



BEYOND PLASTIC:

PROTECTING OUR COASTS,
— OCEANS, AND FUTURE —

AN EDUCATIONAL GUIDE FOR COASTAL COMMUNITIES



REDUCE
what we use



REUSE
what we can



RECYCLE
responsibly



RESTORE
our coasts



EDUCATE
and inspire
others



OBCC
OUTER BANKS
COASTAL CONSERVATION

LESS PLASTIC. HEALTHIER COASTS. A STRONGER FUTURE.

Beyond Plastic: Protecting Our Coasts, Oceans, and Future

Copyright © 2026 Outer Banks Coastal Conservation (OBCC)

All rights reserved.

This book may be reproduced, stored, or transmitted in any form or by any means without prior written permission of the publisher if used for educational and nonprofit purposes.

ISBN: 979-8-951232-56-4

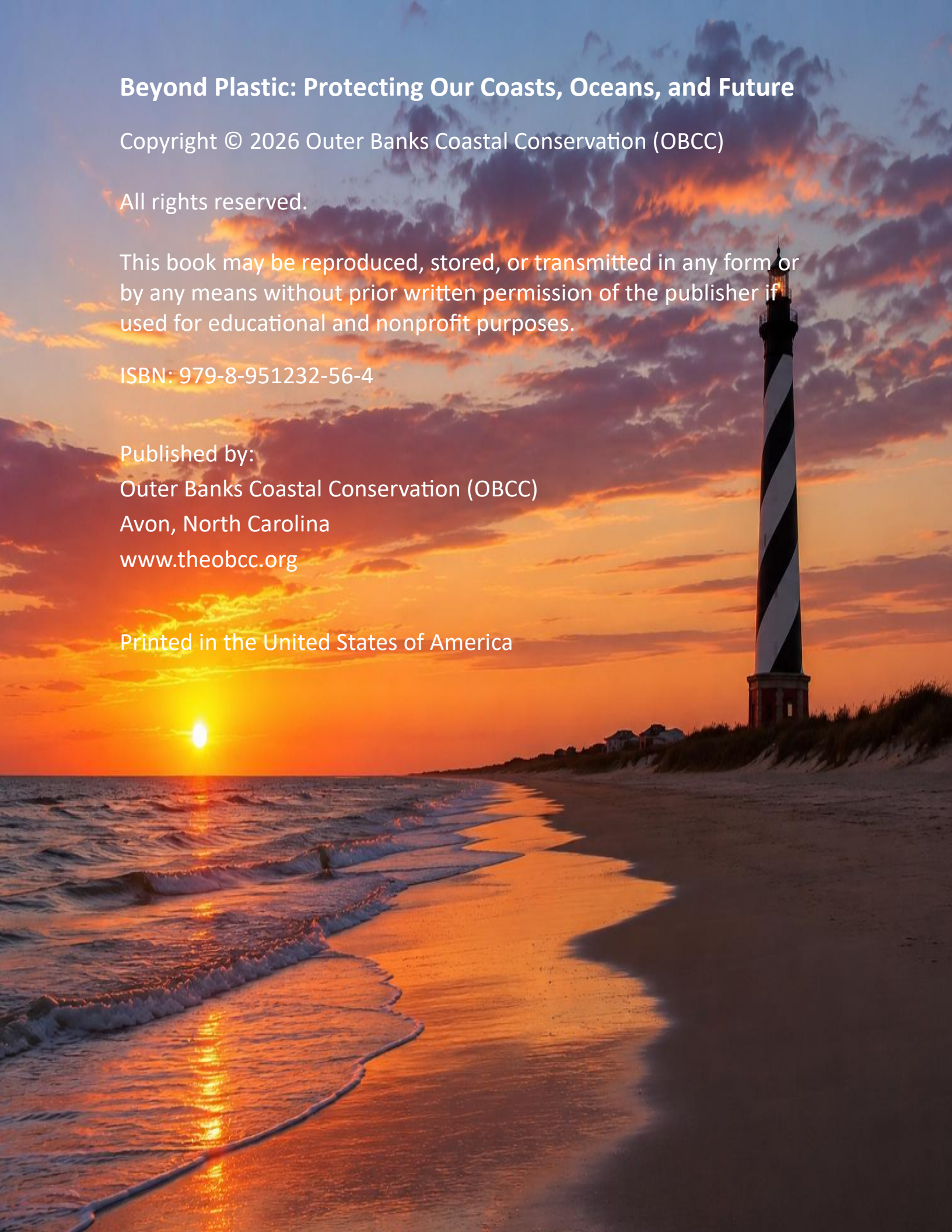
Published by:

