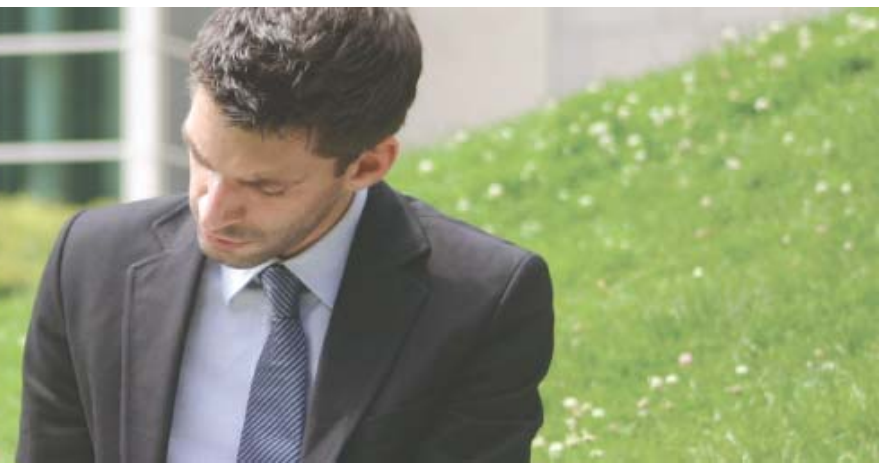


# 2010 Business Environmental Program Series.



**September 14 – The Next Wave for Conservation and Sustainability**

**September 28 – Fort Collins' Smart Grid**

**October 5 – Restaurants: A Menu of Cost Saving and Environmental Choices**

**October 19 – Beyond the Bin: Advanced Recycling Strategies**

**October 26 – Greening the Fort**

**November 9 – Water Smart Landscapes**

**November 16 – Rx for an Efficient Business**

To learn about other programs in the series, visit [fcgov.com/beps](http://fcgov.com/beps), call (970) 221-6700, e-mail [utilities@fcgov.com](mailto:utilities@fcgov.com) or TDD (970) 224-6003.



# 2010 Business Environmental Program Series.



## AGENDA

- 9:05 AM** Introduction
- 9:10 AM** Mona Newton, Governor's Energy Office
- 9:35 AM** Dr. Rosemarie Russo, City of Fort Collins
- 10:05 AM** Kathy Collier, City of Fort Collins Climate Wise Program case studies from various businesses
- 10:25 AM** 10 MINUTE BREAK
- 10:35 AM** Brian Dunbar and Josie Plaut, IBE
- 10:35 AM** Work Session (90 minutes)
- NOON** Conclusion

To learn about other programs in the series, visit [fcgov.com/beps](http://fcgov.com/beps), call (970) 221-6700, e-mail [utilities@fcgov.com](mailto:utilities@fcgov.com) or TDD (970) 224-6003.



1.800.462.0184  
rechargecolorado.com

**City of Fort Collins Business  
Environmental Program Series Kick-off  
September 14, 2010  
Mona Newton, Central Regional Representative**



Governor's  
Energy Office



RECHARGE  
COLORADO



# COLORADO'S NEW ENERGY ECONOMY

- A **national model** for creating jobs, attracting business and producing innovative clean-energy technologies. \$458 M in VC capital in 2008
- **Nearly 17,000 Coloradans now work** in renewable energy and energy research jobs in Colorado, the fourth-highest concentration in the country.
- **Dozens of new businesses** like Vestas Wind Systems, Siemens Wind, Abound Solar, Ascent Solar and Solix Biofuels are growing and adding jobs in Colorado.
- Colorado has nearly quadrupled the amount of **wind power on the grid** and we expect to double that by 2020.



# Creating a New Energy Economy: The Ecosystem...

- 6<sup>th</sup>/**solar**, 11<sup>th</sup>/**wind** & 3<sup>rd</sup> /**geothermal**
- Greening of Government: Earth Day EO
- Innovative policies & incentives (new 30% RPS goal!)
- Trained & well educated workforce
- Collaborative hub for research & development
- Technical assistance (GEO & DOLA)
- Grants & private investment



# THE GOVERNOR'S ENERGY OFFICE

The GEO plays a critical role in charting Colorado's leading role advancing the New Energy Economy.

- Work with communities, utilities, private and public organizations, and individuals to promote renewable energy, energy efficiency and clean energy technologies
- 45 total staff members



# STRATEGY OVERVIEW

**Address barriers to broad deployment of energy efficiency and renewable energy.**

- **Access to Information**

- Create a one-stop-shop for actionable energy information.

- **Access to Capital**

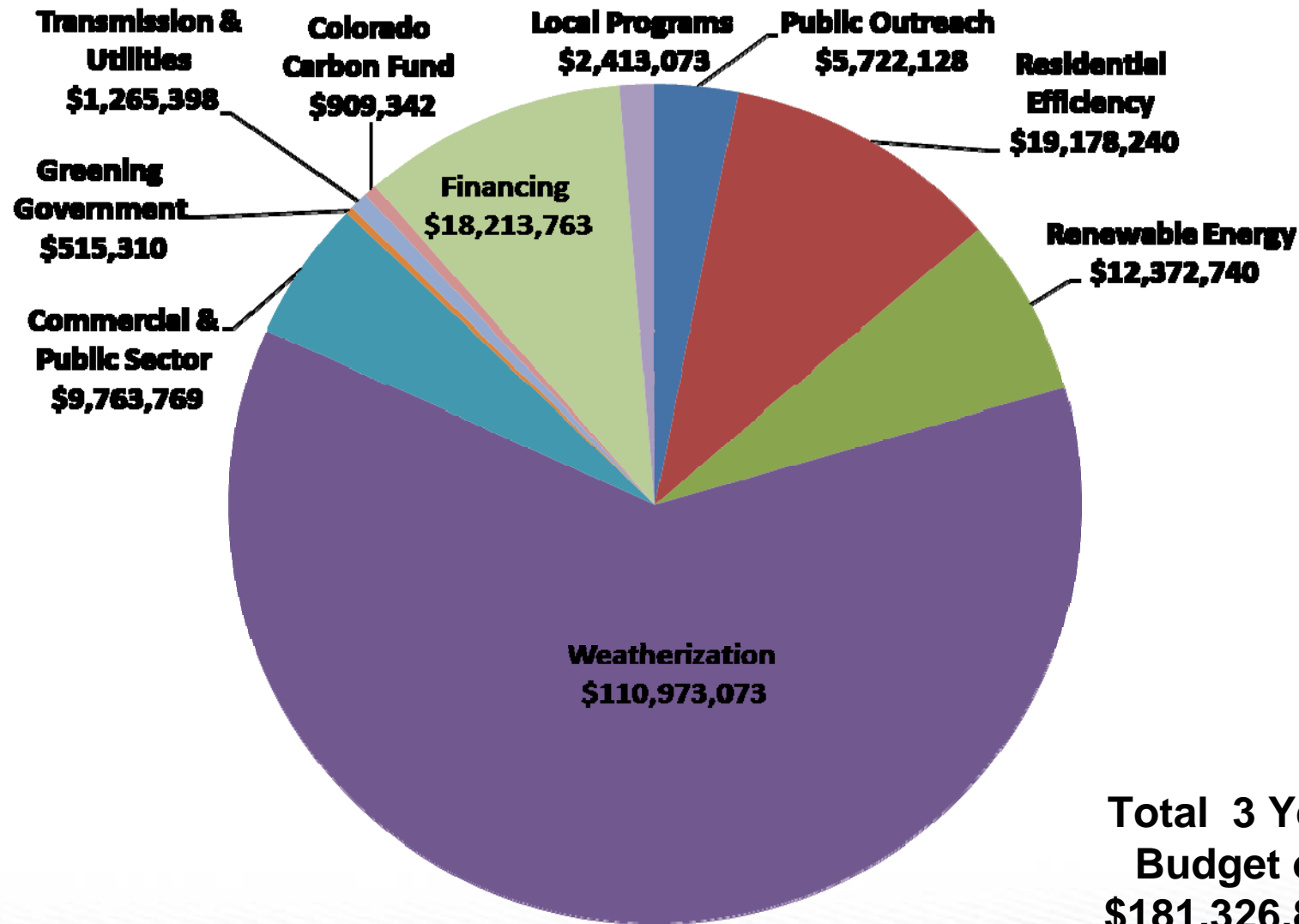
- Assist with up front costs through rebates and grant programs, provide financing mechanisms, and provide technical assistance through performance contracting program.

