



F A C T S H E E T

This fact sheet is intended to support bird and wildlife lovers who want to encourage Beaufort County Council and other local governments to reduce access to single-use plastic bags. Questions? Contact Nolan Schillerstrom, nschillerstrom@audubon.org.

Impact of Plastic on Coastal Birds:

- 9 million tons of plastic enter the oceans annually.¹
- By 2050, by weight, there could be more plastic than fish in the oceans.²
- Plastic trash is found today in 90 percent of seabirds.³
- By 2050, virtually every seabird will consume plastic trash.⁴
- Sharp-edged plastic kills birds by perforating their internal organs. Other plastics collect in the gut, leaving little room for food. Birds can become undernourished, jeopardizing their health.⁵
- Plastic also acts as a sponge for toxins in seawater, such as DDT and PCBs. Trace metals in the water can attach to plastic too, creating a toxic pill for birds.⁶
- Just as sea turtles eat plastic bags because they resemble jellyfish, some seabirds are attracted to the scent of plastic decaying in ocean water. It's the same scent (dimethyl sulfide) that phytoplankton emit when being gobbled by zooplankton — and zooplankton are a favorite seabird snack.⁷

¹ "The New Plastics Economy," Ellen MacArthur Foundation & McKinsey & Co., Feb 2016.

² *Id.*

³ "Nearly Every Seabird on Earth is Eating Plastic," *National Geographic*, Laura Parker, Sept 2, 2015.

⁴ *Id.*

⁵ *Id.*

⁶ "How Much Plastic is Marooned at Sea?" *Audubon*, Emma Bryce, February 27, 2015.

⁷ "Why Do Some Seabirds Eat So Much Plastic?" *Audubon*, Rebecca Heisman, Nov 9, 2016.

- In addition to ingesting plastic, birds get entangled in plastic trash, often with fatal consequences.⁸
- Seabird populations have declined nearly 70 percent since the 1950s.⁹
- Shorebird populations have declined more quickly — nearly 70 percent since the 1970s.¹⁰
- The primary threats to coastal birds are habitat loss and climate change, but plastic ingestion and entanglement are also significant factors.

Impact of Plastic on Other Wildlife:

- Plastic ingestion has an impact on at least 700 marine species worldwide.¹¹ That includes shrimp, crabs, and oysters, which gobble down “microplastics” — tiny fragments of plastic that never fully decompose.
- Among sea turtles, the most common type of trash ingested is plastic bags.¹² Impacts include malnutrition, impaired immunity, internal injuries, intestinal blockage, interference with swimming and buoyancy, and accumulation of heavy metals and other toxins.¹³
- Scientists are still connecting the dots among small-scale studies to determine how many sea turtles ingest plastic. In a recent study of sea turtles accidentally caught on Pacific longlines, 50 of 55 sea turtles, or more than 90 percent, had ingested plastic.¹⁴
- In a recent study focusing on young loggerhead turtles (by far the most common species nesting in South Carolina), 20 of 24 turtles sampled, or 83 percent, had ingested plastic trash. Study authors concluded, “plastic pollution acts as another stressor for this critical life stage of loggerhead turtles...”¹⁵
- In recent years, the South Carolina Aquarium has treated 18 sea turtles for ailments related to plastic ingestion. That number may seem small, but an Aquarium scientist testified at a recent Beaufort County Council hearing: “The turtles we treat are the lucky ones.” One of the turtles treated at the Aquarium had eaten 12 separate pieces of plastic bag material.
- Plastic entanglement, as opposed to ingestion, has an impact on at least 200 species, including mammals, turtles, fish, and crabs. Most reports of entanglement involve sea turtles or seals.¹⁶

Plastic Bags in Our Environment:

In Beaufort County Council hearings to date, the most telling point raised by opponents of this ordinance is that single-use plastic bags represent a small proportion of the trash on our beaches. That may be true, but here are other important considerations:

⁸ “An Annual Rescue Mission to free Northern Gannets Tangled in Plastic Trash,” *Audubon*, Alisa Opar & Sam Hobson, Winter 2016.

⁹ See *National Geographic*, note 3.

¹⁰ “State of the Birds 2016,” North American Bird Conservation Initiative, summary graphic page 3.

¹¹ “The impact of debris on marine life,” *Marine Pollution Bulletin* 92 (2015), Gall, S.C., Thompson, R.C.

¹² “What We Know About Entanglement and Ingestion,” NOAA Marine Debris Program.

¹³ “Plastic ingestion in oceanic-stage loggerhead sea turtles off the North Atlantic subtropical gyre,” *Marine Pollution Bulletin* 121 (2017), Pham C. et al.

