

NY/NJ Harbor Estuary: Hidden Treasure in Your Own Backyard

**New York-New Jersey Harbor Estuary Program
2005 Mini-Grant Program**

FINAL REPORT

**Submitted by
The Education Program at the
New Jersey Marine Sciences Consortium**

PROJECT SUMMARY

Minigrant funds received partially offset costs associated with creating, developing and producing an educational booklet about the NY/NJ Harbor Estuary for schoolchildren. Entitled "*NY/NJ Harbor Estuary: Hidden Treasure in You Own Backyard*," the booklet introduces students to estuaries in general and specifically, the natural and commercial resources of the Harbor Estuary Complex. The booklet contains puzzles, word games, riddles, fact cards, a "kid-friendly" Harbor map, a Harbor wildlife key and an estuarine-related science experiment. The booklet also contains an Internet-based activity that utilizes real-time data from The New York Harbor Observing and Prediction System (NYHOPS) website developed by Stevens Institute of Technology's Davidson Laboratory. This on-line database can be accessed at www.stevens.edu/maritimeforecast and provides real-time data of weather and oceanographic conditions in the Hudson River, the East River, NY/NJ Estuary, Raritan Bay, Long Island Sound and New Jersey's coastal waters.

A first edition of the booklet is being published and will be distributed free of charge to area schools, libraries and informal education centers. The booklet credits the NY/NJ Harbor Estuary Program as a sponsor and collaborator as will all promotional materials, announcing the availability of this product.

The booklet will also become a important part of NJMSC's harbor education initiative *All Hands On Deck*, launched in 2002. NJMSC's *All Hands On Deck* program currently offers a NY/NJ Harbor field trip program to K-12 schools in New York and New Jersey. The field trip consists of an interactive water-borne tour of the Estuary and its environs. The on-board presentation includes narration, discussion and hands-on learning activities that interpret the natural and commercial resources of the Harbor to groups of schoolchildren and their teachers. In addition, guest speakers, recruited from port-related businesses and environmental agencies working within the Harbor, are on board to share their real-life experiences with students. In some cases, a land-side component is conducted.

GOALS REACHED

The production and distribution of NY/NJ Harbor Estuary educational materials, including this booklet, is the goal of the second phase of NJMSC's *All Hands On Deck* harbor education initiative. With the field trip program up and running, it is the goal of the NJMSC to now make available a comprehensive set of Harbor Estuary-based educational materials and resources accessible to interested students and educators. Like the "*Hidden Treasures*" booklet, these materials can be used to extend and enrich the Harbor Estuary field trip experience or as "stand-alone" materials, filling a much needed void in available

educational materials specifically focused on the Harbor Estuary and the critical contributions it makes to the well-being of our region..

HIGHLIGHTS

The first highlight in the development of this project was during the initial “field-test” phase of the project when draft pages and other elements of the proposed booklet were shared with and evaluated by area schoolchildren. Observing students and teachers using draft section of the booklet and hearing their opinions and reactions were very helpful in adjusting the materials and developing new ones.

It was also encouraging to realize that most of the students we visited had some degree of prior knowledge of estuaries and the animals that inhabit them. Many students were aware that estuaries link fresh water with salt and this provides good habitat for many species of marine plants and animals. Students were also sometimes aware that actions on land affect waterways through run-off. Unfortunately though, most students were unable to link this knowledge to their own local estuary, the NY/NJ Harbor Estuary. Even students living very near the Hudson River in Jersey City were, for the most part, unaware of it, and if they were aware of it hardly connected it to what they perceived as a “natural” environment. Not surprisingly, students who were aware of the Harbor and/or local waterways regarded them largely as hopelessly polluted and without wildlife. A disconnect also existed between the goods that they used and enjoyed everyday (clothes, sneakers, video games, etc.), where they were made and how they got to the store in which they were purchased. Awareness of nearby shipping and ports commerce facilities and especially the impact of these facilities on the region’s economy were very low.

The second highlight in the development of the project was working with various partners to finalize the publication. The booklet was reviewed by personnel at Stevens Institute, NJMSC, the New York/New Jersey Harbor Estuary Program and the New Jersey Department of Transportation’s Office of Maritime Resources.

EVALUATION RESULTS

A final evaluation will be conducted once the booklets are distributed.

PROBLEMS and RESOLUTIONS

The production of the booklet took much longer than anticipated. Contributing to this was the time-consuming review process which included a field test with students and teachers and a final review process with peers. Although this process took longer to coordinate than expected each set of “fresh eyes” reviewing this project and the thoughts and ideas they brought to the table were of great value. The use of hand produced drawings also proved time consuming but, in the opinion of the NJMSC, has resulted in a product that is very inviting to children. The use of original artwork over “clip-art” or pre-existing illustrations also allowed the NJMSC to custom tailor drawing to illustrate the educational goals of the project. For example, the cover illustration of the booklet visually portrays the concept that an estuary can successfully balance many uses and purposes including healthy habitat for wildlife, a place for commerce and a place to recreate in and enjoy.

To resolve the time problem project extensions were requested and granted.