Outer Banks Coastal Conservation (OBCC)

Avon, North Carolina

www.theobcc.org

Printed in the United States of America



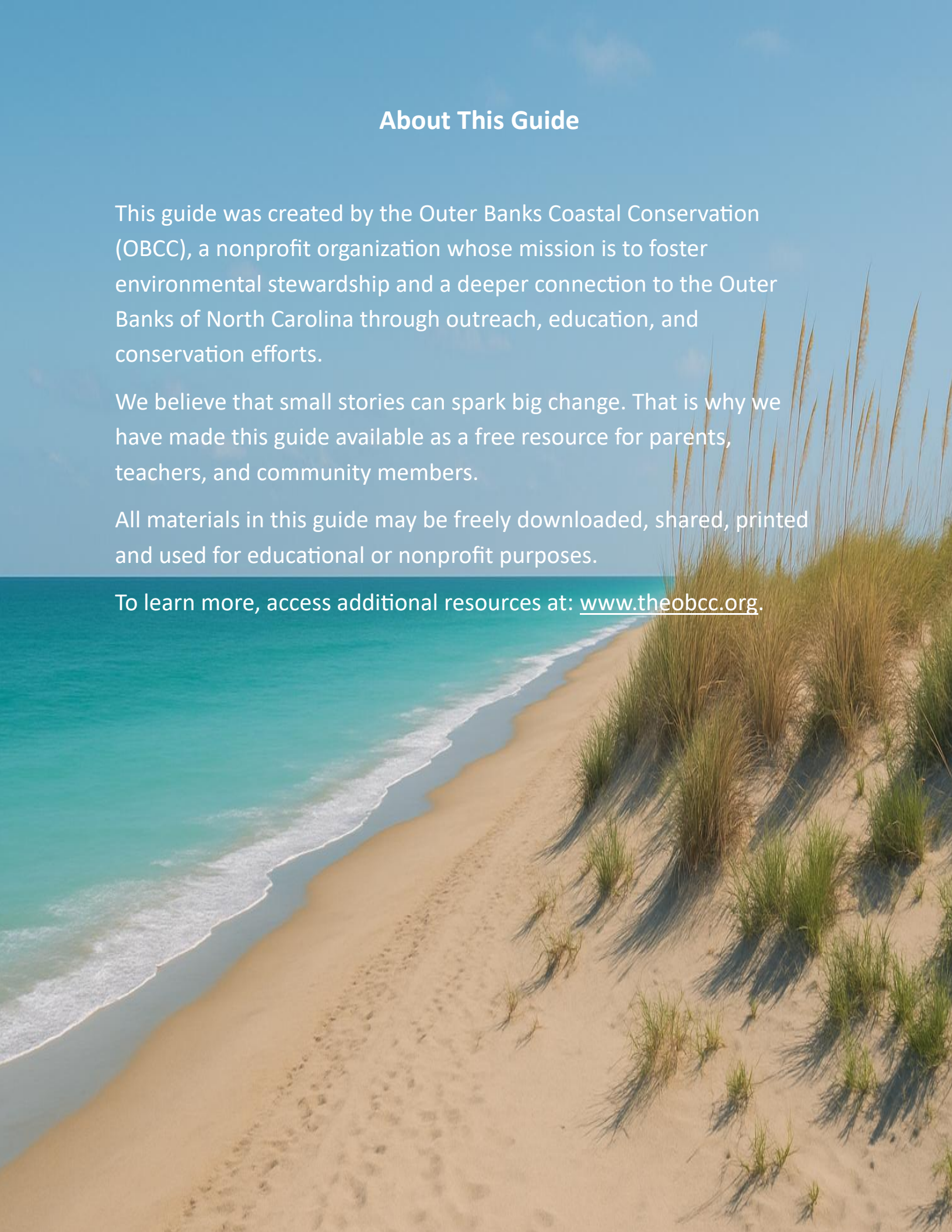
About This Guide

This guide was created by the Outer Banks Coastal Conservation (OBCC), a nonprofit organization whose mission is to foster environmental stewardship and a deeper connection to the Outer Banks of North Carolina through outreach, education, and conservation efforts.

We believe that small stories can spark big change. That is why we have made this guide available as a free resource for parents, teachers, and community members.

All materials in this guide may be freely downloaded, shared, printed and used for educational or nonprofit purposes.

To learn more, access additional resources at: www.theobcc.org.



Introduction: From Convenience to Crisis

Plastic revolutionized modern life—lightweight, cheap, and durable. But what makes it useful also makes it dangerous: it doesn't go away. Every toothbrush, bottle, or wrapper ever made still exists in some form today.

