# SANNUAL SREPORT





### 5 GYRES STAFF

**Airrion Copeland Executive Director** 

Anna Cummins
Deputy Director
& Co-Founder

Marcus Eriksen
Chief Scientific Officer
& Co-Founder

Melissa Aguayo
Program Director

Marina Ivlev
Director of
Communications

**Ginger Goss Mukherjee**Operations Manager

Rachel Labbe-Bellas Manager, Foundation & Corporate Relations

**Sara Mais**Development Manager

**Alison Young**Program Coordinator

# BOARD OF DIRECTORS

**Christopher Gift**Board Chair

**Anna Getty** Secretary

Felipe Bascope Kathleen Egan Elan Glasser Casey Marshall Juli Schulz

# A MESSAGE FROM OUR EXECUTIVE DIRECTOR

few years ago, I was headed out to surf one day in santa Monica. I remember the wonderful feeling that I always get before I go out to surf... the warmth of the sun on my skin, the piercing sound of the waves lifting up the ocean, and the songs of the seagulls as they are lifted by the breeze of the wind. It is a feeling to just plunge yourself into the unknown and let it take you.



So, I began to paddle out to catch my first wave. A beautiful little A-frame begins to approach me and I can feel my heartbeat pounding in rhythm with the wave. I paddle and catch it as it takes me for a nice little ride along its face. There is almost nothing on earth that can give you that feeling.

On my way back out to the line up, with a smile on my face, I look upon the surface of the water ahead of me and notice 4 plastic water bottles afloat around my board. My smile turned upside down as the sight of those bottles stole all of my stoke from the wave that I just caught and put me into a solemn mood... so much so, that I knew at that moment, I needed to do something about this.

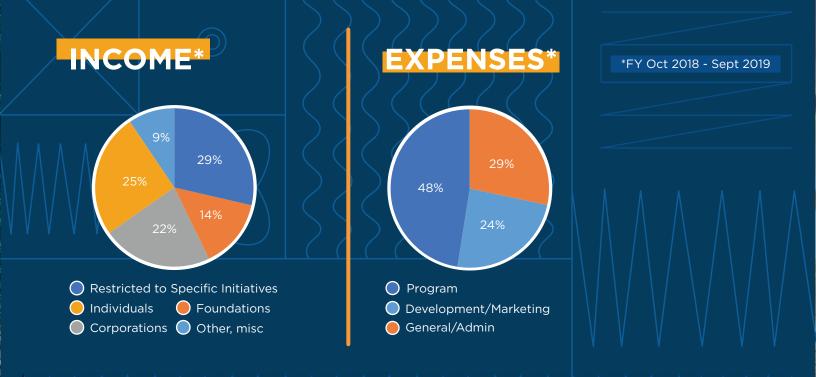
In September of 2019, I was hired as the Executive Director of the 5 Gyres Institute. Our mission is to empower action against the global health crisis of plastic pollution through science, education and adventure. We do this work so that my surfing experience along with many others does not suffer due to disposable plastics in our waters. We thrive by using our science to find solutions to stop plastic pollution.

One of the most amazing accomplishments that we achieved in 2019 was conducting a 5 Gyres Trash Blitz in the city of Los Angeles. This project was designed to evaluate plastic pollution in our city using rigorous data analysis and collection. We empowered and worked with 25 environmental and community organizations to drive results to change local policies. As a result, we discovered the top ten single use plastics, the top 5 materials and the top 5 brands that are polluting the city of LA.

The heart and soul of our organization has always been our expeditions. We give people from all backgrounds and economic status an opportunity to experience the open blue water and discover the impact plastic pollution has on our beautiful ocean. In the summer of this year, we went to the Galapagos Islands and the experience inspired and motivated everyone on the trip to support policy change to stop pollution.

To top off the year, we partnered with the San Francisco Estuary Institute and shared the results and recommendations of a three year San Francisco Microplastic Study, designed to provide critical data on sources and pathways of microplastics in the Bay Area. This study was key to unlocking pivotal solutions to stop single use plastics from harming the Bay Area.