- **Access to Services**

- Develop the workforce for New Energy Economy jobs through training, certification, business expansion into underserved areas, and energy economy curricula.



# OPERATING BUDGET

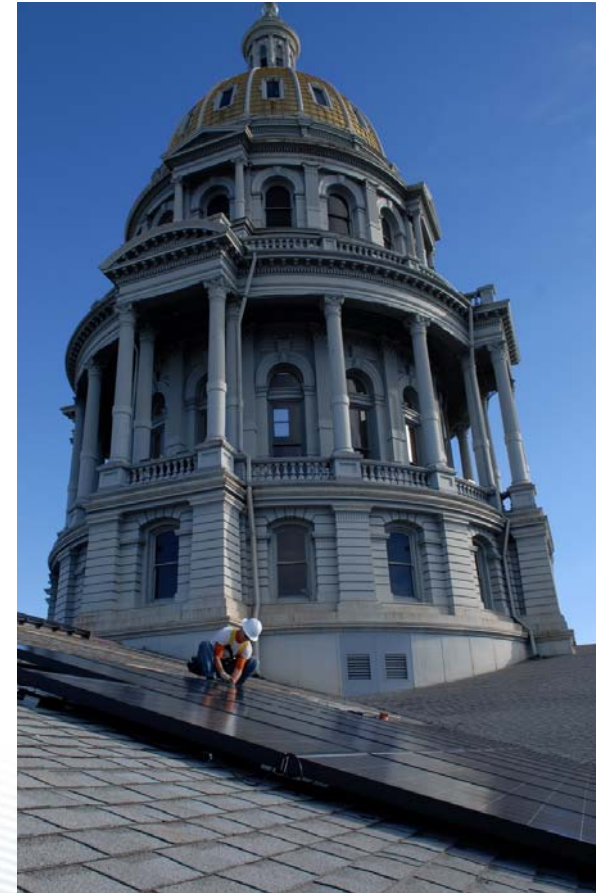


**Total 3 Year  
Budget of  
\$181,326,836**



# GOVERNOR'S ENERGY OFFICE PROGRAMS

- Public Outreach
- Financing & Policy
- Residential Sector
- Commercial Sector
- Public Sector
- Transmission and Utilities
- Colorado Carbon Fund
- Greening Government
- Renewable Energy
- Weatherization



# Public Outreach

**Strategy: create a one-stop-shop for actionable energy information**

- Website-Call in Center -aid to create action
- Messaging for audiences
- Outreach grants and co-marketing alliances for partners
- Grants for promotions and events



# FINANCING

- **Financing Program- \$13,000,000**

Working with banks and financing institutions to leverage these funds for renewable energy and energy efficiency – target \$100,000,000

- **Clean Energy Financing Program (SB 184)**

➤ A loan program to provide financing to Colorado homeowners in **amounts less than \$12,500** to fund investments in energy efficiency or renewable energy.

- **Qualified Energy Conservation Bonds (QECB's)**

➤ Tax credit bonds for the purpose of funding renewable energy and energy efficiency projects

- **Property Assessed Clean Energy (PACE) HB 1328**

➤ Loans to be used for individual renewable energy and energy efficiency projects.

# RESIDENTIAL SECTOR

## ● Energy Efficiency and Renewable Energy Rebates

- Approx. 70,000 EE and RE rebates.
- 90% of these will be for EE measures. 35,000 issued so far
- Rebates will be available statewide.
- All applications will be processed by the GEO via one online process (hard copy options will be available).
- Rebates will be added on top of existing incentives provided that the total amount does not exceed the GEO's identified cap

## Covered Measures

- ✓ Building shell improvements – audits, insulation, duct sealing
- ✓ Appliances
- ✓ Solar PV and DHW
- ✓ Small wind



# COMMERCIAL & PUBLIC SECTOR

## ● Energy Performance Contracting

An EPC is an agreement between the client and an energy service company (ESCO) that allows efficiency upgrades to be paid for with savings achieved through decreased energy consumption and maintenance costs.

**The GEO is working with 140 projects = \$325 million in EE/RE projects. Schools and Public Entities**

- Pre-qualify ESCOs
- Standardize process and procedures
- Standardize contract documents
- ESCOs are under contract with the GEO and required to use standardized procedures and documents
- On-going support from the GEO provided to projects

# COMMERCIAL & PUBLIC SECTOR

- **High Performance Building –New Construction**

**The GEO is working with 15 projects = \$230 million in new construction**

**Benefits:**

- Increases productivity of building occupants
- Decreases maintenance and utility expenses
- Provides an overall better building within the constraints of typical construction budgets
- Reduces the consumption of natural resources
- Reduces the carbon footprint of the building



# COMMERICAL & PUBLIC SECTOR

## ● Main Street Efficiency Program

- Initiative will provide matching grant funds that will reduce energy costs in local businesses and create local jobs.
- Municipalities, small businesses, non-profits, and local governments were eligible to apply.
- Program grants will be awarded in June



# COMMERICAL & PUBLIC SECTOR

## ● Industrial Challenge

- Targeted at the state's 100 largest energy users.
- Commitment to implement all measures with a 5 year payback or less.
- Implementation Partners: SWEEP, CSU Industrial Assessment Center, Rocky Mtn. CHP Center.
- Program launched in July
- Launched in January 2010.





# COLORADO CARBON FUND

- **Sells Carbon Offsets**
- **CCF provides funding for clean energy GHG reduction projects**
  - **Located in Colorado**
  - **Additional – not business as usual**
  - **Direct emissions reductions**
  - **Real, verifiable and permanent reductions**
- **Marketing partnerships with 12 communities** to sell offsets, interested in working with more stakeholders



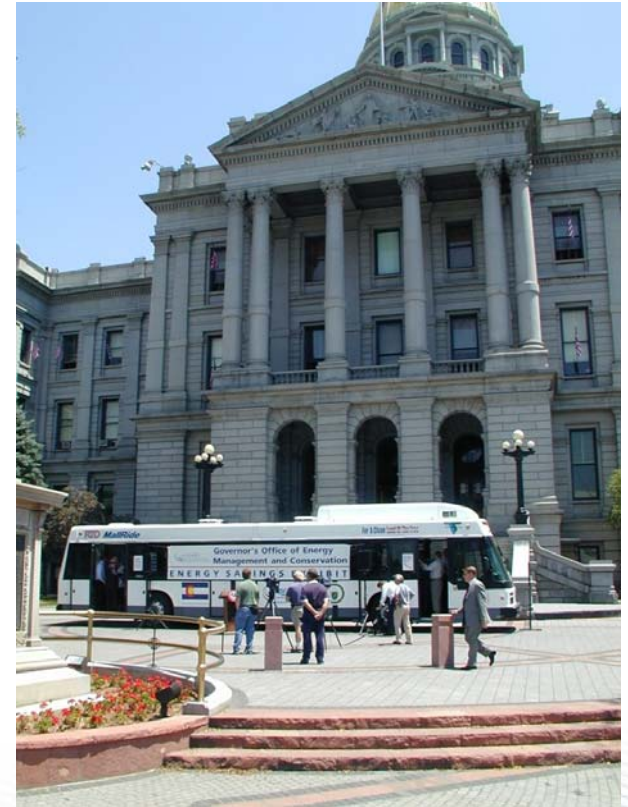
# TRANSMISSION & UTILITIES

- **Renewable Energy Development Infrastructure (REDI) Report**
  - Development & Outreach
  - Report expansion
- **Utilities Climate Action Plan**
  - Development & Outreach
  - Report
- **Colorado Utilities Report**
- **Strategic Energy Plan**



# GREENING GOVERNMENT

- Enables State employees to take a position of leadership in the New Energy Economy through conservation and efficiency thereby reducing the environmental impacts of state operations.
- Achieve the following by June 30, 2012:
  - ✓ 20% reduction in energy use
  - ✓ 10% reduction in paper use
  - ✓ 25% reduction in petroleum use
  - ✓ Divert 75% of waste
- State departments and campuses have sustainability plans and track and report on progress.