Globally, humans produce over 400 million tons of plastic every year, and about 11 million tons end up in the ocean annually. Without action, that number could triple by 2040.



The Journey of a Plastic Bottle

What happens after you toss a plastic bottle?

Even if it's discarded miles from the ocean, wind, rain, and storm drains carry it into rivers and estuaries—eventually reaching the sea.

Once in saltwater:

- Sunlight and waves break plastic into microplastics (smaller than 5 mm).
- These fragments absorb toxic chemicals and are eaten by plankton, fish, and seabirds.
- Plastic enters the food web, reaching our dinner plates.

Scientists estimate there are over 170 trillion plastic particles floating in the world's oceans.



Ecological Impacts

A. Marine Wildlife

- Sea turtles mistake plastic bags for jellyfish and die from internal blockages.
- Seabirds like albatrosses feed plastic bits to their chicks, filling their stomachs with debris.
- Fish and shellfish ingest microplastics that bioaccumulate up the food chain.

B. Coastal Habitats

Plastic waste smothers seagrass beds and coral reefs, blocking sunlight and preventing growth. Fishing gear—called “ghost nets”—continues trapping marine life long after being lost.

C. Human Health

Microplastics have been found in tap water, salt, beer, and human blood. These particles carry chemicals linked to hormone disruption, inflammation, and cancer risk.



The Outer Banks Connection

On barrier islands like the Outer Banks:

- Strong winds and tides pull trash from dunes and roads into the Pamlico Sound.
- Plastic debris washes ashore daily—often bottles, caps, straws, and fishing line.
- Local wildlife rescue teams report entanglements and ingestion injuries every season.

Plastic pollution isn't an abstract issue—it's a local one that affects fishing, tourism, and community health.



Global Scale of the Problem

- 91% of all plastic ever made has *never been recycled*.
- The U.S. alone generates 42 million metric tons of plastic waste per year—more than any other nation.
- By 2050, there could be more plastic than fish (by weight) in the ocean if trends continue.



What Can We Do? Practical Alternatives

Individual Actions

- ☒ Carry a reusable bottle and bag.
- ☒ Choose metal, glass, or paper over plastic packaging.
- ☒ Refuse single-use plastics like straws, utensils, and to-go cups.
- ☒ Compost or recycle properly (rinse containers, avoid contamination).
- ☒ Participate in beach cleanups or adopt-a-dune initiatives.

Home & Garden

- Use compost bins, not plastic trash liners.
- Choose cotton or hemp textiles over synthetic fabrics (which shed microfibers).
- Collect rainwater in barrels and plant native vegetation to reduce runoff.

Business & Community

- Encourage restaurants to opt for paper or reusable serveware.
- Support bans on plastic bags, foam containers, and balloon releases.
- Install recycling bins at public beach access points.
- Partner with local conservation nonprofits for education programs.

