

Annual Sustainability Report



Eagle Wing Tours

December 1, 2020 to November 31, 2021

| | |
|--------------|--|
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| Completed | 7/9/2022 |

synergy

Executive Summary

Eagle Wing Tours is a carbon neutral whale watching company based in Victoria, BC. The company has one small office space at Fisherman's Wharf, one company vehicle, and four boats. Eagle Wing Tours demonstrates a strong commitment to environmental stewardship and sustainable tourism. They are committed to operate as a carbon neutral business and have been monitoring, reducing, and offsetting their carbon footprint since their first day of operations in 2005.

This report measures carbon emissions associated with Eagle Wing Tours' operations for 2021. Total emissions were 687 tCO₂e, a 34% decrease over 2019 due to running 44% fewer tours and having no business travel. Emissions per passenger increased by 8.1% to 31 kgCO₂e in 2021 as a result of fewer passengers compared to 2019. Due to COVID-19 restrictions, overall passenger capacity was reduced at the start of 2021 and returned to normal capacity in the spring.

FY 2018-2019 reports have been restated to correct an error in fuel emissions calculations. Historical emissions for 2015-2020 have been adjusted to account for the biofuel content of both marine diesel (2% biodiesel) and gasoline (5% ethanol). This was done to account for and report on biogenic emissions in accordance with new methodology guidelines set by the Greenhouse Gas (GHG) Protocol.

Inventory Information

| | | | |
|------------------------|---|-------------------------|----------------|
| Company Name | Eagle Wing Tours | | |
| Contact Information | Brett Soberg | info@eaglewingtours.com | (250) 384-8008 |
| Company Description | One office/reception space, four boats (Serengeti, Goldwing, 4 Ever Wild & Wild 4 Whales), one company vehicle | | |
| Reporting Period | December 1, 2020 to November 31, 2021 | | |
| Inventory Boundary | Scope 1 (Direct Emissions) - Gasoline, Marine Diesel (fuel for boats) | | |
| | Scope 2 (Indirect Emissions from Purchased Electricity) - Purchased Electricity (BC Hydro) | | |
| | Scope 3 (Indirect Emissions from Other Sources) - Water, Waste, Stationery, Paper Products, Company Travel, Shipping, Staff Commuting | | |
| Scope 2 Approach | Location Based Emissions Calculation | | |
| Consolidation Approach | Operational Control: Accounting for 100% of emissions from operations over which the company has operational control. | | |
| Primary Measurement | Carbon Dioxide Equivalent (CO ₂ e) | | |
| Reporting Guidelines | Aligned with those defined in <i>The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, Revised Edition (The GHG Protocol, www.ghgprotocol.org)</i> . Emissions factors reviewed & approved by Ostrom. | | |

Inventory Results

| | tCO ₂ e | |
|------------------------|--------------------|---------------------------|
| Scope 1 (Direct) | 650.8 | 94.7% of annual total |
| Scope 2 (Indirect) | N/A | |
| Scope 3 (Indirect) | 23.9 | 3.5% of annual total |
| Biogenic Carbon | 12.5 | 1.8% of annual total |
| TOTAL EMISSIONS | 687.1 | Scope 1, 2, 3, & biogenic |
| NET EMISSIONS | 674.6 | Scope 1, 2, & 3 |

Carbon Footprint (Summary)

Eagle Wing Tours

2021 Report



Offset Total

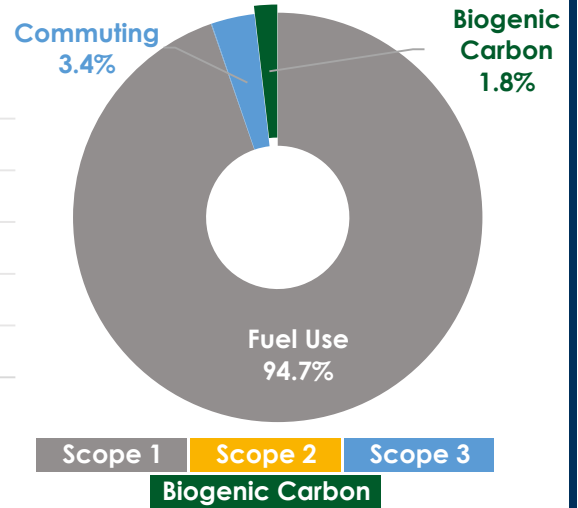
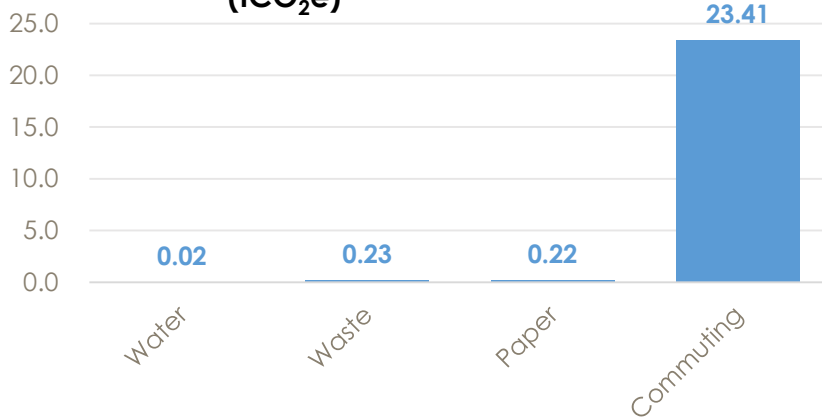
674.6 tCO₂e

