

# Annual Sustainability Report



2014 Report

Verified By	Kayli Anderson
Email	kayli@synergyenterprises.ca
Completed	13/4/2015

synergy

# Executive Summary

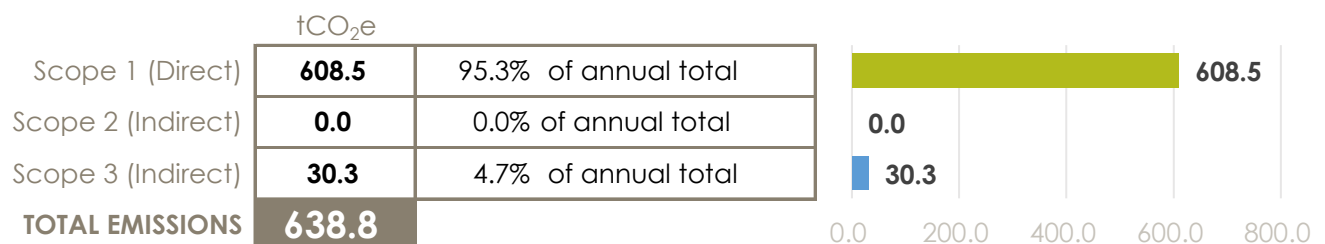
Eagle Wing Tours is a carbon neutral whale watching company based in Victoria, BC, offering adventure tours around Southern Vancouver Island. Their scope includes emissions and activities for one small office/reception space at Fisherman's Wharf and four boats. 2014 marks the fifth year that they have measured, reported and offset their carbon footprint.

Near the end of 2014, a new boat - 4 Ever Wild - was added to the company's fleet. The boat uses roughly the same amount of fuel as their 12-passenger boat, but can seat up to 50 guests, making each Eagle Wing trip much more efficient. This report reflects some additional travel, shipping and gas emissions related to the purchase and maintenance of 4 Ever Wild but does not yet show the reductions expected from having the boat in use.

# Company Information

Company Name	Eagle Wing Tours		
Contact Information	Brett Soberg	info@eaglewingtours.com	(250) 384-8008
Company Description	One office/reception building, four boats, three company vehicles.		
Reporting Period	December 1st, 2013 - November 30th, 2014		
Inventory Boundary	<b>Scope 1 (Direct Emissions)</b> - Gasoline, Diesel/Marine Diesel (Fuel for 4 boats + company vehicles)		
	<b>Scope 2 (Indirect Emissions from Purchased Electricity)</b> - Purchased Electricity (BC Hydro)		
	<b>Scope 3 (Indirect Emissions from Other Sources)</b> - Water, Waste, Stationary, Paper Products, Company Travel, Shipping, Service Calls, Staff Commuting		
Primary Measurement	Carbon Dioxide Equivalent (CO <sub>2</sub> 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 Offsetters.		

