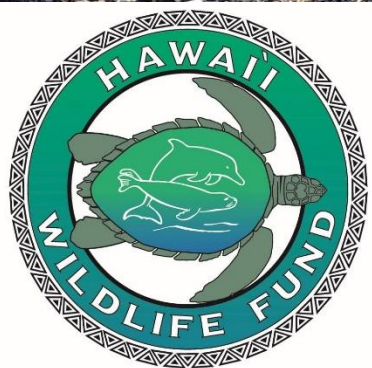


Plastic Pollution: Stories of Recovery, Reduction, and Lessons Learned from Ka'ū



Megan R. Lamson & Stacey I. Breining
Hawai'i Wildlife Fund (www.wildhawaii.org)

Hawai'i Wildlife Fund





Marine debris is a global problem ...



... with local solutions!

22-23 school year we reached 447 Hawaii Island students



1. Marine Debris Keiki Outreach (MDKEO)
2. Hawaiian Coastal Ecosystems (HCE)
3. Honu'ea Ike- endangered Hawaiian Hawksbill Sea Turtle Biology

Recovery efforts: Volunteer power!



© Photo by K. Lindsey Kramer



Volunteers
collect an
average of
81.2 lbs. each

*(2008 - 2018 Hawai'i Island
data, SD = 69.3)*

> 325 tons
collected to date
on Hawai'i Island.



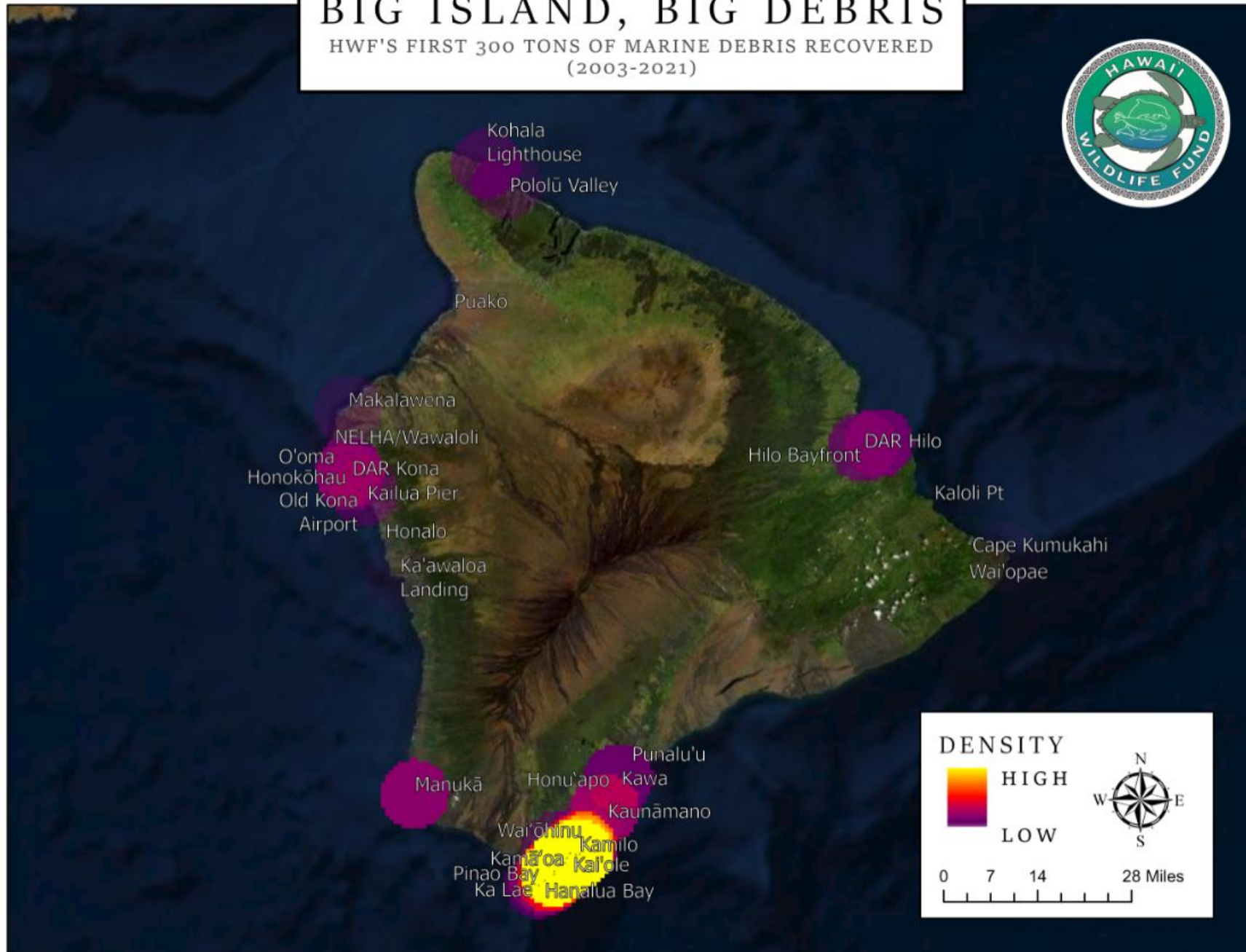
Collectively from
1998 - 2022, HWF
and partners have
removed over

