

Beyond the Bin: Resource Conservation Management

- ▶ Recycle, Repurpose and Composting
- ▶ Sourcing – C&D, Cardboard, etc.
- ▶ Starve Your Trash Challenges and Audits
- ▶ Zero-Waste Events
- ▶ Local Resources

Dr. Rosemarie Russo
Sustainability Coordinator
City of Fort Collins
rrusso@fcgov.com



Data Analyses

Trash volumes decreasing:

2007 = 215,689 tons

2008 = 174,920 tons

2009 = 145,260 tons

Recycling volumes increasing:

2007 = 16,157 tons

2008 = 17,618 tons

2009 = 16,795 tons



Data Analyses

Commercial – 75% of trash volume

Residential – 25% of trash volume

38% - Fort Collins' community diversion rate

15% - state diversion rate

Lowest tipping fees in nation

\$70 ton – Vermont

\$17 ton – Colorado

Arid climate makes it difficult for methane capture.

Methane is 21X more powerful than carbon dioxide.

Waste Reduction & Recycling

Economically Valuable

- Recycling our waste materials creates 8-10 times as many jobs and income than it does to bury it in landfills in CO
- Bottles, cans, paper, cardboard have value as commodities.



Environmental Responsibility

- Less waste and more recycling means fewer landfills, which helps preserve land and avoids new costs for building landfills \$\$\$
- Uses fewer “virgin” natural resources such as minerals (bauxite, iron ore) and trees to make products we consume
- Using recycled materials takes less energy and water when products are manufactured

Recycling = Local Jobs and Revenue

- ▣ Land filling = 1 job
- ▣ Recycling Processing = 10 jobs
- ▣ Recycling based manufacturing = 25 jobs



Colorado Iron & Metal, Fort Collins

GHG Science Translation

Material (50 metric tons)	CO2e Avoided
Aluminum	829 metric tons
Commingled	166 metric tons
Cardboard	143 metric tons
Glass	15 metric tons
Organics	11 metric tons

Trends & Goals

- ▶ Green/environmentally aware events and planning increasing common
- ▶ Carbon neutrality
- ▶ Sustainable
- ▶ Zero Waste
- ▶ Environmentally aware
- ▶ Most trade and professional organizations have developed sustainable meetings guides



Step Up Your Recycling

- ▶ Starve Your Trash
- ▶ Broker large volume directly (paper mills)
- ▶ Fort Collin' Municipal Operations earned \$79,000 in 2009 for metals (consolidate).
- ▶ Use company that provides rebate for high quality material.
- ▶ Performance based contracting.

