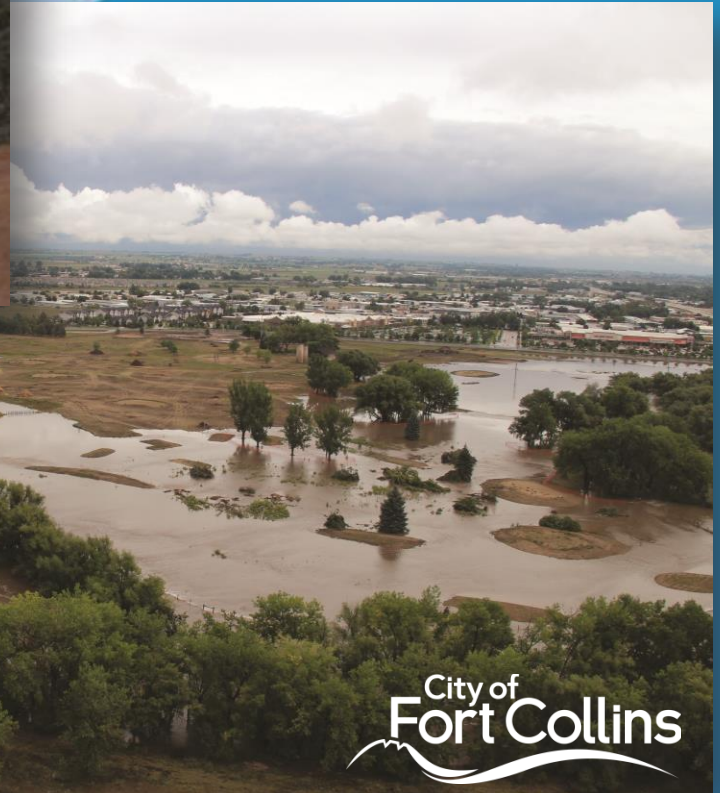


# Fort Collins: Pursuit of a Net Zero Community

Bruce Hendee, Chief Sustainability Officer  
[bhendee@fcgov.com](mailto:bhendee@fcgov.com)

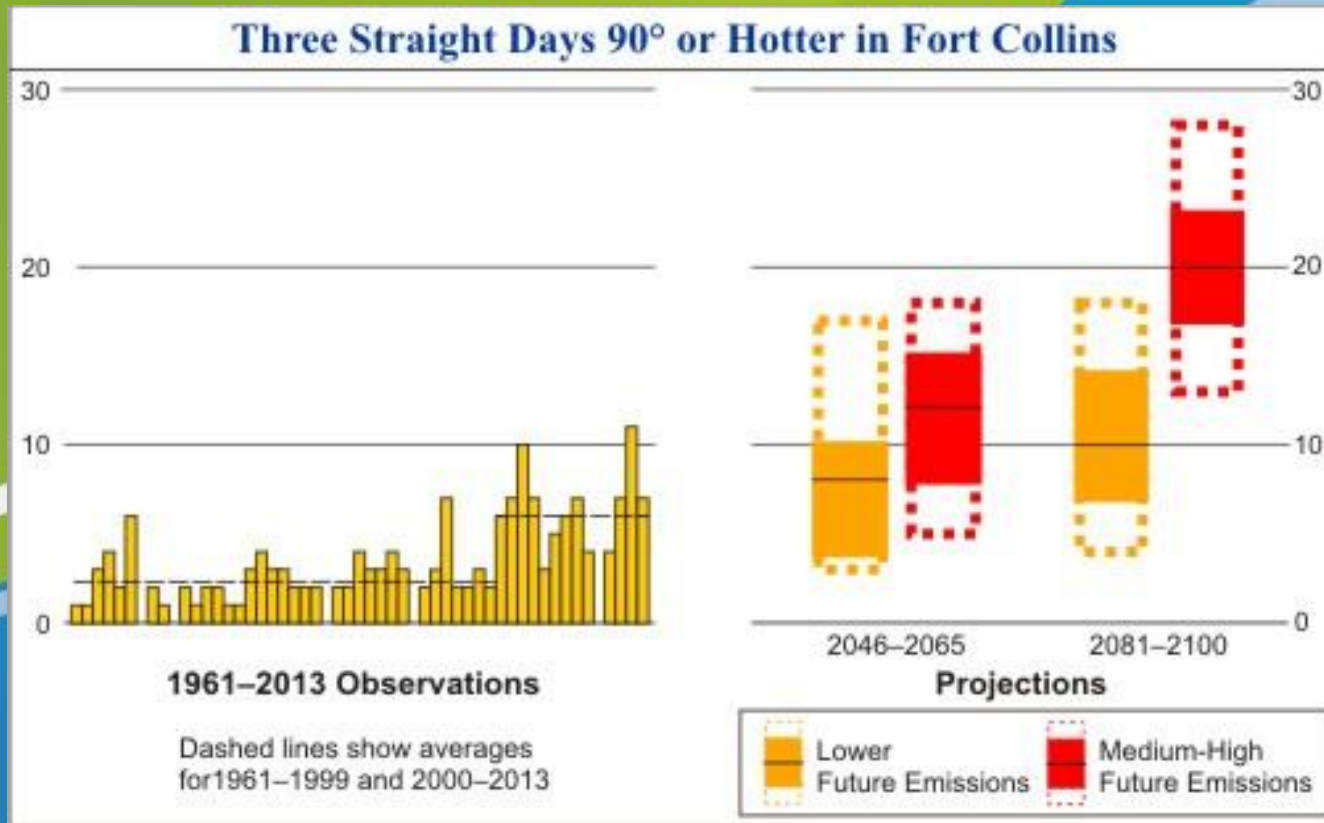


# WHY?



- High Park Fire 2012
- 2013 Flood
- Low carrying capacity vs. population growth
- One Planet