# RENEWABLE ENERGY

- **Grants will be available for RE projects for various technologies:**
  - Woody Biomass
  - Anaerobic digestion
  - Wind for Schools
  - Geothermal
  - Ground Source Heat Pump
- **Renewable Energy Development Team (REDT)**
  - The GEO will provide technical assistance to developing RE projects.
  - The REDT will be comprised of industry experts and project developers.
  - Projects will be reviewed and supported through a phased approach.



# Energy Star



☐ ENERGY STAR New Homes (ESNH) Program

☐ Colorado reached 32.7% market penetration in 2009

☐ National Energy Star Partner two years in a row!

☐ ENERGY STAR Homebuilder Rebate

☐ ESNH trainings are for homebuilders, contractors, real estate professionals and appraisers

☐ ESNH marketing campaign – summer 2010

☐ “Above Building Code” (ABC) grant solicitation posted



# INCOME QUALIFIED WEATHERIZATION

- **STRATEGY:** Provide low income community with comprehensive weatherization services at no cost to the resident
  - Serve households at or below 200% Federal Poverty Level
  - Manage 11 local agencies across the state to implement weatherization services state wide
  - \$6,500 -maximum per home
  - Provide comprehensive weatherization services to qualified households
    - ✓ Full home energy audit
    - ✓ Correct all energy related health and safety issues
    - ✓ Implement all cost effective energy efficiency measures
    - ✓ Provide client education

# Colorado State Energy Policies 2010 Highlights

- HB 1001 Increased the RPS from 20% by 2020 to 30% by 2020. Affects the Investor Owned Utilities.
- SB 1328 – New Energy Jobs Creation Act (aka PACEP)
- HB 1065 - Incent Utilities to convert from Coal to Natural Gas
- HB 1342 – Community Solar Gardens bill



**Governor's  
Energy Office**

Mona Newton  
Central Regional Representative  
Governor's Energy Office  
Mona.Newton@state.co.us  
303.809.0379  
[rechargecolorado.com](http://rechargecolorado.com)







Business Environmental Series  
September 14, 2010

# City of Fort Collins Sustainability Success

Dr Rosemarie Russo  
[rrusso@fcgov.com](mailto:rrusso@fcgov.com)



# Why Do We Care About Sustainability as a Municipality or Community?

- City operates and owns buildings throughout the community;
- City operates fleet vehicles such as Transfort buses;
- As a service provider for electricity and water, the city strives to be a leader in how we operate;
- By reducing GHG, we improve air quality and our health.





*Everybody needs beauty as well as bread,  
places to play in and pray in, where nature  
may heal and give strength to the body and  
soul alike.*

*John Muir*



# Colorado Impacts



- Shorter and warmer winters with thinner snowpack and earlier runoff;
- Precipitation has already decreased by up to 20% in many parts of the state (EPA, 2009)
- Widespread beetle infestation (3.6 millions acres in CO & WY)





# Colorado Impacts



- More wildfires, burning twice as many acres each year than before 1980.
- Increase in severe storms.
- Temperatures could increase by 3 to 6°F by 2100. (EPA, 2009)



# Myths & Science Community

## Skeptics

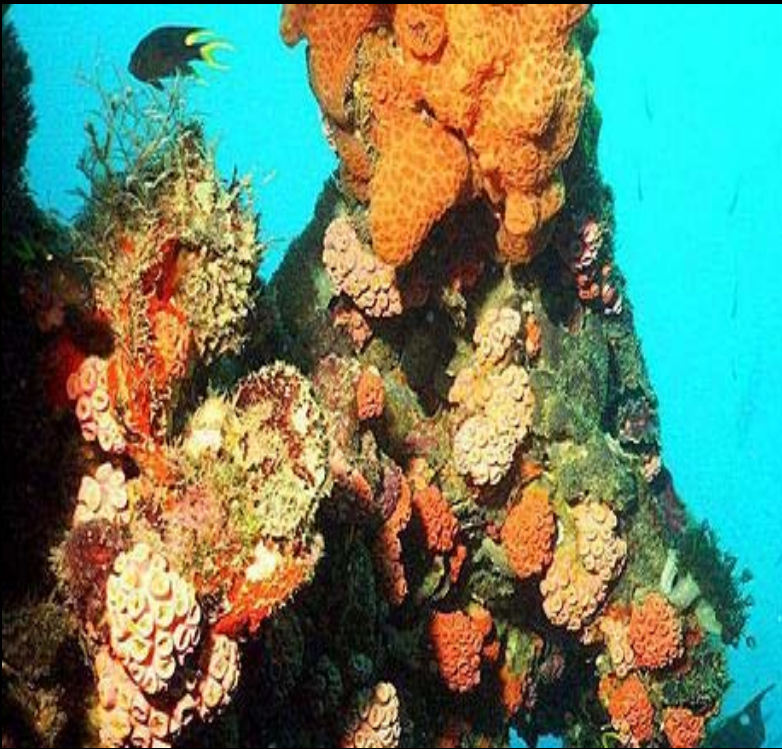
- “ There is no consensus.”
- "Hurricanes aren't linked to global warming."

## Scientists

- 97 % of climate experts agree humans are causing global warming.
- There is uncertainty about the relationship between climate change and the frequency of hurricanes, but increasing evidence shows a link between climate change and the intensity of storms.



# Myths & Scientific Community



Myth –

“Ocean acidification isn’t serious.”

- History shows when CO<sub>2</sub>e rises quickly, there was mass extinction of coral reefs.
- Reefs are breeding grounds for fish, and provide livelihood for 500 million people.





# Myths & Scientific Community



- “Zooks” –zooanthellae is an algae that gives coral their beautiful color.
- The algae helps the coral grow. Increased water temperatures kill the algae, causing bleaching.
- In the last decade, 16% of the world’s coral reefs died.





# Community Carbon Footprint - 2009



- In 2009, Fort Collins emitted 2,692,000 metric tons of CO<sub>2</sub>e.
- Per person emissions were 19 metric tons, just below the US average (20 m.t.) and Colorado average (21 m.t.) but above the world average (4 m.t.).
- Emissions have dropped 3% below 2005 levels.



# Community Highlights – 2009



- Community waste diversion rates increased to 38%.
- The number of Van Go rides increased by 53%.
- Transfort ridership has increased by 28% since 2005.
- Voted 3<sup>rd</sup> Greenest Mid-sized City – Smarter Cities.



# Community Highlights - 2009



- Citizens and businesses participating in City energy efficiency programs avoided almost 28,000 metric tons of CO<sub>2</sub>e in 2009.
- 6.4 % of our electricity is generated by renewable energy.
- PRPA power mix includes 19% hydroelectric.



# Municipal Operations Progress

- From 2005 to 2009, GHG emissions dropped by 4%, or 2,154 metric tons.
- The GHG Emissions reductions are equivalent to:
  - Annual GHG emissions from 374 passenger vehicles;
  - CO<sub>2</sub>e emissions from the energy used by 237 homes for one year; or
  - GHG emissions avoided by recycling 658 tons of material (equal to the weight of 4,544 gorillas).





# Did You Know?

- City maintains 44 parks totaling 750 acres and 25 miles of trails.
- Fort Collins is home to 18 US Green Building Council Certified buildings.
- 6.9% of commuters use public transportation.
- 5% of commuters carpool.



# Recycling

- The Forestry Division chips large diameter wood into mulch that is available throughout the year, for free at Rivendell and Garden at Spring Creek.
- In 2009, the City's office recycling program recycled 212 tons which saved the equivalent of:
  - 3,604 trees
  - 1,484,000 gallons of water



2009 Financial Highlights	Annual Savings
Asphalt, Concrete, & Toilet Recycling	\$313,360
Building Energy Challenge	\$79,820
Metal Recycling	\$69,000
Waste Water Load Shedding	\$54,000
Parks Water Savings	\$19,024
EPIC Lighting Retrofits	\$14,259
Lincoln Center Lighting	\$10,606
Wood Recycling	\$6,545
HVAC & Variable Frequency Drives	\$5,212
Trash Downsizing	\$5,000
TOTALS	\$576,826





# 2010 Cool Steps – ARRA Funding



- Purchased Big Belly Solar compactors for Rolland Moore Park and Oak Street Plaza.
- Installed a 5 kWh system at 215 N Mason and will be installing a 21 kWh system on Aztlan.
- The City is implementing a server virtualization project that translates to 373 metric tons of carbon savings.





# ARRA Transportation Projects

- Improve Bike lanes on Mountain Avenue.
- Paint Bike boxes on Plum and Shield Streets.
- Improve the pedestrian path between Lincoln Ave. and Buckingham Street.