Reduction Target

Eagle Wing Tours commits to a 30% reduction in GHG emissions by 2025 over the 2019 base year.

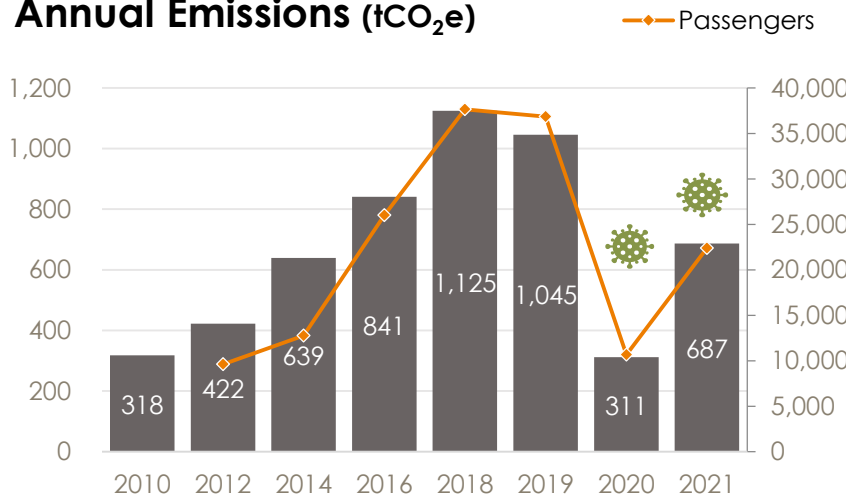
Carbon Footprint By Activity

Minor Emissions by Activity (tCO₂e)



Carbon Footprint (Historical)

Annual Emissions (tCO₂e)



| Year | tCO ₂ e Per Year | Change since Baseline | |
|------|-----------------------------|-----------------------|---------|
| | | tCO ₂ e | Percent |
| 2010 | 317.7 | - | - |
| 2011 | 408.7 | 91.0 | 29% |
| 2012 | 421.9 | 104.2 | 33% |
| 2013 | 496.0 | 178.4 | 56% |
| 2014 | 638.8 | 321.1 | 101% |
| 2015 | 726.2 | 408.5 | 129% |
| 2016 | 840.8 | 523.1 | 165% |
| 2017 | 952.2 | 634.5 | 200% |
| 2018 | 1,124.6 | 806.9 | 254% |
| 2019 | 1,045.2 | 727.5 | 229% |
| 2020 | 311.4 | -6.3 | -2% |
| 2021 | 687.1 | 369.5 | 116% |

Note: Historical emissions for 2015-2020 have been adjusted to account for the biofuel content of both marine diesel (2% biodiesel) and gasoline (5% ethanol).



2,168

Barrels of Oil



184

Cars per Year



30.7

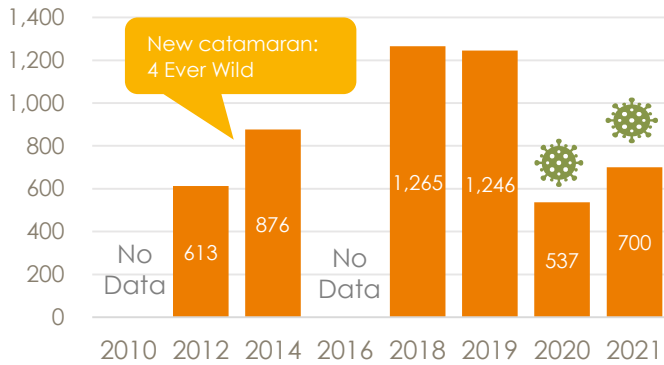
kgCO₂e / psgr

tCO₂e
(Total)