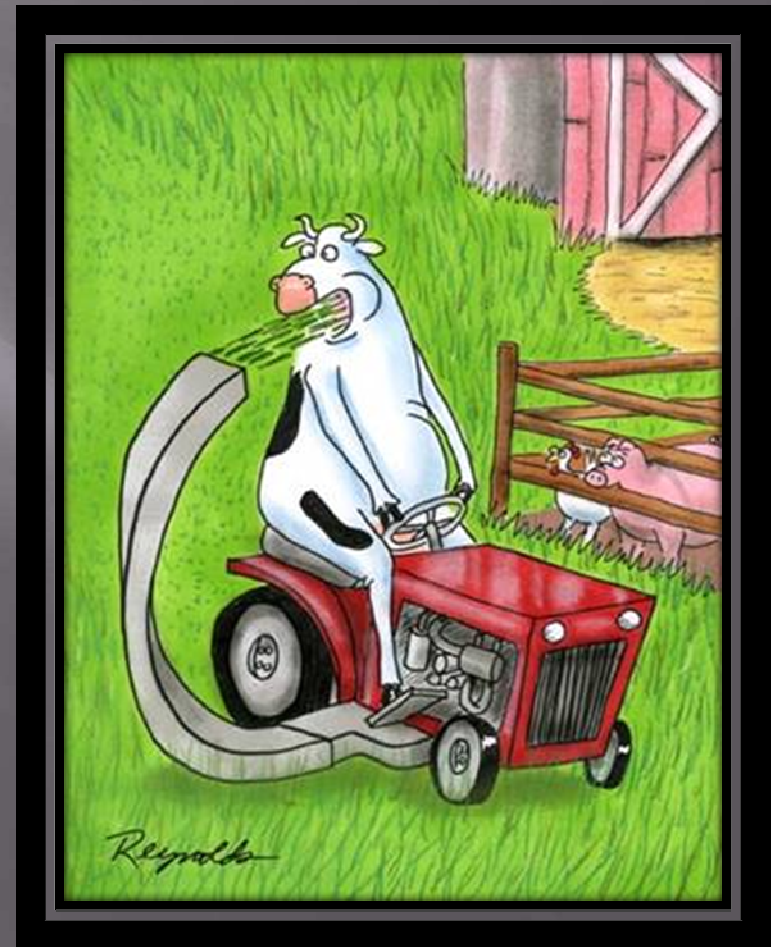


HOT Markets

- Pallets - Contact National Recycling, the vendor that manages the Drop-Off Center - john@nat-recycling.com
- Cardboard - \$17 tons to \$125 tons this year
- Aluminum - \$564. bale

Re-Use

- Morning Fresh – reuses bottles and collects caps. Contributes profits to PSD.
- Paper can be donated to a daycare for an extra use before recycling or used for scratch purposes .
- Grainger – containers that can be used for transporting (repeat supplies).
- Green Cartridge - Marshall Barton: 223-0489



Beyond \$\$\$\$

- PSD's records show that schools have between 7-71% of kids of free or reduced lunch.
- Webber went from 5-25% this year.
- Pick a vendor that contributes to the social or environmental fabric of the community.
- Cartridges - Access has a list of charities. Safe house is a local organization that you can select or Cartridges for Kids.

Junk Mail – Did You Know?

- The average person gets only 1.5 personal letters each week, compared to 10.8 pieces of junk mail.
- Each person will receive almost 560 pieces of junk mail this year.
- Approximately 40% of the solid mass that makes up our landfills is paper and paperboard waste.
- 100 million trees are chopped down each year to produce junk mail.
- Your name is typically worth 3 to 20 cents each time it is sold.

Hand-Out Back Table

- The DoNotMail service will use the data and create a PDF document with 17 letters to print and send to companies.
- Contact [Opt-Out Prescreen](#) online or at 1-888-567-8688 (888-5-OPT-OUT) from your home telephone . (Credit cards)
- Email your removal request to Abacus Direct at optout@abacus-us.com (Catalogs)
- Remove your name from ADVO Inc., by calling 1-888-241-6760, or completing the form at advo.com/consumersupport.html
- Fill out the form on the Direct Marketing Association's website at dmaconsumers.org/cgi/offmailing
- Email your removal request to Publishers Clearinghouse at privacychoices@pchmail.com
- Get off Val-Pak's list by filing out the form at coxtarget.com/mailexpression/s/DisplayMailSuppressionForm

Source Reduction

- ▶ Use software - Green Print and PDF
- ▶ Scan documents - Don't make copies
- ▶ Implement duplex on all computers
- ▶ Ensure new equipment supports duplexing: .
Go to file; "Printing Preferences"; choose
"Duplex" or "Left binding".
- ▶ Buy in bulk (Food Coop)
- ▶ Combine supplies/pick-up - milk and CSA's
- ▶ Buy compostables or use regular dishes

EPP Purchasing

- ▶ Energy Efficient Appliances (ECAP)
- ▶ Designed for reusability and less waste
- ▶ Carpet (Interface)
- ▶ Standard for minimum recycled content
 - 30% post-consumer recycled content

Environmentally Preferable Products

- ▶ Rapidly renewable – bamboo vs. wood
- ▶ Certified wood products
- ▶ Beetle kill wood
- ▶ Reduced toxicity material
 - Low mercury lighting
 - Low VOC paint
- ▶ Local materials (sourced within 500 miles)



Substitute Styrofoam

- ▶ Styrofoam = polystyrene
- ▶ Environmental impacts from production (styrene, benzene, ethylene exposure)
- ▶ Disposal difficulties
 - 500 years to decompose
 - 25 million foam cups disposed each yr
 - PS technically recyclable -limited option



Waste Not

- Convert cardboard into animal bedding which lowers transportation footprint because it is used locally.
- Creates local jobs .
- Serves the needs of CSU Vet hospital .
- Great for packaging too, especially if the packaging material needs to be absorbent. waste-not.com/bedder.htm

669-9912

Construction & Deconstruction

Street Crushing Operations

1380 Hoffman Mill Road

482-1249

fcgov.com/crushing

M-F (7:30 - 4pm)

2009 – Streets recycled over 100,000 tons of asphalt, concrete and porcelain. In doing so, we avoided 90,000 metric tons of CO₂e and yielding \$313,000 in savings.