# Go Down the Path



- Starve Your Trash Challenge (Sept 14 – Oct 12)
  - Pledge Sheets and Instructional Material
- RMSLF:
  - Sustainability Challenge – City of Fort Collins
  - Kid's Starve your Trash Challenge and Re-Use Clothes (tie-dying and decals – bring old white shirts and socks to the Craft Tent

GREEN PRIZES.....



# Climate Wise – Dream Team

- Kathy Collier
- Deb Harris
- Wendy Serour
- Cate Ryan
- Kelsey Doan



# Fort Collins Climate Wise Program and Case Studies

## Business Environmental Program Series

**Kathy Collier, LEED AP**  
Climate Wise  
City of Fort Collins Natural Resources Dept

September 14, 2010

**Climate Wise, Business Smart.**





# Climate Wise: Business Outreach Program

## Promotes voluntary GHG reduction through

- Energy efficiency
- Waste reduction
- Water conservation
- Transportation reduction
- Employee encouragement and education

## Climate Wise provides

- Technical assistance
- Public recognition
- Peer networking opportunities
- Carbon quantification
- Cost savings...and much more!



Climate Wise, Business Smart.



# Climate Wise Partners\*

*More than 230 Businesses Strong*

Advanced Energy Industries, Inc.

Advanced Micro Devices, Inc.

AECOM

Aesthetic Smiles

Alliance Construction Solutions

AlphaGraphics

American Truck Wash

Anheuser-Busch, Inc.

Architecture Plus

Armstead Construction

A-Train Marketing Communications

Austin's American Grill

Avago Technologies

Bath Garden Center and Nursery

Be Local Northern Colorado

Beckman Coulter

Beet Street

Ben & Jerry's

Best Western University Inn

BHA Design Inc.

Big Al's Burgers and Dogs

Brinkman Partners

Butter Cream Cupcakery

Café Ardour

Cambon Studios

Carrabba's Italian Grill

Catalyst Coffee Cafe & Tap Room

Centers for Disease Control and Prevention

Chippers Lanes

Citron Work Spaces

City of Fort Collins

Clean Air Compost

Clean Air Lawn Care

Clean Bees Housekeeping

CLS Visual Communications

Colorado CustomWare Inc.

Colorado State University

Coloradoan

Columbine Health Systems

Comfort Inn

Compliance Partners

Coopersmith's Brewing Company

Core Financial

Cottonwood Condos

Courtyard by Marriott

Crossroads Safehouse

CTL | Thompson

Custom Blending, Inc.

Czero Inc.

Dako Colorado, Inc.

Dellenbach Motors

Delta Construction

Dohn Construction, Inc.

Drahota

Dream Theater Colorado

Dresser-Rand Enginuity

Eco-Thrift

Egg & I Restaurant

Energy Solutions Unlimited, LLC

EnviroFriendly Lawncare

Enzio's Italian Kitchen

European Motor Cars, Inc.

ExperiencePlus! Bicycle Tours

Faith Evangelical Free Church

Farnsworth Group

First United Methodist Church

Food Bank for Larimer County

Foothills Mall

Fort Collins Board of Realtors

Fort Collins Brewery

Fort Collins Chamber of Commerce

Fort Collins Club

Fort Collins Convention & Visitors Bureau

Fort Collins Digital Workshop

Fort Collins Downtown Business Association

Fort Collins Downtown Development

Authority

Fort Collins Food Co-Op

Fort Collins Marriott

Fort Collins Veterinary Emergency Hospital

Front Range Community College

Front Range Village

Fuhrman Landscaping, Inc.

Gallegos Sanitation Inc.

GenGreen LLC

Green Cartridge Colorado

Green Logic

Green Ride Colorado

Green Sweep Cleaning & Maintenance

**\*NOTE: Entire list not included**

# Partner Project Examples

**Some of the 969 efficiency projects completed in 2009**

## **Recycling/Waste Reduction**

- Start solid waste/recycling program
- Internal materials reuse program
- Use silverware instead of plastic
- Construction and demolition recycling
- Hold “Zero Waste” meetings and events

## **Energy Conservation**

- Upgrade to ENERGY STAR® appliances
- Lighting projects
- Cooling Tower
- Turn off computers/lights
- Efficient HVAC upgrade

## **Transportation**

- Alternative Transportation
- Hybrid vehicle use
- Trip optimization

## **Water Conservation**

- Xeriscaping
- Aerator replacement
- Sprinkler audit/optimization
- Indoor fixture replacement

**Climate Wise, Business Smart.**





# Cumulative savings through 2009

Since 2000, Climate Wise partners saved

- Nearly 5 billion gallons of water
- More than 369 million kWh of electricity
- More than 9.5 million therms of natural gas
- 110,200 tons diverted from the landfill
- Total cost savings among partners are nearly \$33 million

Climate Wise, Business Smart.





# Partner Project Examples

## New Mark Merrill Commercial Property Projects

- Installed water aerators and toilet tank banks.
- Reduced building water usage by 82,000 gallons
- Completed the first commercial hybrid deconstruction in Fort Collins; diverted 54% materials from the former Nate's Seafood Restaurant from the landfill
- Recycled 163 tons of concrete!

## Coopersmith's

- Repaired a major water leak identified by a Climate Wise assessment decreasing their water use by 3,127,680 gallons!



# Partner Project Examples (continued)

## Fort Collins Club Lighting Retrofit

- Retrofit in 2009 for 12,000 square foot area
- Received rebate with assistance from Fort Collins Utilities and PRPA
- New lighting is cooler and helps maintain HVAC levels
- Current cost savings = ~\$3500/month on utility bill



## Drahota

In 2008, estimating team set a goal to reduce the amount of paper used by 50%

- By 2009, they had reduced their paper consumption by 85% and saved \$68,000!



# **Business Case Studies**

## **Wal-Mart**

**Recycling efforts on a Grand Scale**

## **AECOM**

**Alternative Transportation Database for Employees**

## **The Brendle Group, Inc.**

**Zero Waste by 2010**

## **U.S. Forest Service**

**Green Team and Employee Engagement**



# **Wal-Mart Supercenter**

## **Before full recycling efforts**

**Basic cardboard recycling**





# Wal-Mart Supercenter

After full recycling efforts

and composting roll-offs

**During the first 3 months, 2008:**

- \* Organics (food, plants, etc) - 30 tons diverted
- \* Wood - 13 tons diverted and eventually mulched and composted
- \* Steel (broken shopping carts and such) - 1 ton diverted
- \* Commingled containers (plastic bottles, cans, etc.) - ½ ton diverted
- \* Office paper - 1.3 tons diverted
- \* Paperboard – 1.4 tons diverted

# Partner Project Examples

## Wal-Mart Supercenter – 2009 Projects

- Cut trash hauling costs in half, saving over \$20,000!
- Donated nearly 90,000 pounds of food to the Food Bank for Larimer County
- Other local charity donations include the Boys and Girls Club, Larimer County Humane Society, Fort Collins Cat Rescue, the Vineyard Church and the Filling Station.
- Combined efforts are estimated to have reduced or avoided about 5,000 tons of CO<sub>2</sub>e



Climate Wise, Business Smart.



# **Business Case Studies**

**AECOM**

**Alternative Transportation Database for Employees**

# Annual BBOP Program September 14, 2010



## What is BBOP?

- Bike, Bus Or Pool (Carpool, that is)
  - Born in 2005 (d.b.a. Retec)
  - Became ENSR/AECOM annual program in 2008
  - Originally lasted ~1 month; now takes place June - September

## BBOP – Purpose?

Getting from Point A to Point B by any means other than just you and your car

- Carpooling
- Bus, train
- Walking, biking, skateboarding, etc. – any human-powered mode

On and off the clock

# BBOP – Categories and Rules

- Categories
  - Human Powered Miles
  - Trips (work commute trips are doubled)
  - Total Miles
- Office Competition – Team Competition
- Exceptions:
  - Recreational Miles
  - “Typical” Trips
- Incentives?

