



## **Kenneth R. Weemhoff**

### **Spanish River Community High School Boca Raton, Florida**

#### **Project Description**

Man's activities combined with natural disasters have led to the deterioration of our local reef system. Therefore a group of Spanish River High School seniors who are serious about pursuing careers in Marine Biology and Environmental Conservation have been selected to continue the one year old "Artificial Reef Construction and Deployment Project" offered though the school under the course title "Research III and IV". Students plan to build numerous "Reef Balls", a modular reef concept, and then deploy them off the coast of Boca Raton on a student permitted artificial reef site sometime in May of 1998. During this school year, these students will continue to study and monitor the development of the artificial reef which was deployed off the coast of Palm Beach by last year's class in order to determine its effectiveness.

In addition, students will work with top local marine scientists on various environmental research projects and plan to enter their work in the local science fair in February of 1998. The students will serve as positive role models for numerous younger school children by giving presentations to elementary and middle school classes and educating them about the environment and the artificial reef project. It is our hope that this will bring about additional environmental awareness among these younger students.

As far as we know, this is the only program of its type offered anywhere in the United States.

#### **Objectives**

- ✦ To build an artificial reef from "Reef Balls", deploy it off the coast of Boca Raton, Fl., and then design experiments to determine the effectiveness of this new concept in artificial reef design.
- ✦ To learn Marine and Environmental Sciences through hands-on, real world experiences.
- ✦ To raise sufficient revenue through various fund raising activities to support our program.
- ✦ To locate, write, and submit various grant applications for funding.
- ✦ To work with and support various local scientists in the fields of Marine and Environmental Biology in their endeavors.
- ✦ To assist City, County, and State, Departments of Environmental Resource Management with various environmental causes.
- ✦ To increase public environmental awareness through newspaper and TV coverage of our program and through various public speaking engagements
- ✦ To build community and political support for our program.

- ✧ To produce top quality Science Fair projects in the fields of Marine and Environmental Biology.
- ✧ To write, submit and acquire a permit for an artificial reef site off the coast of Boca Raton.

### **Benefits to Students**

The Artificial Reef Construction and Deployment Project is a senior honors level science class offered at Spanish River High School in Boca Raton. The eight students enrolled in this program share information with other students and the community . Students are scheduled to speak with numerous elementary and middle school classes in our regional vicinity about our project and the local environment. By conducting classes for the youth, we are able to teach others about the underwater world and relay personal experience which cannot be found in any textbook. Students encourage others to join them in community beach clean-up efforts which increases respect and concern for the environment. The Research III and IV students are actively involved in several additional marine-related projects which also serve as an example for others in the community and enhances environmental consciousness. By generating an interest in environmental conservation, others can readily employ our projects and help to maintain the beauty of our underwater ecosystem. The evaluation of this program will be judged by our accomplishments. Listed below are some of what was accomplished by the 1997/98 class. This years class hope to even more successful.

- ✧ The students authored and submitted numerous grant applications resulting in over \$10,000 in funding.
- ✧ Various student were awarded a total of \$34,000 in scholarship money as a result of this program.
- ✧ All students conducted quality science research which resulted in the production of numerous science fair projects.
- ✧ All students volunteered time to assist various environmental organizations.
- ✧ The students authored and submitted to the State of Florida DEP an application for an artificial reef site.
- ✧ The students constructed numerous reef ball units and deployed them in 27 feet of water off of the coast of Palm Beach.
- ✧ The instructor was named the 1997 "South Florida Environmental Man of the Year" by XS magazine.

### **Use of Funds**

Obviously a project of this type requires funding. We need money to purchase materials and tools for the actual construction, to rent flat bed semi trucks to transport the "Reef Balls" to the deployment loading site, and for the rental of the ocean barge which is used in the actual deployment. We estimate that we will need at least \$6000 to complete our goal of deploying 50 - 60 "Reef Ball" on our Boca Raton artificial reef site. We presently have acquired approximately \$2000. Therefore, if we were to receive your award of \$2000 we would be within \$2000 of our funding goal If we were to receive your top award of \$25000, we would increase the scale of our program and recruit other schools in the county to participate in our efforts.