# Inventory Results



# Carbon Footprint (Summary)

Eagle Wing Tours

2014 Report



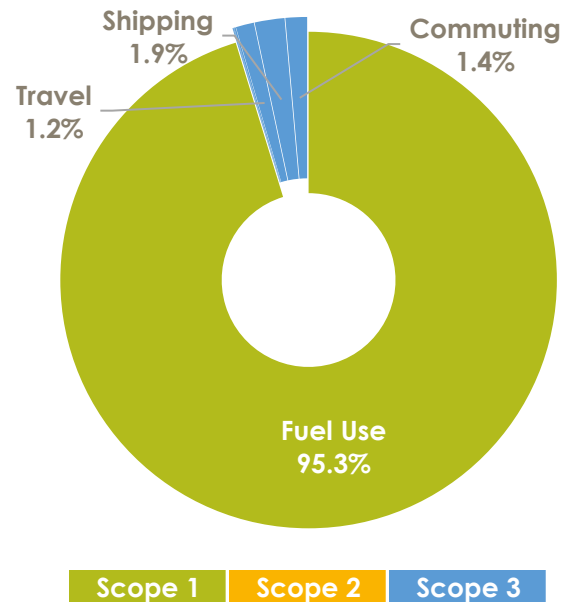
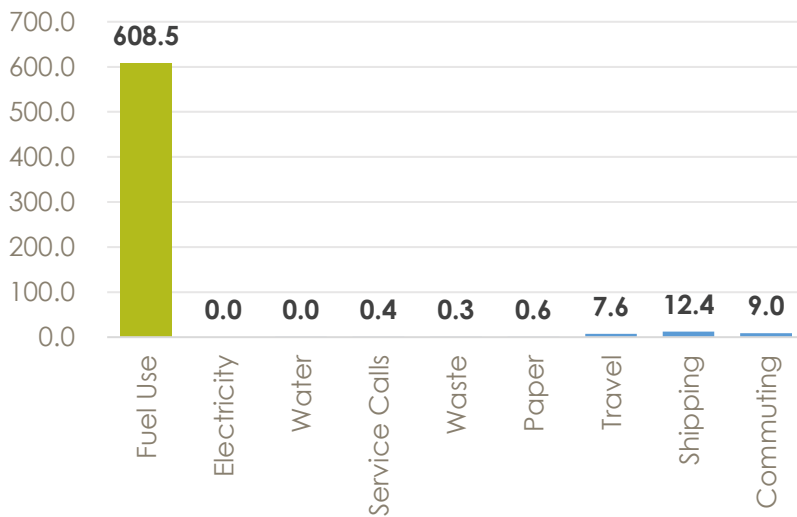
Total emissions: **638.8** tCO<sub>2</sub>e

Offset cost: **\$6,388**

Total emissions were higher in 2014 than in other years, due to a 15% increase in passengers and the addition of a new boat. Per passenger/trip metrics reflect a reduction in emissions by intensity.

## Carbon Footprint (By Activity)

Emissions by Activity (tCO<sub>2</sub>e)



## Carbon Footprint (Historical)

Annual Emissions (tCO<sub>2</sub>e)



	tCO <sub>2</sub> e Per Year	Change since Baseline	
		tCO <sub>2</sub> e	Percent
2010	<b>317.7</b>		
2011	<b>408.7</b>	91.05	28.7%
2012	<b>421.9</b>	104.2	32.8%
2013	<b>496.0</b>	178.4	56.1%
2014	<b>638.8</b>	321.1	101.1%



2,015.0

Barrels of Oil



169.9

Cars per Year



18.8

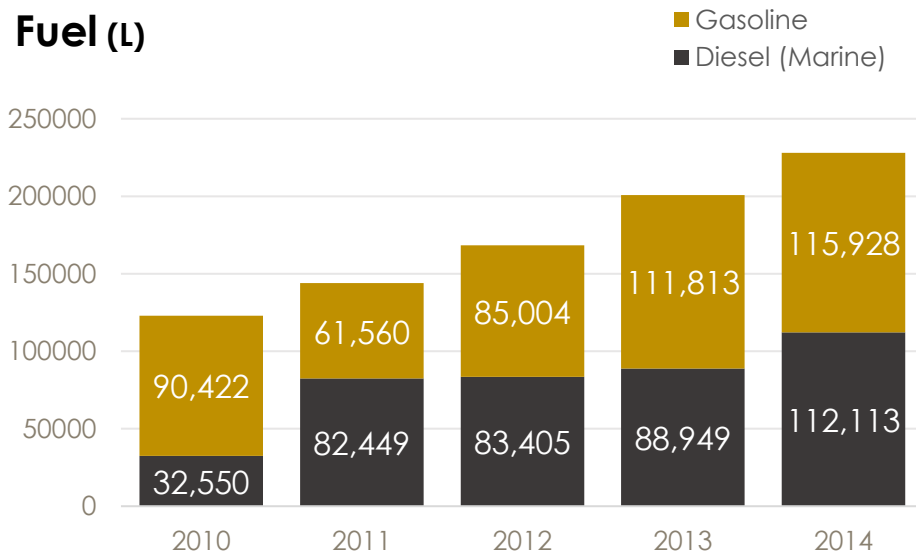
Households

tCO<sub>2</sub>e  
(Total)