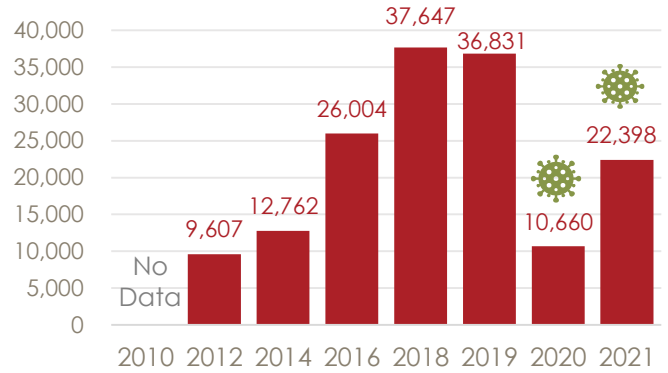
687.1

Intensity Metrics

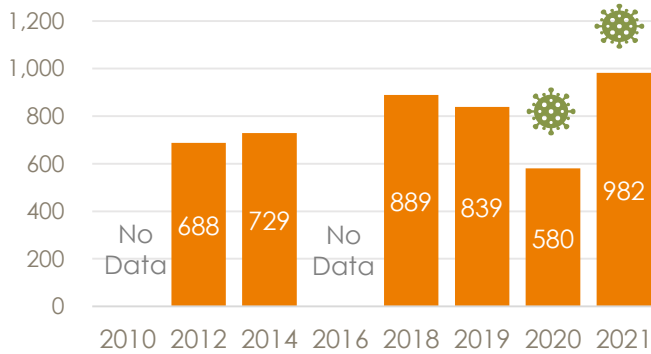
Total Trips



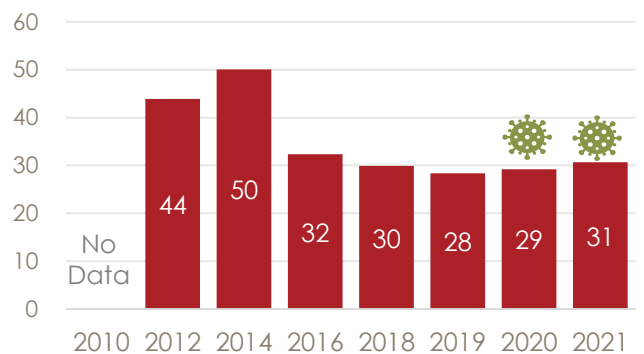
Total Passengers



kgCO₂e/Trip*



kgCO₂e/Passenger*



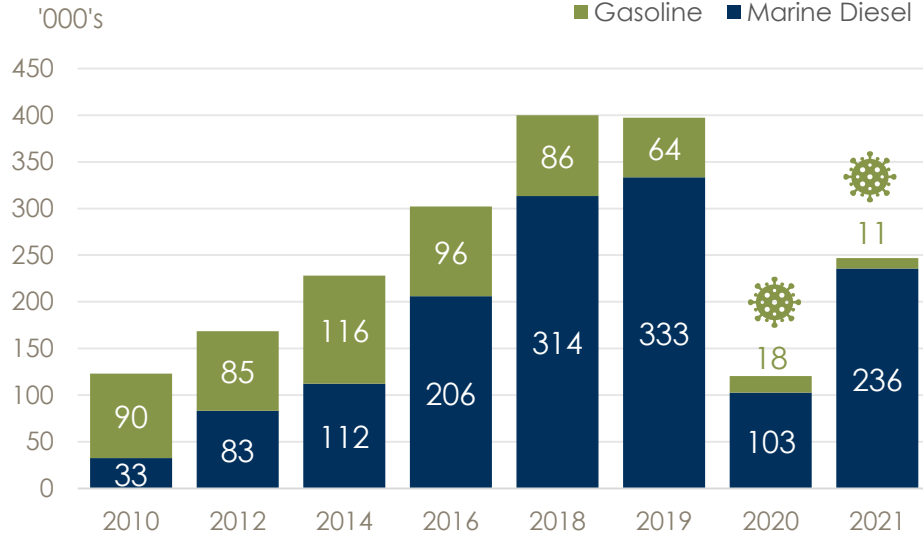
* based on total company emissions

* based on total company emissions

| KPIs | 2021 | Change since 2019 | | 2021 | Change since 2020 | |
|-------------------------------|--------|-------------------|---------|--------|-------------------|---------|
| | | Amount | Percent | | Amount | Percent |
| Total Passengers | 22,398 | -14,433 | -39.2% | 22,398 | 11,738 | 110.1% |
| Total Trips | 700 | -546 | -43.8% | 700 | 163 | 30.4% |
| kgCO ₂ e/Trip | 982 | 143 | 17.0% | 982 | 402 | 69.3% |
| Average Passengers/Trip | 32.0 | 2.4 | 8.2% | 32.0 | 12.1 | 61.2% |
| kgCO ₂ e/Passenger | 30.7 | 2.3 | 8.1% | 30.7 | 1.5 | 5.0% |

Fuel

Fuel (L)



Analysis

Fuel use for company boats has the greatest impact on Eagle Wing Tours' footprint, accounting for 651 tCO₂e or 95% of total emissions.

