

Connecting Purchasing to Climate Action

Green Purchasing Roundtable

October 23, 2015



Alameda County

SUSTAINABILITY

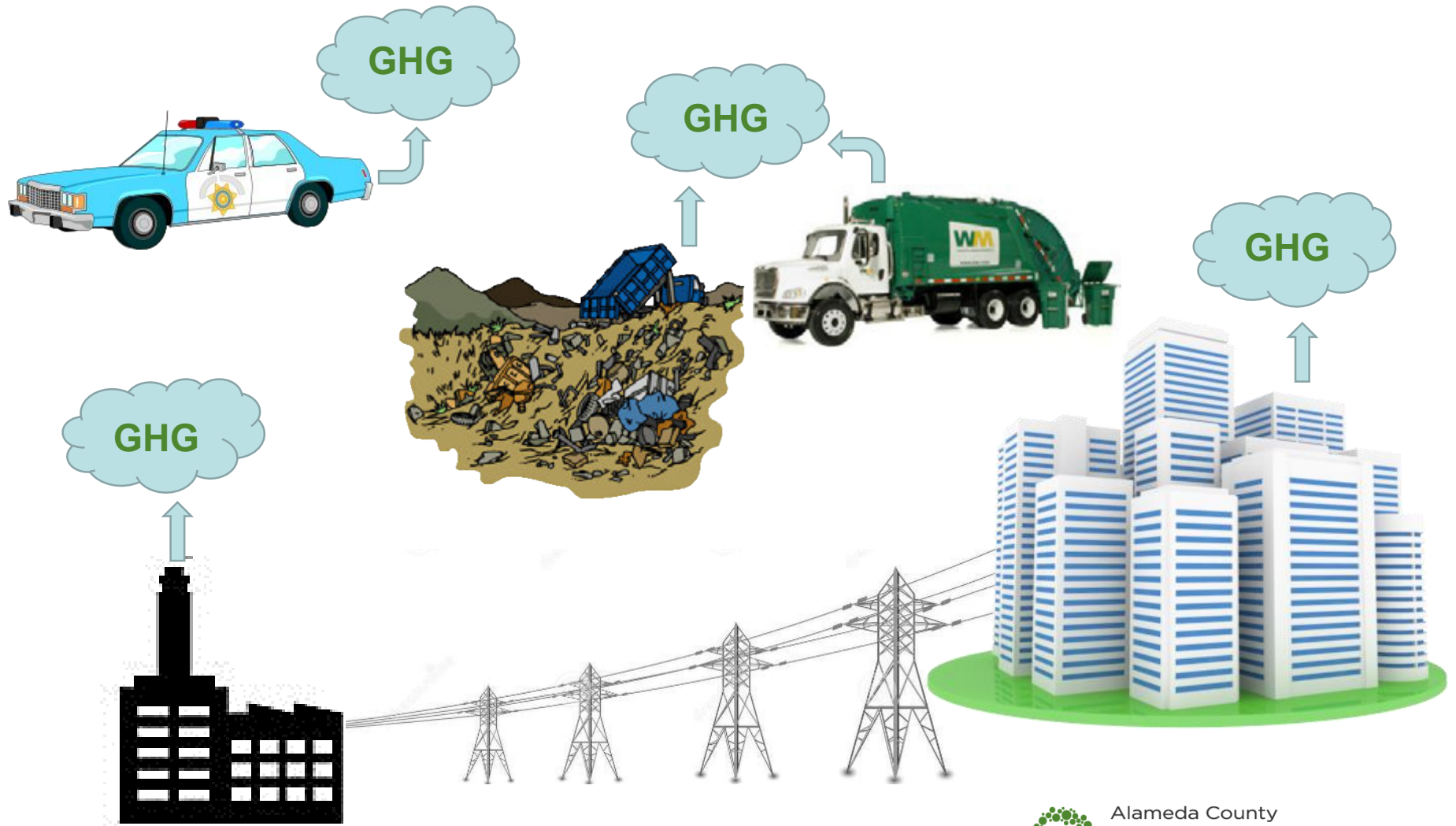
Local Action, Global Impact.

Topics I'll Cover

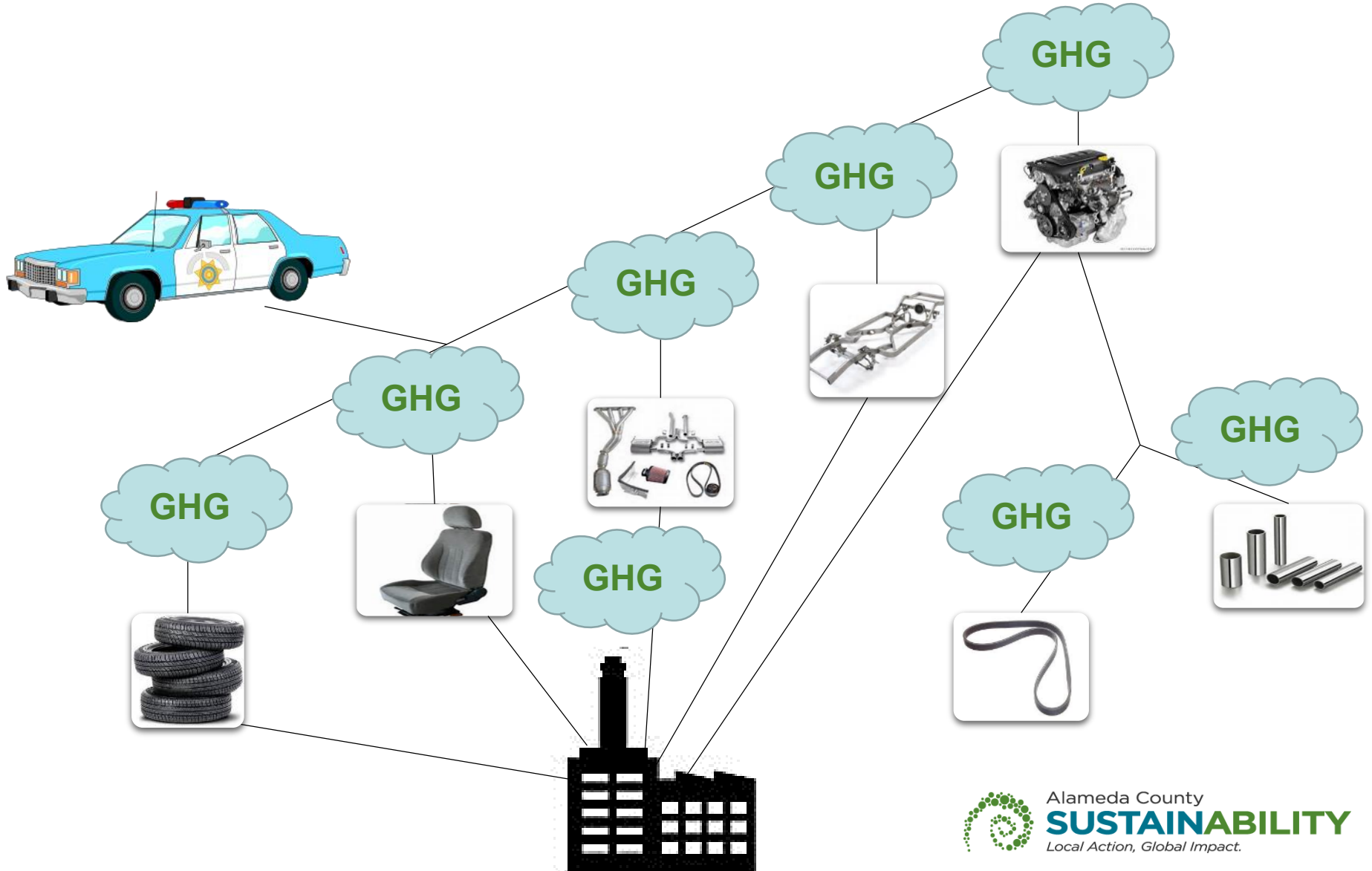
- Supply chain GHG emissions explained
- How are they measured
- Alameda County's journey
- Climate-friendly green purchasing strategies

