Environmental Fact or Fiction?

Balloon Releases

THE BALLOON COUNCIL

Erroneous reports about balloons and balloon releases harming the environment have appeared in major newspapers and on national TV news programs. Many of these reports contain inaccurate claims made by well-intentioned people who care deeply about the earth's ecology — but lack the facts.

Balloons used in special event releases constitute only a small fraction of the industry's sales. Unfortunately, these spurious claims have caused a chilling effect at the local level and unnecessary financial strain on many of America's small, independent balloon retailers who depend on special events as a major source of their livelihoods. Small industries such as delivery and decorating services also suffer.

Most consumers don't have the time or inclination to sort through bad information disguised as fact — often resulting in a negative perception that balloons are bad.

Latex balloons are sometimes confused with plastic items and lumped in with the plastics litter problem. The oft-used phrase, "latex balloons and other plastics"is improper. Latex is not a plastic. It's organic, made from the sap of rubber trees collected through an absolutely harmless tapping process very simple to that used for collecting the maple sap used for making syrup.

Moreover, latex balloons are totally biodegradable — the only type of balloon used in a professionally-produced mass release. A latex balloon's molecular structure begins breaking down with inflation and gathers momentum when exposed to sunlight and the atmosphere. Within three hours, most latex balloons released into the atmosphere rise to approximately five miles, begin to oxidize, freeze and shatter into spaghetti-like pieces. Once on the ground gases and microorganisms attack the latex, continuing the natural decomposition process — even in the dark.

Scientific research, most notably by D.K. Burchette in, "A Study of the Effect of Balloon Releases on the Environment,"demonstrates that latex balloons decompose at a rate equal to — or faster than — an oak leaf under similar conditions.

Mylar balloons are foil-like, usually silver and cost significantly more (retailing for $3 - $8 each) than latex balloons. Mylar is a synthetic, metallized plastic/nylon material which is recyclable, but not biodegradable. Consequently, mylar balloons are never used in a release.

Helium-filled mylar balloons do get away accidentally because a string breaks or a consumer lets go. These incidents seem to be diminishing as a result of ongoing in-store awareness campaigns to encourage anchoring these balloons with decorative weights.

Industry Release Standards

The American balloon industry has set firm standards for mass balloon releases.

1. Releases must use only 100 percent latex balloons
2. All attachments must be biodegradable
3. All balloons must be self-tied
4. Balloons cannot be attached to each other

Balloons and Sea Animals

Since the mid-1980s, many have raised alarm and hyped rumors that balloons are a constant threat to sea animals, causing a plethora of deaths. Most often this misinformation can be traced to two incidents which occurred along the New Jersey coastline back in the 1980s.

The first incident was in 1985. A 17-foot whale was severely injured after it got stuck within the pilings of a pier and subsequently died. Although the actual cause of death was never scientifically established, the post-mortem revealed a deflated mylar balloon attached to three feet of ribbon in the whale's stomach. Balloon release opponents frequently claim this was the cause of death. Perhaps, but this incident doesn't support the anti-release position because neither mylar balloons or ribbons are used in releases.

No direct cause of death was determined by authorities in the second incident which occurred in 1987 and involved a leatherback turtle.. When discovered, the turtle was so decomposed that gender could not be determined. It did have a three-foot long wound caused by a boat propeller — a common cause of sea animal injury and mortality — and the neck of a latex balloon attached to three feet of ribbon also was found in the intestines. This latex balloon did not come from a release — professionally released balloons do not have ribbon attached.

Once again, this incident is irrelevant to the anti-release argument.

Until 1997, TBC studies of public incident records and academic research pertaining to balloon releases produced no other incidents of sea animal deaths or injury cases caused by balloons. With one exception occurring in 1996, those presenting this "evidence"have never produced scientific documentation to substantiate these allegations.

The University of Texas Marine Science Institute produced some turtle mortality research in which balloon pieces were found in about six percent of the animals examined. However, chief researcher Pamela Plotkin unequivocally stated that balloons were not the cause of these turtle deaths.

Dr. George Balazs of the National Oceanic and Atmospheric Administration's (NOAA) Marine Fisheries Service is often cited by balloon release opponents. However, Dr. Balazs has never claimed that a balloon caused the death of any sea animal, even though he has found balloon pieces during several necropsies.