Three of the four vessels are powered by marine diesel, with the *Serengeti* vessel powered by gasoline.

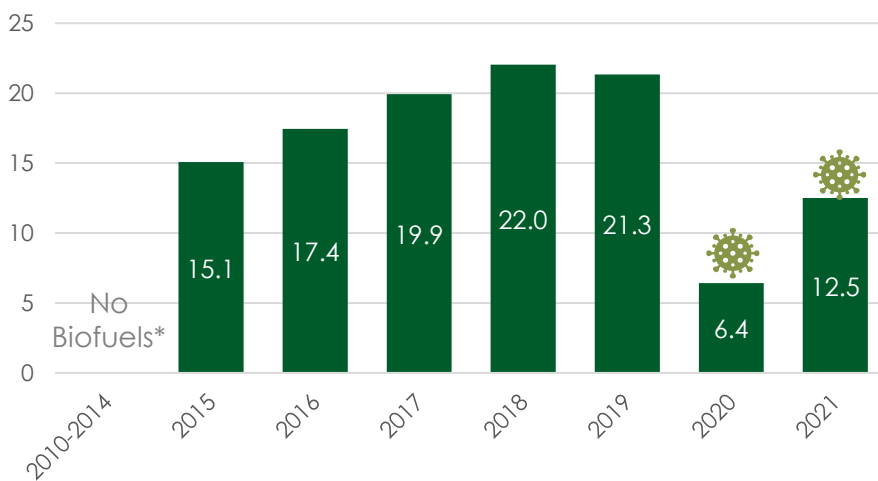
Operations in 2021 were still affected by COVID, with 44% fewer trips and 39% fewer passengers compared to 2019.

Note: Fuel emissions for 2015-2020 have been adjusted to account for the biofuel content of both marine diesel (2% biodiesel) and gasoline (5% ethanol).

| | | | | | | | | |
|---------------------|--------------|-------------------------|--------------|-------------------|--------------|--|------------|--------------------|
| Litres / Day | 676.1 | tCO₂e | 650.8 | % of Total | 94.7% |  | 174 | Cars / Year |
|---------------------|--------------|-------------------------|--------------|-------------------|--------------|--|------------|--------------------|

Biogenic CO₂

Biogenic Emissions (tCO₂)



Analysis

Eagle Wing uses gasoline with 5% ethanol and marine diesel with 2% biodiesel, resulting in a small amount of biogenic carbon emissions. These emissions come from renewable, non-fossil fuel sources that already existed in the carbon cycle and are therefore not considered additional.

In 2021, biogenic emissions equaled 12.5 tCO₂.

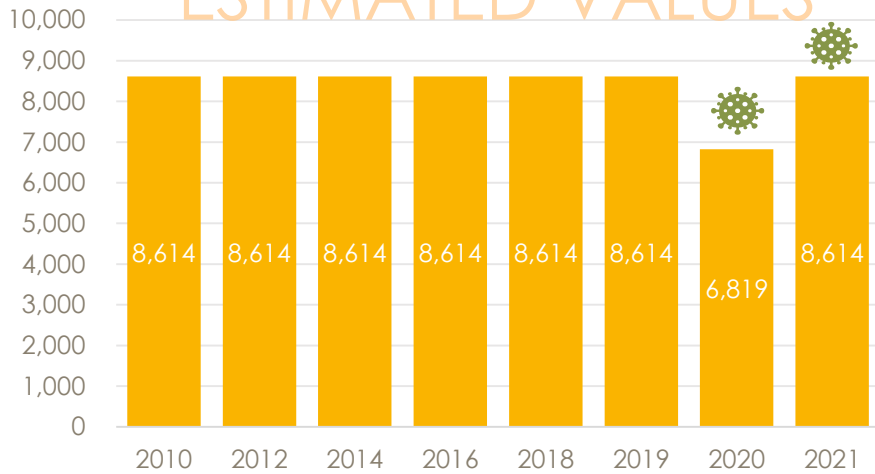
* Note: The Canadian Clean Fuel Standard came into effect in 2015 and requires primary suppliers to have an average renewable content of at least 5% for gasoline and 2% for diesel fuel.

| | | | | | | | | |
|---------------------|--------------|----------------------------|-------------|-------------------|-------------|---|----------|--------------------|
| Total Litres | 5,273 | Bio-tCO₂ | 12.5 | % of Total | 1.8% |  | 3 | Cars / Year |
|---------------------|--------------|----------------------------|-------------|-------------------|-------------|---|----------|--------------------|

Electricity

Electricity (kWh)

ESTIMATED VALUES



Analysis

Eagle Wing's electricity is estimated based on square footage, since it is not metered separately from other tenants at Fisherman's Wharf. Setting up an electricity meter would be helpful for more accurate data down the road.

