

# Size Up Your Footprint

Use data and tools to calculate an ecological footprint and uncover unexpected solutions to reduce it



# Why Do a “Footprint?”

- Understand the environmental impact from a behavior or decision
- Take personal action that focuses on the right thing
- Understand the multiplicative results of consumption choices, and how that impacts ecological resources
- Explain your company or city’s impact on the environment to residents, shareholders, or consumers

# Exercise: What is the Footprint of a Product?

Purpose: to calculate the footprint of drinking coffee

<http://wapo.st/2gRYKOA>



# What are the inputs to a cup of coffee?

- Farming
- Roastery
- Boiling water
- Driving to the coffee shop
- Paper waste from to-go cups
- Plastic lids
- Milk and sugar

= Total impact multiplied by frequency of consumption

X number of coffee drinkers

# Discussion

- What ways have you tried in the past to make your coffee footprint smaller?
- What do you think is the most **effective** way to make your coffee footprint smaller?



# The carbon footprint of coffee is really about milk...

*The carbon footprint of a cup of tea or coffee:*

**21g CO<sub>2</sub>e: black tea or coffee, boiling only the water you need**

**53g CO<sub>2</sub>e: white tea or coffee, boiling only the water you need**

**71g CO<sub>2</sub>e: white tea or coffee, boiling double the water you need**

**235g CO<sub>2</sub>e: a large cappuccino**

**340g CO<sub>2</sub>e: a large latte**

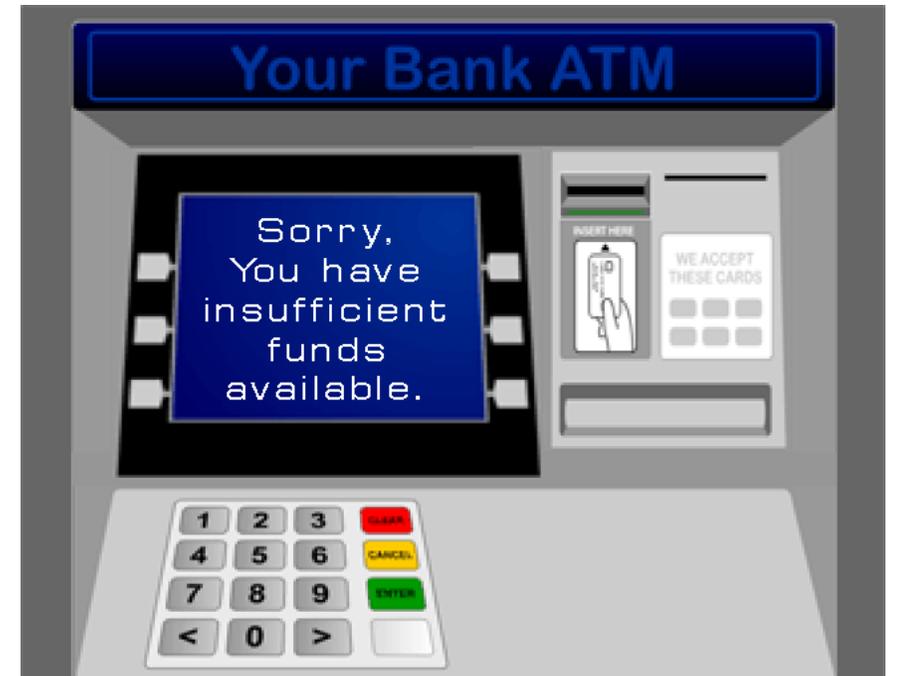


# What is an “Earth Overshoot Day”?

<https://youtu.be/oPO2-KCyFvc>

#movethedate

In a sustainable society, nature is not subject to degradation by physical means (such as deforestation and draining of groundwater tables). --From “the Natural Step”



# How many earths would we need to live like a north American?

Personal footprint (how many earths?)

<https://www.earthday.org/take-action/footprint-calculator/>

Let's calculate a hypothetical Bellevue resident impact.  
Try again: let's try to get to one planet!

What actions would you most likely take?  
What seems the easiest to reduce?  
What are other ways to get to **one** planet?