Supply Chain GHG emissions explained

Operational GHG Emissions



Supply Chain GHG Emissions



What We Are Measuring

- Embodied emissions in the goods and services we buy
- Shared emissions:
 - Purchaser drives demand
 - Emissions occur throughout supply chain



How do we measure?

Turning Dollars into GHGs

- Input:

Description	Spend*
Books & Maps	\$ 54,973.66
Cabling Svcs: Data & Voice	\$ 293,893.61
Chemicals: Water Treat, Boiler	\$ 1,614,422.86
Clothing: Except Uniforms	\$ 500,424.08

- Magic happens!

$$\left[\$ \cdot \frac{CO_2e}{\$} = CO_2e \right]$$

- Output: Embodied GHG emissions

Common Measurement Tool

- Online tool: www.eiolca.net
- Publicly available and free to use
- Estimates GHG emission per dollar spent



Learning About Your Supply Chain Emissions

Do Your Own

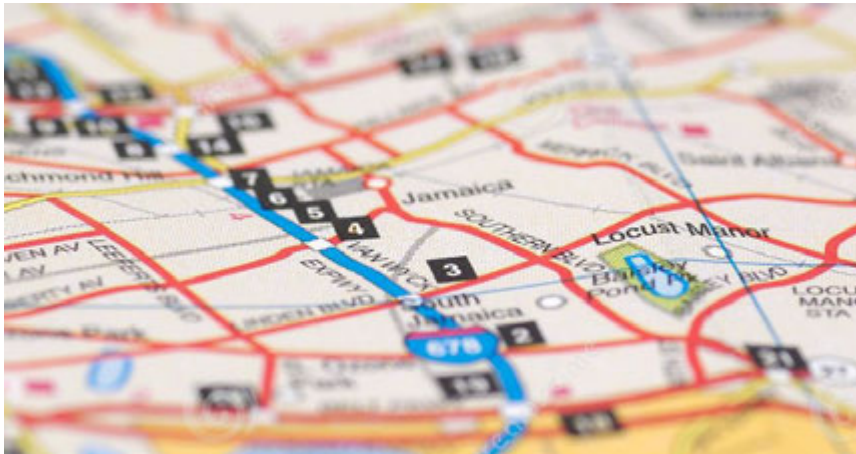
Forum Resource:

How-To Guide

Learn From Others

Forum Resource:

Trend-Analysis Tool



Alameda County's journey: from map to guidepost

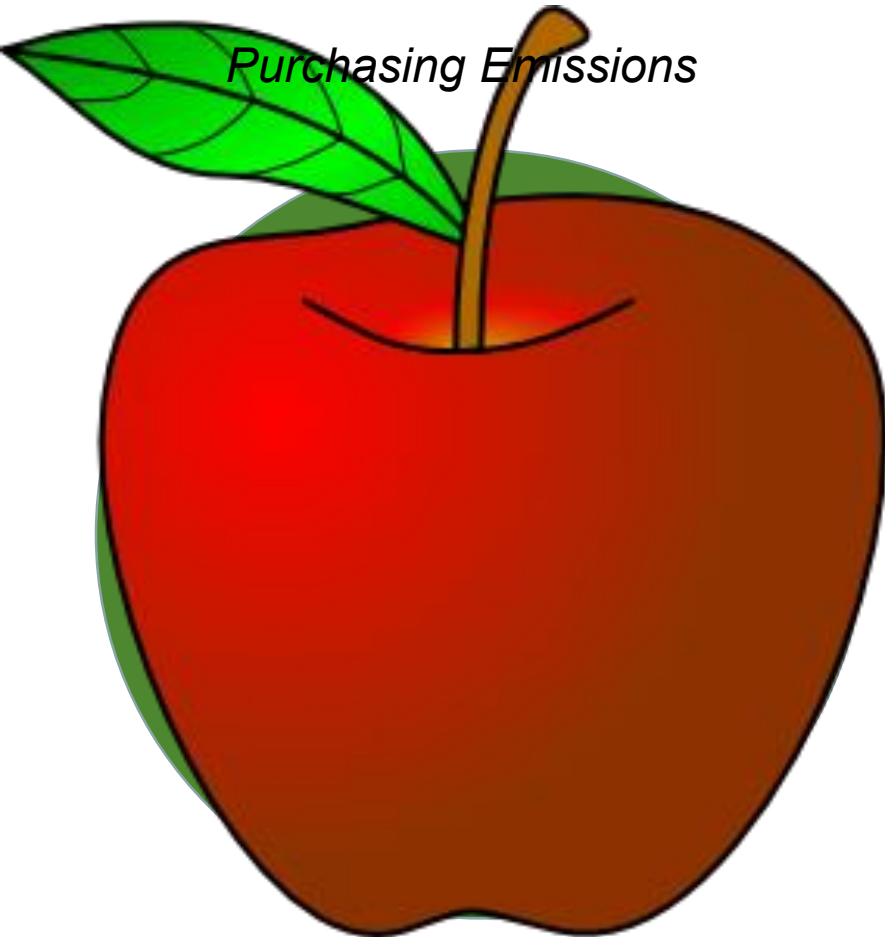
Measuring the County's Supply Chain Emissions