**638.8**

# Fuel Use

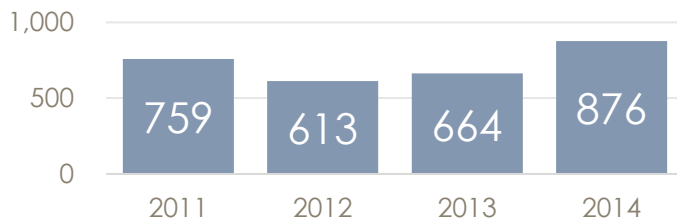
## Fuel (L)



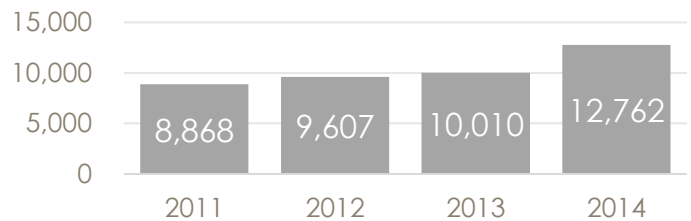
## Analysis

Due to the nature of their business, fuel is by far the largest emission source for Eagle Wing accounting for 95.3% of the total carbon footprint. While 2014 saw an increase in overall fuel use and while total emissions per passenger increased slightly, total emissions per trip decreased by 3%. L per trip decreased from 302.4L in 2014 to 248.3L a decrease of 18%.

## Total Trips



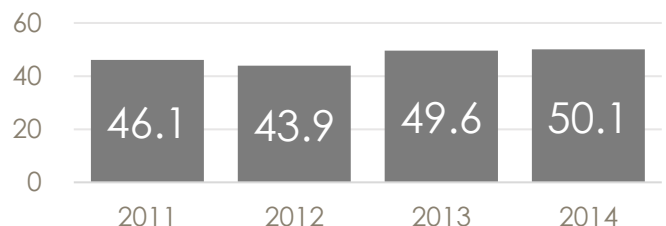
## Total Passengers



## kgCO<sub>2</sub>e/Trip\*



## kgCO<sub>2</sub>e/Passenger\*



\* based on total company emissions

## Change since 2013

2014 KPI's	All boats	Amount	Percent
Total 2014 Passengers	12,762	2,752	22%
Total 2014 Trips	876	212	24%
kgCO <sub>2</sub> e/Trip	729	-18	-2%
Average Passengers/Trip	15	-1	-3%
kgCO <sub>2</sub> e/Passenger	50	0	1%

Litres  
/ Trip

**248.3**

tCO<sub>2</sub>e **608.5**

% of  
Total

**95.3%**

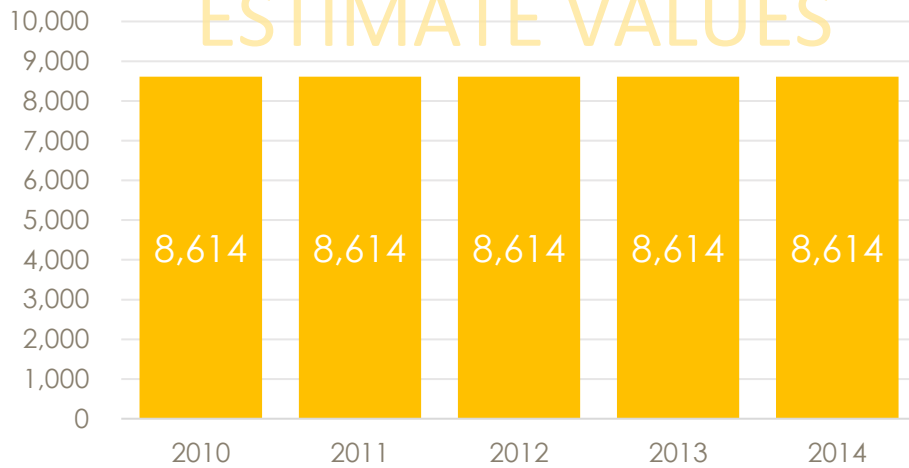


**161.9**  
Cars / Year

# Electricity

## Electricity (kWh)

ESTIMATE 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. While usage changes will not be reflected in this report, the company has made efforts to minimize use, including turning off equipment at night and reducing phantom loads.

