CHARLES MOORE: Let's talk trash (laughter). You know, we had to be taught to renounce the powerful conservation ethic we had developed during The Great Depression and World War II. After the war we needed to direct toward our enormous production capacity toward creation of products for peace time.

Life Magazine helped in this effort by announcing the introduction of throwaways that would liberate the housewife from the drudgery of doing dishes. Mental note to the liberators: Throwaway plastics take a lot of space and don't biodegrade. Only we humans make waste that nature can't digest.

Plastics are also hard to recycle. A teacher told me how to express the under five percent total plastics recovered in our waste stream. It's diddley point squat. That's the percentage we recycle (laughter).

Now, melting point has a lot to do with this. Plastic is not purified by the remelting process like glass and metal. It begins to melt below the boiling of water and does not drive off oil contaminants for which it is a sponge. Half of each year's one hundred billion pounds of thermoplastic pellets be made into fast-track trash. A large, unruly fraction of our trash will flow down rivers to the sea.

Here is the accumulation at Ballona Creek next to the LA airport, and here is the float near California State University Long Beach and the (indiscernible) plant we visited yesterday.

In spite of deposit fees, much of this trash leading out to the sea will be plastic beverage bottles. We use two million of them in the United States every five minutes. Here, imaged by Ted presenter Chris Jordan, who artfully mass consumption and zooms in for more detail.

Here is a remote island repository for bottles of the coast of Baha, California. Isla San Roque is an uninhabited bird (indiscernible) of Baha's sparsely populated central coast. Notice that the bottles here have caps on them. Bottles made of polyethylene terephthalate, PET, will sink in seawater and not make it this far from civilization. Also, the craps are produced in separate factories from a different plastic, polypropylene. They will float in seawater, but unfortunately do not get recycled under the bottle bills.

Let's trace the journey of the million of caps that make it to sea solo. After a year, the ones from Japan are heading straight across the Pacific, whiles ours get caught in the California current and first head down to the latitude of Cabo San Lucas. After ten years, a lot of the Japanese caps are in what we call the Eastern Garbage Patch, while ours litter the Philippines. After 20 years, we see emerging the debris accumulation zone of the North Pacific Gyre. It so happens that
millions of Albatross nesting on curry and midway (indiscernible) in the northwest Hawaiian islands national monument forage here and scavenge whatever they can find for regurgitation to their chicks. A four-month-old (indiscernible) Albatross chick died with this in its stomach. Hundreds of thousands of the goose-sized chicks are dying with stomachs full of bottle caps and other rubbish like cigarette lighters, but mostly bottle caps. Sadly their parents mistake bottle caps for food tossing about in the ocean's surface.

The retainer rings for the caps also have consequences for aquatic animals. This is Mae West, still alive at a zookeeper's home in New Orleans.

I wanted to see what my hometown of Long Beach was contributing to the problem, so on Coastal Cleanup Day in 2005 I went to the Long Beach peninsula at the east end of our long beach. We cleaned up the swatch of beach shown. I offered five cents each for bottle caps. I got plenty of takers. Here are the 1,100 bottle caps they collected. I thought I would spend 20 bucks that day. I ended up spending nearly $60. I separated them by color and put them on display the next Earth Day at Cabrillo Marine Aquarium in San Pedro. Governor Schwarzenegger and his wife Maria stopped by to discuss the display. In spite of my girly man hat crocheted from plastic shopping bags, they shook my hand (laughter). I showed him and Maria a zooplankton trawl from the gyre north of (indiscernible) with more plastic than plankton.

Here's what our trawl samples from the plastic soup our ocean has become look like. Trawling a zooplankton net on the surface for a mile produces samples like this and this.

Now, when the debris washes up on the beaches of Hawaii, it looks like this. And this particular peach is Kailua Beach, the beach where our President and his family vacationed before moving to Washington.

Now, how do we analyze samples like this one that contain more plastic than plankton? We sort the plastic fragments into different size classes from five millimeters to one-third of a millimeter. Small bits of plastic concentrate persistent organic pollutants up to a million times their levels in the surrounding seawater.

We wanted to see if the most common fish in the deep ocean at the base of the food chain was ingesting these poison pills. We did hundreds of necropsies and over a third had polluted plastic fragments in their stomachs. The record holder, only two and half inches long, had 84 pieces in its tiny stomach.

Now, you can buy certified organic produce, but no fish monger on Earth can sell you a certified organic, wild caught fish.

This is the legacy we are leaving to future generations. The throwaway society cannot be contained. It has gone global. We simply cannot store and maintain or recycle all our stuff.
We have to throw it away. Now, the market can do a lot for us, but it can't fix the natural system in the ocean we've broken. All the kings horses and all the kings men will never gather up all the plastic and put the ocean back together again.

(Video clip begins) The levels are increasing, the amount of packaging is increasing, the throwaway concept of living is proliferating and its showing up in the ocean.

NARRATOR: He offers no hope of cleaning it up. Straining the ocean for plastic would be beyond the budget of any country. It might kill untold amounts of sea life in the process. The solution, Moore says, is to stop the plastic at its source. Stop it on land before it falls into the ocean.

CHARLES MOORE: There's your typical t-shirt shopping bag.

NARRATOR: And in a plastic wrapped and packaged world, he doesn't hold out much hope for that either. This is Brian Rooney for Nightline in Long Beach, California.

(Video clip ends)

CHARLES MOORE: Thank you.

[Applause]

(End of video.)
CERTIFICATE OF TRANSCRIPTION

I hereby certify that the foregoing transcription is a true and accurate verbatim record of the recorded proceedings.

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