375 tons *(750,000 pounds!)*

from the shores of
Hawai'i Island,
Maui, Midway and
the French Frigate
Shoals (NWHI).

BIG ISLAND, BIG DEBRIS

HWF'S FIRST 300 TONS OF MARINE DEBRIS RECOVERED
(2003-2021)



SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGIRD, IGN, AND THE GIS USER COMMUNITY





Get Involved!

HWF Community Coastal Cleanup Events:

- Sat Aug 19, 2023: Hiking only (Kama'oa)
- More dates TBD! *Check the website, linked below or host your own event!*
- **DIY or adopt-your-own favorite public beach, park, trail, or coastline!**



www.wildhawaii.org/calendar
stacey.hwf@gmail.com

Threats to our Climate

EXECUTIVE SUMMARY

Plastic & Climate

THE HIDDEN COSTS OF A PLASTIC PLANET



Plastic Proliferation Threatens the Climate on a Global Scale

The plastic pollution crisis that overwhelms our oceans is also a significant and growing threat to the Earth's climate. At current levels, greenhouse gas emissions from the plastic lifecycle threaten the ability of the global community to keep global temperature rise below 1.5°C. With the petrochemical and plastic industries planning a massive expansion in production, the problem is on track to get much worse.

Greenhouse gas emissions from the plastic lifecycle threaten the ability of the global community to keep global temperature rise below 1.5°C. By 2050, the greenhouse gas emissions from plastic could reach over 56 gigatons—10-13 percent of the entire remaining carbon budget.

If plastic production and use grow as currently planned, by 2030, these emissions could reach 1.34 gigatons per year—equivalent to the emissions released by more than 295 new 500-megawatt coal-fired power plants. By 2050, the cumulative of these greenhouse gas emissions from plastic could reach over 56 gigatons—10-13 percent of the entire remaining carbon budget.

Nearly every piece of plastic begins as a fossil fuel, and greenhouse gases are emitted at each of each stage of the plastic lifecycle: 1) fossil fuel extraction and transport, 2) plastic refining and manufacture, 3) managing plastic waste, and 4) plastic's ongoing impact once it reaches our oceans, waterways, and landscape.

This report examines each of these stages of the plastic lifecycle to identify the major sources of greenhouse gas emissions, sources of uncouncted

FIGURE 1
Annual Plastic Emissions to 2050

3.0 billion metric tons

By 2050, annual emissions could grow to more than 2.75 billion metric tons of CO₂e from plastic production and incineration.



Source: CIEL

Photo: © iStockphoto/Wyryl Gorlov



“In 2019, the production and incineration of plastic will produce more than 850 million metric tons of GHG – equal to the emissions from 189 500MW coal power plants.”