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

kWh /  
ft<sup>2</sup>

**18**

tCO<sub>2</sub>e

**0.0**

% of  
Total

**0.0%**



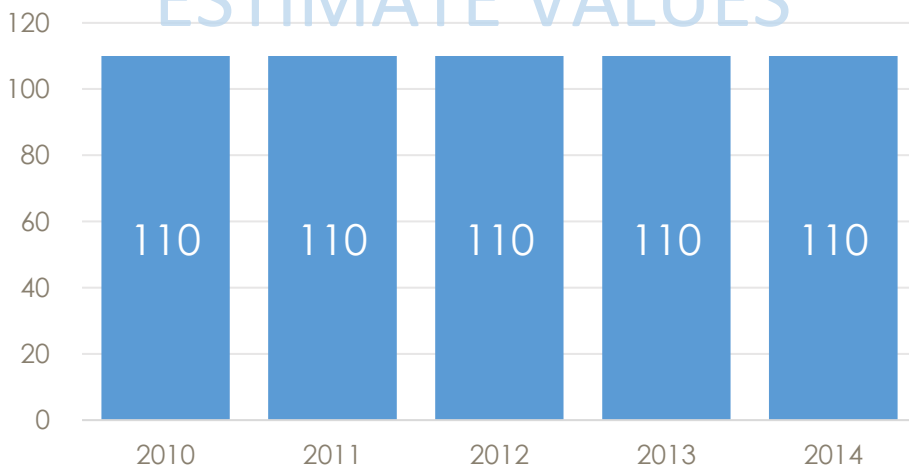
**0.8**

Houses

# Water

## Water (m<sup>3</sup>)

ESTIMATE VALUES



### Analysis

Minimal water is used on site. It is measured based on square footage, and is not metered separately from surrounding businesses. As such, changes in use will not be seen.

m<sup>3</sup> / ft<sup>2</sup>

**0**

tCO<sub>2</sub>e

**0.0**

% of  
Total

**0.0%**



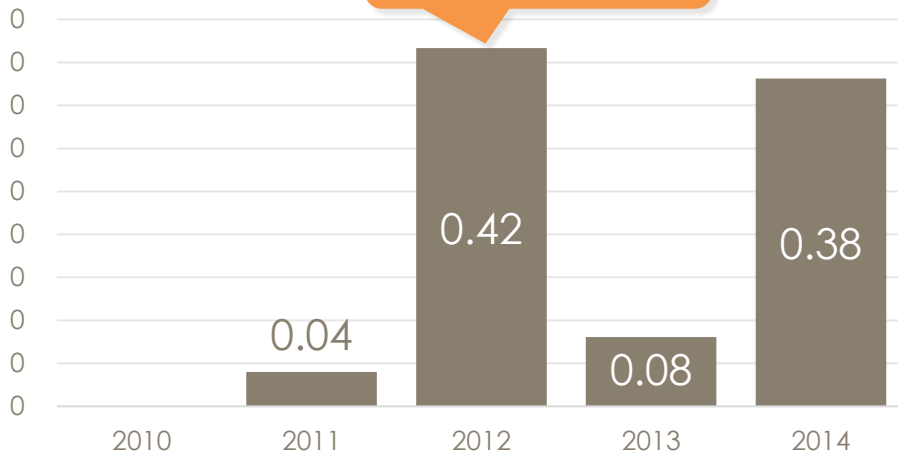
**501**

Baths (50gal)

## Service Calls

### Emissions (tCO<sub>2</sub>e)

A more in-depth study was made into deliveries and service call data this year.



### Analysis

Service calls in this report include the many trips made by Eagle Wing staff to the docking station in Sidney, BC, where they retrofitted and serviced their new boat. Staff made an average of two trips per week over two months, and emissions are therefore higher than the previous year.

