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**Title:**  
**Heavy Metal Gradients in the Hackensack River Estuary: A Baseline for Improving Ecosystem Health**

**Map Explanation:**

Sediments in the Lower Hackensack River tidal creeks were sampled to assess the Post Superstorm Sandy contaminant baselines for chromium and mercury to aid in future ecosystem health monitoring. Of the creeks sampled, this research focused on West Riser Ditch, East Riser Ditch, and Peach Island Creek East. Sediment samples at West and East Riser Ditches showed a negative concentration gradient from the tide gates moving inland. Peach Island Creek East showed consistently higher metal concentrations than the other sampled creeks for both metals and showed a concentration gradient that was positive from the tide gate moving inland. Aerial imagery from 1930 to 2015 was used to identify a spatial relationship between land use over time and tidal creek ecosystem health.