Goals:

1. Connect green purchasing to climate efforts
2. Prioritize future areas of work
3. Identify green purchasing strategies
4. Document effort to help others

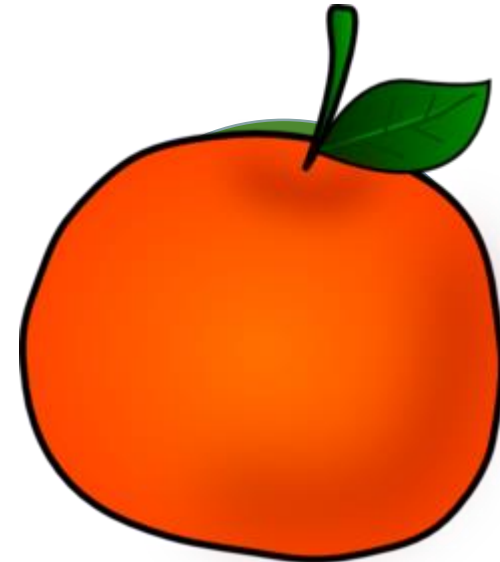
2010 County Emissions

Purchasing Emissions



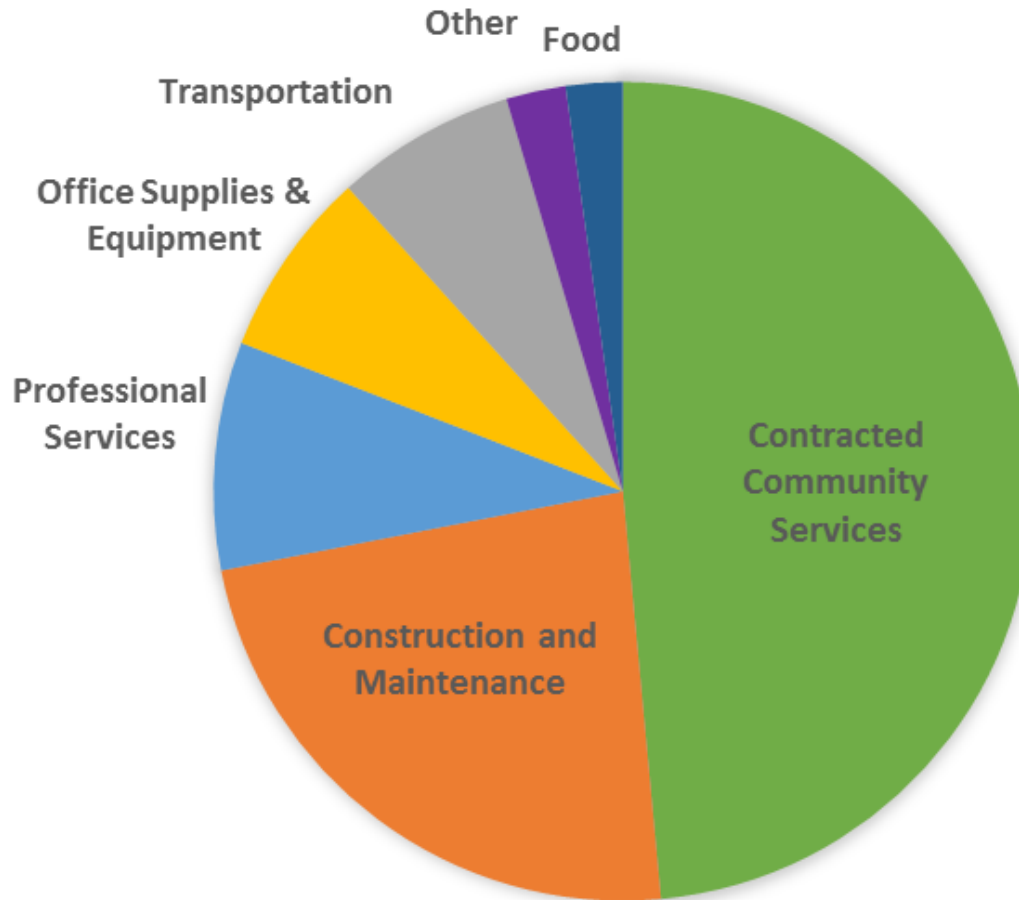
Total: 180,000 mt CO₂e

Government Operations Emissions



Total: 53,207 mt CO₂e

CONTRIBUTION BY PURCHASING CATEGORY TO TOTAL GHG EMISSIONS IN ALAMEDA COUNTY'S SUPPLY CHAIN INVENTORY (FY2010)



Total: 180,000 MT CO₂e

New Questions

- How does this compare to other organizations?
- What can we do to reduce these impacts?
- How can we share this information?



Trend-Analysis Project

- Inspiration:



**West Coast Climate
& Materials Management Forum**

- Funding:



- Analysis:



- Project
Management:



Alameda County
SUSTAINABILITY
Local Action, Global Impact.

Finding Trends in Results

- 86 inventories from 36 organizations
- Organization types:
 - Public Agencies
 - Higher Education
 - Public Utilities

Higher Education Funding Council for England (HEFCE)
Portland Community College
University of California - Berkeley
University of Cambridge
De Montfort University
Nottingham Trent University
Yale University
University of Oregon
Southern Oregon University
Eastern Oregon Univeristy
Western Oregon University
Oregon State University
Portland State University
Oregon Institute of Technology
University of Texas - Austin
University of North Carolina - Willmington
Portland, OR - Parks and Recreation
Tualatin Hills, OR - Parks & Recreation District
Eugene, OR
Vancouver, WA
Gresham, OR
Hillsboro, OR
Beaverton, OR
Corvallis, OR
Lake Oswego, OR
Springfield, OR
Orange County, CA - Transportation Authority
Washington County, OR
Alameda County, CA
Portland Metro
East of England Local Authorities
Minnesota Pollution Control Agency
Oregon DEQ Operational
Joint Water Commission
Eugene Metropolitan Wastewater Management
Commission
Eugene Water and Electric Board

Primary Data: Inventory Summary Results

Category	Emissions MT CO ₂ e				Total
	2010	2011	2012	2013	
Building Construction and Improvements	14,500	9,800	9,800	23,800	57,900
Office Supplies and Printing (Including IT)	2,600	2,600	2,800	2,800	10,800
Facilities Equipment and Maintenance	1,700	1,800	2,000	2,700	8,200
Chemicals & Safety Equipment	1,500	1,300	1,400	1,300	5,500
Fleet and Non-Roadway Vehicles	700	800	800	800	3,100
Library and Community Programs	700	700	700	700	2,800
Professional & Technical Services	700	700	400	500	2,300
Total	22,400	17,700	17,900	32,600	90,600

