Green Means More Than Being From Marshall
Agenda

- What is “From Green to Sustainability”?
- History
- Myths
- Green Chemicals/Residential
- Green Equipment/Residential
- Certification Agencies
- LEED
- Recycling
- Composting
- Interesting Facts
- Be Good Stewards of the Environment
- Interactive to win Starbucks gift cards (Three $25 gift cards)
What is Sustainable Green Cleaning

- Defined as a system of cleaning that promotes healthy surroundings for workers, students and building visitors, and is also less detrimental to the environment
- Improves indoor air quality
- Improves worker productivity and student attendance
- Reduces insurance claims
- Reduces maintenance costs
- Increases the value and appearance of your facility or increase the visibility of your school
The green cleaning movement started in the late 1990s with a presidential executive order by the U.S. Department of Interior to procure recycled-content products and address concerns about the indoor air quality in two headquarters buildings in Washington, D.C., and a pilot study at Yellowstone National Park.

Prior to the launch of the U.S. Green Building Council’s LEED program in 1998, state and local governments — King County, WA; Santa Monica, CA; quickly followed by Massachusetts and others – began implementing their own versions of green cleaning.

Green cleaning then became a hot topic for building service contractors (BSCs) who were bidding on jobs in government buildings.

The movement quickly started to spread to the education and healthcare sectors, which are hotbeds of activity where occupants are often concerned about chemicals and the quality of the indoor environment.

With the growing awareness of Green Seal and the service the organization provides, cleaning manufacturers started applying and acquiring product certifications for environmentally friendly products.
Green Cleaning Myths

Myth #1: Green cleaning chemicals are very expensive.

Myth #2: Green cleaning products and procedures are not as effective as traditional cleaning products.

Myth #3: All I need to do is use green chemicals and I can market my facility as green.

Myth #4: Companies who offer green cleaning services need to be certified.

Myth #5: Only environmentalists are concerned with green cleaning.

Myth #6: To implement a green cleaning program you have to dump all of your current cleaning chemicals and buy new green chemicals.
Overview - Sustainable Green Cleaning Program

• **GreenSeal certified chemicals**
• **Environmentally preferred products for special needs**
• **Multi-purpose Alpha HP**
• **Dilution control -- R-T-D (no special plumbing needed)**
• **PACE microfiber system**
• **CRI Approved equipment**

**Products**

• **Survey forms**
• **Procedure manual**
• **Training Posters**
• **O-J-T tools**
• **Audit forms**

**Procedure**

• **Greenguard**
• **LEED submittal templates**
• **Green Seal**
• **LEED Certified**

**Certification**

• **Client communication tools**
• **Customization ability**

**Communications**
Overview - Sustainable Green Cleaning Program

- “Green Cleaning” Practices
- Use of “Green” Chemical
- Use of chemical concentrates
- Use of CRI Certified Equipment
- Use Microfiber Technology
- Implement a US Green Building Council program using LEED protocols
- Develop Recycling Programs
- Implement an Internal Awareness Program using Collateral Material
Question 1

What does LEED stand for?

a. Leadership in Energy and Environmental Design
b. Leadership in Engineering and Environmental Design
c. Leadership in Energy and Economic Design
a. Leadership in Energy and Environmental Design
Green Cleaning Equipment

- Vacuums
  - Carpet & Rug Institute (CRI)
  - HEPA – 99.97% of .3 micron diameter

- Steam Vapor Cleaning Systems
  - Uses only water
  - Disinfects with steam

- Microfiber Mops & Microfiber Cleaning Cloths
  - Holds 7 times their own weight
  - Lint free
  - Color coated cleaning cloths

- Upgrading Your Equipment

- Closed loop chemical dilution control systems using concentrates
Green Chemicals

- Green Seal Certified
  - Independent, non-profit organization
  - www.greenseal.org
- Reduces VOC (volatile organic compounds) off-gassing
  - Cancer
  - Respiratory ailments
  - Chemical sensitivities
  - Allergies
  - Reproductive problems
Certification Agencies & Websites

Greenguard – www.greenguard.org
Green Seal – www.greenseal.org
Blue Green – www.bluegreen.org
Green Label – www.carpet-rug.com
Ecologo – www.environmentalchoice.com
EPA – www.epa.gov/dfe
Greenstar Certified – www.greenstarcertified.org
Healthy Schools Campaign – www.healthyschoolscampaign.org
Hospital for a Healthy Environment – www.h2e-online.org
LEED-EB – www.usgbc.org/leed/eb
Environmentally Preferred Rating – www.cfeca.org
**Green Cleaning Chemicals**