Construction & Deconstruction

- Brick/Cinder Block – Mendoza Used Bricks
mendozaservices.com
- Carpet/ Building Material - Re Source
498-9663
- Clean Wood /Landscape Material – A-1
Organics a1organics.com
- Plumbing/Heating Supply – ReSource
- Scrap Metal – Colorado Iron and Metal
482-7707 and Aragon 484-2577

C & D

- Reduced waste fees and tax breaks from the donation of materials to a non-profit.
- Produces affordable building material and jobs for the community.
- Keeps historical material in the community.

E-waste

- Ecothrift – 484-4224
- Local Haulers
- Best Buy
 - Free for cartridges, rechargeable batteries, CDs/DVDs and gift cards kiosks
 - Tech Trade – In – Used electronics
 - TV/ Appliance Haul Away if you buy a replacement

Textiles

- Larimer County Boys and Girls
- Ecothrifit
- Usagain- shares a portion of its profits with site parking lot participants.
- For the 5.4 billion people living on less than \$10 per day, used clothing is the only option.
- 1 lb clothes = 7 lbs of CO₂e
- Export clothes to struggling countries to generate revenue and create green jobs in the US and abroad

Closing the LOOP

- Buy alternative gifts – “green energy” - \$10 month above basic bill rate
- Buy products from local vendors made of recycled material:
 - Buy fashionable bags from On Belay Gear, a Fort Collins company that sells outdoor customizable messenger bags that (Each bag is made from canvas, retired climbing gear and other locally sources recycled material.) onBelayGear.com
 - Try an ecosak for your children or teen’s room. (The covers are created from organic cotton and recycled soda bottles and the fillings are buckwheat hulls and shredded recycled foam.) ecosak.com
- Support Feeding the Families – Happy Heart Farm
- Aveda products are made from recycled lids.

Zero-Waste Event Plan and Goal



Develop:

- Rough menu
- How food will be catered, transported and served
- Types of waste generated and how it will be handled (trash, recyclables, compostable)
- Approximate budget
- Measure of success

Food Waste Recyclers

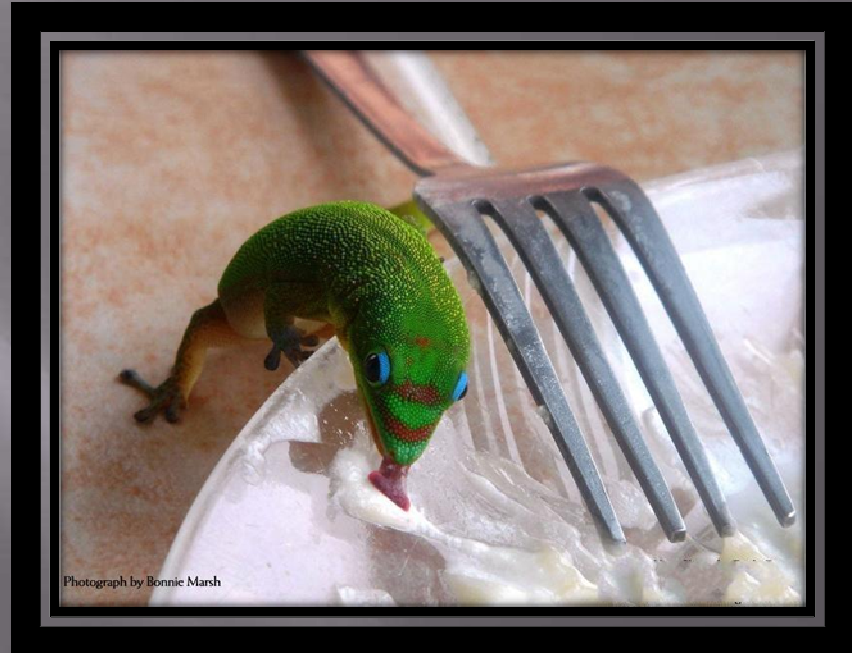
Restaurant collection offered:

Clean Air Composting
(970) 566-3524

Gallegos Sanitation, Inc.
(970) 484-5556

Waste-Not Recycling
(970) 669-9912

Materials go to compost facilities in
Platteville, Eaton



Process/Contacts

What are inputs, outputs and gaps ?