Purchasing categories summary from supply chain
GHG inventory results, 2010 - 2013 (Hillsboro, OR)

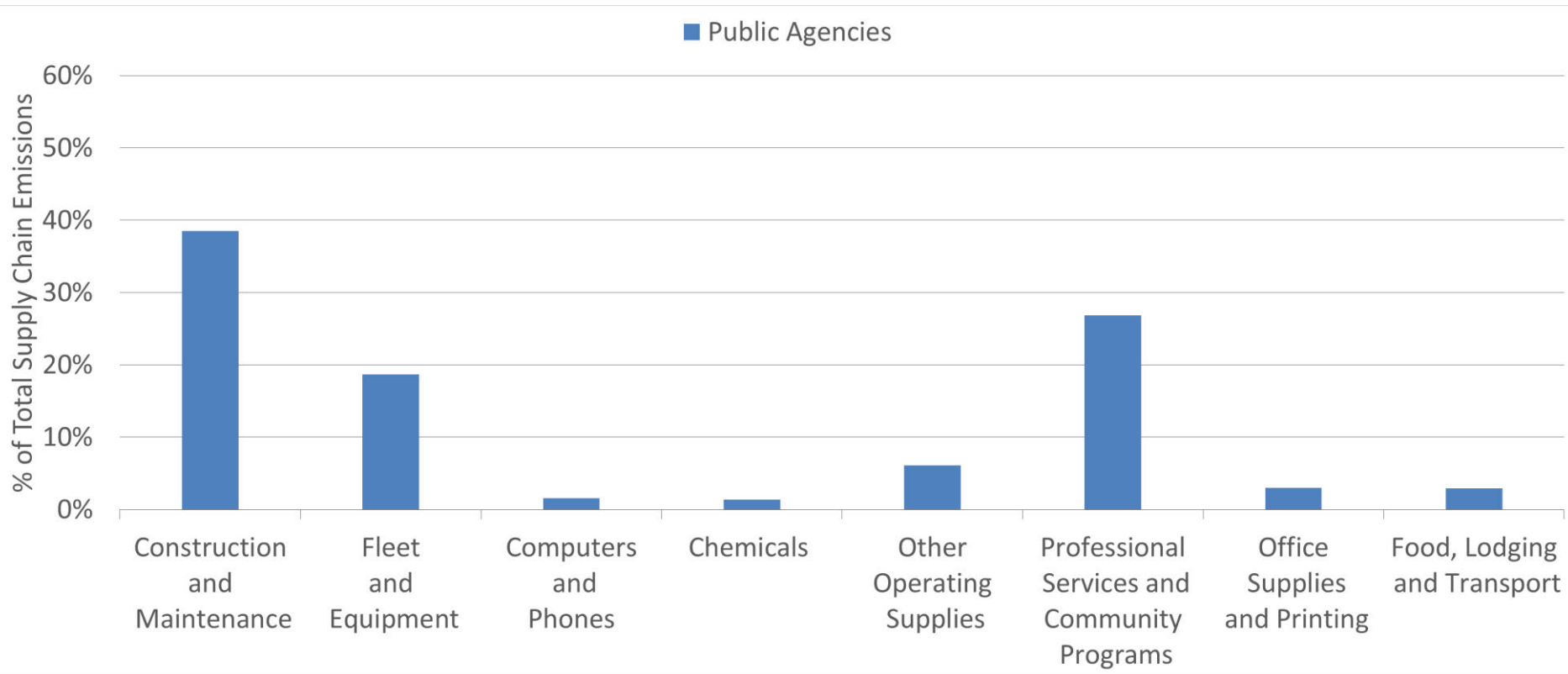
Results of Trends-Analysis

- **Supply chain emissions are a significant source of emissions**
 - 35% - 55% of all GHG emission measured by an organization
- **Dollars spent on services matter**

Significant sources of emissions are:

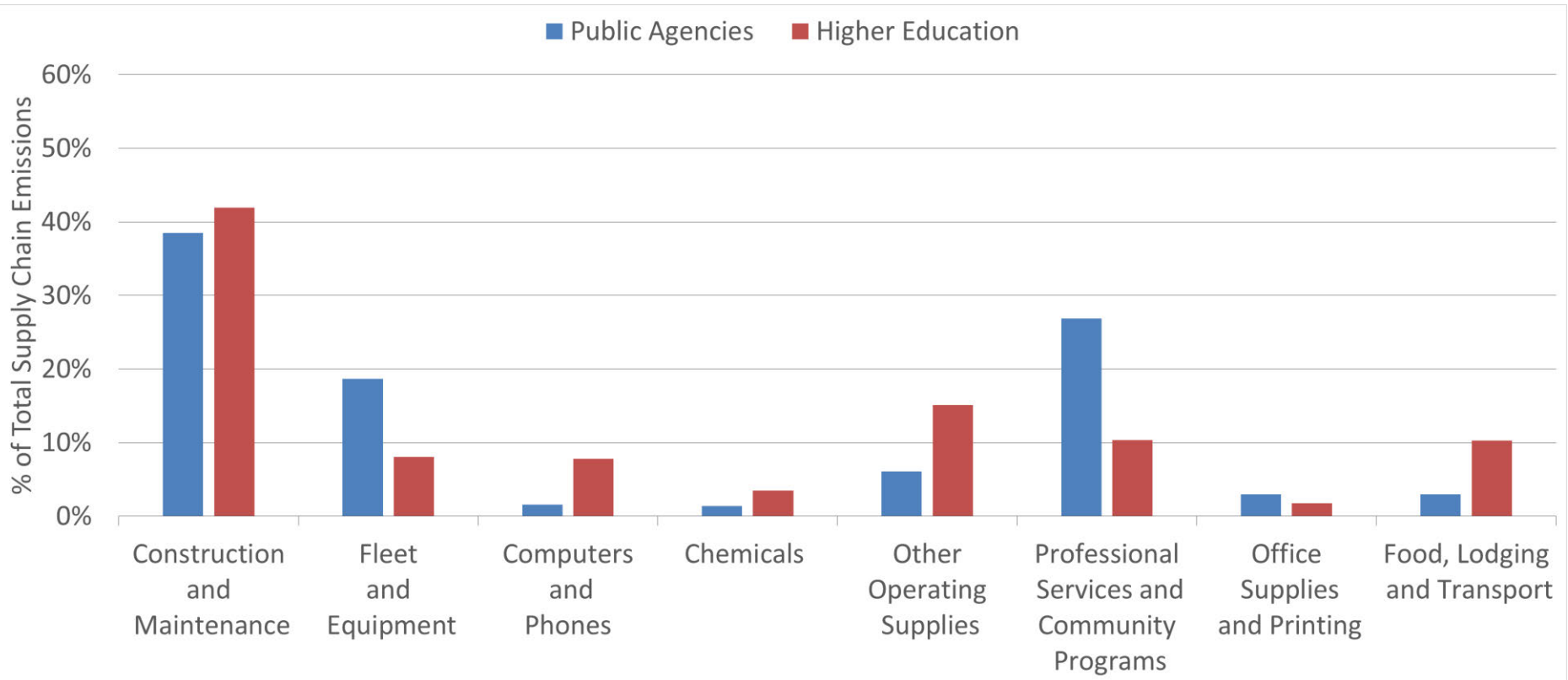
 - Construction & Maintenance
 - Professional & Community Services