- What is GHG Footprint of REI?
- 2015
- Pg. 29 and 37/38

Current and archived reports available online @

<https://www.rei.com/stewardship/report/2015.pdf>



# REI Product Sustainability Standards

**The Seattle Times**

## REI rolls out rigorous new sustainability standards for suppliers

Originally published April 9, 2018 at 5:00 am | Updated April 8, 2018 at 11:00 am



REI Chief Executive Jerry Stritzke calls the sustainability standards "transformative" in the co-op's 80-year-old history. (REI)

## USA TODAY

### Do you want to sell your products at REI? Then be kind to the planet

Charisse Jones, USA TODAY Published 4:01 p.m. ET April 11, 2018



According to outdoor retailer REI, at least. Time

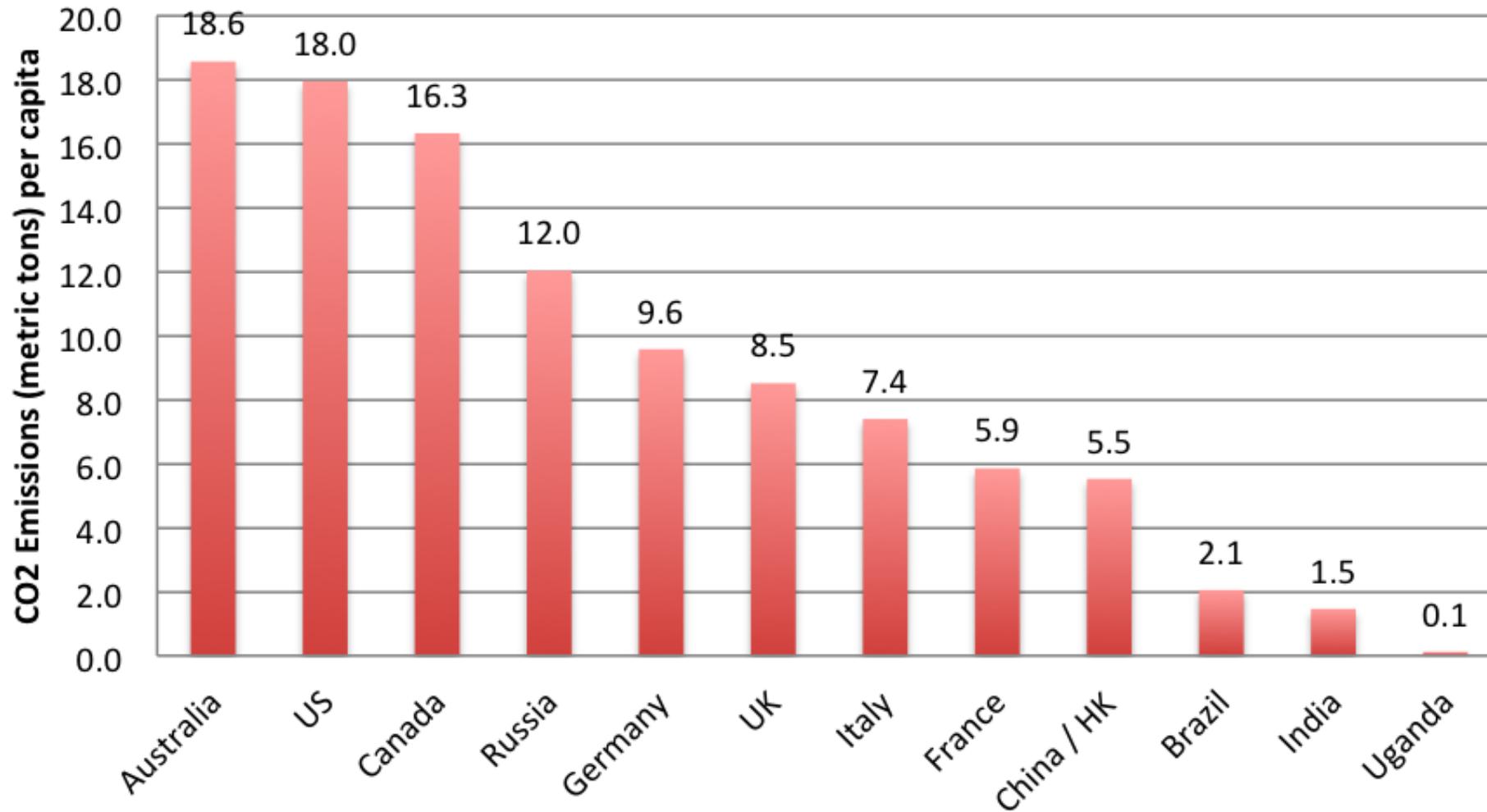


(Photo: Ted S. Warren, AP)

