trace metals.