Significant Purchasing Categories

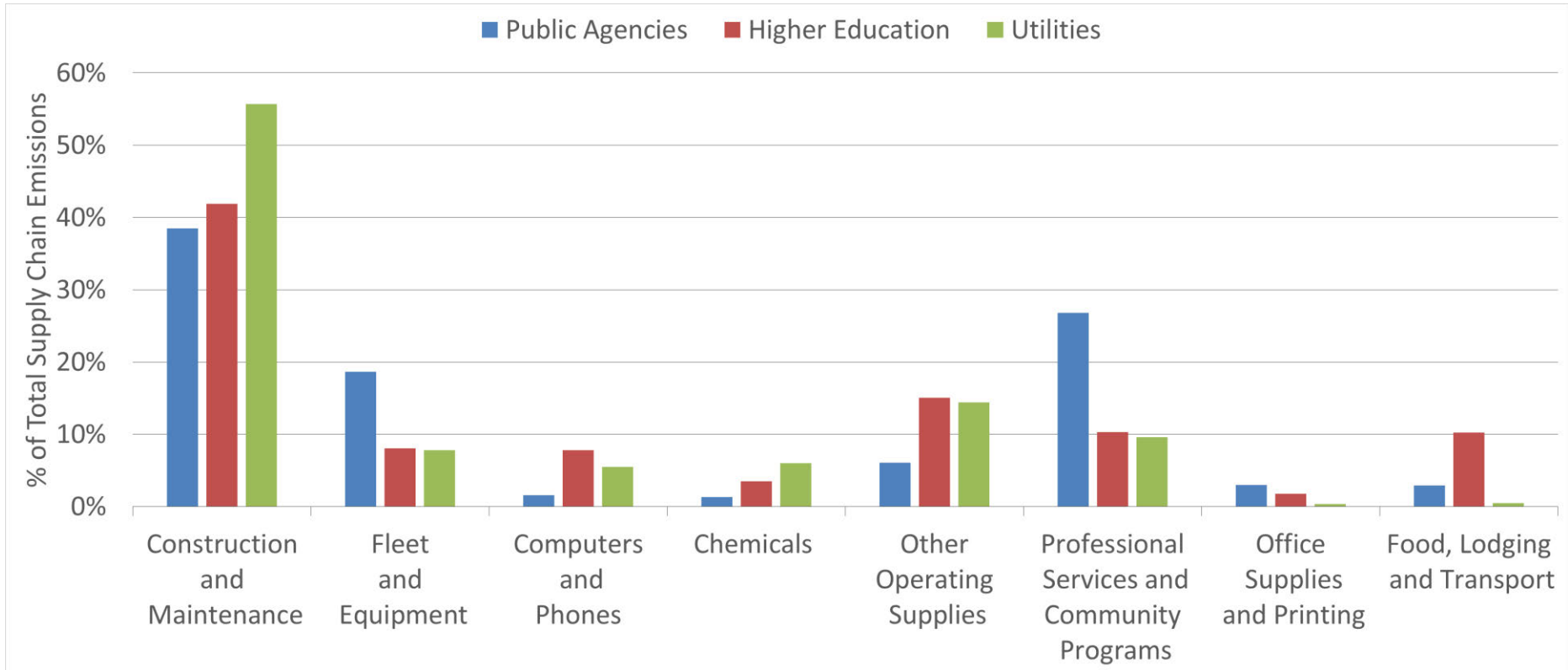


Source: Good Company on behalf of StopWaste (2015).
[Supply Chain Greenhouse Gas Inventory Meta-Analysis](#)

Significant Purchasing Categories



Significant Purchasing Categories

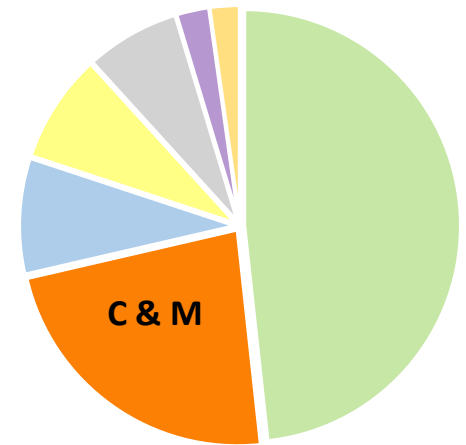


Addressing the climate impacts of purchasing

Construction & Maintenance

2010 Supply Chain GHGs

Supply Chain GHG Emissions come from...

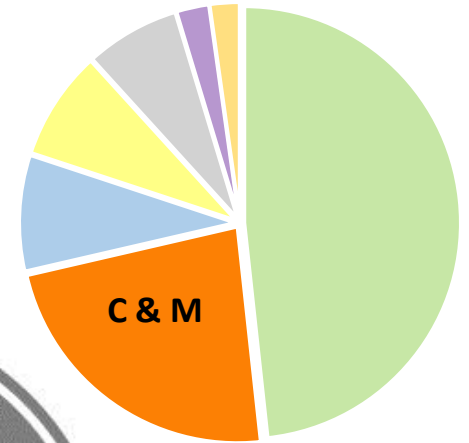


- **Construction operations**
 - Electric-powered tools and machinery
 - Fuel-burning equipment and vehicles
- **Building materials supply chains**
 - Raw materials extraction, refinement
 - Processing, manufacturing
 - Transportation

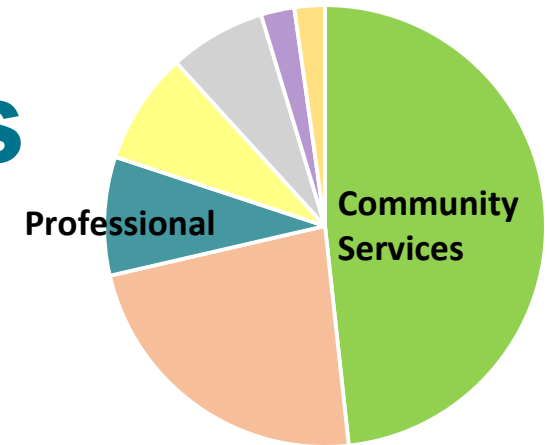
Construction & Maintenance

2010 Supply Chain GHGs

Reducing Supply Chain Emissions



Professional & Community Services



Supply Chain GHG Emissions come from...

