

Baird

Projects

Eel Tracking Study *St. Lawrence River*

Client

New York Power Authority

Project Scope

The American Eel is a species that has seen a dramatic decrease in numbers in North America and throughout much of the world. While specific causes are uncertain, concern over mortality of eels due to passage through dams lead to a study carried out by the New York Power Authority (NYPA) on the St. Lawrence River near Massena, New York. NYPA conducted an acoustic telemetry study with tagged eels migrating downstream through the Moses-Saunders Dam and needed methods to review, visualize and extract results from complex databases.

Services Provided

Baird's role in this study was to provide the tools to extract the greatest possible knowledge from the collected data in a timely and efficient manner. This involved carrying out a current measurement program, which was used to calibrate a numerical model of the study area. The 3D model was used to predict the flow conditions throughout the river and particularly near the dam where understanding the eels' paths was most important.

Baird also developed two software applications for NYPA to allow them to visualize their data and produce eel tracks in three dimensions based on the data received from the acoustic telemetry study. These two applications were developed as additional modules of Baird's X-Vision and SDA packages, and permitted work in a three-dimensional environment and a GIS environment respectively. These packages allowed the complex raw telemetry data to be organized in a clean efficient manner into a product that contained the best estimate of the track, and a description of the environmental data (currents, water depth, etc.) at each point along its passage.