* Note: Eagle Wing's electricity has no associated carbon emissions, since it is purchased through Bullfrog Power from renewable sources.

kWh /
ft²

18

tCO₂e **N/A***

% of
Total

N/A*

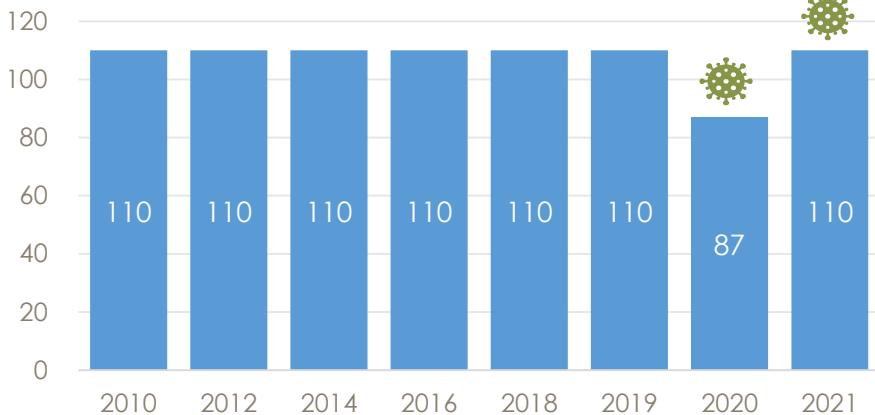


0.8
Houses

Water

Water (m³)

ESTIMATED VALUES



Analysis

Eagle Wing's water is estimated based on square footage, since it is not metered separately from other tenants at Fisherman's Wharf. As such, any conservation improvements will not be seen, but are very much encouraged.

m³ / ft²

0.2

tCO₂e **0.02**

% of
Total

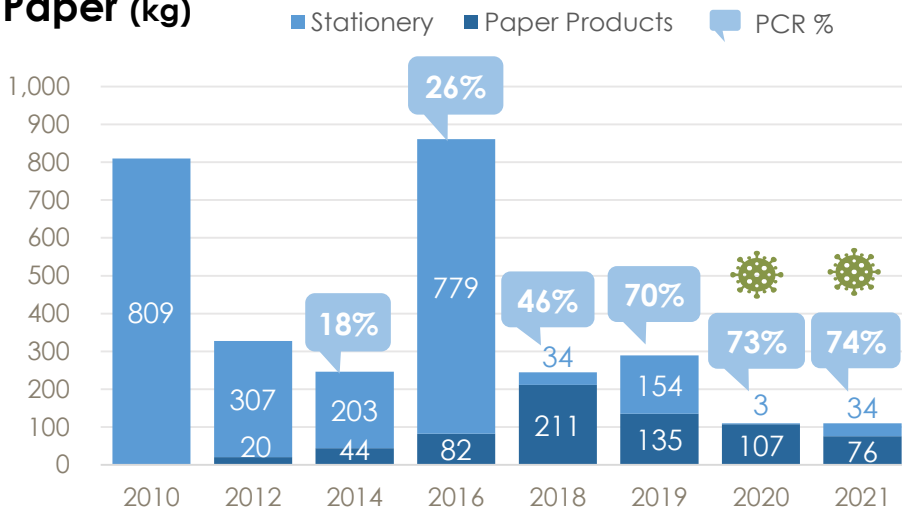
0.002%



501
Baths (50gal)

Paper

Paper (kg)



Analysis

Paper is ordered on an as-needed basis, leading to fluctuations in high and low purchasing years (e.g. no brochures or business cards purchased in 2021 due to a surplus from previous years). Eagle Wing Tours has done an excellent job at increasing post-consumer recycled (PCR) content to 74% in 2021 - the highest to date!

Note: Stationery includes office paper, waivers, brochures, business cards, envelopes, and thermal rolls. Paper products include toilet paper, paper towels, facial tissue, and compostable paper cups.

