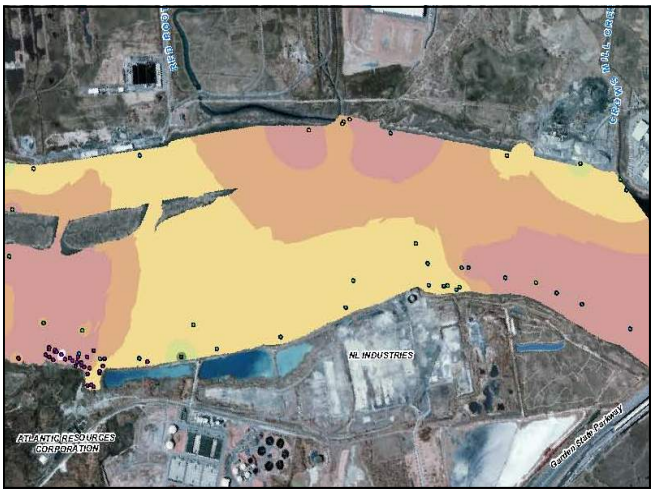
Lower Raritan River Sediment Survey And Ecological Risk Assessment

Chapin Engineering

Middlesex County, NJ



The "Keasbey Reach" of the Lower Raritan River includes an estuarine waterfront landscape that is dominated by active and inactive industrial facilities, including multiple properties that appear on State and Federal lists of known contaminated sites. Princeton Hydro completed a Scope of Work that consisted of three primary tasks:

- Bathymetric survey;
- Sediment sampling and analysis for contaminants; and,
- Consolidation of available sediment data as reported by responsible parties in public documents and as generated by our sampling program.

During two on-water mobilizations, Princeton Hydro collected sediment samples from thirty one locations; two discrete samples (0 to 1-feet and 1 to 2-feet below sediment surface) were obtained at the majority of the locations in an effort to differentiate recent (i.e., surface) from historic (i.e., subsurface) contaminant inputs. For a subset of samples, the widely-disseminated historic pesticide DDT and its associated metabolites were used to qualitatively determine time horizons in the sediment profile.

Using geographic information system (GIS) technology, Princeton Hydro combined our data set with investigation results reported to New Jersey Department of Environmental Protection by various responsible party members with interests in the "Keasbey Reach". The GIS platform facilitated data presentation and interpretation and provided our client with an interactive gateway that is readily upgradeable if new or additional data become available.

The magnitude and distribution of particular contaminants detected in sediment samples were interpreted by our client as indications that additional investigation, risk assessment, and cleanup actions may be warranted.