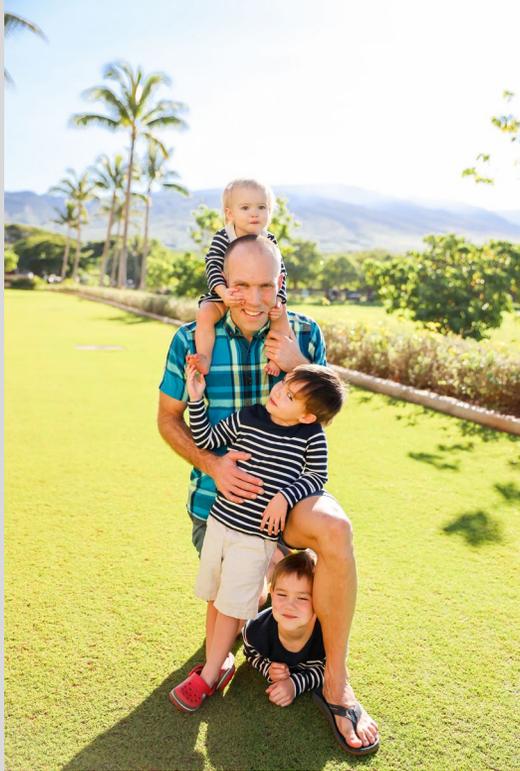


CARBON NEUTRAL RACE PRODUCTION

By Porter Bratten

About Me



- Loves dad jokes
- Lives in Anacortes, Washington
- Started out in 2010 with triathlons
- Owner of Orca Running, Evergreen Trail Runs, Blackfish Timing, Blackfish Crafts and Evergreen Excursions
- 10 trail races, 14 road races, 3 excursions, about 15,000 runners annually



ORCA RUNNING



DAD JOKE

- My wife asked me the other day where I got so much candy. I said, "I always have a few Twix up my sleeve."



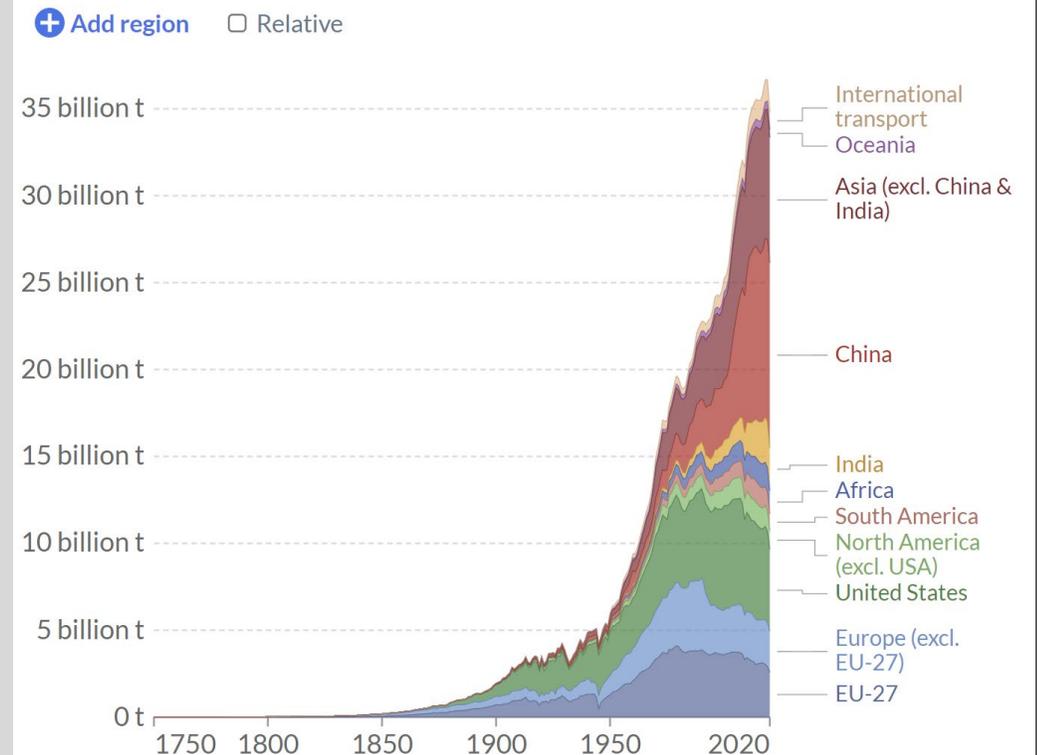
Why Carbon Neutral?