Treeless Content

74%

tCO₂e

0.2

% of Total

0.03%

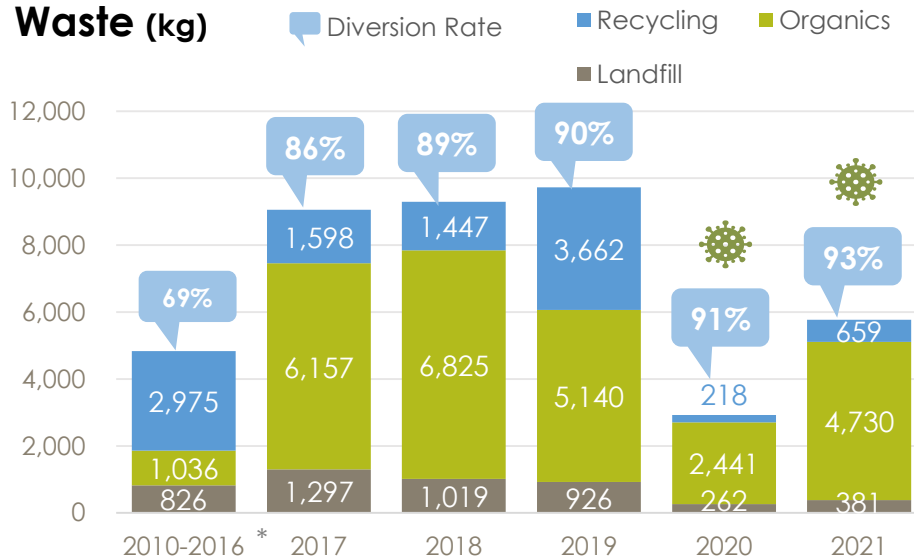


0.8

Trees / Year

Waste

Waste (kg)



Analysis

COVID-19 safety procedures in 2021 required that guests and staff took all of their waste off the boats, resulting in minimal landfill waste and recycling.

Total waste volumes decreased by 41% over 2019 levels. Eagle Wing Tours was also successful in increasing its waste diversion rate to an impressive 93%, the highest to date!

* Note: 2010 - 2016 waste data did not take into account Eagle Wing Tours' winter season waste audits. 2017 is the new baseline as data has improved significantly.

kg / Day

16

tCO₂e

0.2

% of Total

0.03%

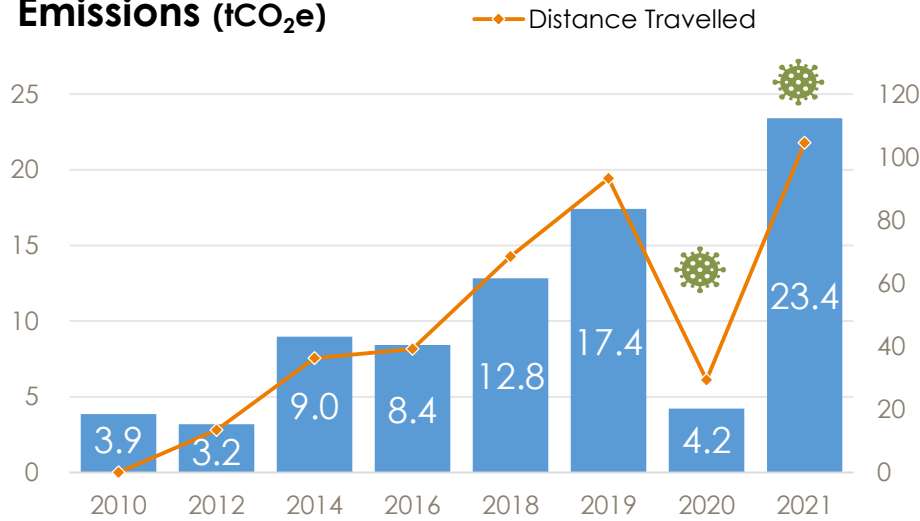


93%

Diversion Rate

Commuting

Emissions (tCO₂e)



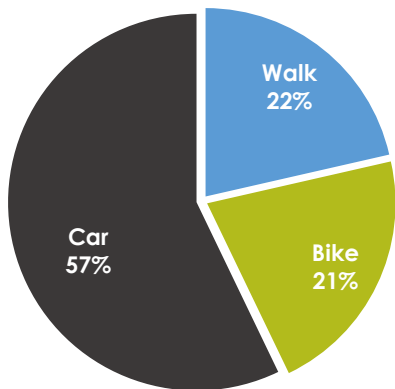
Analysis

Staff commuting is the second highest contributor to overall emissions at 23 tCO₂e.

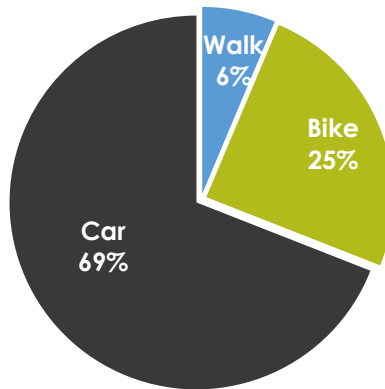
Emissions from staff commuting increased by 34% over 2019 as a result of an increase in employees and a shift to higher-emission transport methods.