Visits / Day

**0.8**

tCO<sub>2</sub>e

**0.4**

% of Total

**0.1%**



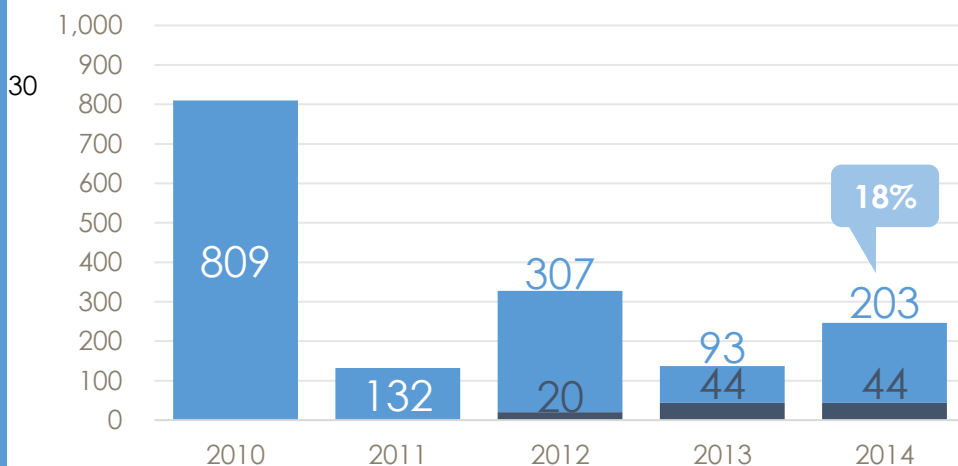
**0.1**

Cars / Year

## Paper

### Paper (kg)

■ Stationary  
■ Paper Products



### Analysis

Paper products include paper waivers, brochures, coffee cups (for hot chocolate for passengers), and toilet paper. Paper use was higher in 2014 due to a double order of brochures. While office paper is a tree-less wheat variety, other paper products had no post-consumer recycled (PCR) content, resulting in an average percent PCR of 18%.

Treeless Content

**18%**

tCO<sub>2</sub>e

**0.6**

% of Total

**0.1%**

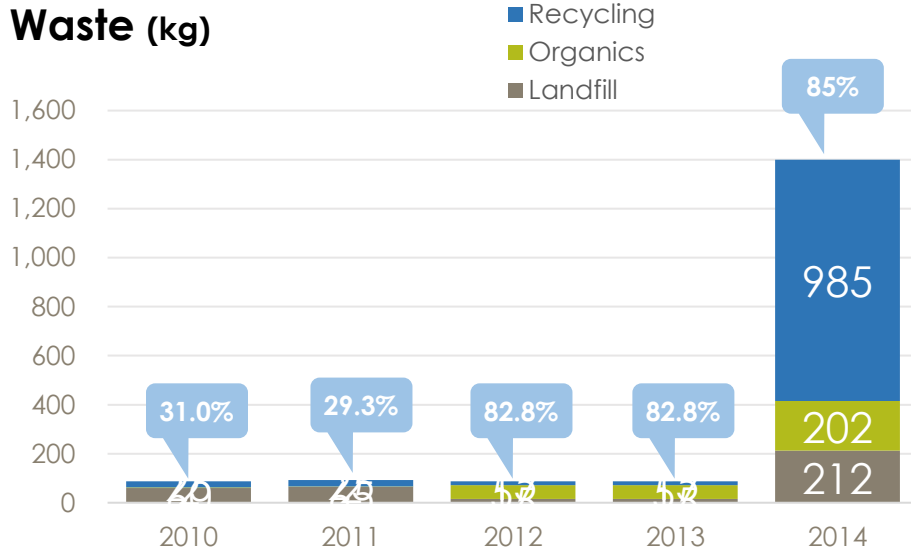


**5.3**

Trees / Year

# Waste

## Waste (kg)



## Analysis

A waste audit was conducted in both the summer and winter months of 2014, in an attempt to better understand waste at Eagle Wing. While the diversion rate remained relatively similar, total volume increased.

2014 will serve as the new baseline for waste at Eagle Wing Tours.