¹⁴ “Investigation of plastic debris ingestion in four species of sea turtles collected as bycatch in pelagic Pacific longline fisheries,” *Marine Pollution Bulletin* (volume and date not yet available), Clukey, K, et al.

¹⁵ See “Plastic ingestion...,” note 13; “Turtles and Plastic: The Case for More Action,” *SWOT Report*, seaturtlestatus.org, Emily Duncan.

¹⁶ See “What We Know...,” note 12.

- The Ocean Conservancy organizes an annual international beach sweep. Last year Conservancy volunteers collected more than 520,000 plastic grocery bags — the fifth most collected item worldwide.¹⁷ So even if single-use plastic bags are a small proportion of total beach trash, that doesn't mean there are just a few of them out there.
- Plastic bags are tough to remove from beaches. They get trapped so far under the sand that it takes significant time to dig them out with a shovel. If they're old, they fragment. Ask any beach sweeper: a just-cleaned beach is still full of shredded, partially buried plastic bags.
- Reducing access to single-use plastic bags is just the beginning of meaningful change in Beaufort County. Having studied the issue, some Council members now seem eager to explore next steps. For example, recycling that's both cheaper and more effective. The plastic bag ordinance is important in and of itself, and because it could lead to more effective measures.

Typical Exemptions from Plastic Bag Ordinances

Some people are concerned that Beaufort County's proposed ordinance will unreasonably restrict the use of plastic. Here are some common exemptions from single-use plastic bag ordinances. These exemptions and others are incorporated into the ordinances recently adopted in Folly Beach and Isle of Palms, and will likely be adopted in Beaufort as well:

- Garbage bags
- Pet waste bags
- Yard waste bags
- Dry cleaning bags
- Newspaper bags
- Bags provided for prescription drugs or other medical necessities
- Bags used to wrap frozen foods, meat, or fish, whether or not prepackaged
- Bags used to wrap flowers, potted plants, etc. to prevent moisture damage
- Bags of any type that the customer brings to the store for their own use

Progressive Policies Worldwide:

- In 2007, San Francisco became the first U.S. city to ban plastic bags. In 2016, California banned single-use plastic bags at large retail stores. All the most populous counties in Hawaii prohibit non-biodegradable plastic bags at checkout (and also paper bags containing less than 40 percent recycled material). Effectively, Hawaii has a statewide ban.¹⁸
- Chicago, Los Angeles, Seattle, Washington, D.C., Austin, TX, Cambridge, MA and other cities have followed with bans of their own.¹⁹ In South Carolina, Folly Beach and Isle of Palms have banned single-use plastic bags.
- In Asia, Bangladesh banned plastic bags in 2002 after they blocked drainage systems and caused serious flooding.²⁰ In Africa, Rwanda²¹ and Kenya²² have banned all non-biodegradable

¹⁷ "Fighting for Trash-Free Seas," Ocean Conservancy 2017.

¹⁸ "State Plastic and Paper Bag Legislation," National Conference of State Legislators.

¹⁹ *Id.*

²⁰ *Id.*

²¹ "The Country that Bans Plastic Bags," *Huffington Post*, Tom Carver, April 15, 2013.

²² "Kenya Becomes Latest Country to Ban Plastic Bags," *Voice of America*, September 2, 2017

plastic bags. Kenya's cabinet secretary for the environment explains that they're fouling the country's food and water supplies: "It's a toxin that we must get rid of."²³

- In Europe, France is in the lead. After banning single-use plastic bags in 2016, France is also moving toward banning single-use plastic cups and plates. Plastic table-wear in France must include an increasing percent of home-compostable material.²⁴ Meanwhile, the European Union will cut the disposal of single-use plastic bags by 50 percent by 2019.²⁵

Our Recommendations for Speaking/Writing to Public Officials:

- Start by telling them you support the ordinance. One sentence. Crystal clear.
- Add a brief personal story. About what you picked up on a beach sweep. Or about what your child or grandchild said yesterday about dolphins. Or whatever. *"When the heart speaks, however simple the words, its language is always acceptable to those who have hearts."*
- If you want, add a statistic or two that are particularly meaningful to you.

Generally speaking, stay positive. Stay accurate. Stay concise. Show your passion, but check anger at the door. Assume that our public officials are smart people doing their best to serve the public interest. And note: three minutes per speaker is typically the maximum allowed at a public hearing.

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The remains of a Laysan Albatross on Midway Atoll. Plastic is everywhere! Photo: Chris Jordan

²³ *Id.*

²⁴ "France becomes first country to ban plastic cups and plates," *CNN*, Sophie Eastaugh, Sept 20, 2016.

²⁵ "EU to halve plastic bag use," *Euractiv*, Cecile Barbieri, April 29, 2015.