- As a father—for my children
- Small business owner—example to other businesses and to my customers
- USA resident—we are world's second largest polluter after China and #16 per capita in the world
- Moral imperative
- Can also be a marketing angle to help bring in more runners or to garner more brand support.
- Not that difficult for races—much easier compared to other more materialistic industries

Global emissions have not yet peaked

Annual CO₂ emissions from fossil fuels, by world region

Our World
in Data

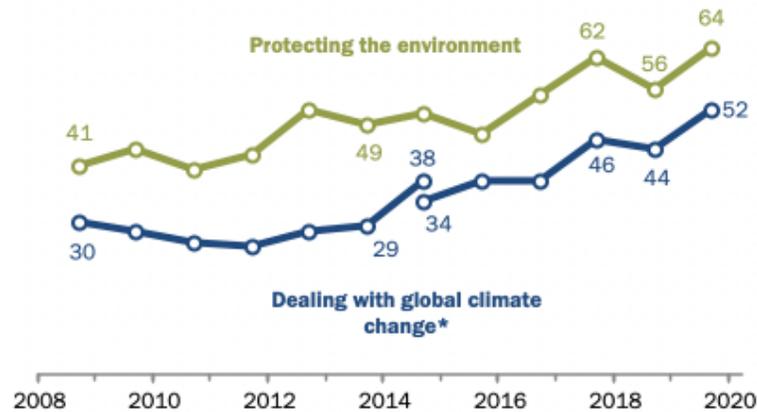


Source: Global Carbon Project OurWorldInData.org/co2-and-other-greenhouse-gas-emissions • CC BY
Note: This measures CO₂ emissions from fossil fuels and cement production only - land use change is not included. 'Statistical differences' (included in the GCP dataset) are not included here.

Public opinion is changing

Increased support for prioritizing policies on the environment, climate change since 2011

% U.S. adults who say ____ should be a top priority for the president and Congress



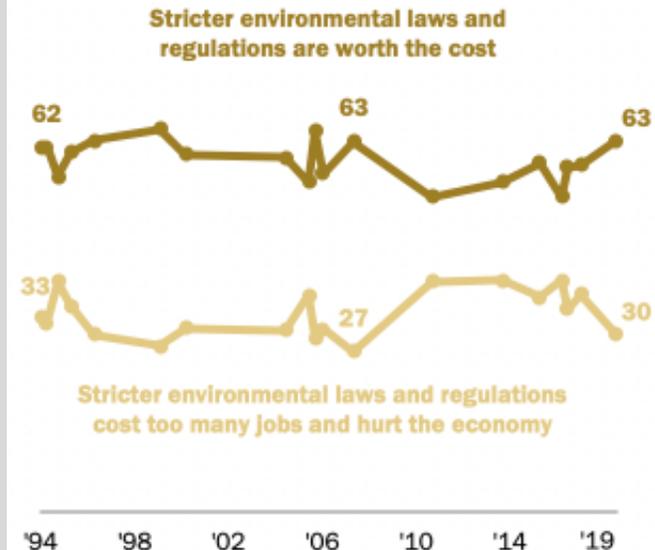
*In 2014 and earlier, respondents were asked about dealing with "global warming." In 2015 half the sample was asked about either "global warming" or "global climate change"; 34% called "global climate change" a top priority while 38% said this about "global warming."
Source: Survey of U.S. adults conducted Jan. 8-13, 2020.

"As Economic Concerns Recede, Environmental Protection Rises on the Public's Policy Agenda"

PEW RESEARCH CENTER

Majority of Americans say stricter environmental laws are 'worth the cost'

% of U.S. adults who say ...



Note: Don't know responses not shown.