# BBOP - Tracking

The screenshot shows a Microsoft Access application window titled "Main Switchboard - BBOP Score Tracker". The ribbon includes tabs for Home, Create, External Data, Database Tools, and Acrobat. The Home tab is active, showing groups for Views, Clipboard, Font, Rich Text, Records, Sort & Filter, Window, and Find. The main content area has a green background and contains the following elements:

- Hello! Hutchinson, Korey Fort Collins**
- A button labeled **That's not me!**
- A text box with the message: *Earn points for each trip you take. Plus DOUBLE your points for using alternate transportation for your daily commute to work!*
- BBOP Score Tracker**
- Data Entry**
  - ☐ Enter Your Points
  - ☐ Edit Employee Data
- Reporting**
  - ☐ Generate Reports
- Finished**
  - ☐ Close BBOP Score Tracker
- A banner at the bottom for **Sustainable ENSR | AECOM** with the tagline "Greening our work and our community".

The status bar at the bottom shows "Form View" and "Num Lock Filtered".



# BBOP – Trip Data

Enter Trip Data - BBOP Score Tracker

Home Create External Data Database Tools Acrobat

View Views Paste Clipboard Font Rich Text Refresh All New Save Delete Records Totals Spelling More Filter Sort & Filter Selection Advanced Toggle Filter Size to Fit Form Switch Windows Window Find Find

## Enter Trip Data

**STEP 1:** Enter Your Office

**STEP 2:** Find Your Name

**STEP 3:** Enter Your Points

Return to Main Page

**HELP TOPICS**

What's a Trip?

Bonus Points

Mode of Transportation:

Date:

Trips:

Total Miles for These Trips:

Was this your work commute?

Bicycle  
Walk  
Car/Van Pool  
Bus  
Tele Commute  
Rollerblade  
Skateboard  
Other - Human Powered  
Other - Not Human Power

Submit Data

Clear Form

**Data Editing**

Show Data for Employee

Hide Data for Employee

Foreign Key linking back to tblTranType Num Lock

# BBOP – Trip Data

Enter Trip Data - BBOP Score Tracker

Home Create External Data Database Tools Acrobat

View Paste Font Rich Text Refresh All New Save Delete Records Totals Spelling More Filter Advanced Selection Size to Fit Form Switch Windows Find

## Enter Trip Data

**STEP 1:** Enter Your Office

**STEP 2:** Find Your Name

**STEP 3:** Enter Your Points

Mode of Transportation:

Date:

Trips:

Total Miles for These Trips:

Was this your work commute?

Return to Main Page

Submit Data

Clear Form

**HELP TOPICS**

What's a Trip?

Bonus Points

**Data Editing**

Show Data for Employee

Hide Data for Employee

Date of Trip

Num Lock

# BBOP – Trip Data

Enter Trip Data - BBOP Score Tracker

Home Create External Data Database Tools Acrobat

View Paste Font Rich Text Refresh All New Save Delete Records Totals Spelling More Filter Selection Advanced Sort & Filter Size to Fit Form Switch Windows Find

**STEP 3: Enter Your Points**

Mode of Transportation:

Date:

Trips:

Total Miles for These Trips:

Was this your work commute?

Submit Data

Clear Form

Data Editing

Show Data for Employee

Hide Data for Employee

**STEP 4: Review and Edit data you already entered**  
You can Edit or Delete directly in the table below

Employee Name	Date	Transportation	Miles	Trips	Work Commute?
Hutchinson, Korey	9/9/2010	Bicycle	10.0	2	Yes
Hutchinson, Korey	9/8/2010	Tele Commute	65.0	1	No
Hutchinson, Korey	9/7/2010	Walk	3.0	2	No
Hutchinson, Korey	9/3/2010	Bicycle	3.5	2	No
Hutchinson, Korey	8/26/2010	Car/Van Pool	120.0	2	No
Hutchinson, Korey	8/24/2010	Skateboard	5.0	2	Yes
Hutchinson, Korey	8/23/2010	Other - Not Human Powered	8.0	2	No

Form View Num Lock

# BBOP – I Need Help

The screenshot shows a Microsoft Access form titled "frmHelp\_Leg - BBOP Score Tracker". The form has a title bar with standard Windows icons and a menu bar with "Home", "Create", "External Data", "Database Tools", and "Acrobat". Below the menu bar is a ribbon with various tool groups. The main content area of the form is titled "B-BOP HELP Trip Points" in green text. Below the title is a "Close" button. The form contains two columns of text, each with a question (Q:) and an answer (A:). The first column addresses how to count trips, and the second column addresses how to enter round trips. The status bar at the bottom indicates "Form View" and "Num Lock".

**B-BOP HELP Trip Points** Close

**Q: How do I count my trips?**

**A:** Count 1 trip for each "leg" of your trip. A typical commute to work counts as 1 trip.

Example 1: You ride your bike to the bus stop and then ride the bus to work, that would be 2 Trips on your way to work. If you did the same thing on the way home it would be another 2 Trips.

Example 2: You ride your bike all the way home instead of taking the bus, it would be 1 Trip.

**Q: Do I enter round trips in the same entry?**

**A:** It's your choice. The B-BOP Score tracker will track your score both ways.

Example 1: You ride your bike to work and home. It's easiest to make one entry -- in this case: 2 Trips. Enter your round trip miles.

Example 2: You ride your bike to work but carpool home with your spouse. Make one entry for your bike trip and one entry for your carpool trip (this would be 1 Trip each) and the one way mileage for each.

The screenshot shows a Microsoft Access form titled "frmHelp\_WorkTrips - BBOP Score Tracker". The form has a title bar with standard Windows icons and a menu bar with "Home", "Create", "External Data", "Database Tools", and "Acrobat". Below the menu bar is a ribbon with various tool groups. The main content area of the form is titled "B-BOP HELP Work Commute Bonus" in green text. Below the title is a "Close" button. The form contains three columns of text, each with a question (Q:) and an answer (A:). The first column addresses what kind of trips count for Work Commute Bonus Points, the second column addresses whether to double trip points, and the third column addresses how many Work Commute Points can be earned per day. The status bar at the bottom indicates "Form View" and "Num Lock".

**B-BOP HELP Work Commute Bonus** Close

**Q: What kind of trips count for Work Commute Bonus Points?**

**A:** Your daily commute to and from work. If you are traveling, you can take credit for your commute to and from the job site/office (provided you used alternative transportation).

**Q: Do I double my Trip Points when I enter them?**

**A:** NO! Just enter the actual number of trips and be sure select "Yes" under the "Work Commute." The B-BOP Score Tracker will take care of the rest.

**Q: How many Work Commute Points can I earn per day?**

**A:** You can only take credit for a maximum of 2 Work Commutes per day (that's one round-trip from home to work).



# BBOP – Main Tracking Menu

The screenshot shows the 'Main Switchboard - BBOP Score Tracker' application window. The interface has a green background and a blue header bar with tabs: Home, Create, External Data, Database Tools, and Acrobat. The Home tab is active, displaying a ribbon with various tool groups: View, Clipboard, Font, Rich Text, Records, Sort & Filter, Window, and Find. The main content area is divided into several sections:

- Hello! Hutchinson, Korey Fort Collins**: A personalized greeting box with a button that says 'That's not me!'.
- BBOP Score Tracker**: The main title of the application.
- Data Entry**: A section with two buttons: 'Enter Your Points' and 'Edit Employee Data'.
- Reporting**: A section with one button: 'Generate Reports'.
- Finished**: A section with one button: 'Close BBOP Score Tracker'.
- Footer**: A banner for 'Sustainable ENSR | AECOM' with the tagline 'Greening our work and our community'.

