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Date: 5/17/04 8:47PM
Subject: Comments on Ocean Plan

Although these comments were prepared for the US Commission on Ocean Policy, they apply equally well to the California Ocean Plan.

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May 11, 2004

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**SUBJECT: Public Comment on Preliminary Report
Chapter 18: Reducing Marine Debris**

Algalita Marine Research Foundation has been studying the problem of marine debris for the past decade. While we find the information in Chapter 18 of the Commission's Preliminary Report "Reducing Marine Debris," to be extremely valuable, we believe the most significant component of marine debris has been completely overlooked.

Both pre and post-consumer plastic particulates in our oceans outweigh and in some cases even outnumber the zooplankton with which they are intermixed.¹ These particulates have been increasing since at least the 1960's, and are readily ingested by marine invertebrates.² The particles, which are the breakdown products of consumer plastics and industry feedstock, may be a greater threat to the marine environment than whole objects which are picked up during beach cleanups; indeed they probably outweigh and surely outnumber them, and are found throughout the water column.³

Since plastics in the marine environment concentrate persistent hydrophobic pollutants, they have the potential to transport them throughout marine food webs.⁴

Any assessment of marine debris should take these findings into account, and any monitoring plan should include monitoring of plastic particulates.

Captain Charles Moore

- 1) Moore et al, "A Comparison of Plastic and Plankton in the North Pacific Central Gyre," *Marine Pollution Bulletin* Vol. 42, No.12, 2001
- 2) Thompson et al, "Lost at Sea: Where is All the Plastic?" *Science* 304, 7 May, 2004
- 3) Lattin et al, "A comparison of neustonic plastic and zooplankton at different depths near the southern California Shore," Article in Press
- 4) Mato et al, "Plastic Resin Pellets as a Transport Medium for Toxic Chemicals in the Marine Environment," *Environmental Science & Technology*, Vol. 35, No.2, 2001

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