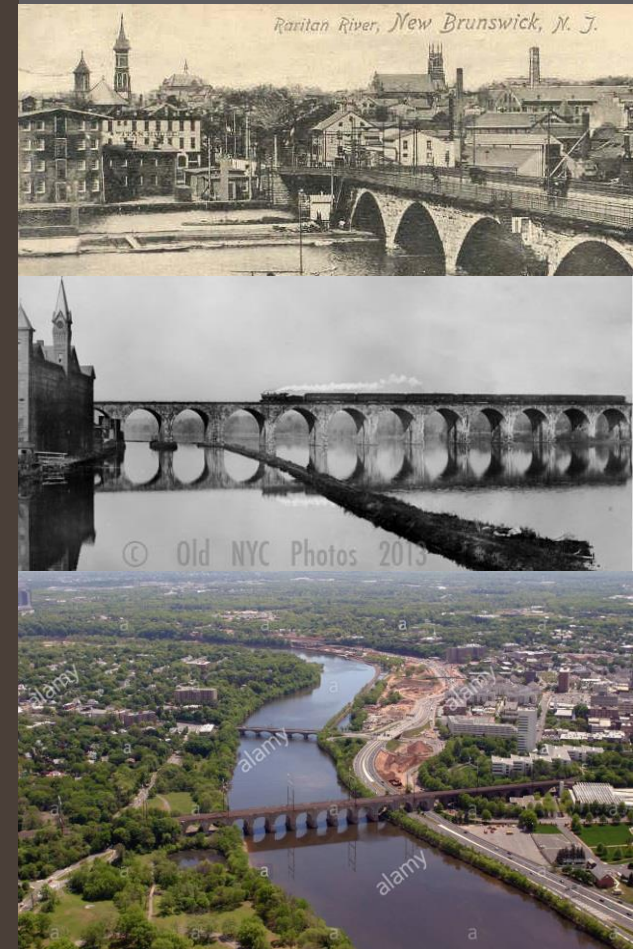


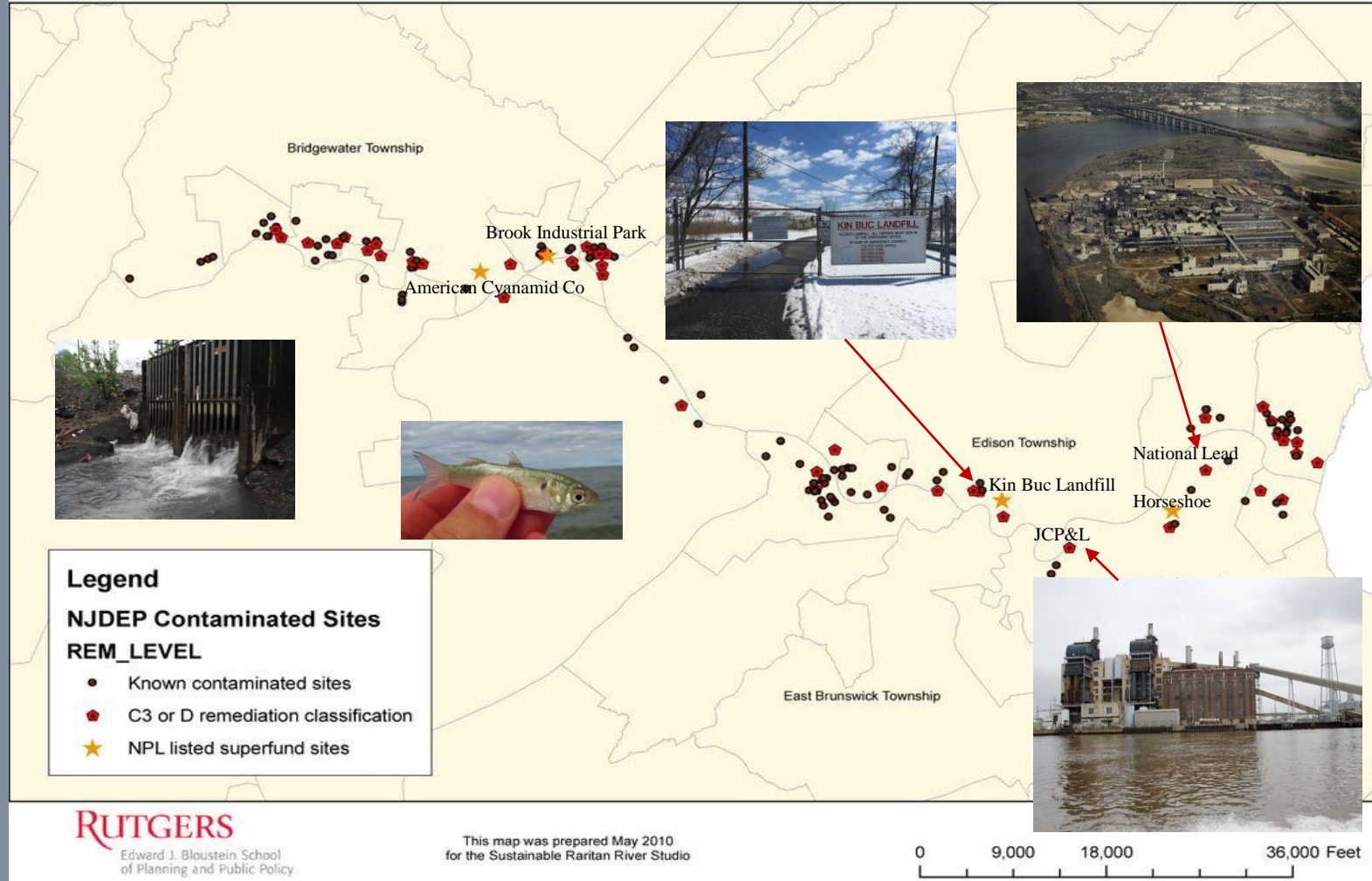
# Temporal Heavy Metal Distribution and Bioaccumulation in the Lower Raritan River