The one exception to the rule was documented on The Discovery Channel in 1997. Marine scientists rescued a sick whale off the Florida coast. During an exploratory surgical procedure, the scientists found and removed a deflated latex balloon blocking the digestive tract leading into the second stomach. The whale subsequently recovered and was released back into the ocean.

In pursuing the facts, TBC also has conducted two extensive database searches. These searches examined documented turtle deaths along the U.S. coastline from Maine to Texas during the 1980s. The results of this investigation: only one report of a balloon being swallowed — the New Jersey leatherback turtle incident described earlier.

Typical of the information contained in these databases is the 1988 database which documents 284 incidents in the Northeast. The most significant causes of death were from boat hits and propeller wounds (79). There were 17 ingestion incidents — not one was attributed to balloons.

A study by wildlife researcher Cathy Beck, published in "The Marine Pollution Bulletin,"found no balloons involved in the deaths of more than 800 sea cows examined over an eight-year period.

In summary, after extensive review of goverment and environmental databases, searches on the Internet, following up media reports and checking facts covering the period 1980 to 1998, TBC found:

1. One scientifically documented incident in which a sea animal was harmed by a latex balloon
2. No direct scientific evidence that any sea animal has been harmed or killed by a latex balloon involved in a release
3. In one 10-year period, more than 100,000 sea turtles were killed by shrimp trawlers

Minuscule Litter Threat

The balloon industry operates with a vigilant eye on the environment. With concerns for the environment continuing to grow, the ongoing question that must be addressed by the balloon industry is: "Are balloons really a significant litter problem and ecological hazard?"The answer, according to the facts produced by independent organizations, is a resounding, "no."Manufacturers try to ensure both the organic materials harvested and the production processes are environmentally sound. Retailers — mostly family-owned and operated small businesses — try to ensure their products are handled properly. The industry's efforts are paying off.

Take a walk through your neighborhood, a local park or the woods. Most likely you'll see a lot of litter — discarded cans, bottles, paper and plastic items. Odds are, you'll rarely discover a latex balloon in this mess. And if you do, most likely it didn't get there as a result of a mass release.

According to the Burchette report cited earlier, the vast majority of released balloons don't even return to earth as balloons. Burchette's study shows that the effects of altitude pressure and freezing causes "brittle fracture"— breaking into spaghetti-like pieces that scatter as they return to earth.

Burchette also studied the rate at which balloons fail to rise to this altitude due to leaks or underinflation. He found that in a average release of 500 balloons, the density of balloons landing intact would be no greater than one per 15 square miles.

According to the annual International Coastal Cleanup report prepared by the Center for Marine Conservation (CMC), balloon litter has been declining steadily.

In 1994, the CMC U.S. Coastal Cleanup found balloons/balloon pieces were found at a rate of 6.93 per mile and accounted for .64 percent of the total debris collected.

By 1998, the CMC's U.S. Coastal Cleanup grew to include 160,000 volunteers and covered 6,887 miles. Although the manpower and coverage increased so dramatically in 1997, the amount of balloons/balloon pieces found decreased to a rate of 5.5 per mile. Balloons pieces found would fit inside five large garbage bags.

Bottom line — balloon litter has never been a significant part of the list of debris and it continues to drop

towards the bottom of the CMC list. In 1994 balloons were ranked 27th and in 1997 balloons had fallen to 37th. This declining trend coincides with the industry's public education programs and is evidence that the packaging information about proper disposal and release of balloons is working.

However, a closer look at the make-up of the balloon litter found in during these annual campaigns tells us the industry must continue to build consumer awareness through public education. For example. A close look at the makeup of the majority of balloons found during the cleanups clearly are not the result of mass releases. In one Florida-wide cleanup there were 288 balloons/balloon pieces found. Of these:

- 179 were water balloons which obviously are not used in releases
- 138 were too small to have been released
- 196 had strings/ribbon/thread attached (never used in a release)
- 12 were valved (never used in a qualified release)
- 13 were shaped (never used in a qualified release)
- 170 — less than 25 percent — might have been used in releases

Objectively judging the cleanup data and applying common sense, most open-minded observers examining the facts will arrive at the same conclusion: balloons — and mass balloon releases — do not constitute a serious litter problem or ecological threat.