- ▶ Garbage Busters – John Anderson
 - ▶ Event Suppliers – Green Logic
 - ▶ Event Planning – John Long (Zero-Hero)
 - Waste Vegetable Oil – Ecothrifit or Bioxchange –
www.recycOil.com (303) 544-1500
 - Green Stream – greenstreamwaste.com or 203-4749
- Consultants

Colorado Recycling Services

- ❑ CRS is a company dedicated to reclaiming hard-to-recycle items and materials from both business and residential communities.
- ❑ Currently, CRS is Colorado's exclusive outlet for reclamation of post consumer carpeting and used mattresses.

Recycling City Operations

- ❑ 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



2010 Cool Steps – ARRA Funding



- Purchased Big Belly Solar compactors for Rolland Moore Park and Oak Street Plaza.
- Piloting an Earth Tub composting system - \$10,000 (cost) at 200 LaPorte (old Creamery)
- 3 yards capacity; 40-150 lb./day of food waste. 3-6 week process to make compost.
- Austin's is contributing kitchen food waste and Streets organics.
- Collection by Rob's Bike Courier Service

Separate Glass for Better Recycling

Regional effort for more glass collected separately from other bottles/cans at special drop-off locations

Fort Collins

- Rivendell Recycling Center, 1702 Riverside
- Chipper's Bowling Alley Mason/Horsetooth
- Larimer County Landfill, 5887 S. Taft Hill Rd.



Economic Environmental & Value of Glass Recycling

- Uses fewer “virgin” materials (soda ash, limestone, sand), less shipping
- Cullet melts at lower temperatures, so furnaces require less energy
- Amber glass is about \$50/ton (price static for 10 years or more)
- Diverting waste from landfill disposal creates more jobs
- Single-stream recycling damages glass; only 30% gets recycled.

Elevate your BOTTLE Karma

30% KARMA
DUE TO BREAKING AND CONTAMINATION, ONLY 30% OF GLASS WILL SEE NEW LIFE WHEN CO-MINGLED WITH OTHER RECYCLABLES

100% KARMA
WHEN PLACED IN THE GLASS ONLY YELLOW BINS, 100% OF THE GLASS WILL TAKE NEW FORM.

WHAT'S YOUR BEER BOTTLE KARMA?

VISIT THE YELLOW GLASS-ONLY RECYCLING BINS LOCATED AT RIVERSIDE AND CHIPPERS SOUTH

City of Fort Collins

Glass Recycling Project

- 14 restaurants & bars in Old Town
- Rob's Bike Courier Service (970) 231-6794
- Collected in 65-gal carts, goes to New Belgium Brewery
- 100+ tons of glass/year and still going strong!



But I'm so comfortable...



Leaders disturb the comfortable...



lines

RECYCLING GUIDE



SINGLE-STREAM RECYCLING

WHAT YOU CAN MIX IN ONE CONTAINER AT THE CURB OR TAKE TO RECYCLE CENTERS.