A Sustainable Future

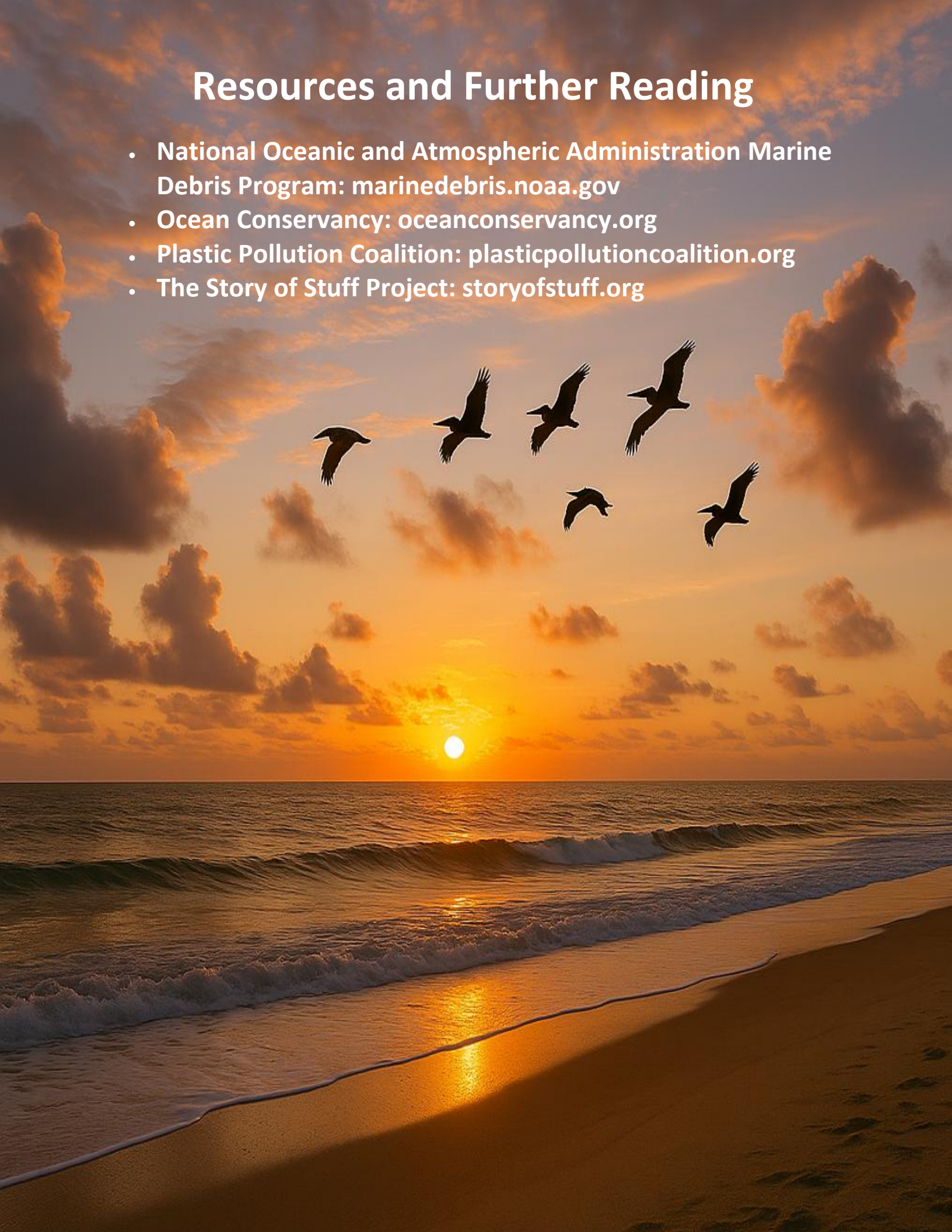
Plastic pollution is a global challenge—but solutions start locally. Each bottle picked up, each refill made, each policy passed brings us closer to a cleaner ocean.

“Taking care of the land means taking care of the sea.”



Resources and Further Reading

- National Oceanic and Atmospheric Administration Marine Debris Program: marinedebris.noaa.gov
- Ocean Conservancy: oceanconservancy.org
- Plastic Pollution Coalition: plasticpollutioncoalition.org
- The Story of Stuff Project: storyofstuff.org



References

National Oceanic and Atmospheric Administration (NOAA) Marine Debris Program. (n.d.). *Marine debris: What is it?* NOAA Office of Response and Restoration. <https://marinedebris.noaa.gov>

Ocean Conservancy. (n.d.). *Fighting for trash-free seas.* <https://oceanconservancy.org>

Plastic Pollution Coalition. (n.d.). *About plastic pollution.* <https://plasticpollutioncoalition.org>

The Story of Stuff Project. (n.d.). *Plastic pollution.* <https://storyofstuff.org>

United Nations Environment Programme (UNEP). (2023). *Turning off the tap: How the world can end plastic pollution and create a circular economy.* <https://www.unep.org>

World Wildlife Fund (WWF). (2022). *Plastics: Facts and figures.* <https://www.worldwildlife.org>



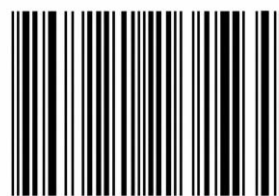
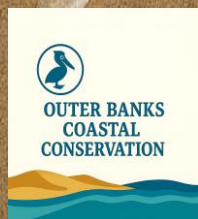
Beyond Plastic: Protecting Our Coasts, Oceans, and Future

Beyond Plastic: Protecting Our Coasts, Oceans, and Future explains how plastic pollution threatens oceans, wildlife, and human health. It follows the journey of plastic from everyday use to rivers and the sea, where it breaks into harmful microplastics that enter the food chain. The guide highlights the impacts on marine life, coastal habitats, and communities—especially in the Outer Banks—and emphasizes that local actions can make a global difference. It concludes with practical solutions, including reducing single-use plastics, recycling properly, choosing sustainable alternatives, supporting community initiatives, and participating in beach cleanups to help protect our coasts for future generations.

About the Publisher

Outer Banks Coastal Conservation (OBCC) is a nonprofit organization dedicated to fostering environmental stewardship and a deeper connection to the Outer Banks of North Carolina through education, outreach, and conservation initiatives.

Learn more and download free educational resources at:
www.theobcc.org.



9798951232564
ISBN: 979-8-951232-56-4