

WHY BUILD REEFS?

The effects of man's abuse and natural disasters have led to the significant destruction and reduction of our natural reef systems. Recreationally, explosive growth in sportfishing, scuba diving, and boating has increased the pressures on these systems. Commercially, the future of our seafood industry is dependent on developing the ocean to enable ever larger, yet sustainable harvests. The loss of our natural systems, coupled with increased use, *compels us to do everything we can to save natural reefs*. Even with more protection, the natural reefs cannot rebuild themselves fast enough to meet human demands. Artificial reefs are a useful tool for restoring our reef systems to a natural and productive balance.

WHY REEF BALLS?

For thousands of years, man has made attempts to enhance fishing by building artificial reefs. Today, reefs are built not only to manage fish stocks, but also to create dive sites, restore damaged reefs, and to enhance ecosystems. In recent years, the trend has been to build artificial reefs from "materials of opportunity" (derelict ships, cars, airplanes, bridges, concrete rubble or culvert, oil platforms and natural boulders). These materials will not be used as much in the future due to their high costs. The expense to clean, transport, and deploy them is just too high to make a real impact. Reef Balls have been specifically engineered to overcome these disadvantages. They are more cost effective, better for the environment, and they look like natural coral heads.

FLOATING DEPLOYMENT

Reef Balls are cast around an extremely durable Polyform bladder. This bladder can be left in the unit to provide floatation so it can be towed behind any size boat. Once at the site, the bladder is deflated and removed by divers using a BCD style deflation valve. Divers place the unit precisely on the the sea floor with a controlled descent. This makes repairs to damaged reefs possible without endangering adjacent natural reef. If desired, the units can be thrown overboard and they will land bottom down because most of the weight is in the bottom of the unit. Multiple units can be towed behind a single boat.

SURFACE TEXTURES

A variety of surface textures which enhance the settlement of marine life are available. A popular surface texture is made by spraying a non-toxic complex carbohydrate (called a surface retarder) onto the surfaces of the mold before casting. After the cement mixture hardens, the mold panels are removed and the last 1/2 inch of concrete remains unhardened. A rough stoney surface is exposed by rinsing the module with a garden hose. Alternately, the unhardened cement can be shaped with various stamps (or fingers) to obtain the desired surface texture. All surfaces are enhanced by the use of an air entrainment admix. This non-toxic soapy like additive creates tiny air pockets in the concrete which pits the surface of the Reef Balls. These pits offer tiny marine organisms (such as larval corals) a place to easily attach themselves.



STABILITY

Reef Balls are designed so that 80-90% of the weight is within a foot of the bottom outside edge. The opening in the top of the unit breaks up the lifting force of the hydrofoil effect common to dome shapes. Side holes are wider near the center of the walls and narrow near the unit's surface. This feature creates miniature vortexes which further reduce lifting forces and bring rich nutrients to life on the reef. Reef Balls can be cast up to double the standard weight to accommodate high energy zones or can be cast at 75% of the standard weight to save concrete for bay, deep or protected water locations. Our staff will help you determine the best way to insure stability. Connection systems and built-in anchors are also available for extreme applications.

MARINE FRIENDLY CONCRETE

The concrete used to make Reef Balls features W. R. Grace's Force 10,000 micro silica to create a super high strength, abrasion resistant, concrete which is inert. This is unlike regular concrete which can leach lime and change the pH at the surface. This pH change can harm corals. Micro silica gives Reef Balls an expected life of 500+ years. A unit can support about 250 pounds of fish each year. (125,000 pounds per Reef Ball!)

GET ON BOARD!!

I know that you have all heard the phrase "Time to Fish or Cut Bait." With this new technology on artificial reefs available to us now, it seems to me that we can really do something for the environment as well as improve our already good fishing into what can be the best anywhere along the Atlantic Coast. Step up and support this new effort that is being launched from the Port Canaveral area. After reading this article, we hope that each and every one of you that believe in artificial reefs will get in touch with us at *Saltwater News* and become a player, not just sit in the stands and watch as all of this develops. All we are asking for is your support by filling out the coupon below, and returning it to us. Want to see our fishing improve? — Fill out the form. We need your signature and support. There are many ways that you can help.

If you don't have a pen, stop by *Saltwater News*, we not only have pens — we have extra forms if you need them for a fishing or diving buddy.

Saltwater News Artificial Reef Project

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Yes, I'm interested
Please send me further information

Name _____

Address _____

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Also, I would like to:

Volunteer Labor Volunteer Services Make a Contribution

COMMENTS: _____