The momentum that we have generated through our work in 2019 is unparalleled. I am so excited about the work that we have ahead of us. The 5 Gyres Institute is growing and expanding in ways that will drive impact to change policies that will ban single use plastics in every city and state across the land. I'd like to sincerely thank all of you, our partners, our ambassadors, our board, our staff, our donors and our whole community for supporting 5 Gyres in 2019. The ocean is our most precious resource for all sentient beings to thrive, let's not let plastic ruin its beauty." - AIR COPELAND



# THANK YOU TO OUR DONORS & PARTNERS

1% For the Planet, All Ways Forward Life Coaching, Angora Ridge Foundation, Aquagear, Aspect Consumer Partners, Bambaw, Baum Foundation, Beauty Heroes, Brew Dr. Kombucha, California Coastal Conservancy, Chicobag/ToGo Ware, Clif Bar Family Foundation, Costa Sunglasses, Crunchi, Curtis and Edith Munson Foundation, David Schwartz Foundation, Discovery, Earle & Annette Shawe Family Foundation, Elbaz Family Foundation, Eskayel, Everything But Water, FinalStraw, Fred Craves Family Foundation, Giving Mutt Family Fund, Greater Kansas City Community Foundation, Highwave, Hull Family Foundation, Jacques Weber Foundation, Inc., Johnson Ohana Charitable Foundation, JyARZ, Kablo, Kesher Fund of Cohen-Fruchtman-Kreiger Family Inc., Kings Care Foundation, Klean Kanteen, Leonardo DiCaprio Foundation, Liquid Death, Lonely Whale, LunchSkins, Mario M. Morino Trust, Mary G Jameson Foundation, Mathiesen Family Charitable Fund, Metabolic Studio, Metropolitan Water District of Southern California, Minneapolis Foundation, Moller Family Foundation, Movement, Nara Shave, Natracare, Nelson - O'Neil Charitable Fund, Nordic Naturals, Oceanic Society, Ohrstrom Foundation, Oliver Valentine, Pangaia, Pixel & Timber, Plaine Products, Preserve, Public School/Grill Concepts, Rose Foundation, Sail and Explore Association, Gordon and Betty Moore Foundation c/o San Francisco Estuary Institute (SFEI), Seed Phytonutrients, Shanahan Family Foundation, SIMA Environmental Fund, Soludos, Sony Pictures Entertainment, SoulBuffalo, Stasher Bag, Stella Templo, Stickeen, Sustainable Futures Fund, The Gallifrey Foundation, The Repass-Rodgers Family Foundation, The Wiggins Foundation, The Wutz Family Foundation, Trinity Property Consultants, U-Konserve, US Department of State, Virginia Wellington Cabot Foundation, WexCo Environmental Donations of \$1,000+ within FY 2019

### A MESSAGE FROM OUR BOARD CHAIR

As we end the first decade as an organization and begin a new one, I am proud of what 5 Gyres has accomplished so far and am looking forward to our future. With a new Executive Director steering the ship and enthusiastic staff to support, I believe that we can continue changing the tide on plastic pollution through research, education, and adventure." - CHRIS GIFT







## TRASHBLITZ

IN APRIL OF 2019 WE LAUNCHED TRASHBLITZ, A CITIZEN SCIENCE PROGRAM THAT GIVES INDIVIDUALS THE RESEARCH TOOLS NECESSARY TO CREATE CHANGE IN THEIR COMMUNITIES.

TrashBlitz takes a unique approach by engaging diverse stakeholders in collecting local data to better understand the source of the problem in a direct, hands-on way. This data is then leveraged to promote plastic pollution solutions that are locally relevant.

Officially launched in Los Angeles, we created a movement and rallied over 25 local organizations to collect a robust, city-wide, trash audit data set. Using our new web-based application, over a three week period we collected and tracked over 100,000 items of trash in 110 sample sites across 15 municipal districts. We then hosted a Solutions Summit to talk about next steps based on data collected, giving participants a different way to stay engaged and be a part of the solution.

