

# Steps to Going Green

## How to Operate a green facility

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# Why?

- Self serving- personal value
- Social and environmental stewardship
- Marketing/public relations: local news, newspaper, magazines, national press as well.
  - Clients come to you over competition?

# Change Business Culture

Ground Up leadership style

FIRST THING:

Establish a 'green' committee. This is a core group of people who can oversee incentives are supported, discussed and completed.

Create a strong green business philosophy and make sure visible for staff and clients. Marketing benefits

Solicit staff input and ownership, including training and education for new hires.

Operating a green facility can be a challenge, but doable and rewarding... To begin, just **P•A•W** right through it!

**P • Products & Purchase**

**A • Administration**

**W • Waste**

# Products & Purchases

- Factors to environmental footprint
  - Water used to produce
  - Chemicals used to produce
  - Carbon footprint of raw materials, manuf., end product, shipping [Oil]
  - Efficient use of packaging, 'green packaging' etc
  - **Cradle to grave conscious**
- Ideal
  - Locally made
  - Minimal water, chemical, carbon
  - No packaging
  - Reusable, then Recyclable, then compostable
- Greenwashed products- Quizno's paper...



# Products & Purchases

- Switch to recycled, re-purposed or compostable alternatives when possible.
  - Office (pens, paper, printers & inks)
  - Janitorial (mopheads, cleaning products, waste –related products)
  - Building (carpet, cabinetry, furniture, paint)
- Purchase high-efficiency appliances
  - Everything should be Energy Star Rated.
    - E- star may not be very efficient.
- Upgrade with water conserving fixtures
  - Faucets, toilets, dishwashers, W/D, showerheads
- Partner with other eco-minded businesses and organizations who can support and aid.



# Products & Purchases

Switch to recycled, re-purposed or compostable alternatives when possible.

## Office Supplies-Paper, Pens, paper plates/cups

### Paper Products:

- 100% post-consumer recycled - 2x cost of standard paper. Paper dander.
- 30% post-consumer recycled - 1.5x cost of standard paper
- Print double sided or 2 pages per side
- Save misprinted paper: print memo's and other in-house items on the back; cut into 1/4 and staple together for scrap
- Educate staff about printing mindfully not wastefully
  - More computers = more paper wasted. Paperless records- better?

# Products & Purchases

Switch to recycled, re-purposed or compostable alternatives when possible.

## **Office Supplies- pens, plates/cups, utensils**

Other items:Pens: Pilot & Papermate have some biodegradable options which are \$comparable\$.

Corn based or recycled paper cups, plates, utensils: In lobby for clients. 1.3x more in cost. Env footprint questioned.

Staff + client kitchen supplies: Buy plates/cups/utensils at flea market and have high efficiency dishwasher.



# Products & Purchases

Insist on green shipping & packaging options from all distributors.

- Insist on 100% post consumer recycled cardboard + no styrofoam or other packaging materials
- Some will both deliver and recycle with no added cost.
- Insist on reusable bins: MWI
- Purina is working on changing packaging b/c of our insistence



# Products & Purchases

Search for eco-minded companies/suppliers that can aid you in your efforts.

## Janitorial Supplies

- Microfiber mop heads use less water & chemicals and are function friendly.
- Use biodegradable all-purpose cleaner for the non-clinical areas of your practice.
- **No eco-friendly hosp grade cleaner exists.**
- Staff break room, kitchen, reception desk. All else needs hosp cleaning.
- Biodegradable liquid laundry detergents

*ecoproducts.com*

*pedrosplanet.com*

# Products & Purchases

*I want to be audited!*

*Most utilities do energy audits for minimal/no costs  
(ex: Xcel=\$200)*

*The audits potentially pay for themselves in  
recommended improvements*

# Products & Purchases

## Building Components- Lighting

- Exchange light switches to motion sensors or timers in clinic offices, exam rooms, break rooms, storage areas and low use rooms.
- Switch an incandescent or fluroescent EXIT sign to LED. The payback from the change may occur <1year and bulb replacement may never be needed again.
- Replace conventional incandescent lights with compact fluorecents.
- LED lighting is coming... less electricity, less cost to manufacture and easier to dispose



Lighting has been one of the quickest financial recoveries for AMVS.



