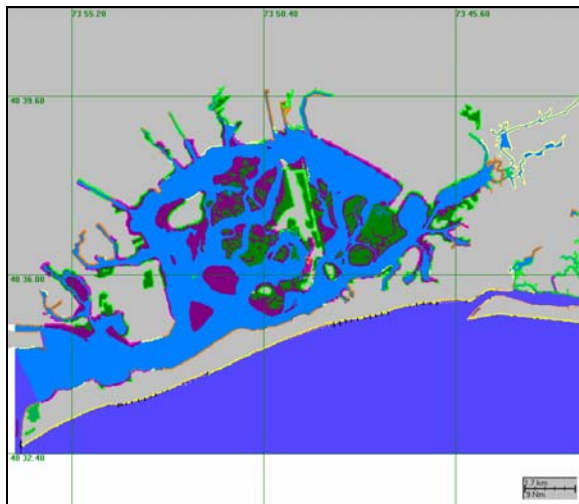


SIMAP OIL SPILL MODEL: HABITAT AND CURRENT DATABASES FOR JAMAICA BAY AND NY HARBOR

Client: Florida Power & Light (FP&L)

ASA's oil spill model system SIMAP (Spill Impact Model Application Package) is used by Florida Power & Light (FP&L) for contingency planning, drills, spill response, impact assessment, and evaluation of fates and effects of oil and fuel spills. FP&L needs the capability to evaluate the consequences of hypothetical oil spills along the transportation route to and at its facilities in Jamaica Bay, Long Island, New York. ASA developed databases for Jamaica Bay and New York Harbor for use in the model. These data include shore and habitat type mapping (based on Environmental Sensitivity Index atlas data), water depths, winds and current data sets. The NY-Jamaica Bay location data adds to the existing library of such databases for areas around FP&L facilities. Florida locations where data were previously compiled include Tampa Bay, Fort Myers area, Biscayne Bay, Fort Lauderdale, Riviera, Cape Canaveral, and the St John River.



A three-dimensional hydrodynamic model application to the New York Harbor Region was prepared using ASA's Boundary-Fitted HYDROdynamic model (BFHYDRO).

The grid system was designed to provide sufficient resolution in the New York Harbor region and a fine resolution in Jamaica Bay. The model forcing functions consisted of tidal elevations along the open boundaries and fresh water flows from the rivers and sewage outfalls into the study area. The model-predicted surface elevations compare well with the observed surface elevations at four stations. Model predicted currents also compare well with the observed currents at Bergen Point and Verrazano Narrows.