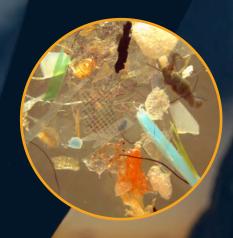
There is no substitute for regionally relevant data for engaging municipalities and local business communities. In 2020, 5 Gyres will expand TrashBlitz into 3 major US cities - Denver, Portland, and Brooklyn - to help support local on-the-ground efforts to reduce waste in those communities and beyond.



We collected and tracked over 100,000 items of trash in 110 sample sites across 15 municipal districts.

# SF BAY MICROPLASTIC STUDY

In 2019, we completed our three year study of microplastics in the San Francisco Bay. We found that over 7 trillion pieces of plastic enter the Bay each year from primary sources including stormwater and wastewater. We studied surface water, sediment, and fish for evidence of plastic less than 5 mm. Our findings showed extremely high concentrations of microfibers which warrants more stringent policies in controlling downstream runoff.



Through this scientific work, we are able to make sound recommendations for mitigation and design change in relation to microfibers and microplastics such as phasing out single-use products and packaging, using rain gardens to mitigate off-flow, and mandate filtration on washing machines.

California is leading the nation in plastic pollution reduction efforts, with other communities looking to us for guidance.

# **AMBASSADORS**

WHAT BEGAN AS A WAY FOR
EXPEDITION CREW TO KEEP IN TOUCH
HAS FLOURISHED INTO A NETWORK OF
ACTIVE AMBASSADORS SPANNING THE
GLOBE, AGES 8 TO 80, WITH OVER 1,400
MEMBERS NOW PARTICIPATING IN THE
PROGRAM.

We will achieve 2,020 ambassadors in 2020 while providing them with new and exciting resources and opportunities such as our first ever Ambassador Summit. The Summit gives ambassadors the opportunity to meet each other, learn more about the issue, and become invigorated on their journeys to ending plastic pollution for good.

# **OUR GOAL IS 2,020 AMBASSADORS IN 2020**



### Sydney Steenland

Founder of The Sea Monkey Project - Australia

Educates public about plastic pollution through living on a sailboat with her family, speaking engagements and upcycling.



### **Weldon Wade**

Founder of Guardians of the Reef - Bermuda

Engages fellow scuba divers in exploring and protecting the ocean through clean ups and community support.



### Andrea Lema

Founder & National Director of PlastiCo. - Ecuador

Educates people on the effects of plastic pollution & provides alternatives to single use plastics through her zero waste store "Suyana".

5 Gyres was established in 2009 to document plastic pollution on a global level after Co-Founder Marcus Eriksen completed the JUNKraft expedition, a 2,600 nautical mile expedition from Los Angeles to Hawaii on a raft made of 15,000 plastic bottles. Since then, 5 Gyres has completed 19 large scale research expeditions, traveling over 50,000 nautical miles and bringing more than 222 people to the world's oceanic gyres. Each research expedition brings together an international group of individuals, including scientists, artists, activists, musicians, and corporate partners. Each trip aimed to collect samples on the levels of plastic pollution floating on the surface of our oceans, in addition to educating the participants and followers about the issue with the intention of inspiring local action.

# TIMELINE OF EXPEDITIONS OVER THE LAST 10 YEARS



### 2010 FIRST EXPEDITION ACROSS THE ENTIRE NORTH ATLANTIC GYRE

### FIRST OFFICIAL EXPEDITION FOR 5 GYRES!

ROUTE Bahamas to Bermuda, Bermuda to Azores

FUN FACT Joel Paschal, Marcus' co- navigator from JUNKraft, joined the crew as well!