# Products & Purchases

## Building Components- Lighting

Replace traditional fluorescent tubes with newer, more efficient versions. **40% savings on elec bill**

- AMVS made a switch from T12 to high performance T8 CFLs.
  - T8s have 3-4x the life of the T12.
  - T12s are also generally 4 bulbs per panel, whereas T8s only 2.
  - Greater T8 bulb cost makes the switch seem costly, but the above factors recover the cost.

<u>Bulb</u>	<u>Cost</u>	<u>#/Panel</u>	<u>Bulb</u>	<u>Cost</u>	<u>#/Panel</u>
T12	\$1.12	x4=\$4.48	T8	\$2.40	x2=\$4.80

Always look for rebates, incentives and grants:  
Local, State, Federal.



# Products & Purchases

## Water Conservation

### Building Components - Plumbing

Low flow & motion sensor water fixtures are available. Dual flush, low flow toilets use 60% less water.

Change to high-efficiency appliances; especially washers and dryers with EnergyStar rating

Fleece beds in runs/cages

Grey Water systems. Collect/store greywater and use for kennels/runs/landscaping.

Install drip systems for landscaping

Fake grass for outdoor playyards: Many synthetic grass manuf.

- No lawn watering or fertilizers
- Easy to spray down and clean [disinfection possible?]



# Products & Purchases

**Laundry:** Purchase high efficiency, EnergyStar rated

- Front load washers: efficient and use less water + detergents
  - Spin cycles 1200rpm+ = laundry almost dry
  - Pack in "35 towels"
- Use fleece bedding for patients- come out of wash literally almost dry [load them together]
- New Dryers on the market can sense when your load is dry and save significant energy.
- Buy 3yr commercial service contract and replace them afterwards. [Best Buy]



ASPEN  
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SPECIALISTS

# Products & Purchases

Community Energy is called progress.

## Building Components - Utilities

Wind and Solar Power: Massive growth industries.

- Lease programs vs buy
- Local windmill on-site are debated efficacy
- Also can purchase windpower form local utility company or buy credits

### Xcel Wind Energy Program

1.6 cents more per kWh consumed. A rate-lock benefit offsets the additional 1.6cents per kWh cost. *Our cost is \$1600 per yr more, decreasing per yr.*





# Products & Purchases

Check the structural staples.

## **Building Components-Utilities**

Regularly replace furnace filters (monthly); cost effective way to improve efficiency by 10%. Hair clogs them.  
Install programmable thermostats with setbacks when areas are unoccupied.

## **Building Components-Radiology**

Alter your x-ray processor to collect all waste chemicals and recycle it with your chemical provider. If they do not recycle, attempt finding another provider  
Digital Radiology: Prices coming down and save staff time, repair costs, chemical costs, and space.

# Administration & Use

I thought computers were reducing paper waste?

## **Administrative Options**

Incorporate paperless or 'paperlite' record systems. Digital records are easier to keep and transfer, while saving space and simplifying searches.

Use the web and email whenever possible with staff memo's, suppliers and clients. Provide e-newsletters in lieu of mailings.

Turn off/unplug unused electronics: Medical equipment often has battery chargers and need to be plugged in whenever not in use.

# Administration & Use

Take a look at staff's access to work.

## **Administration-Transportation**

Car Pooling is a cheaper option for staffing and promotes team culture.

Bike Racks are located immediately outside AMVS to support those staff members that live locally.

Bus Route Find nearest bus route for staff.

# Administration & Use

## Administration-Client(s)

Display your green-ness in the lobby-

Ask clients for their ideas on waste reduction. Then listen to them!