- **Vendor operations**



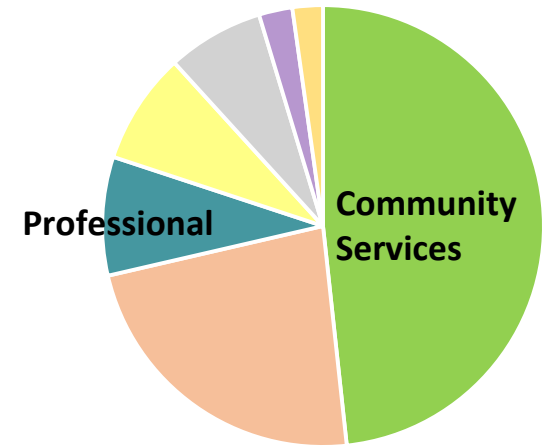
- **Vendor supply chains**

- Their supply chains *are* our supply chains

Professional & Community

Reducing Supply Chain Emissions

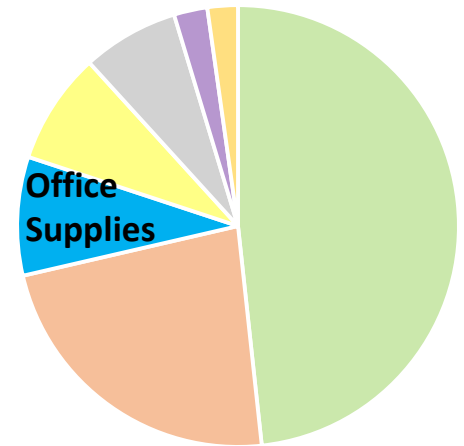
2010 Supply Chain GHGs



Office Supplies & Equipment

2010 Supply Chain GHGs

*Supply Chain GHG Emissions
come from...*

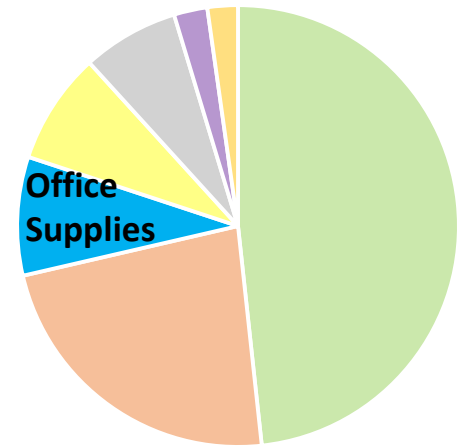


- **Production of computers, office supplies, paper, furniture, equipment**
 - Resource extraction
 - Refinement of raw materials
 - Manufacturing of products
 - Shipping, warehousing, storage

Office Supplies & Equipment

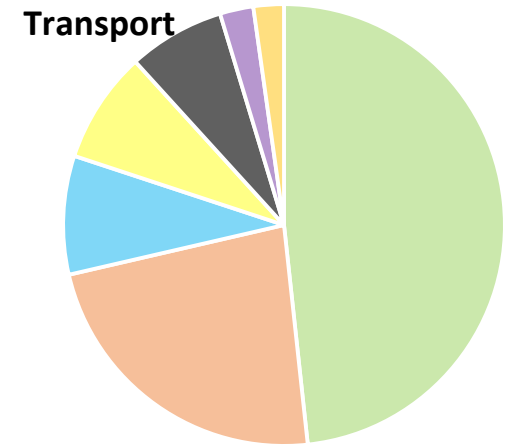
2010 Supply Chain GHGs

Reducing Supply Chain Emissions



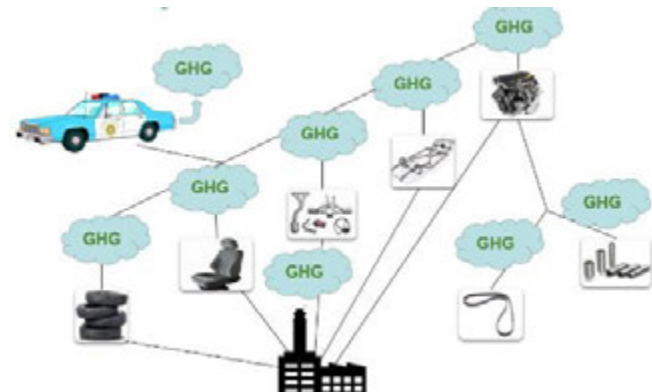
Transportation

Supply Chain GHG Emissions come from...



- **Fuel supply chains**
 - Extraction – drilling, fracking
 - Refinement, processing
 - Transporting, storing, pumping

