Clean Ocean Action

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Ocean Advocacy Since 1984

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Bill Figley, Reef Coordinator
NJ Division of Fish and Wildlife
P.O. Box 418
Port Republic, NJ 08241

December 6, 2004

RE: New Jersey Draft Artificial Reef Plan

VIA FASCIMILE

Dear Mr. Figley,

Clean Ocean Action (COA, representing 170 organizations) has reviewed the above referenced draft plan submit the following comments.

In general, the Draft Plan works towards ensuring that only appropriate materials be used to develop New Jersey's Artificial Reef Program. However, it is clear that the program is under-funded and lacks supportive resources to be effective. It is important to note that because of content, the document reads much more like a *program* than a plan. Perhaps the NJDEP should consider revising the title.

Upon careful review of the document to address marine water quality issues there are a few specific issues that we feel still need additional attention. They are as follows:

1. TRAC Committee

It is our understanding that the TRAC Committee has only had one meeting thus far and has yet to begin the process of developing, much less implementing, monitoring requirements for the 8-year study on subway cars. The TRAC Committee is an integral part of the reef program and serves the important role of providing balanced and independent scientific and technical advisory regarding future (and current) reef materials. The DEP is urged to activate the committee and allow it to provide the technical and scientific expertise needed for the reef program

2. CONCRETE/REEF BALLS ISSUES

This section requires clarification in several areas. Page 66, Section 6.2 Construction Material, 2nd states:¶ *"Type II Portland cement, which is used to manufacture **Reef Ball habitats**, can be expected to have a life expectancy of 20 to 35 years in the marine environment (American Society of Testing Materials in the Designation Standard Specifications for Portland Cement)."*

This statement is misleading for two reasons and should be revised:

a. Type II Portland Cement ASTM Standards refer to an engineering lifespan and are only appropriate for land-based applications. The biological lifespan (maintaining 90% integrity) of unamended Type II Portland Cement in the marine environment is approximately **100 years**[1]**.**

b. Reef Balls are not an appropriate example and should be excluded from this paragraph as they are made with a Microsilica additive, which resists chemical breakdown in marine environments, which increases the lifespan of the Reef Ball to **500 years**[1]**.**

[1] Information provided by W.R. Grace Concrete and the Reef Ball Foundation

3. MISCELANEOUS CABLE

a. Section 6.2.6 Undersea Telecommunication Wire, Page 69

There are several concerns about the appropriateness of using obsolete telecommunication wires as reef materials (100' diameter piles of cable 3' to 10' in profile)

The Plan clearly states that:

- Environmentally hazardous material should not be used:

Page 6, Section 7 (C)

"5. The reef materials shall not be toxic"

"6. The reef materials shall not be hazardous"

- Plastic materials should not be used:
  - Page 69, Section 6.2.7, 2nd Sentence: *"Lightweight materials, such as plastic or fiberglass, are unacceptable as major components of reef structures"*
  - Page 81, 5th ¶, 1st Sentence: *"The use of manmade materials, such as auto tires (not used anymore), plastic (not used), concrete debris and ships, to construct reefs opens the potential for introducing chemical compounds into the marine environment."*

b. There is no scientific evidence to support the statement in this section

"After laying on the ocean floor for 50 to 100 years, they show little sign of wear"

A study analyzing failures of ocean communications cable cited commercial fishing operations as the most significant hazard to the cables resulting in damage[2]. On their own these cables may be fairly resistant to deterioration, but many of the older ones have already sustained significant damage while in place. These cables can contain contaminants such as copper wire cores, coal-tarred hemp or polyethylene plastic coverings and lead based stabilizers.

[2] A. J. Munitz. 1966 Analyzing Failures of Ocean Communications Cable. Undersea Technology 7: 45-49.

Cables clearly do not meet the specific conditions stated in Section 1.2 Department Policy and are therefore not appropriate artificial reef material.

4. MONOFILLAMENT

It is evident that the structural composition of some of the reef material leads to excessive snagging of fishing tackle and creates an entanglement hazard to marine life. COA recommends future discussions with divers and fishing groups, to develop guidelines to reduce and/or prevent tackle entanglement on reef materials.

5. CLEAN UP PROCEDURES

The Plan lacks guidelines for clean-up procedures that are required prior to sinking of materials. All material types need specific clean-up procedures to ensure they are in appropriate condition for reef building.

6. LANGUAGE ISSUES

Page 69, 1st Sentence: There is a reference to standards in Paragraph 4. This needs to be clarified and should state:

"standards set forth in paragraph 4 ***of the Policy Directive 2003-02****"*

Page 71, Section 6.2.8 Other Suitable Material: The language needs to be clarified to properly reflect the Policy Directive 2003-02, we recommend a change from:

"with the exception of subway cars" to
"with the exception ***of the proposed study*** *on subway cars"*

7. FUNDING ISSUES

The success of the artificial reef program in New Jersey is going to require a much more substantial commitment of funding and resources to support the purchase of high quality reef materials and adequate scientific monitoring.

The incorporation of our comments into the final NJ Artificial Reef Plan would ensure proper protection of the marine environment and result in a document that will serve as the foundation for the Artificial Reef Program.

Sincerely,

Cindy Zipf
Executive Director

Jennifer Samson, PhD
Principal Scientist