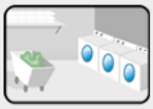
Energy Best Management Practices

Water Best Management Practices

Waste Best Management Practices



Energy Best Management Practices

- Install energy star equipment or energy efficient equipment.
- Have regular preventative maintenance (PM) done your equipment.
  - Washers, Dryers, Boilers, Folders, Ironers, and etc.
- Clean dryer lint filters regularly & outside exhaust (5%).
- Begin an ozone program or water re-use laundry program.
- The two largest energy consumers in your laundry are the hot water heater and the drying tumbler.
- Install moisture sensors on your dryers.

Water Best Management Practices

- Install energy star equipment or efficient programmable washers.
  * Washer programming is the biggest variable in controlling water consumption.
- Have regular preventative maintenance (PM) done your equipment.
- Check washers for leaks.
- Make sure washers are fully loaded (weigh linens).
- Begin an ozone laundry program.
- Consider other water conservation programs (water reuse, etc.).

Waste Best Management Practices

- Create linen reuse program (display information in guest rooms).
- Recycle old linens (donate to charities or reuse in your facility).
- Create a waste reduction program for laundry and cleaning chemicals
- Make sure washers are fully loaded (weigh linens).
- Periodically check chemical quantities and dispenser function.
- Recycle or donate other housekeeping products.
  -Recycle chemical containers

- Ozone (O_3), the triatomic form of oxygen, is a very powerful oxidizer with nearly twice the oxidizing potential of chlorine bleach.
- Ozone is formed naturally during lightning storms and by ultraviolet radiation in the upper atmosphere, and is produced commercially by corona discharge and other technologies.

- Ozone was first applied commercially in municipal water treatment in France in 1893.
- Ozone was later used in food preservation and disinfection in the early 1900s.
- In 1970 the use of ozone in bottled water processing was initiated, and the FDA approved ozone for this purpose in 1982.
- In 1986 the U.S. EPA approved standards for the application of ozone.
- Ten years later, the USDA approved ozone for use as a disinfectant.

-Ozone is increasingly replacing traditional chemical oxidants in a variety of processes and industries around the world.

Established commercial applications for ozone:
- Municipal Water Treatment
- Bottled Water Processing
- Food Processing & Sanitation
- Cooling Towers
- Pools & Water Parks
- Commercial laundries:
  Hospitals, Hotels, Correctional Facilities, Nursing Homes, Uniform Services, and Professional Laundry Companies

- 25-50% Reduction in total water usage.
- 90-98% reduction in hot water reduction.
- Reduced linen replacement budget.
- Reduction in man hours.
- Conserves natural gas and water.
- Linens are white, softer, and smell better.
- Reduction in dryer times.
- Ozone destroys bacteria and inactivates viruses and cysts.
- Ozone enhances chemical reaction in the wash wheel for superior cleaning.
- Improved employee working environment (lighter & colder linens).

Example # Actual 750 Room Florida Resort:
- 1st Year Therm Savings: 48,514 Therms @ $1.25/therm= **$60,642**
- 1st Year Water/Sewer Savings: 2,950,888 gallons @ $4.75/1000 gallons= **$14,016**
- Total 1st Year Saving= **$74,658**
- Based on Daily Average Poundage of 13,000 Pounds and Boiler Set Point of 150 degrees
- Average ROI 6-12 months

Pre-Ozone Laundry Operation:
- Hot Water Usage - - - 1.63 Gallons/pound of laundry processed
- Cold Water Usage - - 0.84 Gallons/pound of laundry processed
- Total Water Usage - - 2.47 Gallons/pound of laundry processed

Post-Ozone Laundry Operation:
- Hot Water Usage - - - 0.43 Gallons/pound of laundry processed
- Cold Water Usage - - 1.43 Gallons/pound of laundry processed
- Total Water Usage - - 1.86 Gallons/pound of laundry processed

If 100 Small facilities (90-125 Rooms) had an Ozone system…Averaging 5,213.71 therms /year
337,990 gallons / year

-33,799,000 gallons / year
-521,371 therms / Year = 2,607 Metric Tons of Co2
-10,000 Rooms Represented
-Florida has over 370,000 Rooms

The Florida *Green Lodging* Program was established in 2004 by the Florida Department of Environmental Protection (DEP) with the intent of recognizing and rewarding environmentally conscientious lodging facilities in the state. Through this rapidly growing program DEP encourages the lodging industry to conserve and protect Florida's natural resources.

http://www.dep.state.fl.us/greenlodging/

OzoneSolutions Approved Green Lodging Vendor Partner

USGBC LEED Certification

Sandpearl Resort:
One of the first of it's kind a LEED Certified Resort.
- Ozone Pool Sanitizing System
- Ozone Laundry System

LEED for Existing Buildings: Operations & Maintenance
The LEED for Existing Buildings Rating System helps building owners and operators measure operations, improvements and maintenance on a consistent scale, with the goal of maximizing operational efficiency while minimizing environmental impacts.
http://www.usgbc.org

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