CHAPTER 1
INTRODUCTION

Since 1973, an annual Year Class Report has been prepared on behalf of the several electric utility companies (collectively, the "Utilities") operating generating stations in the Hudson River estuary. This report, which is based on the 2000 Hudson River Biological Monitoring Program, has been prepared on behalf of Dynegy Roseton L.L.C., Entergy Nuclear Indian Point 2 L.L.C., Entergy Nuclear Indian Point 3 L.L.C., and Mirant Bowline L.L.C. The principal reporting objective has been to present and analyze data on the distribution and abundance of early life stages of selected fish species based on field surveys conducted throughout the Hudson River estuary. The content and scope of these reports have varied over time from estimating the environmental impact of five Hudson River generating stations to focusing on indices of year class strength to describing the spatiotemporal distribution of selected fish species. Since the early 1990's, the annual Year Class Report has been standardized to describe the physical/chemical parameter patterns in the Hudson River estuary and the spatiotemporal distribution of 16 selected species of fish. These 16 species were identified by the New York State Department of Environmental Conservation (NYSDEC) of interest for discharge permitting purposes.

This report adds to the historical database by describing the results of the Longitudinal River Ichthyoplankton Survey, the Fall Shoals Survey, and the Beach Seine Survey for 2000. The 2000 Year Class Report presents basic abundance and distribution data with the following objectives:

- Describe the patterns and variability of environmental parameters that may have affected fish distribution and abundance in the Hudson River estuary in 2000.
- Describe the distribution and abundance of 16 selected species of fish (Table 1-1) in the Hudson River estuary in 2000.
- Describe the fish community of the Hudson River estuary in 2000.
- Describe patterns in growth for the 2000 year class of key species.
- Summarize the results of the Atlantic tomcod food habit study for 2000 (presented in an appendix section).

This report is organized into four chapters with supporting appendixes. Data collection and analysis methods are described in Chapter 2. Physical and chemical parameters are described in Chapter 3 and fish community analysis and spatiotemporal distribution of selected fish species are presented in Chapter 4. Detailed data tables supporting report analyses are contained within the appendix sections as follows:

- Appendix A - Quality Control Report for the 2000 Hudson River Ichthyoplankton Laboratory Program and 2000 Fall Juvenile Survey;
- Appendix B - Physical/Chemical Parameters;
- Appendix C - Numbers of Fish Collected in the Long River (1988-2000), Fall Shoals (1985-2000), and Beach Seine (1985-2000) Surveys;
- Appendix D - Density and Standing Crop Estimates;
- Appendix E - Length Frequency Distribution;
- Appendix F - Atlantic Tomcod Food Habit Study; and

- Appendix G - Annual Abundance Indices.

Table 1-1 Fish Species Treated in Depth in the 2000 Year Class Report

Common Name	Scientific Name[a]
Alewife	*Alosa pseudoharengus*
American shad	*Alosa sapidissima*
Atlantic sturgeon	*Acipenser oxyrhynchus*
Atlantic tomcod	*Microgadus tomcod*
Bay anchovy	*Anchoa mitchilli*
Blueback herring	*Alosa aestivalis*
Bluefish	*Pomatomus saltatrix*
Gizzard shad	*Dorosoma cepedianum*
Hogchoker	*Trinectes maculatus*
Rainbow smelt	*Osmerus mordax*
Shortnose sturgeon	*Acipenser brevirostrum*
Spottail shiner	*Notropis hudsonius*
Striped bass	*Morone saxatilis*
Weakfish	*Cynoscion regalis*
White catfish	*Ameiurus catus*
White perch	*Morone americana*

a. Names recognized by American Fisheries Society (Robins et al. 1991).