The status bar at the bottom indicates 'Form View' and 'Num Lock Filtered'.

frmReports - BBOP Score Tracker

Home Create External Data Database Tools Acrobat

View Paste Font Rich Text Refresh All New Save Delete Records Totals Spelling More

Filter Advanced Toggle Filter Sort & Filter Size to Fit Form Switch Windows Window Find Find

## View Reports

**STEP 1:** Select office/employee for reports:

Office

Employee Name

**STEP 2:** Select report to view:

**Individual Totals**

- ☐ By Mileage
- ☐ By Trips
- ☐ Human Powered Miles
- ☐ Details for Employee

[Return to Main Page](#)

Form View Num Lock

### 2009 BBOP Individual Totals (Top Trips) For Fort Collins

Employee	Total Trips (With Bonus)	Total Trips (Actual)	Total Miles
Daqqett, Rollin	248	152	789
Munson, Kim	231	129	647.5
Hurshman, Jeremy	231	163	1076.45
Scheetz, Vincent	216	128	669
Bock, Bill	187	120	245
Petter, David	155	85	652
Taylor, Courtney	140	92	482
Blannan, Doug	128	74	1077.5
Bopray, Doug	112	56	280
Lawless, Steve	100	50	544
Bothun, Rikka	72	38	315
Bass, Brian	46	30	251.4
matern, Alison	44	40	377.5
Dufresne, Dorlee	20	10	30
Clem, Patrick	16	8	166
Moreland, April	16	10	67.11
Idler, Ruth	14	8	30
Trzinski, Elliot	14	8	36



# BBOP - Reports

## 2009 BBOP Individual Totals (Top Miles) For Fort Collins

Employee	Total Miles	Total Trips (Actual)	Total Trips (With Bonus)
Brannan, Doug	1077.5	74	128
Hurshman, Jeremy	1076.45	163	231
Daggett, Rollin	789	152	248
Paulson, Jim	720.9	11	11
Scheetz, Vincent	669	128	216
Petler, David	652	85	155
Munson, Kim	647.5	129	231
Lawless, Steve	522	48	96
Taylor, Courtney	482	92	140
mattem, Alison	377.5	40	44
Bothun, Rikka	315	38	72
Bopray, Doug	280	56	112
Bass, Brian	251.4	30	46
Bock, Bill	245	120	187
Clem, Patrick	166	8	16
Moreland, April	67.11	10	16
Trzdinski, Elliot	36	8	14
Dufresne, Dorice	30	10	20





# BBOP - Reports

## 2009 BBOP Individual Scores Human Powered Mileage For Fort Collins

Employee Name	Total Human Powered Miles
Daqqett, Rollin	789
Scheetz, Vincent	669
Munson, Kim	647.5
Lawless, Steve	522
Taylor, Courtney	324.5
Brannan, Doug	295.5
Fetter, David	282
Bopray, Doug	280
Bock, Bill	245
mattem, Allison	227.5
Hurshman, Jeremy	199.75
Bass, Brian	128.4
Bothun, Rikka	57
Trzinski, Elliot	36
Clem, Patrick	36
Dufresne, Dorée	30
Idler, Ruth	30
Thoenes, Jason	25
Moreland, April	22.11
Paulson, Jim	1



# BBOP - Reports

## 2009 BBOP Individual Total and Scores

Brannan, Doug

Date:	Transportation:	Miles:	Trips:	Work Commute?
6/30/2010	Bicycle	11.0	2	<input checked="" type="checkbox"/>
7/15/2010	Bicycle	11.0	2	<input checked="" type="checkbox"/>
7/14/2010	Bicycle	11.0	2	<input checked="" type="checkbox"/>
7/13/2010	Bicycle	11.0	2	<input checked="" type="checkbox"/>
7/22/2010	Bicycle	11.0	2	<input checked="" type="checkbox"/>
7/12/2010	Bicycle	11.0	2	<input checked="" type="checkbox"/>
7/3/2010	Car/Van Pool	120.0	2	<input type="checkbox"/>
6/24/2010	Bicycle	11.0	2	<input checked="" type="checkbox"/>
6/23/2010	Bicycle	11.0	2	<input checked="" type="checkbox"/>
6/29/2010	Bicycle	11.0	2	<input checked="" type="checkbox"/>
7/18/2010	Car/Van Pool	95.0	1	<input type="checkbox"/>
7/1/2010	Bicycle	4.0	2	<input type="checkbox"/>
7/1/2010	Bicycle	11.0	2	<input checked="" type="checkbox"/>
7/2/2010	Bicycle	11.0	2	<input checked="" type="checkbox"/>
6/23/2010	Bicycle	1.0	2	<input type="checkbox"/>
6/23/2010	Bicycle	1.0	2	<input checked="" type="checkbox"/>
6/21/2010	Bicycle	11.0	2	<input checked="" type="checkbox"/>
6/22/2010	Car/Van Pool	130.0	2	<input checked="" type="checkbox"/>
6/28/2010	Bicycle	11.0	2	<input checked="" type="checkbox"/>



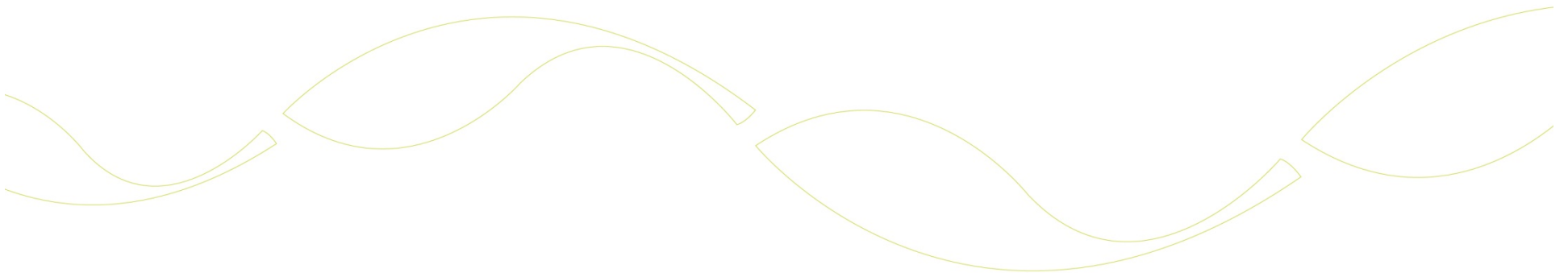
# **Business Case Studies**

**The Brendle Group, Inc.**  
**Zero Waste by 2010**



brendle GROUP

*Engineering Sustainable Change*



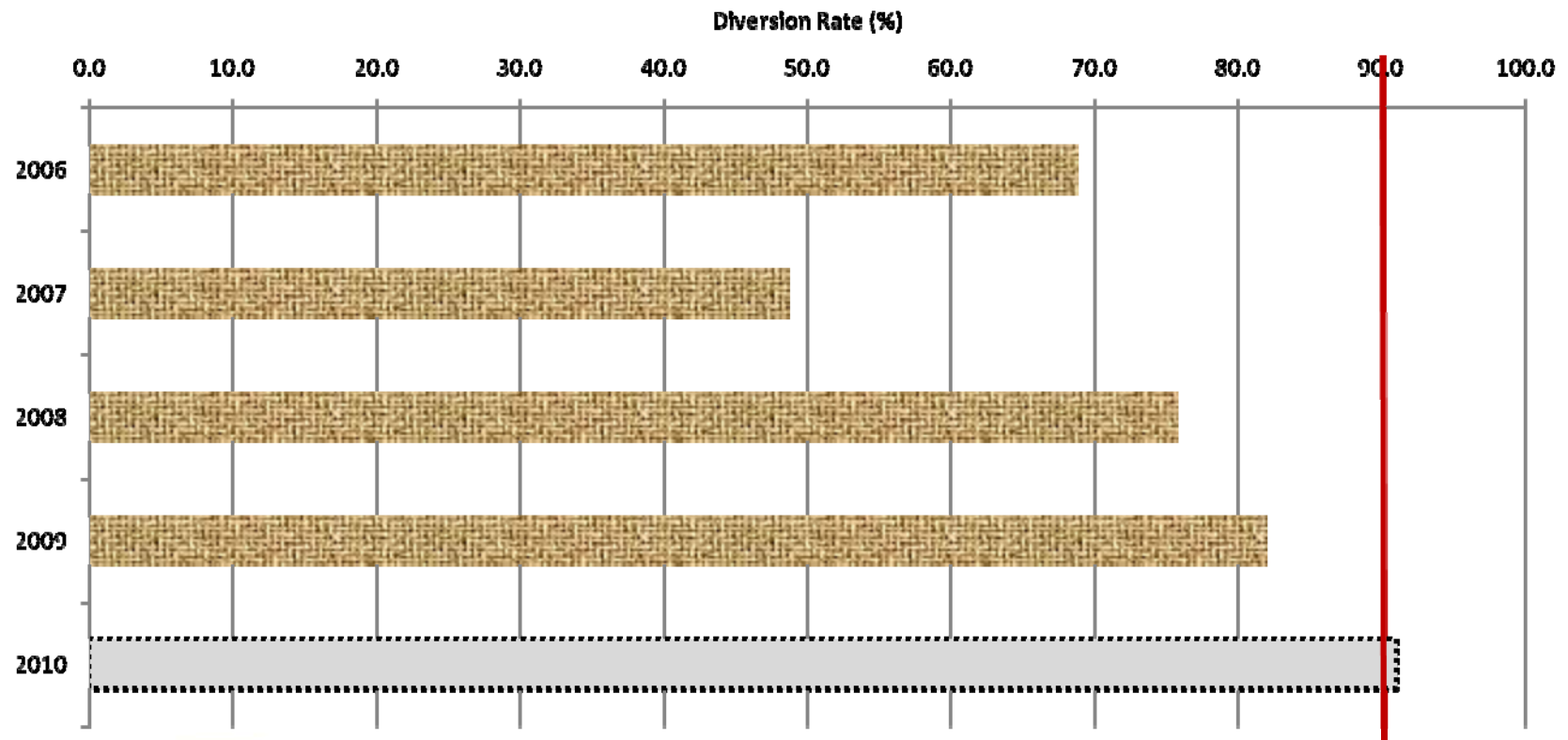


# Zero Waste Goals and Progress

- 2005 Goal: Be certified Zero-Waste by 2010
  - Achieved 90% diversion
  - Registered for zero-waste certification with Zero Waste International Alliance ([www.zwia.org](http://www.zwia.org))