kg /  
Day

**4**

tCO<sub>2</sub>e

**0.3**

% of  
Total

**0.0%**

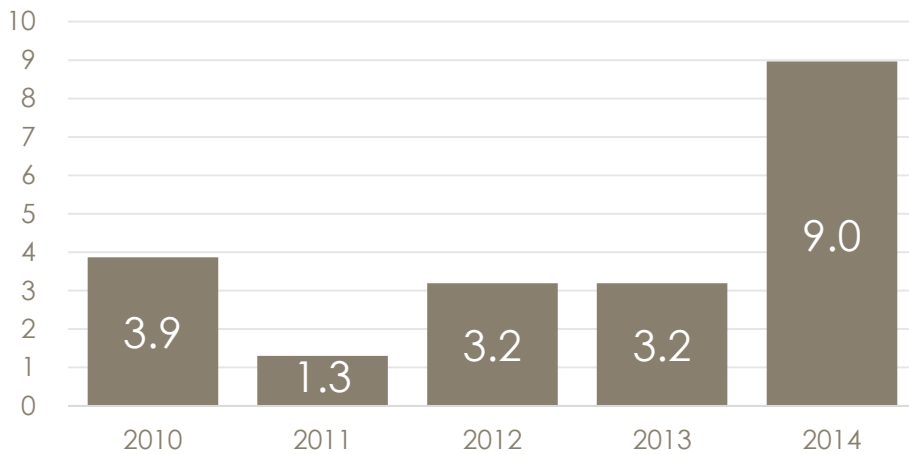


**84.8%**

Diversion Rate

# Commuting

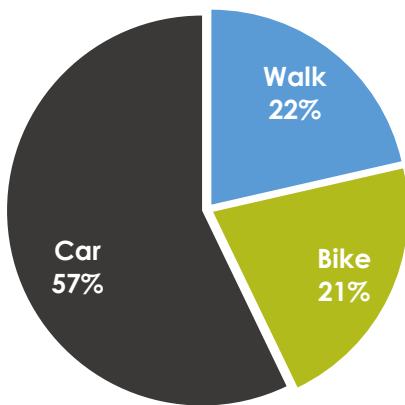
## Emissions (tCO<sub>2</sub>e)



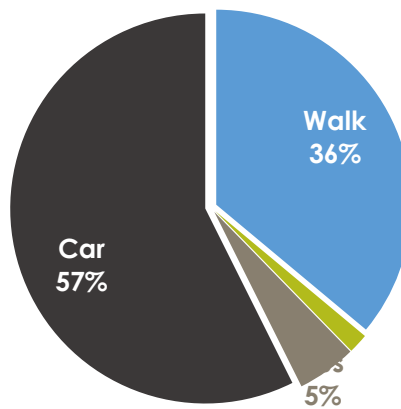
## Analysis

Staff commuting emissions almost tripled (increase of 5.8 tCO<sub>2</sub>e) due to an increase in staff and the number of staff driving to work. Due to early hours and long distances traveled, transit and cycling are not options for many staff.

## Commuting Percentages by Method per Day



Baseline (2012)



Current (2014)

## Analysis (Breakdown)

For this analysis, 2012 was used as the baseline since earlier data was not available. While the number of staff who walked to work grew in 2014, the number of bikers was significantly reduced, resulting in an overall lower share of low-emission commuting.

Average kgCO <sub>2</sub> e/km	<b>0.238</b>
Low-Emission Commuting %	<b>43%</b>

Average kgCO <sub>2</sub> e/km	<b>0.247</b>
Low-Emission Commuting %	<b>42.6%</b>

