

THE BROADMOOR

C O L O R A D O S P R I N G S

6/18/2010

The following environmentally-conscious programs are currently in place:

Energy Use

- The Central Plant Upgrade that eliminated 7 aging evaporation / central plant systems throughout the resort resulted in the elimination of cooling towers, chillers, condenser pumps and motors, evaporator pumps and motors and other associated equipment.
- During our renovations, the facility was insulated, including the installation of all new thermal pane, energy efficient windows. All of the mechanical distribution (hot water, heating and cooling) piping was replaced with insulated material (formerly it was not insulated), pipe diameters were increased to reduce friction losses etc. Over taxed electrical distribution systems were completely redesigned and replaced with new more efficient equipment.
- A state-of-the-art Energy Management System was designed and implemented which enabled us to control lighting, heating, cooling systems, space temperatures, demand cycling and many life safety functions through out the resort. This system ensures that we operate all of our mechanical systems in the most efficient manner possible. Additional spaces connected to the Energy Management System to include lighting control (I/C, West Lower Level, etc.)
- Occupancy sensor thermostats installed in the Cottage guest rooms.
- A waste heat recovery unit for our laundry system recovers heat from our wash cycle to pre-heat the cold water, making a significant reduction in natural gas usage.
- We are currently in design phase (for 2012 installation) of a completely new state-of-the-art boiler plant. This plant provides heat water and steam to the majority of the resort. We anticipate this upgrade will provide substantial BTU per sq.ft. savings.
- Replace boiler at Cheyenne Lodge (90% efficient gas replaced electric)
- Existing CP boiler efficiency upgrades.
- Upgraded VFD's installed on the CP boiler feed water pumps
- VFD's added to AHU3/4 at Broadmoor West.
- Chilled water balance complete. This will maximize the efficiency of our chilled water supply to the various locations throughout the resort.
- Not heating outdoor pool in winter.
- Converted over 30,000 of our existing light fixtures to compact fluorescents, cold cathode fluorescents, and LED's.
- Lighting retrofit complete.
- Conversion of incandescent lighting, T12, T8 and metal halide lighting to efficient T8, T5, Biax, CFL's cold cathode fluorescents and LED's let to improved light levels and reduced energy costs as well as maintenance concerns.
 - Environment Impact:
 - Reduction of our electrical consumption by over 5,300,000 kWh annually
 - Reduction of demand by 1,139 kW
 - Pollution reduction of: Carbon Dioxide (in Tons)=6,430.6, Sulfur Dioxide (in Kg)=53,588 and Nitrogen Oxide (in Kg)=21,435.
 - 9,646 Barrels of crude oil and 2,519 tons of coal that will not be burned by electric power plants
 - Equivalent to eliminating the pollution from 750 cars per year or planting 1,554 trees per year.

Waste Generation

- Hired a Recycling Manager
- Inspection and training of our staff was organized by Christopher Lee Erzinger (Compliance Officer with Colorado Department of Public Health and Environment). This was performed to assist us in ensuring that all of our waste/controlled substances, disposal materials are handled in an environmentally sound and compliant manner, adhering to all applicable statutes and good business practices. This included all Laundry, Grounds, and Engineering Operations.
- A cardboard baler is located on each loading dock and one was recently installed at South Tower. Employees will continue to be trained on how to produce a bale as well as encouraged to get boxes from exhibitors, the kitchen, groups, etc. to the baler instead of the trash compactor. We are producing about a bale per day (1000 lbs per bale).
- Three recycle dumpsters for commingle are located at the West dock, Main dock, and Broadmoor Hall. There is also a dumpster for aluminum at Broadmoor Hall.
- Thirty large plastic totes with attached lids are located throughout the Hotel.
- The Sales office in Broadmoor Hall has two recycle bins, one in the Copy Room for paper and one in the kitchen for co-mingled items. Recycle bins to be ordered for the Human Resources Copy Room for paper as well as bins for Training Rooms in which co-mingled items can be placed.
- All cooking grease is contained in 55 gallon drums to be recycled into bio-diesel. We average about 41,000 pounds per year.
- All refuse metals including copper, brass aluminum cans, which are quite considerable, are recycled.
- In an effort to ensure continued and successful recycling, a 'Recycling Team' was organized.

Water Use

- Hotel eliminated 7 evaporation and mechanical cooling systems throughout the complex during The Central Plant Upgrade. Project not only reduced water use but also electricity and chemical treatments.
- Ice machines are hooked up to closed loop condenser water, eliminating flow through usage.
- All irrigation systems have been upgraded over the last several years to include: vast drip irrigation systems, rain monitoring systems and remote computer controlled operation.
- Toilets in all guest rooms have been converted to low-flow and showers are flow-restricted.
- Display fountains are only run during restricted hours, or during functions, and all are recirculating.
- The new swimming pool installed during phase II of our renovations has a state of the art back wash system which minimizes water usage.
- Indoor pool converted to saline treatment.

Golf

- Our golf courses are certified Audubon Sanctuaries, which recognize the highest level in environmental policies.
- Converted over 50 acres of highly maintained turfgrass to native varieties of grasses and wildflowers.
- Installed below ground moisture and temperature sensors that communicate every five minutes with central irrigation computers.
- Have two onsite weather stations that communicate directly with central irrigation computers.
- Conduct irrigation audits with outside water engineering firm leading to replacement of nozzles and seals for over 500 sprinkler heads and improved irrigation efficiency by 10%.
- regularly use wetting agent surfactants to improve irrigation distribution through turfgrass root zone.

- Recently upgraded all golf course irrigation field satellites and computers specifically dedicated for irrigation programming.
- Hand water high playability areas to promote dry and firm playing conditions.
- Regularly aerify and verticut turfgrass in all areas to promote deeper rooting and water infiltration.
- Employ full time irrigation department including one full time irrigation manager and three full time irrigation technicians.
- Purchased and installed the highest quality irrigation sprinklers manufactured by Toro Company allowing each 6/18/2010sprinkler to be individually adjusted for arc and trajectory. This allows us to effectively irrigate under trees and saves water in windy conditions.
- We use non-potable water for irrigation for grounds and golf.

Retail

- We carry organic jams/jellies, chocolates, and nuts (no preservatives) in Cheyenne Gourmet.
- As of Spring 2008 we carry, *Linda Loudermilk*, a woman's organic clothing line and animal friendly handbag line, *Matt & Nat*.
- Colorado Clothing is available in the Signature Shop.
- Casual Resort Sportswear line *BORN* will be carried in the Haberdashery featuring charcoal and bamboo materials.
- Many clothing lines are made with natural cotton and fibers and no pesticides. Some also contain soy materials.