# Progress Tracking



# What Brendle Group Recycles



Engineering Sustainable Change



# What Brendle Group Re-uses



Engineering Sustainable Change



# What Brendle Group Composts

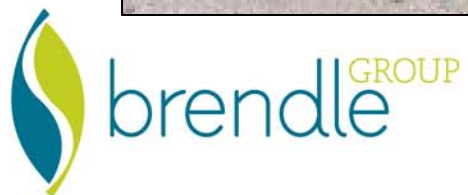
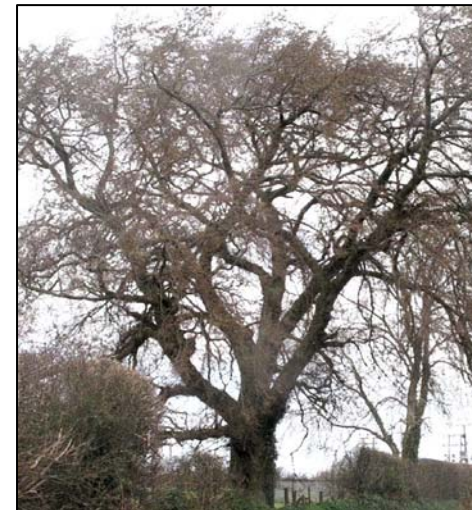


# Diversion at Our New Building



Engineering Sustainable Change

But Really,



Engineering Sustainable Change





brendle<sup>GROUP</sup>

*Engineering Sustainable Change*

970.207.0058 P

970.207.0059 F

226 S. Remington St., No.3  
Fort Collins, CO 80524

[www.brendlegroup.com](http://www.brendlegroup.com)



# **Business Case Studies**

**USDA Natural Resources  
Research Center, Building A  
Green Team and Employee Engagement**

# NRRC-A Green Team Working together to make Bldg. A Greener!

- [Home](#)
- [About](#)
- [Suggestion Box](#)

1 Sep

## About

Posted by Matt.



### NRRC Building A

The NRRC Building A Green Team is a group of U.S. Department of Agriculture employees dedicated to lowering the ecological impact of operations within their workplace. Building A is one of five buildings within the Natural Resource Research Center (NRRC), a campus in Fort Collins, Colorado housing the U.S. Forest Service, Animal and Plant Health Inspection Service, Natural Resource Research Service, Agricultural Research Service, U.S. Geological Survey and headquarters of the Arapaho and Roosevelt National Forest and Pawnee National Grassland.

The Building A Green Team is dedicated to lead by example, promoting the pragmatic implementation of sustainable principles and fostering operations that reduce our building's and campus' environmental footprint. These efforts include water conservation, energy conservation, renewable energy advocacy, waste prevention, recycling, green purchasing and reducing transportation impacts.

We interact with other “place-based” green teams in the NRRC, adjacent CSU campuses and throughout Fort Collins on the issues that are meaningful to all of us. Through this website, we hope to encourage dialog with and linkages to other agency green team efforts.



### The Green Team

We hope you will find information of use to you and your own community here, however small or large. We likewise welcome your questions, suggestions and comments so our collective efforts will have a positive impact on our world and lives.

### Categories

### Recent Posts

- [Revolving Doors](#)
- [Sustainable Living Fair](#)
- [Welcome!](#)
- [Climate Wise Fall Fair](#)
- [2010 Harvest Festival](#)

# Thank you!

**City of Fort Collins Climate Wise program**

221-6600

climatewise@fcgov.com

[www.fcgov.com/climatewise](http://www.fcgov.com/climatewise)





# Bringing New Life: Sustainability & Beyond



Brian Dunbar, Executive Director

Josie Plaut, Director of Projects

Business Environmental Program Series

September 14, 2010

INSTITUTE *for the* BUILT ENVIRONMENT

**Colorado State University**

COLLEGE OF APPLIED HUMAN SCIENCES

# INSTITUTE *for the* BUILT ENVIRONMENT

## Colorado State University

COLLEGE OF APPLIED HUMAN SCIENCES



# Green Buildings

- Energy efficiency
- Water savings
- High performance lighting
- Improved indoor air quality
- Temperature control
- Emissions reductions
- Reduced Construction Waste



Fossil Ridge High School, Fort Collins, CO

For the past 12 years, the focus has been on improving the table manners of the cannibal, instead of changing the practice of cannibalism. We need to recognize that we have been eating ourselves and continuing to do so, even in smaller and more efficient bites..... is nothing less than insanity.

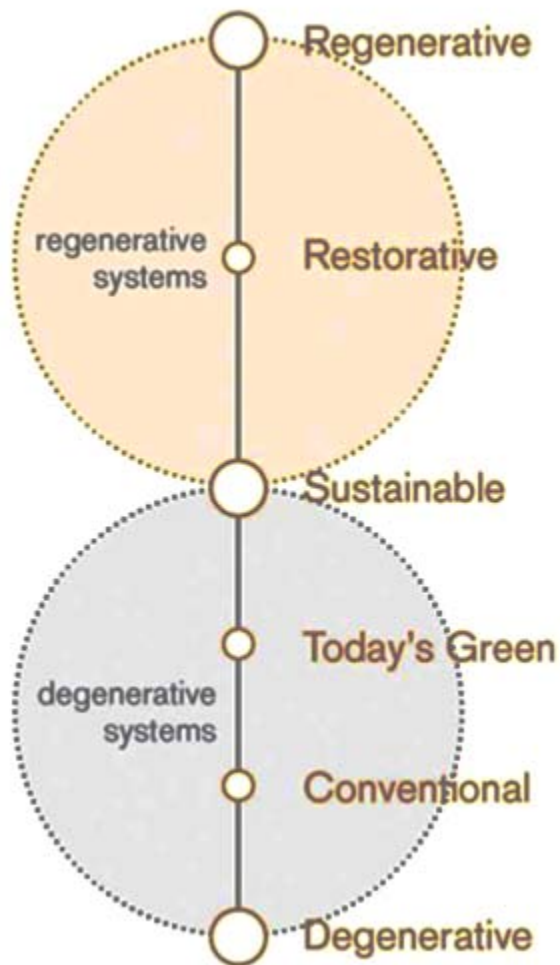
Chrisna du Plessis

The Day After Tomorrow: New Perspectives  
on Sustainable Building





# Beyond Sustainable



## Regenerate

To give new life, strength, or vigor

## Sustain

To keep from failing; to maintain

## Degenerate

Having declined in worth

Imagine buildings that make oxygen, sequester carbon, produce food, distil water, provide habitat for various species, accrue solar energy as fuel, build soil, change with the seasons and are beautiful..... just like fruit trees.

W. McDonough



# A tree is not sustainable.

“By looking at just the building project, and not the larger whole, you are inherently promoting non-sustainability.”

Tim O’Riordan UK  
Sustainable Development Commission



So what would  
beyond green  
mean?