The commuting survey had a 70% response rate.

Commuting Percentages by Method per Day



Baseline (2012)



Current (2021)

Analysis (Breakdown)

In 2021, 31% of commutes were made by low-emission methods, down from 45% in 2020 and 42% in 2019.

The most common commuting method is via personal vehicle, due to excessive distance and a lack of transit and bike infrastructure to Fisherman's Wharf.

| | |
|--------------------------------|--------------|
| Average kgCO ₂ e/km | 0.238 |
| Low-Emission Commuting % | 43% |

| | |
|--------------------------------|--------------|
| Average kgCO ₂ e/km | 0.224 |
| Low-Emission Commuting % | 31% |

tCO₂e / FTE **0.867**

tCO₂e **23.4**

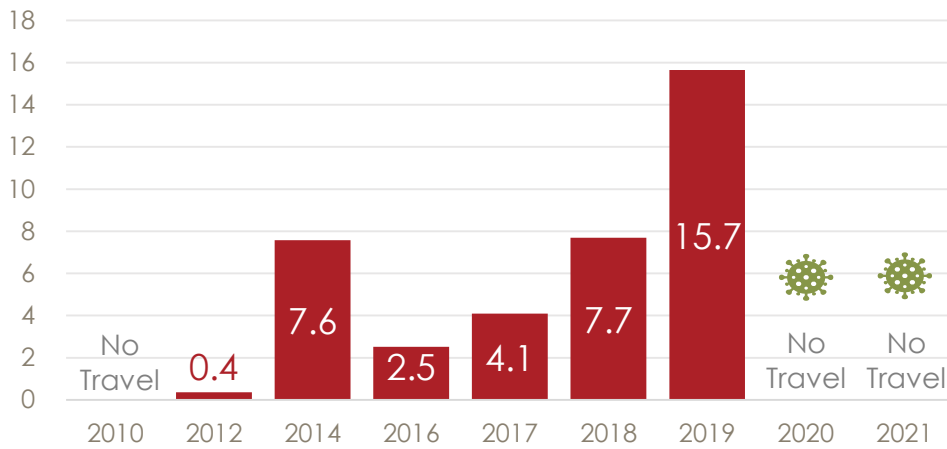
% of Total **3.4%**



6.3
Cars / Year

Travel

Emissions (tCO₂e)



Analysis

Travel includes all flights and ferries for business travel purposes. In 2019, travel was the third largest contributor to Eagle Wing Tours' carbon footprint at 15 tCO₂e.

No business travel took place in 2021.

tCO₂e / FTE

N/A

tCO₂e

N/A

% of Total

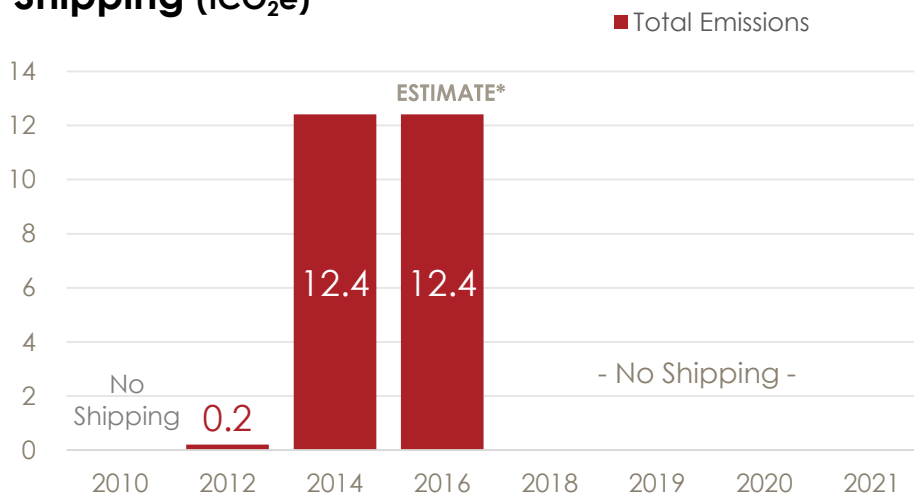
N/A



N/A
Cars / Year

Shipping

Shipping (tCO₂e)



Analysis

Shipping at Eagle Wings has been associated with purchasing new boats. The scope for shipping has been set to include anything over 50 lbs.

No new boats were shipped during the 2021 reporting period, thus no effect on Eagle Wing's total carbon footprint.