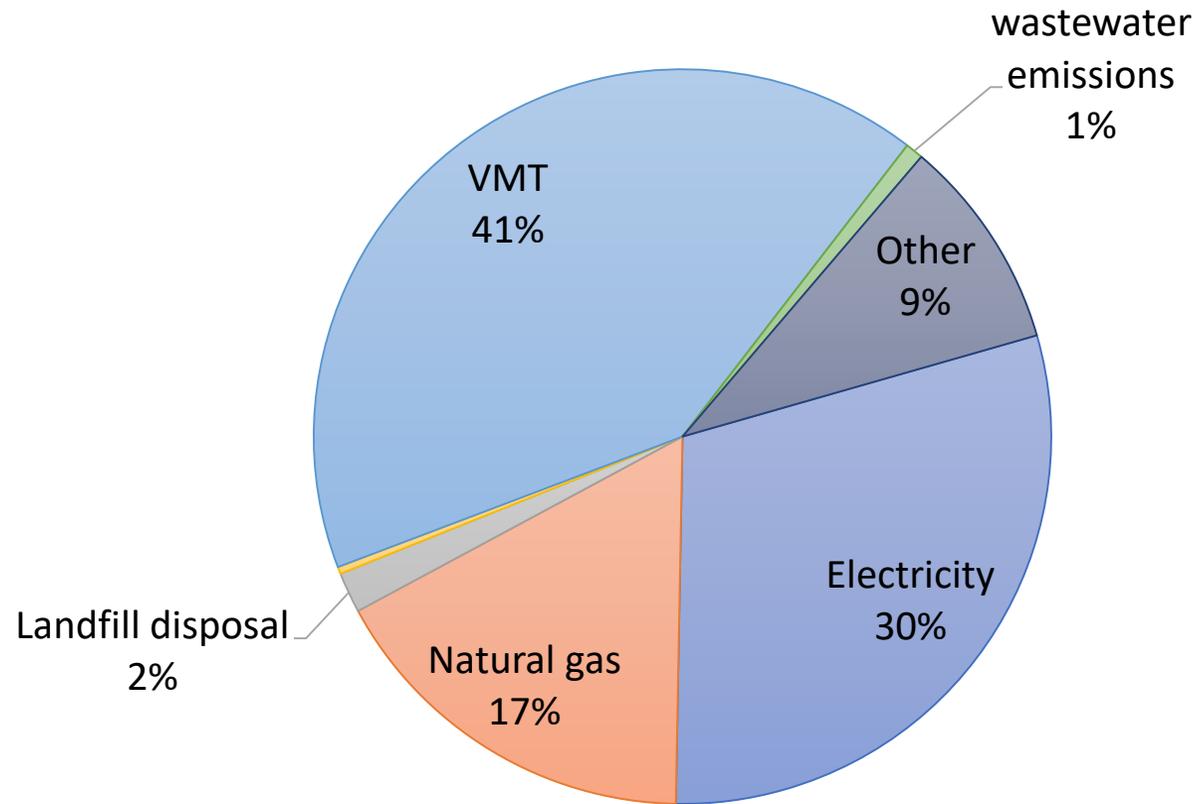
       
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In a move that could be a new model for the retail industry, outdoor gear and clothing seller REI has established a set of environmentally-friendly standards that brands must meet if they want a place on its store shelves.