# Children's Village at Cheyenne Botanic Gardens, WY



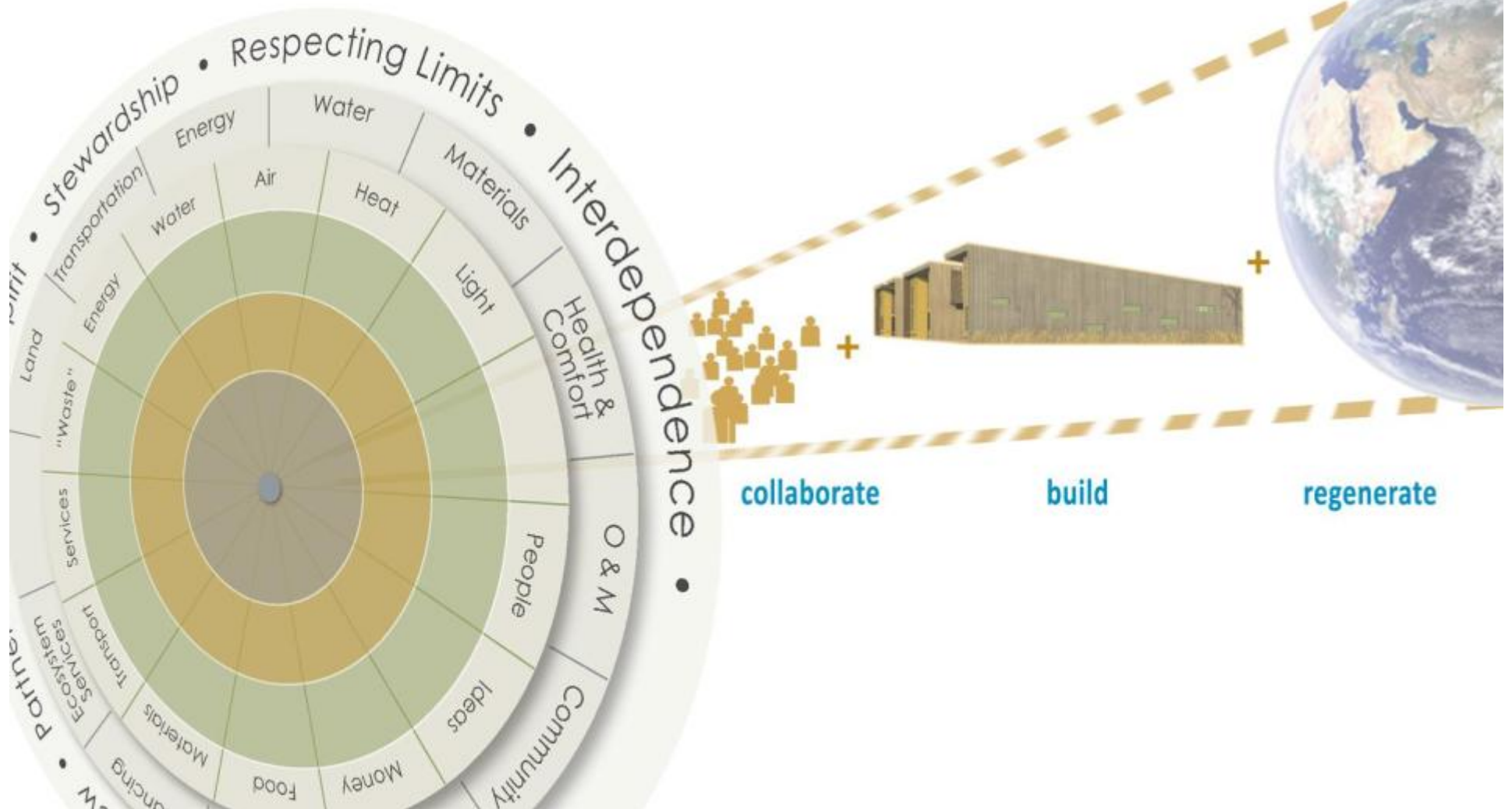
Photo: Paul Brokering

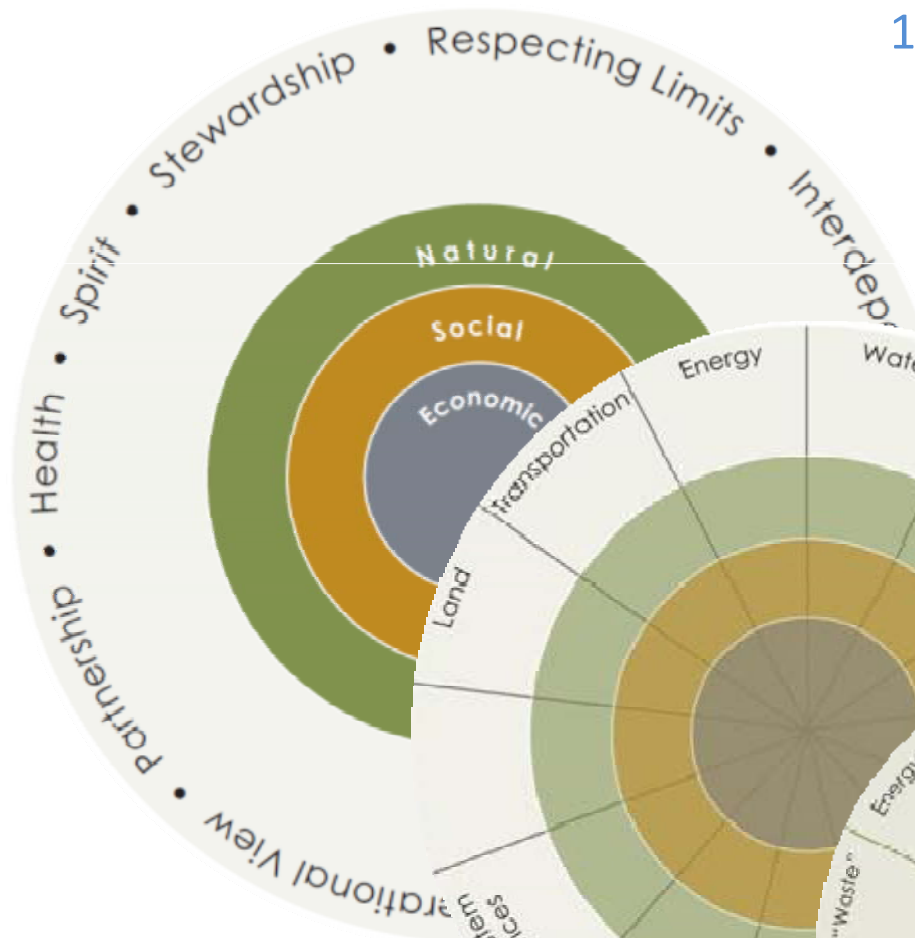


Living  
Environments in  
Natural,  
Social &  
Economic  
Systems



# How does it work?





## 1. Foundation Lens

Build capacity, shared understanding and commitment around guiding principles and integrated bottom line

## 3. Flows Lens

Comprehensive assessment of site and region over time + relationship between items

## 2. Aspects of Place

Defines degenerative, sustainable and regenerative practices in each aspect



# Brainstorming & Heart-Warming Charrette

## Laurel & College Court: Regenerate the Place!

**Key Question:** How would you bring new life to this place and to the community?

- Natural
- Social
- Economic



Looking North





Looking South





Looking East





# Looking West





# Center



# Brainstorming & Heart-Warming Charrette

## Laurel & College Court: Regenerate the Place!

**Key Question:** How would you bring new life to this place and to the community? (Natural, Social & Economic)

Close your eyes &  
imagine a favorite  
public space.....





# Brainstorming & Heart-Warming Charrette

## Laurel & College Court: Regenerate the Place!

**Key Question:** How would you bring new life to this place and to the community? (Natural, Social & Economic)

### Step 1: Introduce

- Name + one favorite public space

### Step 2: Create

- Which people/organizations could be involved?
- Use LENSES to spark consideration of all aspects of this place
- Brainstorm as many regenerative ideas as you can

### Step 3: Share

- Present best ideas 2min/group





The future is always  
beginning...*now*.

Mark Strand



# Thank You!



Brian Dunbar, Executive Director

Josie Plaut, Director of Projects

[ibe.colostate.edu](http://ibe.colostate.edu)

970.491.5665

INSTITUTE *for the* BUILT ENVIRONMENT

**Colorado State University**

COLLEGE OF APPLIED HUMAN SCIENCES

So what is **green**  
anyway?



## Hunts Point Park, Bronx, NY



Photo: Majora Carter Group





***“Bacon Elementary is a building that teaches. Real time energy use is displayed as well as exposed structural and mechanical systems. An array of building products made from recycled materials are used throughout the building.”***

*George Breilig  
RB+B Architects*