Note: 2016 shipping data was unavailable for the new catamaran. Estimate based on 2014 shipping data when the first catamaran was purchased and retrofitted.

kgCO₂e / t-km

N/A

tCO₂e

N/A

% of Total

N/A



N/A
Cars / Year

Carbon Reduction Strategy

Eagle Wing Tours is committed to operating as a carbon neutral business and has been monitoring, reducing, and offsetting their carbon footprint since 2005. Eagle Wing Tours has made great efforts to mitigate their environmental impact while expanding their operations. Improvements include introducing two larger, high-efficiency catamarans, purchasing paper products with high post-consumer recycled (PCR) content, and improving waste diversion efforts.

Total emissions in 2021 came to 687 tCO₂e, a 34% decrease over 2019 due to running 44% fewer tours and having no business travel. Emissions per passenger increased by 8.1% to 31 kgCO₂e in 2021 as a result of the decrease in overall passengers compared to 2019.

Moving forward, Eagle Wing Tours can use FY 2020 & 2021 as examples of how the business can operate with minimal company travel. Minimizing flights as business travel ramps up again will help to keep travel emissions low and allow Eagle Wing Tours to focus on encouraging low carbon staff commuting, improving boat fuel efficiency, and researching opportunities to convert motors to hydrogen fuel cells.

Achievements

- Measured, reported and offset all GHG emissions from the beginning of the existence of the company, making Eagle Wing Tours carbon neutral since their first day of operations in 2005
- Increased waste diversion rate to 93% in 2021
- Electricity purchased from renewable resources with Bullfrog Power
- Two fuel efficient, clean and quiet catamarans in fleet
- Added a hydrofoil to *Wild 4 Whales* to improve vessel fuel efficiency
- \$5 wildlife fee implemented in 2019 to support local research, education and conservation initiatives in the Salish Sea
- 1% for the Planet member since 2011
- Launched the Wild 4 Whales Foundation in 2016
- Developed a UN Sustainable Development Goals Decade of Action Plan

Moving Forward

- Use FY 2020 - 2021 as a model for how the company can operate with minimal staff flights
- Ensure all stationery paper is at least 80% - 100% PCR
- Research opportunities to convert motors to hydrogen fuel cells
- Continue to conduct waste audits to monitor waste generated on board and at the office
- Add new catamaran to the fleet in spring 2023
- Incorporate sustainable building standards into plans for new office (solar panels, rainwater collection)

Information on Inventory Uncertainty

* Electricity and water consumption are estimates based on billing and square footage, as Eagle Wing is not independently metered for these utilities.

Emissions References

1. 2020 B.C. Best Practices Methodology for Quantifying Greenhouse Gas Emissions

<https://www2.gov.bc.ca/assets/gov/environment/climate-change/cng/methodology/2018-psomethodology>.

2. Environment Canada's National Inventory Report (1990-2019); Part 2 & 3.

<https://www.canada.ca/en/environment-climate-change/services/climate-change/greenhouse-gas-emissions/inventory.html>

3. Department for Environment, Food & Rural Affairs (UK) Carbon Factors 2021

<https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors>

4. Intergovernmental Panel on Climate Change (Global Warming Potentials)

http://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html

All emissions factors are reviewed and approved by Ostrom Climate Solutions (<https://ostromclimate.com/>) on an annual basis.

Policy for Base Year Recalculation:

Base year emissions, and other previous emissions, shall be retroactively recalculated if a change in organisational structure or data quality is expected to exceed a significance threshold of 10% of base year emissions. These changes may arise from structural changes such as mergers, acquisitions, divestments, outsourcing or insourcing, changes in calculation methodology and improvements in accuracy, or discovery of significant errors.

Glossary of Terms

| Term | Description |
|--------------------|--|
| CFL | Compact Fluorescent Light |
| GHG | Greenhouse Gas (emissions): Atmospheric gasses contributing to the greenhouse effect, including Carbon Dioxide (CO ₂), Methane (CH ₄), Nitrous Oxide (N ₂ O), etc. |
| GJ | Gigajoule: Unit of natural gas equal to 26.137 m ³ or 0.947 MMBtu |
| HVAC | Heating, Ventilation & Air Conditioning |
| kWh | Kilowatt-Hour: Common unit for measuring electrical consumption |
| LED | Light Emitting Diode: A form of highly efficient lighting technology |
| m ³ | Cubic Meter: Unit of measurement equal to 1,000 Litres |
| PCR% | Post-Consumer Recycled Content (as a percentage) |
| psg-km | Passenger-Kilometer: Unit separating total emissions between passengers per km |
| Ream | Standard unit of paper measurement equal to 500 sheets (with 10 reams in one box) |
| tCO ₂ e | Tonnes of Carbon Dioxide Equivalent: a combined term capturing the emissions from various GHGs. |
| t-km | Tonne-kilometer: A unit of measurement used in shipping |

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