*Pace Microfiber Mopping System*

<table>
<thead>
<tr>
<th><strong>Stride</strong> Neutral Cleaner</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alpha HP</strong> Multi-Surface Cleaner</td>
</tr>
<tr>
<td><strong>Glance</strong> Non-Ammoniated Glass Cleaner</td>
</tr>
<tr>
<td><strong>Crew</strong> Restroom Cleaner &amp; Scale Remover</td>
</tr>
<tr>
<td><strong>Heavy Duty Prespray, Carpet Shampoo and Extraction Rinse</strong></td>
</tr>
<tr>
<td><strong>Aquaria</strong> Floor Finish</td>
</tr>
<tr>
<td><strong>Freedom SC</strong> Floor Stripper</td>
</tr>
</tbody>
</table>

**EPA Compliant**

- **GP Envision 2Ply Facial Tissue**
- **Gp EnMotion HRT Hard Roll Towel**
- **GP Preference M-Fold Towels**
- **GP Rollsaver JRT 2Ply Tissue**
- **GP Envision 2Ply TT**
Residential/Household

Bounty

Tide

Pampers

Ariel

FUTURE FRIENDLY

Bambo
Innovative Equipment

- Tennant ecH2O Floor Scrubber
  - Scrub without chemicals
  - Decrease noise levels to 67dBA
  - Hygienic tanks reduce on-board mold and bacteria
  - Reduces water consumption by 70%

- Windsor iVacuum
  - Decrease noise levels to under 69dBA
  - Uses counter rotating brushes
  - Ultra-tight turning radius
  - Uses environmentally friendly gel batteries
Sustainable Cleaning Has Far-Reaching Benefits

Sustainable cleaning technologies like Orbio Split Stream technology and ec-H2O™ technology from Tennant, are changing the world of cleaning. The effective cleaning solutions created with these technologies are safe to use. They can help cleaning professionals eliminate the use of potentially harmful chemicals in applications of all kinds.

SIMPLIFY THE PROCESS Using water-based technologies replaces multiple cleaning products. The solution created with Orbio Split Stream technology, for example, will work with most existing equipment and methods; no need to buy special equipment.

REDUCE IMPACT Eliminate the need for traditional cleaning chemicals, reduce environmental impact, and improve indoor air quality. Water-based cleaning technologies support sustainability initiatives.

PROMOTE HEALTH AND SAFETY The proprietary technologies brought to market by Tennant and Orbio offer cleaning results that are equal to or better than conventional chemical detergents, without the potential health and safety hazards.

CLEAN EVERYWHERE The solution created by Orbio Split Stream technology effectively cleans in both spray-and-wipe and cleaning equipment applications.

CONTROL COSTS Reduce or eliminate the need for buying, transporting, storing, handling, and disposing of traditional cleaning chemicals and packaging – and save time and money on training and regulatory compliance.
Healthy High Performance Cleaning Day

- Reduces Energy Consumption from 4% - 8%
- Reduces Carbon Footprint
- Increased Security
- Increased Cleanliness
- Lower Turnover
- Higher Job Satisfaction
- Lowers Building Costs
- Socially Responsible
Implementing a Green Cleaning Program

1. Begin by developing a comprehensive cleaning plan – USGBC
2. Place mats at every entry – 80% of dust & dirt come through entries
3. Thoroughly train your cleaning staff
4. Teach proper care of equipment, backpack vacuums
5. Use microfiber cloths and mops
6. Use a self contained chemical mixing system
7. Used chemicals in concentrated units
8. Goal is to move to less hazardous disinfectants or sanitizers
9. Minimize chemical use – “less is better”
10. Use paper and liners made from post consumer waste
11. Make you students, faculty and guests aware of what you are doing
Implementing a Green Cleaning Program at Home

- Use a vacuum with a HEPA filter
- Recycle
- Use “green cleaning” chemicals – many are natural products. Baking soda, vinegar etc.
- Use Microfiber dusting clothes
- Make a game out of it with your family. Try to educate your family about going green, sustainability and being good stewards of our environment
  - Culture
  - All about education
  - Margaret Mead said “Never doubt that a small group of thoughtful, committed, citizens can change the world. Indeed, it is the only thing that ever has.”
Hand Dryers vs. Paper Towels