# Climate Change is Impacting Us





# Our Focus



Two major categories of effort:

- Resilience
- Carbon reduction

# EPA /Fort Collins Partnership

Fort Collins Mayor on President's Task Force on  
Climate Preparedness and Resiliency  
Assigned to Built Systems Subgroup  
Climate Hub (USDA)



# Sustainability Services

## Triple Bottom Line

- Environment
- Economy
- Social

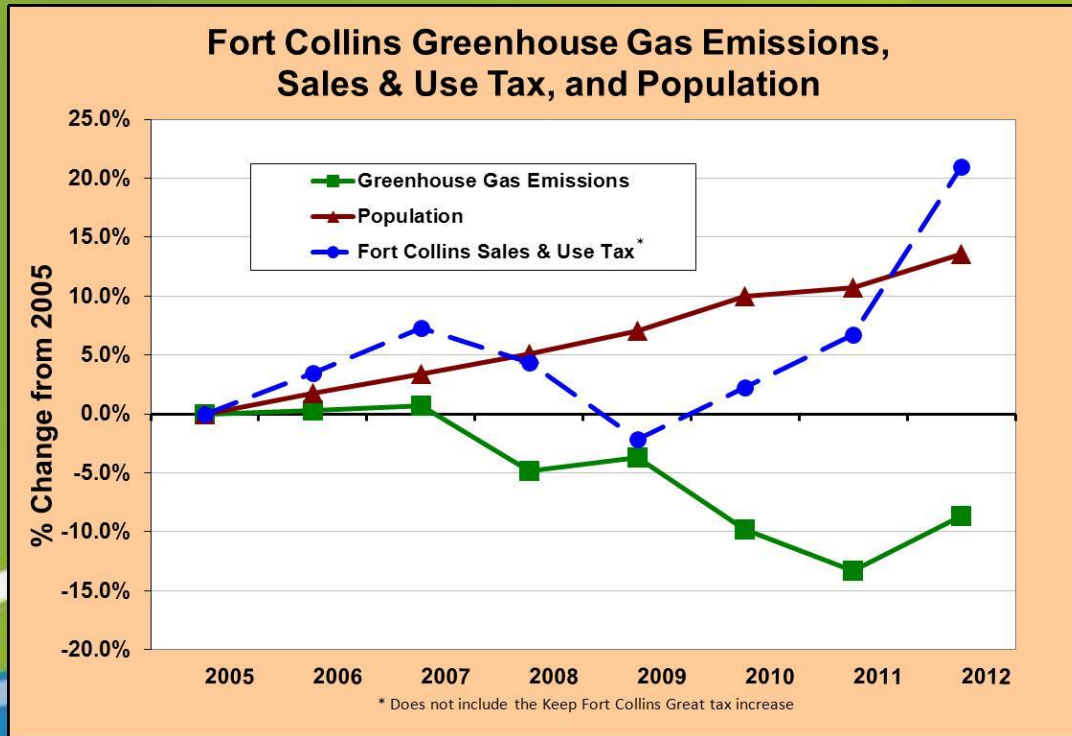
A Unique Management Structure  
for Environmental, Economic,  
and Social Sustainability



Sustainability Services  
Area Established in 2011

City of  
**Fort Collins**

# Successes



8.7% reduction in carbon emissions since 2005, 13% increase in population



# Successes



MAX opening May 2014

DENC

ClimateWise

Road to Zero Waste

Net Zero Cities

FortZED

Green Building Roadmap

Solar Power Program

Home/Biz Efficiency

Green Purchasing

1.5% Reduction/Year in Electricity

Go Solar in 2014



Business Smart.







**Net Zero Cities**  
Global innovators for a low-carbon future

Net Zero Carbon | Net Zero Water | Net Zero Waste



15 Countries, 3 Cities, Corporations





# Prototyping solutions in Net Zero Energy

Finance	System	Percent Generation	MWH generation
Private	ESCO Model	20%	46,000 MWh
City	LED Streetlights	1%	2,300 MWh
Private/PPA	Solar Downtown	5%	11,500 MWh
Utilities- Smart Grid Grant	Demand Response	5%	11,500 MWh
Private (Woodward)	Combined Heat and Power	15%	34,500 MWh
Consumer	Prepay	5%	11,500 MWh
Utilities	Conservation reduction	2%	4,600 MWh
Utilities (PPA)	Waste to Energy	10%	23,000 MWh
PRPA/FCU	Utility scale solar	33%	75,900 MWh
CSU	Wind	10%	23,000 MWh
	District heat (Lincoln)		
		106%	



## Prototyping solutions in Net Zero Energy



- Utilities as a service model
  - Wind and solar energy
  - Proprietary thermostat
  - Combined heat and power
- Information center for engagement



# Successes

Triple Helix Partnership

City of Fort Collins

Colorado State University

Colorado Clean Energy Cluster



# Successes

## Change in Greenhouse Gas Goals

80% Below 2005 by 2030

1. Reduce building energy use 31%  
Implement cost-effective conventional efficiency technologies

2. Carbon neutral electricity by 2030

3. Reduce transportation emissions by 48%

Make it easier for Fort Collins to drive less

Accelerate adoption of fuel-efficient autos and electric vehicles

# Fort Collins' Challenges



- Low energy costs
- Low landfill costs
- Regional Energy Provider
  - Thermal Energy
- Suburban development pattern
- First cost of energy & efficiency
  - Behavior change



# Fort Collins' Challenges



Complexity  
Time  
Engagement  
Getting to Scale  
Alignment

Net Zero Cities 2013





Thank you

<http://www.fcgov.com/sustainability>