- **GLASS BOTTLES & JARS:** Rinse, remove lids, labels okay (no plate glass, drinking glasses, light bulbs or ceramics).
- **PAPERBOARD:** Non-corrugated boxes like cereal boxes, egg cartons, greeting cards, manila folders, mailing tubes, wrapping/tissue paper, etc.
- **PAPER:** Office paper, junk mail, envelopes, letters, postcards, paper bags, reports, brochures, magazines, catalogs, newspapers with inserts and phone books (no dark or fluorescent colored office paper or colored sticky notes).
- **CARDBOARD:** Flatten and cut/fold down to under 2 feet, clean pizza boxes only.
- **ACCEPTABLE PLASTICS:** Any #1-7 container (except those listed under unacceptable plastics).
 - Narrow-necked bottles and caps
 - Wide-mouth containers (butter and cottage cheese tubs)
 - Yogurt containers
 - Clear clamshells (deli/bakery sandwich or cookie/strawberry containers)
 - Personal care/prescription bottles
 - Pails (under 5-gallon size ONLY)
 - Flower and garden pots
 - Nalgene bottles



PUT THESE PAPER ITEMS IN THE TRASH

- Tissues
- Paper towels & napkins
- Photographs
- Waxed paper or waxed cardboard (juice boxes)
- Pet food bags
- Charcoal bags
- Foil or plastic-lin
- Carbon paper

UNACCEPTABLE ITEMS

And other items



WHAT WITH T

- Frozen entrée microwave trays . . . Put in trash
- Food trays or party platters, even if stamped with #1-7 Reuse or put in trash
- Shrink wrap or plastic wrap Put in trash
- Plastic bags Reuse or recycle at groc
- Automotive chemical containers, including motor oil and antifreeze bottles Triple rinse and put in tr
- Pesticide containers Triple rinse and put in tr
- Styrofoam containers Put in trash
- Compostable bottles or cups marked #7 "compostable" Put in trash or "hot" cor
- Paper plates Put in trash or "hot" cor



HOW to Recycle Other Things

If your items are still in good working order and someone else could use them, consider donating them to charities and thrift stores like Habitat for Humanity, Goodwill or Eco-Thrift. Clean textiles can be donated at drop-off boxes around town or at charities.

For more options, visit the City's recycling webpage: fcgov.com/recycling/centers.php, or call 970-221-6600.

Visit the City's Recycling Drop-off Facility at 1702 Riverside Ave.



E-WASTE (ELECTRONIC EQUIPMENT)

TVs, computers, stereos, DVDs, VCRs, video cameras, phones, video games, fax and copy machines are prohibited from the trash. Please take them to:

- Eco-Thrift. 970-484-4224
 - Larimer County Recycling Center 970-226-1101
 - Access Computer Products 970-612-2930
 - Goodwill Industries 970-223-1042
- Or call your trash hauler to arrange for special pick up.



NON-WORKING APPLIANCES

- Eco-Thrift 970-484-4224
- Colorado Iron and Metal 970-482-7707
- Aragon Iron and Metal 970-484-2577

If you are upgrading to an Energy Star appliance, check out the Fort Collins Utilities appliance rebate programs. Contact 970-221-6700, or fcgov.com/conservation/res-index.php. For refrigerator rebate program: fcgov.com/conservation/res-frige.php



HOUSEHOLD HAZARDOUS WASTE

Things like pesticides, paint, paint thinners, cleaning supplies, motor oil, etc. go to the **Household Hazardous Waste Center at the Larimer County Landfill**.

Also, take advantage of the Drop and Swap Shop —leave or take low-toxicity products— for free.

For more information, call 970-498-5771, or visit larimer.org/solidwaste/haz.htm



ORGANIC WASTE

The City of Fort Collins Recycle Center **DOES NOT accept** yard waste, such as tree branches, grass or garden waste.

- Hageman's EarthCycle 970-221-7173 (yard)
- Clean Air Compost. 970-482-1249
- Gallegos Sanitation 970-484-5556
- Weitzel's 970-482-4983



CFL LIGHTBULBS

- Clay's Ace Hardware
- Downtown Ace Hardware
- Drake Hardware & Lumber
- The Light Center
- Home Depot
- Lowes

Larimer County Landfill · 970-498-5760
www.larimer.org/solidwaste/landfill.htm



PHARMACEUTICALS

- Good Day Pharmacies
- Household Hazardous Waste Center at the Larimer County

Chunk Styrofoam is NOT recyclable in Fort Collins. But you can recycle peanuts and bubble wrap by donating them to pack & ship businesses.



USED BUILDING MATERIALS

ReSource 970-498-9663
Donate or buy used building materials
Also a drop-off site for toilet recycling



ASPHALT, CONCRETE, TOILETS & FILL DIRT

The City will accept these items for free—make sure they are clean and free of branches, trash and organic matter.