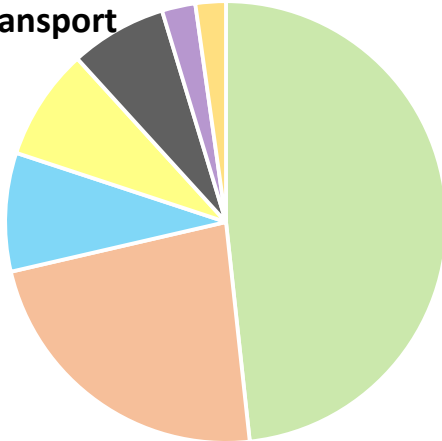
- **Vehicle and parts supply chains**



Transportation

Reducing Supply Chain Emissions

Transport

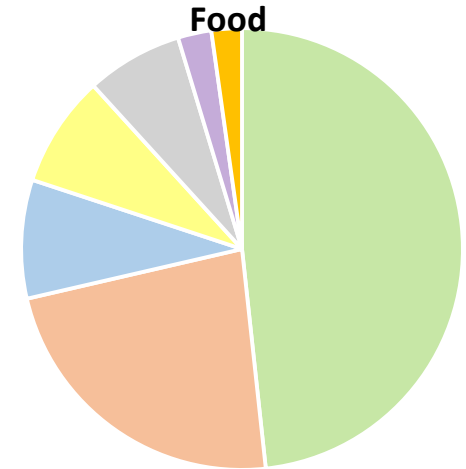


Food

*Supply Chain GHG Emissions
come from...*

- **Food supply chains**
 - Agriculture is most of climate impact

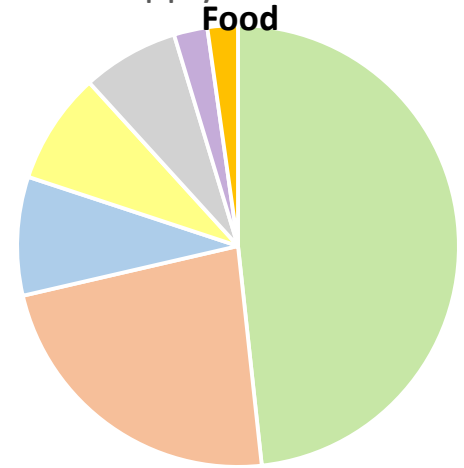
- **Food services**
 - Caterer/service company operations
 - Food supply chains (mostly agriculture)



Food

Reducing Supply Chain Emissions

2010 Supply Chain GHGs



Questions?