### 2010 FIRST EXPEDITION ACROSS INDIAN OCEAN GYRE

**ROUTE** Australia to Mauritius

**FUN FACT** We invented a new type of trawl, AVANI (All-purpose, Velocity, Accelerated, Nautical, Instrument).

### 2010 + 2011 FIRST EXPEDITIONS ACROSS SOUTH ATLANTIC GYRE

**ROUTE** Ascenscion Island, Brazil to South Africa, Namibia to Uruguay

MARCUS SAYS "From Namibia to Uruguay, the trawl line wrapped around the propeller, damaging the engine, and requiring travel under sail only for 1,000 miles!"

**FUN FACT** Chelsea Rochman joined the leg from Brazil to South Africa and wrote a paper about flame retardants in fish in the middle of the gyre.

### 2011 FIRST EXPEDITIONS ACROSS SOUTH PACIFIC GYRE

**ROUTE** Chile to Easter Island, Easter Island to Tahiti

MARCUS SAYS "From Chile to Easter Island we created the "Pantz Trawl" (a trawl made out of an actual pair of pants!) and had a band of musicians on board. We had Anna Cummins on violin, and three other crew on guitar, harmonica, and Scottish royalty on bagpipes."

**FUN FACT** We published the first paper describing the South Pacific Gyre!

### 2011 + 2012 NORTH PACIFIC GYRE EXPEDITION

ROUTE Hawaii to Vancouver, Marshall Islands to Japan, Japan to Hawaii

MARCUS SAYS "From Japan to Hawaii we sailed through the 2011 'Tsunami Debris Field'. We discovered lots of household items, a car tire, and a few shoes that drifted by with the laces tied up. We also found half a fishing boat, which we kept until we got to Hawaii and shipped it to Los Angeles."

### **2012 GREAT LAKES EXPEDITION** - LAKES SUPERIOR, HURON, ERIE

**FUN FACT** We (along with our partners) discovered microbeads were polluting the lakes, published several papers on the topic, and 2.5 years later President Obama signed the 2015 Microbead Free Waters Act.

### 2013 LAKE MICHIGAN EXPEDITION

MARCUS SAYS "I think it is safe to say that this was a turning point for 5 Gyres, as we started looking inland for microplastics in fresh water environments."

### 2013 NORTH ATLANTIC GYRE EXPEDITION

**ROUTE** Bermuda to Rhode Island

**FUN FACT** Michael Brown, our plastics industry leader turned plastic-activist, made the 5 Gyres flag for us, which has been with us on every voyage.

### 2014 VIKING GYRE EXPEDITION - NORTH ATLANTIC, SUBPOLAR GYRE

**ROUTE** Bermuda to Iceland

MARCUS SAYS "We were on constant watch through the Labrador Sea for icebergs through the heavy fog!"

**FUN FACT** Marcus' mom grew up in Reykjavik, so when we landed in Iceland, Marcus met his Icelandic family on the dock, including a dozen cousins, aunts and uncles, nieces and nephews.

### 2015 SEA CHANGE EXPEDITION

**ROUTE** Miami to Bahamas, Bermuda to New York City

**FUN FACT** Smog of the Sea film was created with musician Jack Johnson, Celine Cousteau, and pro surfers Dan and Keith Malloy on board!

### 2016 ARCTIC EXPEDITION WITH SEA SHEPARD AND VANCOUVER AQUARIUM

**ROUTE** Greenland to Canada

MARCUS SAYS "We discovered abundant microfibers in surface waters and Vancouver Aquarium discovered abundant microfibers below the surface. Now, in 2020, it's clear to many researchers that micro and nano-plastics will likely find their final resting place in the Arctic, as one of several places where deep sea currents slow down and stop."

### 2018 CORAL TRIANGLE EXPEDITION

ROUTE Komodo to Bali and back

NOT-50 FUN FACT. We found 141 flip flops over 1/8 mile stretch of beach.

### 2019 GALAPAGOS ISLANDS EXPEDITION

**FUN FACT** We had our first international TrashBlitz in Guayaquil, Ecuador! This expedition had a focus on citizen science and the passion of our global ambassador network.

# YOU'RE NEVER TOO YOUNG TO CHANGE THE WORLD