tCO<sub>2</sub>e / FTE **0.640**

tCO<sub>2</sub>e **9.0**

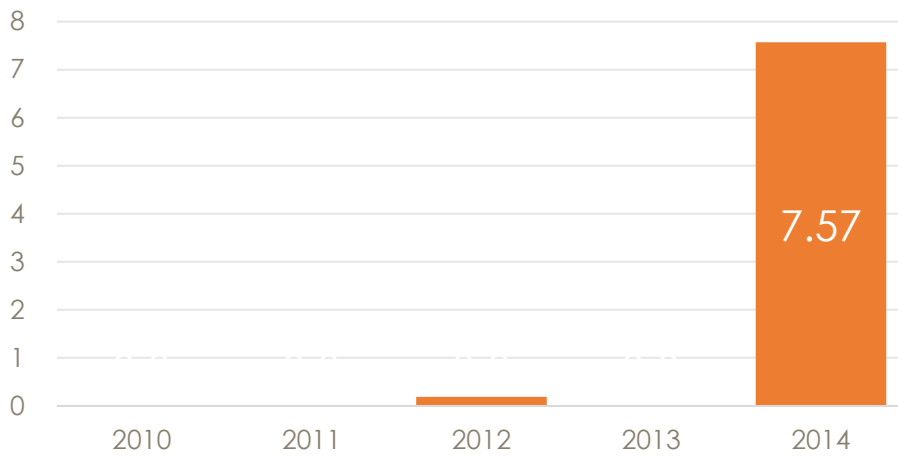
% of Total **1.4%**

 **2.4**  
Cars / Year



# Travel

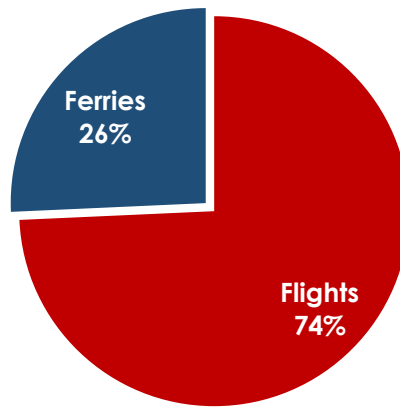
## Emissions (tCO<sub>2</sub>e)



### Analysis

As a company, Eagle Wing doesn't do much business travel. However, several trips were made in 2014 to research, view and purchase the new boat. The company also visited a trade show in Calgary. These trips added almost 8 tonnes of CO<sub>2</sub>e to Eagle Wing's carbon footprint, 1.2% of the total.

## Travel Percentages by Number of Trips



### Analysis (Breakdown)

Emissions associated with ferry travel are much lower than flights. Whenever possible, company travel should prioritize ferry travel over flights.

#### Baseline (2012)

Average kgCO <sub>2</sub> e/km	
Low-Emissions Travel %	

#### Current (2014)

Average kgCO <sub>2</sub> e/km	0.214
Low-Emissions Travel %	1.2%

tCO<sub>2</sub>e / FTE **0.536**

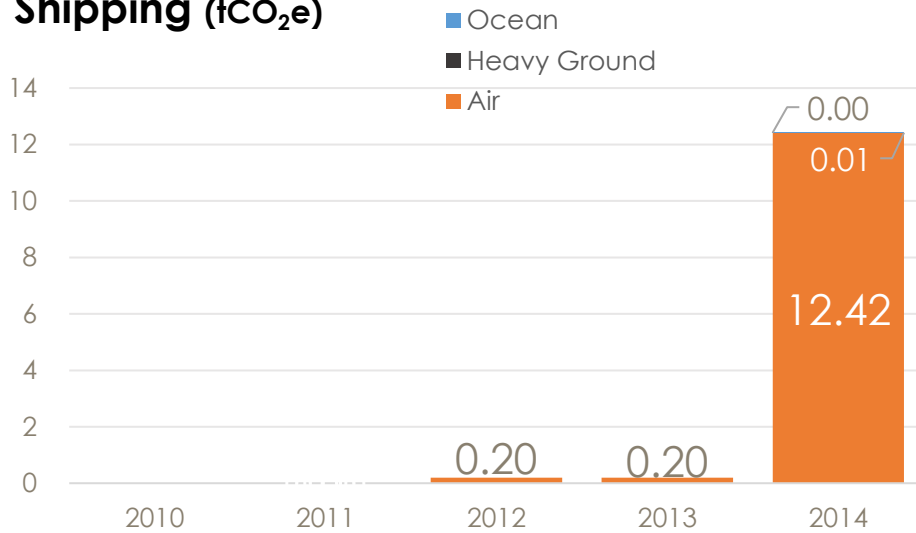
tCO<sub>2</sub>e **7.6**

% of Total **1.2%**

 **2.0**  
Cars / Year

# Shipping

## Shipping (tCO<sub>2</sub>e)



## Analysis

Shipping increased dramatically over the course of 2014 because of the need for new parts for Forever Wild, including a new engine, transmission, driveline and flooring. Some items needed to be transported via Air, increasing Eagle Wing's carbon footprint by 12.4 tonnes.

kgCO<sub>2</sub>e/  
Shipment **2,484.5**

tCO<sub>2</sub>e **12.4**

% of  
Total **1.9%**

 **3.3**  
Cars / Year

# Carbon Reduction Strategy

Over the last five years, Eagle Wing Tours has made significant efforts to reduce their carbon impact, while successfully growing their business. By targeting fuel efficiency in their boats, they have been able to cut the emissions per passenger in half and expect to see further reductions with their new boat in use year round.