AMVS has parking specifically designated for high-efficiency, low-emitting vehicles. This is active support of the green business philosophy.

Staff education and access to resources will help the culture of the clinic spawn. Newsletter or email announcements about green living, free recycling, food consumption, etc. moves discussion of lifestyle choices.

# Administration & Use

## Building Fact Sheet



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**Building**

- New building constructed at 154 S. Main St in Longmont, Colorado, just up the street from the current location of the surgery and emergency services.
- Building plans include green architecture and construction.
- Owner, Dr. Matt Hoenes, is seeking Leadership in Energy and Environmental Design (LEED) certification status. Once attained, AMVS will be the first LEED-certified clinic in the county.
- New building team members:
  - Chuck Bond, Project Manager - Reliance
  - Cary Woods, Architect - Lewis Homes Associates, Inc.
  - Bob Brock, Site Foreman - Oaks Construction
- The new building is 8,400 square feet.
- The new building will have five exam rooms, a physical therapy suite, a radiology suite, intensive care unit, procedure room, isolation ward, and two operating rooms, providing the same equipment and abilities as the local human hospital.

**What's green about this building?**

**Architectural**

- Designated parking for low emissions and hybrid vehicles.
- Heating cooling roof elements white and providing reflective white membrane to reduce heat gain.
- Recycling areas throughout.
- Composting on site.
- All recycled concrete.
- Re-use of doors, frames, storefront, drinking fountains, windows, walls, etc.
- Sustainable "treeing" signs.
- Recycled content carpet, ceramic flooring, laminates, solid surface counter tops.
- FSC (Forest Stewardship Council) wood doors.
- Low emitting materials (low VOC) such as paint, carpet, sealants and adhesives.

**Electrical**

- Energy efficiency lighting and day lighting.
- Fluorescent light fixtures equipped with high performance T-8 light tubes.
- Fixtures will turn off if angle amount of daylight is in the room.
- Trains, dimmers, double switched lighting, motion sensors.
- Green power.
- 100 percent of total energy use created by 100 percent wind power.
- Light pollution reduction.
- All outdoor light fixtures designed so there is no light going up into the sky.
- Does not intrude into neighboring lots.
- Designed with the capacity to generate some of its own electricity in the future.

**Mechanical/Plumbing**

- Refrigerant management - new equipment utilizes environmentally friendly refrigerants and techniques.
- Outdoor air delivery monitoring with carbon dioxide sensors.
- Energy efficient HVAC with energy recuperation system that draws out the energy in the old air (hot or cold) and uses it to heat or cool the new air coming in.
- 20 percent increase in ventilation above ASHRA requirements with carbon dioxide sensors.
- Thermal comfort design.
- Low-flow fixtures and dual flush toilets.
- Other green design features.
- Site is within 1/2 mile of at least two public transportation bus lines, a key site selection criteria.
- Bike racks, showers, and lockers to allow employees to bike to work or work out while on break.

For several years, the AMVS (formerly part of Patron Veterinary Specialists) has partnered with Eco-Cycle of Boulder County to work towards being a zero-waste business. Even before moving to its planned LEED certified building, AMVS has already been doing everything it can to reduce its environmental impact: using recycled and biodegradable products (i.e. compostable plates, silverware, paper towels, and cups); recycling, composting and reusing our waste (i.e. even hard to recycle materials like the plastic syringe cases); and conserving energy and increasing energy efficiency. AMVS is a Partner for a Clean Environment (PACE) certified organization, which is a voluntary program that recognizes leaders in the business community who are setting the standard for environmental sustainability. Certification criteria are based upon the following categories: Culture of Sustainability, Energy Efficiency, Water Conservation, Resource Management, and Transportation.

