

Did you know . . . ?

In 1993, New Jersey ranked sixth in the nation in the number of physicians per 100,000 population: 203.

SOURCE: The New Jersey Almanac

New Jersey

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The Star-Ledger

Something fishy here ...

Concrete condos are the latest sea habitat

By Kings Borowy
STAR-LEDGER STAFF

For years, artificial reefs have been created off the New Jersey coast through an odd assortment of discarded hardware — ship hulks, construction debris, an M-60 battle tank, even a subway car.

But the fish condo is the new habitat of choice.

State officials are looking into the mass production of hollow, dome-shaped forms called "reef balls," which mimic coral reefs better than other man-made methods. If all goes well, the molded concrete balls could be sunk offshore by the hundreds as early as 1999. And, in a bid to cut costs, they would be produced by inmates at Southern State Prison, for starters.

"This is a major change in the state's artificial reef construction program," said Bill Figley, who directs the \$2 million annual effort by the state Division of Fish, Game and Wildlife.

Until now, the state has relied on a hodgepodge of construction debris and obsolete transportation vehicles to fill 14 reef sites. But many of the items, from rubber tires to building rubble, are getting harder and more expensive to come by.

Roughly the size of a desk and pierced by irregular holes, the reef balls promise an improvement in several ways, Figley said. The hollow center gives more protection for fish than structures not designed as underwater habitats, and the textured surface attracts mussels and barnacles.

Other reef materials have to be clustered to be effective, but the concrete forms can be scattered over a wide area, which gives fish a better chance to breed and mature.

"The balls will be good for small fish," Figley said. "They would be scattered and difficult to find by fishermen and scuba divers."

There also is an environmental benefit to the balls, which have been used in Florida, South Carolina and Mexico. The manufacturer, Reef Ball Development Group, claims the special concrete lasts as long as 500 years, and dissolves into sand as it decays.

State wildlife officials have applied for a federal grant to help offset the \$75,000 cost of purchasing molds from the company next year. If the program goes forward, Southern State inmates would produce the habitats.

The state purchased one ball and sent it to the prison last week for study, said John Males, the reef program's supervising biologist. Ocean County also is considering a purchase of the company's molds.

The concrete balls do have a major drawback. If the state decides to use them, it will have to come up with more cash than the \$69,000 it contributed to the reef program this year. The rest of the program's \$2 million operating cost comes from federal grants, in-kind donations from contractors and the military, as well as a smattering of charitable donations.

Ambeuser-Busch donated money for a Budweiser reef, and Cooks Light did the same for its own site. Local fishing and diving clubs also contribute to the "Adopt-a-Reef" program.

Last year, the state scuttled a 165-foot Navy oil tanker in memory of an avid fisherman, John Dobbins, after the Linden man's co-workers made a donation to the reef program.

"My grandson goes fishing on the spot where the tanker lies," said Dobbins' mother, Agnes. "He and his father were very close."

Whether others will contribute as readily where a reef ball is concerned, PLEASE SEE REEF, PAGE 16

New lures for Atlantic sea life

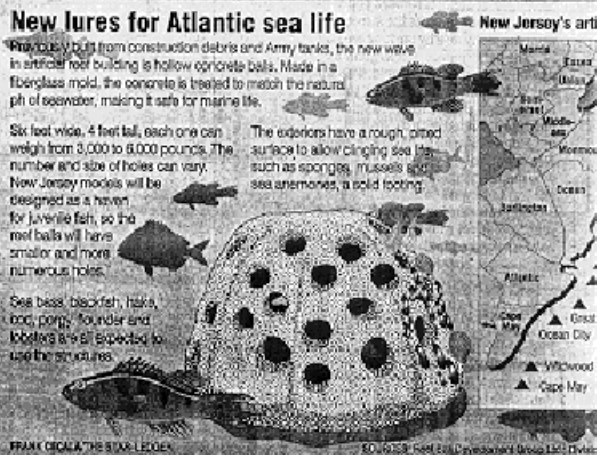
Instead of fish from construction debris and Army tanks, the new wave in artificial reef building is hollow concrete balls. Made in a fiberglass mold, the concrete is treated to match the natural pH of seawater, making it safe for marine life.

Six feet wide, 4 feet tall, each one can weigh from 3,000 to 6,000 pounds. The number and size of holes can vary.

New Jersey models will be designed as a haven for juvenile fish, so the reef balls will have smaller and more numerous holes.

Sea bass, blackfish, hake, cod, porgy, flounder and lobsters are all expected to use the structures.

The exteriors have a rough, pitted surface to allow clinging sea life, such as sponges, mussels and sea anemones, a solid footing.



The state has sunk a tank (above) and ships to create artificial reefs for fish, such as the blue right). But the latest plan is to manufacture concrete "reef balls" that provide better protection