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## Major contaminated sites within 1/2 mile of the Lower Raritan River



## Lower Raritan River

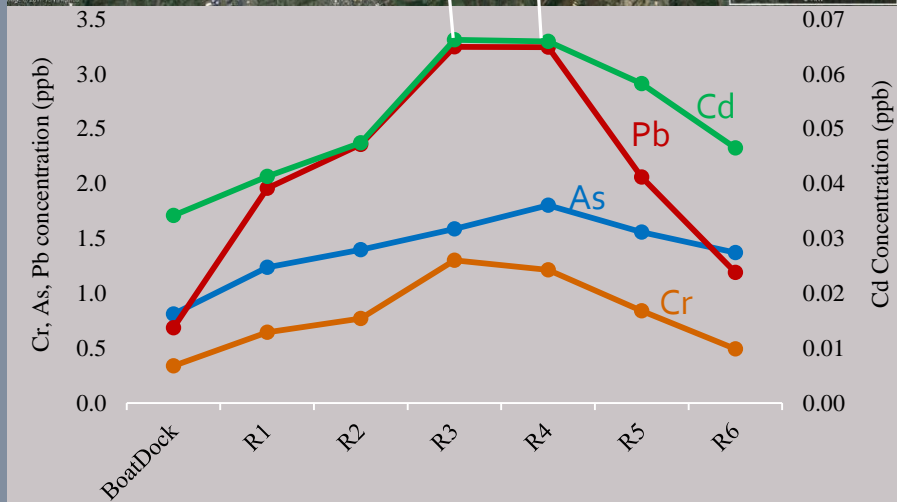
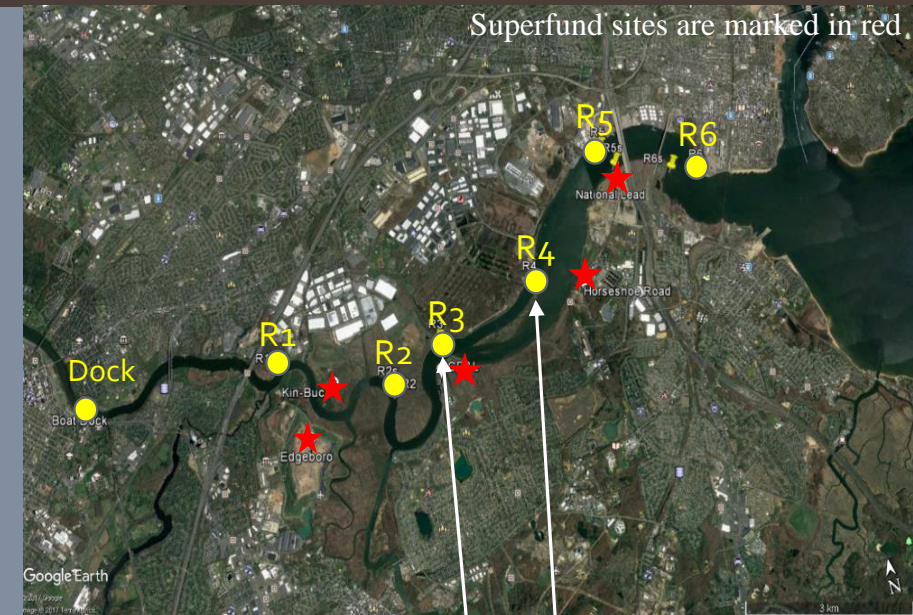
- Serving >1M residents with water, recreation and transportation
- Profoundly contaminated over the last 100 years
- Dense contamination sites along the river
- Pollutant concentrations affected by freshwater discharge, tide, precipitation, etc.
- Little information about local sources of heavy metal contamination to the Raritan River ecosystem

## Project Goal

- ❑ Better understand the spatial distribution of toxic metals (As, Cr, Cd and Pb) in water, sediment and biota dwelling in the Lower Raritan River
- ❑ To evaluate if seasonal variables such as river discharge influences the size fractionation and temporal trend in heavy metal concentration in the surface water

## Field sampling (April, June, August)

- Water (surface and depth)
- Sediment
- Plankton (zoo- and large phytoplankton)
- Shrimp (optional; off-shore)





## Who & When

- Field sampling will be carried out with the participation of undergraduates from Analytical Environmental Chemistry Lab course and graduate students
- Analytical work will be performed with the assistance from undergraduates in DES and lab technician in Rutgers Inorganic Analytical Laboratory (RIAL)

Timeline	Activity
April	River water, sediment and zooplankton sampling
June and August	Additional river water, plankton sampling, shrimp sampling
April-August	Samples will be processed and analyzed upon collection
September	Data processing, paper/article drafting