**Staff**

- The staff is comprised of many of the finest specialty and emergency doctors and nurses in the state.
- 7 doctors, 3 interns, 20 nurses, and 7 administrative staff members.
- Dr. Matt Hoenes received his doctor of veterinary medicine (DVM) in 1998 and master's of science degree in 2002 from Colorado State University and became board certified by the American College of Veterinary Surgeons in 2004. He previously served on the faculty at CSU's school of veterinary medicine and biomedical sciences.

A board certified veterinary specialist is a veterinarian with advanced education and training in a specific discipline of medicine or surgery. His or her knowledge and skill in this area has been evaluated and recognized by a specialty organization (college) sanctioned by the American Veterinary Medical Association. To become a specialist, a veterinarian must subsequently complete a one-year internship in small animal medicine and surgery followed by a three-year residency training program in their elected discipline at an accredited School of Veterinary Medicine. Successful completion of written and practical examinations by a board of Examiners, approval of case reports, and the publication of a research article in the veterinary literature are also required. When successfully completed, the individual is referred to as a diplomate in one of the 14 specialty colleges.

**Other**

- The organization partners with local humane societies to help animals get the care that they need by providing charity surgeries, donated drugs, financial donations, and partnership in fundraising efforts.



PACE  
Partners for a Clean Environment



eco-cycle  
ZERO WASTE



PROUD TO USE  
COMMUNITY ENERGY



1%  
FOR THE PLANET  
MEMBER



# Waste

## Waste-Composting & Recycling

### Waste Stations:

- large recycle Bin
- medium compost
- smallest is trash.

With this simple change, we saved 70% landfill volume overnight.

Continue to Pursue Zero-waste



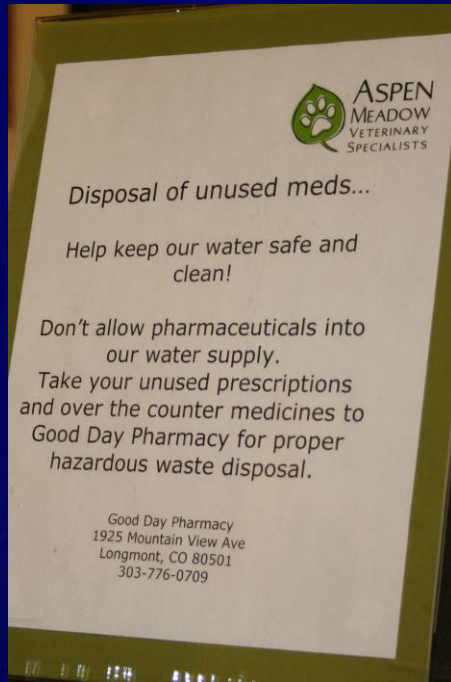
# Waste

We're always wasting more than we should.

## Waste-Composting & Recycling

Recycling: hard to recycle items like Styrofoam, electronics and appliances and plastic syringe cases.

Provide a safe system for clients to drop off old medications. Many local pharmacies can assist you in disposing of them in an environmentally friendly manner.



# Donate

- Provides exposure to env. conscious clients.
- Donate to local green organizations
- Join 1% for the Planet



# Resources

- Aspen Meadow Veterinary Specialists  
[aspenmeadowvet.com/resources.html](http://aspenmeadowvet.com/resources.html)



- Leadership in Environmental & Energy Design (LEED) [usgbc.org](http://usgbc.org)
- Partners for a Clean Environment (PACE) [bouldercolorado.gov/www/pace/index.html](http://bouldercolorado.gov/www/pace/index.html)
- 1% for the Planet [onepercentfortheplanet.org](http://onepercentfortheplanet.org)
- Community Energy [communityenergyinc.com](http://communityenergyinc.com)



- Ecocycle [ecocycle.org](http://ecocycle.org)
- EcoProducts [ecoproducts.com](http://ecoproducts.com)
- Pedro's Planet [pedrosplanet.com](http://pedrosplanet.com)



# Questions?

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