- City Streets Department 970-482-1249
Hoffman Mill Road



Challenge Prep & Tracking

1. Set printer default for non-color copies and print double-sided.
2. Conduct a garbage volume evaluation. Check trash day before collection to see if it is full.
3. Reuse paper for printing
4. Visit the Leaf Exchange - http://groups.yahoo.com/group/fcleaf_exchange/ or the City's recycling website— <http://fcgov.com/recycling>
5. Post a recycling guide on your container or refrigerator.
6. Bring at least one item to be recycled to:
 - Resource - Toilets, fencing, doors
 - Good Day Pharmacy—Pharmaceuticals
 - Larimer County HHW Center—Household Hazardous Waste
 - Access Computers—E-waste
 - Ace Hardwares/Home Depot—CFLs
 - Rivendell or Chippers on Horsetooth -Glass bottles and jars



Circle Actions that you took and return form to Rosemarie Russo at 215 N. Mason,
P.O. Box 580, Fort Collins, CO 80522, or rrusso@fcgov.com by October 18, 2010

	Avoided	Per Year
1. Increase the amount of material that you compost by 5% (Join Leaf Exchange or sign up for yard collection from hauler).	-	12
2. Reduce solid waste by 10%. Increase recycling material by 10%.	60/540	48
3. "Right-Size" your trash. Call trash hauler to request lower trash service (32 gallon) and larger recycling bin.	12,000	96
4. Buy paper with 30% - 100% recycled content (i.e. toilet paper, napkins, coffee filters, paper towels & office paper).	660	\$1.00 cost
5. Donate clothes to local thrift stores.	20	10
6. Install a green cone or a composting digester.	80	48
7. Post a recycling guide on your bin.	1,080	24
8. Contact closest daycare to set up a paper donation or post items on craigslist.com or freecycle.com.	340	14
9. Stop junk mail at www.donotmail.org .	100	50
10. Buy rechargeable batteries and charger. Benefits not calculated for reduced heavy metals in landfill & transportation emissions.	.2	60
ANNUAL SAVINGS	14,880 (7 tons)	\$362



**Starve Your Trash — Take 10
Business Version**

	Pounds of CO₂e Avoided	\$ Saved Per Year
1. If you have to shred documents, only shred the confidential part.	16,000	99
2. Reduce solid waste by 10%. Increase recycling material by 10%.	4,000/ 30,000	47/96
3. “Right-Size” your trash. Downsize frequency of pick-up and container size.	16,000	234
4. Verify paper is 30% - 100% recycled content.	98,148	\$90 cost
5. Buy flatware and Igloo-type water cooler for staff meetings	580	450
6. Install a green cone or compost bin. (i.e. after initial purchase)	2,000	47
7. Don’t make copies. Scan and send documents electronically.	6,000	93
8. Contact closest daycare to set up a paper donation.	6,000	93
9. Stop junk mail at www.donotmail.org (per every 2 employees)	100	50
10. Register for Trees Water People paper offset program at claudia@treeswaterpeople.org (1 tree = 200 lbs. of paper)	200	\$1 cost pe tree
ANNUAL SAVINGS	179,028 (90 tons)	\$1,101

Larimer County Landfill

5887 S Taft Hill Rd

- ❑ Household Hazardous Waste – Diverted 24.9 million pounds of HHW. (T, TH, F and Sat 9-4)
- ❑ Garbage Garage – award winning education center. (T, TH, F 10-2)

General Resources

- City of Fort Collins Green Meeting Website
 - <http://citynet.fcgov.com/greenmeetings>
- Blue Green Meetings
 - www.bluegreenmeetings.org
- EPA Green Meeting Resources
 - www.epa.gov/oppt/greenmeetings/
- Environment Canada
 - www.atl.ec.gc.ca/greenman/index.html
- Green Meeting Industry Council
 - www.greenmeetings.info

Resources

- ▶ DMAchoice.com
- ▶ Greenseal.org
- ▶ www.waste-not.com/zerowaste.htm
- ▶ www.ecocycle.org/ZeroWaste/
- ▶ www.grrn.org/zerowaste/index.html

THANK - YOU