VS
Hybrid vs. Hummer

VS

www.ocregister.com
www.grist.org
EPA Studies

The EPA has recently completed a study that found that by implementing a sustainable green cleaning program there was a:

- 34% reduction in doctor’s visits
- 24% fewer sick days
- Increased productivity of .5% to 5%
LEED (Leadership in Energy and Environmental Design)

- What is LEED (Leadership in Energy and Environmental Design)
  - LEED-NC
  - LEED-EB

- LEED
- Energy Star
- Sustainability
- Certification Process
- Certified, Silver, Gold & Platinum
- Cleaning and LEED
  - 8 Points come from Green Cleaning
Columbus, Ohio, December 2, 2008—The U.S. Green Building Council named **Doug C. Chapman**, Aetna’s Vice President of Business Development, as one of its more than 43,000 Leed-APs. This professional accreditation is just one example of Aetna Building Maintenance’s ongoing effort to be a more environmentally conscious company.

LEED professional accreditation distinguishes building professionals with the knowledge and skills to successfully steward the LEED certification process. LEED Accredited Professionals (LEED AP) have demonstrated a thorough understanding of green building practices and principles and the LEED Rating System.
Question 2

If all the plastic bottles thrown away by Americans in one day were laid end to end, how far would it reach?

a. From Huntington to Miami Beach, FL

b. Around the world 3 times

c. From Huntington to China and back
c. From here to China and back, over 100 million plastic bottles end up in landfills every day
Sustainability/Recycling – Case Study

Brown University

www.thedailygreen.com
Brown University – Case Study

Administration

Brown University is committed to sustainability through a formal policy and plan. A committee, an office, and several staff members lead and oversee campus environmental initiatives. The school's green purchasing policy encourages the procurement of green products, including Energy Star appliances and environmentally preferable paper products.

Climate Change & Energy

Brown has reduced greenhouse gas emissions 19 percent since 2007 and aims to achieve a 42 percent reduction by 2020. Energy efficiency technologies, such as economizers and heat recovery systems, have been installed across campus, and the school encourages energy conservation through awareness campaigns. Over one-third of energy purchases come from renewable sources.
Food & Dining
The university spends 20 percent of its food budget on local products, including items from a student garden. All milk served on campus is hormone free, and some fair trade coffee is served. Brown offers discounts for the use of reusable containers; pre- and postconsumer food scraps are composted; and most dining locations are trayless.

Green Building
New construction must meet LEED Silver standards, at a minimum. The Sidney E. Frank Hall for Life Sciences is LEED Silver certified, and six other buildings meet LEED standards. Brown has conducted several adaptive reuse projects, has installed water-saving technologies such as dual-flush toilets around campus, and uses vegetated roofs for stormwater management.
Student Involvement

Students participate in two annual conservation competitions, and several student groups, such as Bikes at Brown and Beyond the Bottle, promote sustainable initiatives on campus. The Environmental House is home to 14 students committed to environmentalism. New students are introduced to sustainability through presentations and eco-rep orientation activities.

Transportation

Brown offers ride-matching and parking discounts to carpoolers, operates a shuttle to off-campus destinations, and provides free access to local public transit. A bike-sharing program began in 2008, and the school partners with a car-sharing program. Bike racks and showers are in place to encourage cycling, running, or walking to work.
Question 3

How much food does America waste every day?

a. Enough to fill your home

b. Enough to cover one acre 10 feet high

c. Enough to fill a 100,000 seat stadium to the very top
c. Enough to fill a 100,000 seat stadium to the very top
Compostable and Biodegradable
Composting - Benefits

- Compost enriches soils – microorganisms
- Compost helps remediate contaminated soil – absorbs odors and VOCs (volatile organic compounds)
- Compost helps prevent pollution – prevent runoff pollution
- Provides an economic benefit – reduce the need for water and fertilizers
- The Scott Company – a case study
Recycling Containers
Green cleaning is here to stay

Not all “Green” chemicals work

• Commercial, Industrial, Education and Home

Not cost prohibitive

LEED Certification can be costly

It’s all about education – green, sustainability and stewardship

Use microfiber, HEPA vacuums, green chemical and CRI certified equipment

Recycle when appropriate

You can “green” your building and your home
Questions