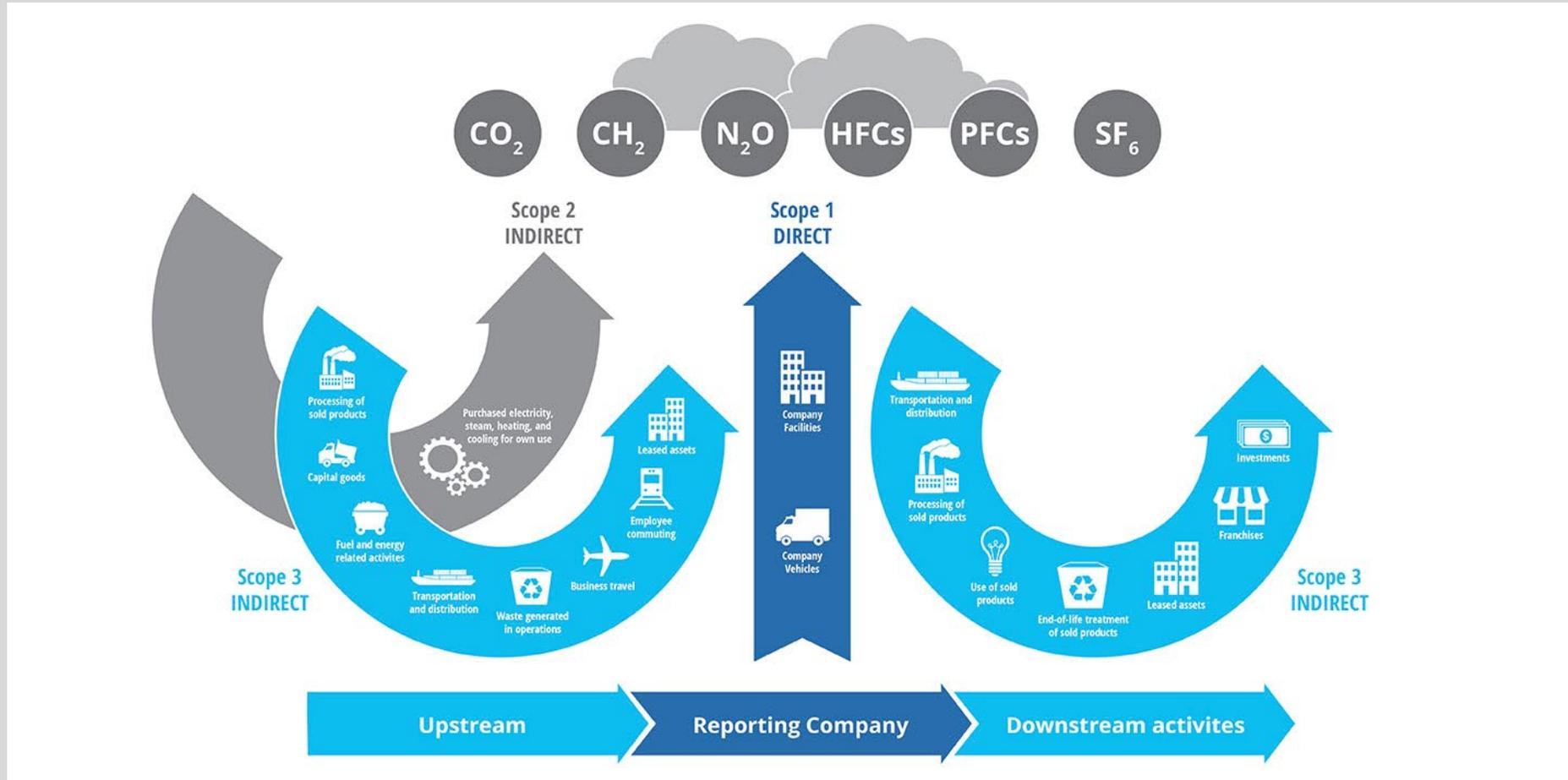
Source: Survey of U.S. adults conducted Jan. 9-14, 2019.

PEW RESEARCH CENTER

What is a carbon footprint?

- A carbon footprint is a measure of how much carbon dioxide equivalent you release into the atmosphere, measured in metric tonnes (1,000 kg = 2,204 lb)
- Standards established by Greenhouse Gas Protocol, a non-profit <https://ghgprotocol.org/>
- What is carbon dioxide equivalent (CO₂e)? Different gasses have different effects on the atmosphere—some are more potent than others in warming the planet. Methane is 25x more potent than CO₂, so one pound of methane = 25 lbs
- Comes from three categories:
 - Scope 1: Direct emissions. Examples: gasoline vehicle or generator
 - Scope 2: Purchased energy, nearly always electricity.
 - Scope 3: Emissions resulting from activities not directly owned by your business but are associated with its operation. Examples; business travel, waste management, commuting, metal manufacturing, etc.

Three Scopes, Visually



What is your carbon footprint?