Karen Cook

Sustainability Project Manager

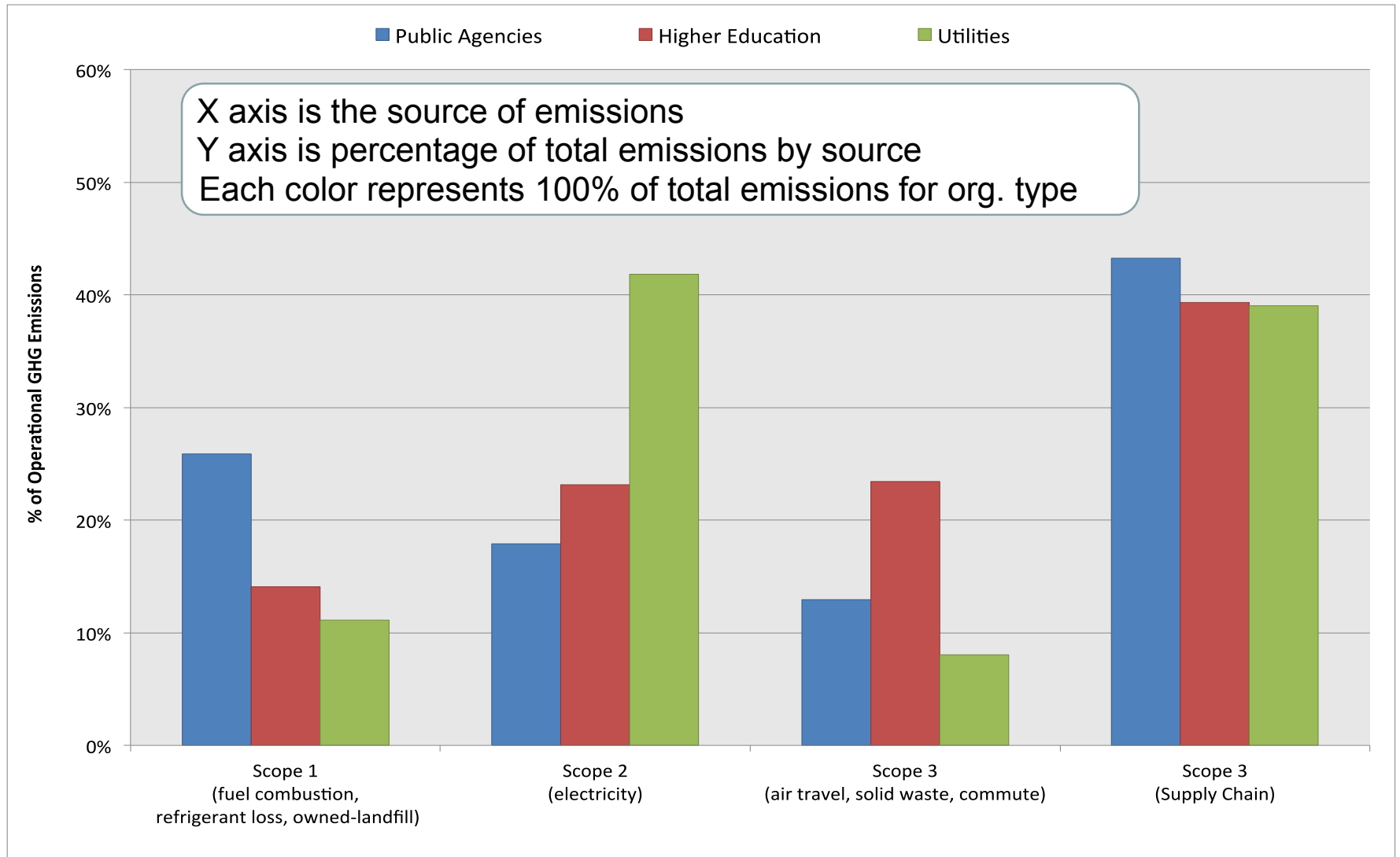
Karen.Cook@acgov.org

510-208-9754

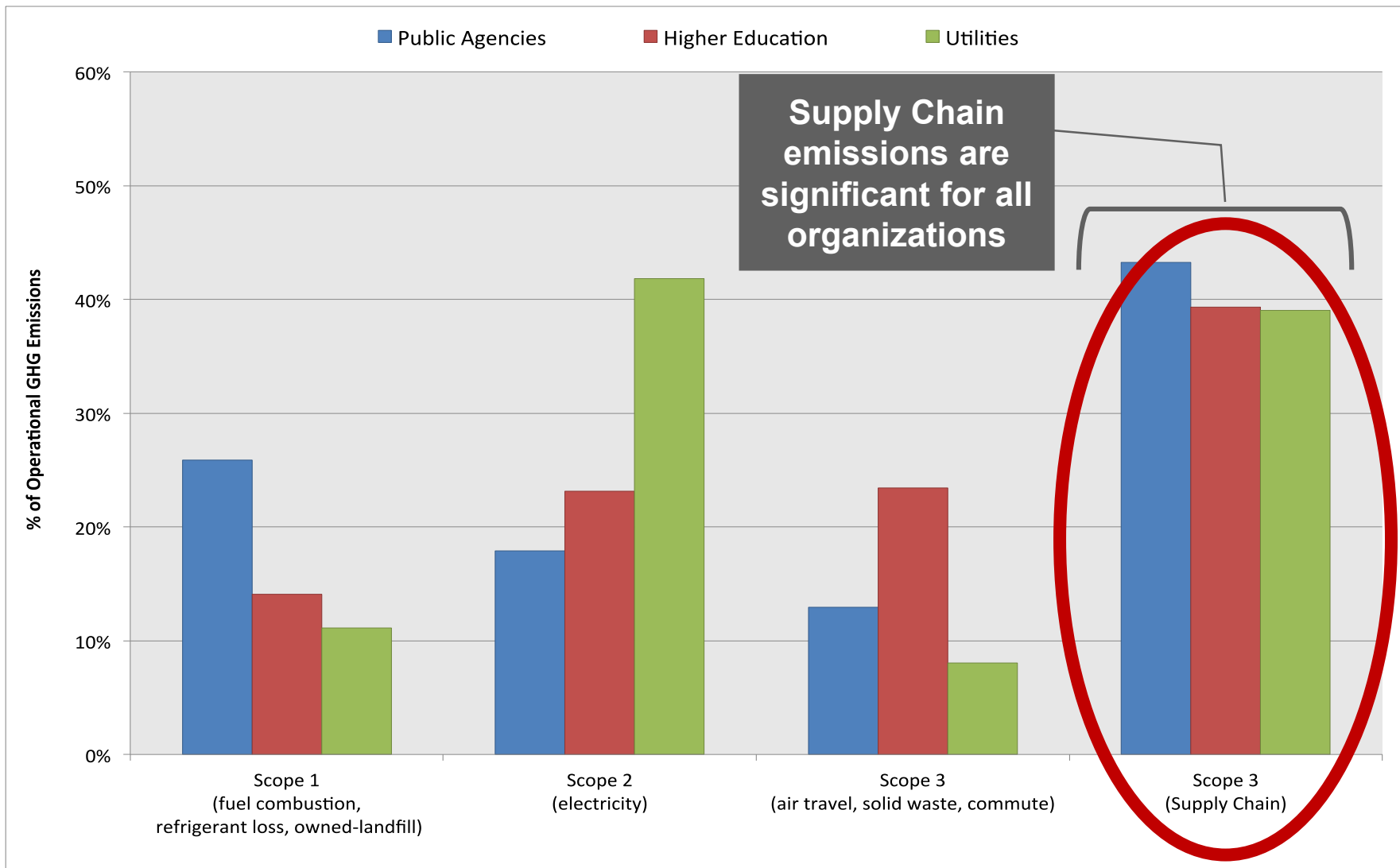
www.acsustain.org

Trends-Analysis: Detailed Results

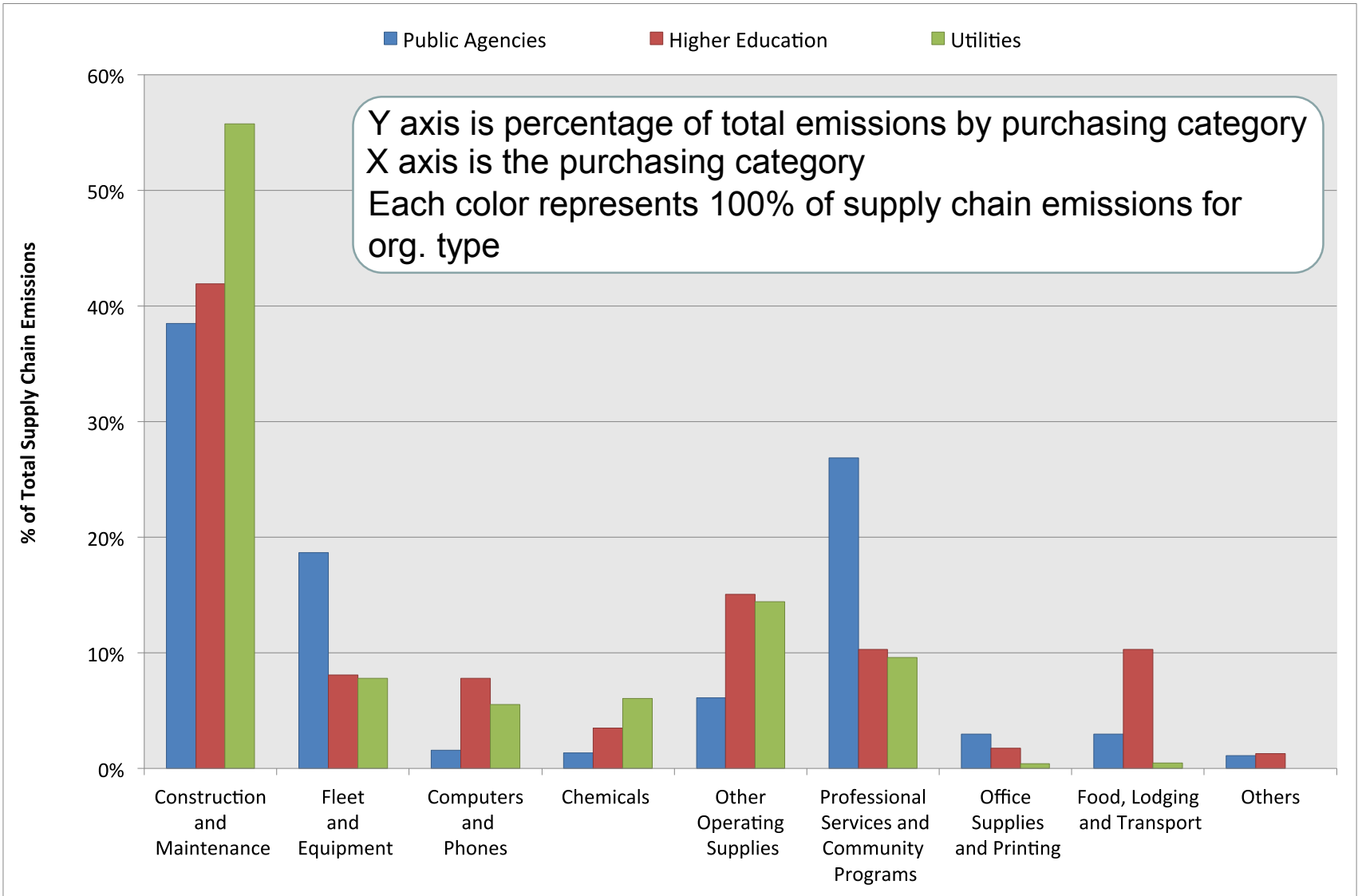
Significance of Supply Chain GHG Emissions



Significance of Supply Chain GHG Emissions



Significant Purchasing Categories in Supply Chain GHG Emissions



Significant Purchasing Categories in Supply Chain GHG Emissions