Eagle Wing has begun sharing information about their carbon footprint with passengers. They educate their guests about the impact of each trip, and how it affects the wildlife and ecosystems they are viewing. By focusing on reducing emissions and impact, they have become award winning leaders in the eco-tourism industry on Vancouver Island.

## Achievements

### CLIMATE ACTION

- Carbon Neutral for five years
- Switched to Bullfrog Power

### CONSERVATION

- Introduced \$2 wildlife fee (Industry first!) to support the Pacific Salmon foundation and the Centre for Whale Research
- 1% For the Planet members
- Founding members of ViSTA
- Coordinated World Oceans Day at Fisherman's Wharf

### AWARDS

- 2014 Sustainable Tourism Business Award TIAC
- 2014 CRD EcoStar, Environmental Leadership
- 2013 Tourism VI Sustainable Business Award
- Green Tourism Canada - GOLD 2013

## Moving Forward

- Install fuel treatment system to increase fuel efficiency
- Replace Goldwing motors with larger more efficient motors
- Researching opportunities to convert motors to biodiesel and/or hybrid electric

## Information on Inventory Uncertainty

\* Electricity and Water use are estimates based on billing and square footage, as Eagle Wing is not independantly metered for these utilities.

## EMISSIONS REFERENCES

1. 2013 B.C. Best Practices Methodology for Quantifying Greenhouse Gas Emissions  
<http://www.env.gov.bc.ca/cas/mitigation/pdfs/BC-Best-Practices-Methodology-for-Quantifying-Greenhouse-Gas-Emissions.pdf>
2. Environment Canada's National Inventory Report (1990-2011)  
[http://publications.gc.ca/collections/collection\\_2013/ec/En81-4-2011-2-eng.pdf](http://publications.gc.ca/collections/collection_2013/ec/En81-4-2011-2-eng.pdf)
3. Department for Environment, Food & Rural Affairs (UK) Carbon Factors  
<http://www.ukconversionfactorscarbonsmart.co.uk/>
4. Intergovernmental Panel on Climate Change (Global Warming Potentials)  
[http://www.ipcc.ch/publications\\_and\\_data/ar4/wg1/en/ch2s2-10-2.html](http://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html)

All emissions factors are reviewed and approved by Offsetters ([www.offsetters.ca](http://www.offsetters.ca)) on an annual basis.

## Glossary of Terms

Term	Description
CFL	<b>Compact Fluorescent Light</b>
GHG	Greenhouse Gas (emissions): Atmospheric gasses contributing to the greenhouse gas effect, including Carbon Dioxide (CO <sub>2</sub> ), Methane (CH <sub>4</sub> ), Nitrous Oxide (N <sub>2</sub> O), etc.
GJ	<b>Gigajoule:</b> Unit of natural gas equal to 38.26 L or 26.137 m <sup>3</sup>
HVAC	<b>Heating, Ventilation &amp; Air Conditioning</b>
KPI	<b>Key Performance Indicators</b> (Highlights)
kWh	<b>Kilowatt-Hour:</b> Common unit for measuring electrical consumption
LED	<b>Light Emitting Diode:</b> A form of highly efficient lighting technology
m <sup>3</sup>	<b>Cubic Meter:</b> Unit of measurement equal to 1,000 Litres
PCR%	<b>Post-Consumer Recycled Content</b> (as a percentage)
psg-km	<b>Passenger-Kilometer:</b> Unit separating total emissions between passengers per km
Ream	Standard unit of paper measurement equal to 500 sheets (with 10 reams in one box)
T12/T8/T5	Models of common fluorescent tube lighting
tCO <sub>2</sub> e	<b>Tonnes of Carbon Dioxide Equivalent:</b> GHGs have different warming potentials, measured collectively as CO <sub>2</sub> equivalent (hence "e")
t-km	<b>Tonne-kilometer:</b> A unit of measurement used in shipping

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The logo for Synergy Enterprises, featuring the word "synergy" in a lowercase, green, sans-serif font. A stylized green leaf is positioned above the letter 'y'.