- A carbon footprint is a measure of how much carbon dioxide equivalent you release into the atmosphere, measured in metric tonnes (1,000 kg = 2,204 lb)
- What is carbon dioxide equivalent (CO₂e)? Different gasses have different effects on the atmosphere—some are more potent than others in warming the planet. Methane is 25x more potent than CO₂, so one pound of methane = 25 lbs
- You must decide what your race's carbon footprint will be—no one will tell you.
 - Decide what you will and won't consider part of your footprint, draw a circle around your business. Everything inside the circle is part of your footprint, outside the circle is not. You can always change it.
 - Things inside the circle should be more directly under your control or have data accessible to you.
 - The goal is to then bring your carbon footprint to zero through two ways: reducing and offsetting.



What we decided—for now

Inside carbon footprint

- Staff/employee transportation
- Participant swag--shirts
- Electricity/gas usage for staff home offices
- Participant race day transportation
- Mailing/shipping
- Race day generators
- Race day waste

Outside carbon footprint

- Medal production in China
- Participant food

What we are doing

- Trees not tees
- Recycle medals--divert waste
- Make some of our swag in the USA
- Carpool incentivization
- Sort waste
- Recycled shirts
- Cloverly for shipping/mail
- Cupless racing
- Pay for solar or renewable energy sources for office/home office electricity
- Purchasing offsets for the remainder
- Make our medal provider wrap our medals in paper, not plastic

What else you can do

- Choose foods with lower carbon footprint (avoid beef, cheese)
- Use locally-produced food

Offsetting what's left

- Offsets are 'credits' that you purchase on an open market. Can buy in large batches (save \$\$) or small quantities
- Idea that by purchasing offset, you have prevented a specific amount of CO₂e from being released
- The market is taking off—prices going up as more and more companies offset
- Large range of quality—ranging from sketchy to new projects + economic stimulus
- We are charging \$0.95 per physical participant for offsetting race day participant transportation in RunSignUp
- We have purchased in advance for all 2022 races our offset for participant race day transportation. About \$6500 for 14,000 runners.

Our Project—Crow Lake Wind



This certificate verifies that

Blackfish Ventures

has compensated

550 tonnes of greenhouse gas emissions

by investing in South Pole's climate protection project:
Crow Lake Wind Emissions Reduction Project

13 CLIMATE ACTION



Thank you for committing to bold climate action. Your contribution is not only a meaningful step towards mitigating climate change globally, but also changes lives for the better by contributing to the Sustainable Development Goals set out by the UN.

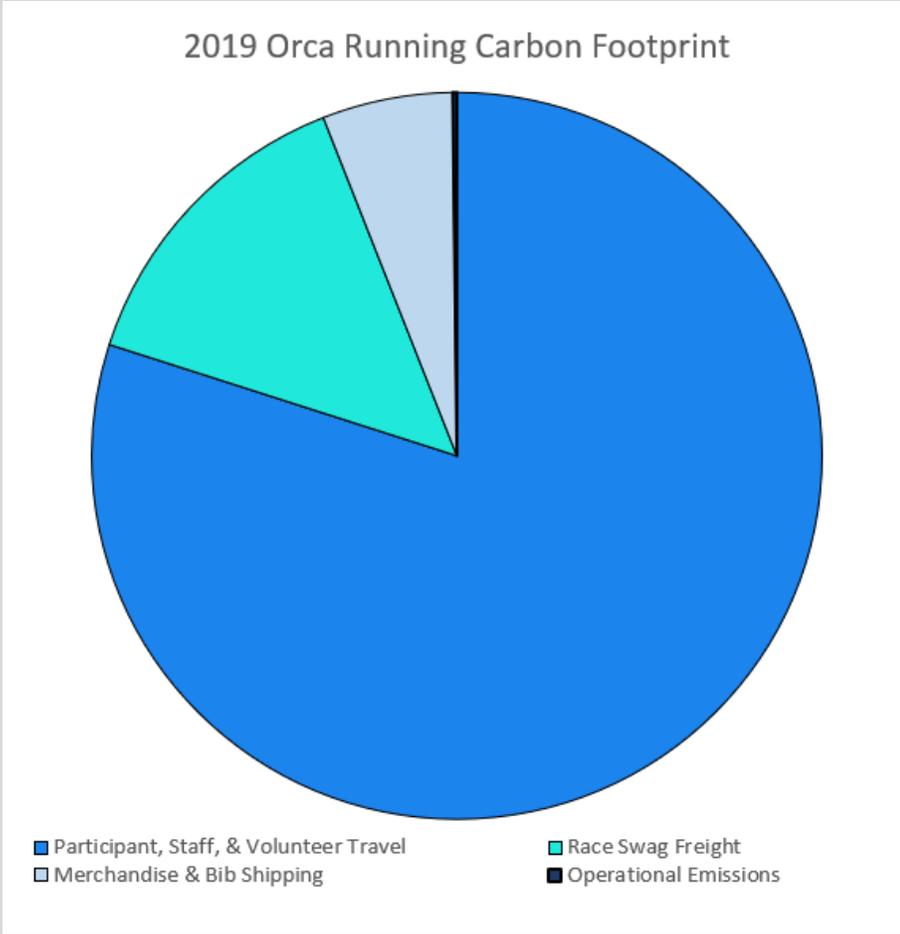
This certificate is issued by South Pole. For more information about our projects and more than 100 climate protection projects, please visit: southpole.com/projects. The CO₂ emissions included on this certificate are compensated through investments in the above mentioned carbon offset projects based on international standards.