Unjustified Environmental Concern

Latex balloons used in mass releases are produced from the sap of the rubber tree. It's collected without harming the tree by using an environmentally safe, age-old process similar to that used for collecting the sap from maple trees for making syrup.

Because of rubber's versatility and high demand, these tropical rain forest trees are very valuable and highly coveted. Equally important, these precious trees play a key role in the earth's fragile ecological balance by removing carbon dioxide from the atmosphere which helps prevent global warming. As a result, the world's rubber trees are well-protected natural resources.

Consequently, a latex balloon — the only type used in mass releases — is made from 100 percent organic material and it's 100 percent biodegradable. Stress caused by inflation starts this decomposition cycle. Exposure to sunlight accelerates the process — oxygen and ozone continue the molecular attack even in the dark. Deterioration is clearly evident within a few hours — it begins to oxidize or "frost"— and soon the balloon will break apart into small pieces. Research has shown that under the same conditions latex decomposes as quickly as an oak leaf.

Consumer Education Ongoing

Balloon manufacturers and distributors are working alongside retailers to educate consumers and create awareness of the value of good balloon management practices. This is being accomplished through an ever-expanding

Annual International Coastal Cleanup
United States Results

(Source: Center For Marine Conservation — Includes 53 States, Territories & Protectorates)

	Volunteers	Miles	Debris	Balloon Pieces	Balloon/ Mile	% Balloon Debris
1994	139,746	5,200	5,635,662	36,047	6.93	0.64%
1995	134,929	5,870	4,057,748	28,774	4.90	0.71%
1996	151,502	5,832	3,757,123	23,351	4.00	0.62%
1997	175,000	7,093	5,882,879	30,324	4.28	0.52%
1998	160,000	6,887	5,697,877	36,355	5.50	0.01%
Average	**152,235**	**6,176**	**5,006,258**	**30,970**	**5.12**	**0.5%**

While the annual CMC International Coastal Cleanup campaign has been increasing in scope — manpower and coverage — balloons/balloon pieces represent a miniscule fragment of the total debris collected. In 1997, a record-setting year for the campaign, the quantity of balloon/balloon pieces collected declined for the second consecutive year.

campaign of informative messages attached to balloon bouquets and printed on balloon packages and in-store information. Specifically, these messages are:

1. Follow industry guidelines for balloon releases – use only hand-tied latex balloons and no plastic attachments
2. Never release metallic balloons
3. Never attach metallic ribbon to helium-filled balloons. An accidental release could become tangled in power lines and might cause a line fault
4. Always supervise young children under age 8. Never allow children to play with deflated balloons – or broken pieces – which could cause choking or suffocation
5. Always attach weights – mug, vase or heavy object – to helium-filled balloons to counter lift and prevent accidental release
6. Don't tie helium-filled metallic balloons together and insure each is individually attached to a counter-weight to prevent them from rising as a cluster which could catch on power lines.
7. Properly dispose of balloons. Cut balloons with scissors directly above the knot or sealing point and immediately place in trash containers.

Conclusions

1. The industry has attempted to collect all documented evidence and research covering the last 18 years which addresses the environmental and litter issues pertaining to balloons and mass releases.
2. This data shows only one substantiated incident in which a sea animal was harmed by a latex balloon.
3. This data shows no sea animal deaths due to a balloon.
4. Latex balloons are 100 percent organic, 100 biodegradable and decompose at a rate equal to that of an oak leaf.
5. On average, mass balloon releases have a return-to-earth rate of no greater than one balloon per 15 square miles.
6. Total debris collected during annual CMC U.S. coastal cleanup campaigns from 1994 to 1997 averaged balloons/pieces content of .61 percent and this ratio is steadily decreasing. In 1997 — the largest CMC cleanup by far — balloons accounted for only .52 percent.
7. The industry's goal is to remove balloons from the CMC Coastal Cleanup litter list through ongoing consumer education and balloon management practices emphasized through package labeling and at point-of-purchase.

The balloon industry is intent on providing products that are fun and safe for everyone and don't conflict with the environment. Industry leaders also recognize they have obligations to set industry standards that will help protect and preserve the environment and provide consumers with information that will encourage them to use the product safely and responsibly and dispose of it properly.