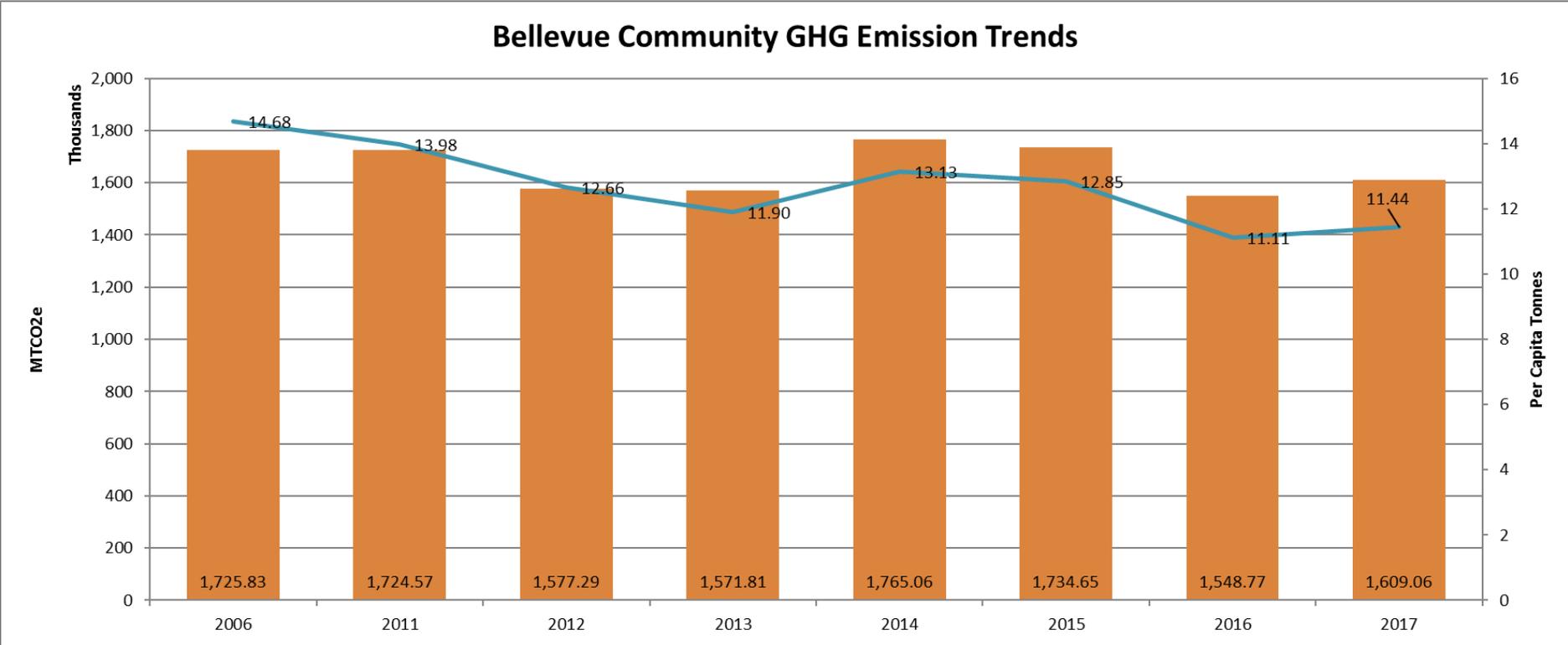
## CO2 Emissions per Capita



# Community Greenhouse Gas Emissions by Sector (2017)

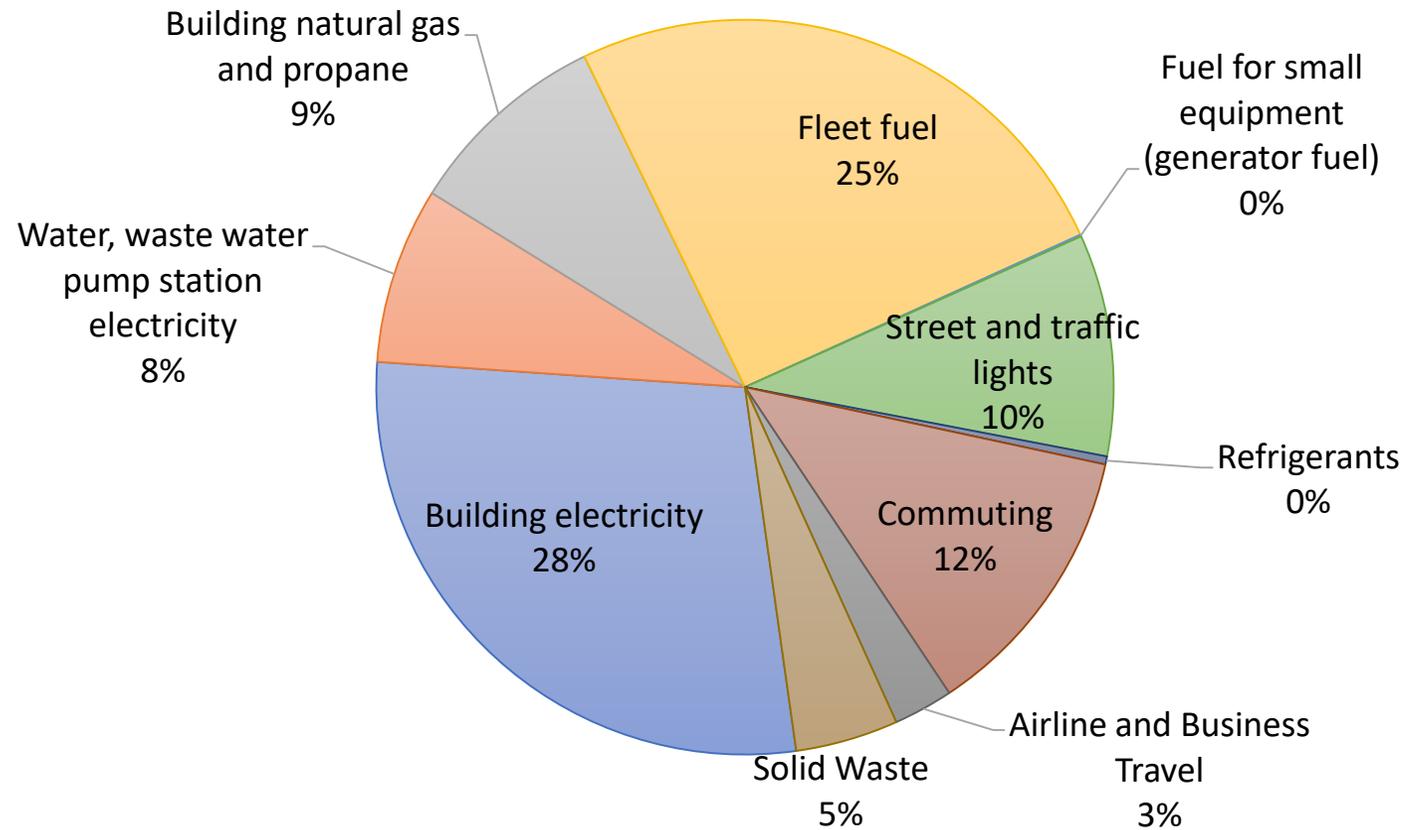


# Bellevue Citywide Emission Trends



1990: approximately 1.4 million metric tonnes

# Municipal Greenhouse Gas Emissions (2017)

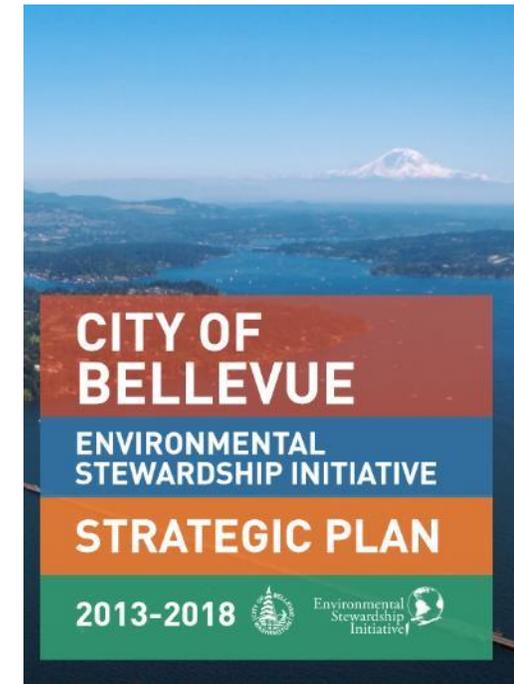


# ESI Strategic Plan Framework

- Contains five category areas with 57 actions
  1. Greenhouse Gas Emissions
  2. Mobility & Land use
  3. Energy & Water
  4. Materials Management & Waste
  5. Ecosystems & Open Spaces
- Signed by the Leadership Team in 2013

*“The City Council of the City of Bellevue will strive to meet or exceed the Kyoto Protocol targets (7% below 1990 levels by 2012) for reducing global warming pollution by **taking actions in our own operations** and similar actions within our community...”*

[City Council Res. 7517 \(2/22/2007\)](#)



# Environmental Stewardship Initiative Accomplishments - Mitigation

- Green power:
  - Solar installations at Bellevue Service Center and Crossroads Community Center
  - Solarize Campaigns – 2,316 kW installed!
  - SolSmart Bronze community
  - Green for city facilities
  - Green Power Challenge w/ PSE
- Energy Efficiency:
  - Energy efficiency outreach to businesses and residents
  - Resource Conservation Management for city operations
  - Top 10 in Georgetown University Energy Prize



# Environmental Stewardship Initiative Accomplishments - Mitigation

- Transportation alternatives:
  - Light Rail planning (coming in 2023)
  - Buying hybrids, EVs and 20% biofuel
  - EV Bike Share pilot
- Land Use:
  - Updated stormwater and low impact development requirements
  - Walkable mixed-use communities for downtown, Bel-Red, and Willburton



An aerial photograph of a coastal city and its surrounding landscape. In the foreground, a long bridge spans across a large body of blue water. The middle ground shows a dense forested area with scattered houses and a city skyline with several tall buildings. In the background, there are rolling green hills and a prominent snow-capped mountain peak under a clear blue sky.

# Questions and Comments

# Further Reading

- TNC carbon calculator <https://www.nature.org/greenliving/carboncalculator/index.htm>
- Earth overshoot day <https://www.overshootday.org/>
- How Bad are Bananas? The Carbon Footprint of Everything (2011)
- Water footprint information and calculators <http://waterfootprint.org/en/>
- Home energy DIY audit and calculator <http://www.hes.lbl.gov/consumer/>
- Car carbon calculator <http://carboncounter.com/>

# Thank You!

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