How to estimate your footprint

- Break down each component of what's inside your footprint.
- Don't get overwhelmed. Tackle it one small piece at a time, give yourself time.
 - Prioritize - travel is the largest piece and least mitigable
- Don't be afraid to use estimates—nearly everything will be
- You can pay for a complete audit if it's in the budget
- Estimate/measure your footprint
 - Online calculators
 - Most are geared towards conferences/conventions - use the portions you can. We liked the [BP tool](#).
 - Historical RunSignUp registration data
 - Participant surveys
 - Assess carpooling habits
 - Test reception to proposed green initiatives
 - Lots of spreadsheets! Analytical approach

Mostly Participant Travel!



Our travel footprint calculations

- Compiled registration data from a more representative year (2019 in our case)
- Created / sourced spreadsheets of additional data
 - Coordinates of [US Zip Codes](#) and Canadian Postal Codes
 - Spreadsheet of each race included in compiled reg data and the corresponding Zip or Postal Code for each
- Used VLOOKUPs to add columns for participant latitude/longitude and race latitude/longitude to each row of the compiled registration data
- Used a formula to determine an as-the-crow-flies travel distance for each registration
- Determined reasonable assumptions and cleaned the data accordingly
 - Racing not sole factor for those traveling over 100m one-way , use average travel distance for these folks
 - Registrants for the same race with the same address will carpool
 - Registrants who share a home Zip code with the race will still have *some* amount of travel
- Arrived at **average round-trip travel** per traveler and per registrant
 - Both are handy figures to have

Our travel footprint calculations

- Conducted participant survey to estimate rate of multi-household carpooling
 - Assessed popularity/effectiveness of carpool incentives, and barriers to carpooling in the same survey
- Used that rate, the household carpool rate from reg data, and average no-show rate to arrive at **# total driving participants**
- # total driving participants + (average staff & volunteers * # races) = **# total travelers**
- Average Round-Trip Travel per Traveler * # Total = **Total Mileage**
- Entered total mileage in a calculator to arrive at tonnes of carbon attributable to participant travel
 - We found the [Greenhouse Gas Protocol](#) calculator most helpful and straightforward (Transportation Sheet)

Resources

- Athletes for a Fit Planet <https://afitplanet.com/>
- Council for Responsible Sport <https://www.councilforresponsiblesport.org/>
- Chicago Marathon <https://www.chicagomarathon.com/get-involved/sustainability/>
- Trees not Tees <https://treesnottees.com/>
- South Pole <https://www.southpole.com/>
- Cloverly <https://www.cloverly.com/>
- Greenhouse Gas Protocol Calculator <https://ghgprotocol.org/ghg-emissions-calculation-tool>
- Calculate your carbon footprint: <https://www.nature.org/en-us/get-involved/how-to-help/carbon-footprint-calculator/>
- US Zip Code Coordinate File <https://simplemaps.com/data/us-zips>
- Greenhouse Gas Protocol <https://ghgprotocol.org/>

Sources

- Slide 3: <https://ourworldindata.org/grapher/annual-co-emissions-by-region>
- Crow Lake Wind: <https://www.southpole.com/projects/crow-lake-wind>