



SPOTLIGHT ON... PRINGLE CREEK COMMUNITY

AT A GLANCE

Pringle Creek Community
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WHAT IS PRINGLE CREEK?

Pringle Creek Community, with a planned 130 homes, is one of the most sustainable communities being built in the country. The guiding principles integrate green building, energy efficiency and respect to the natural environment.

AT THE COMMUNITY CENTER

Lighting: Installed energy efficient lighting with zones and sensors; relied on daylighting to reduce lighting needs

Water usage: Low-flow toilets and faucets; 2,000-gallon rainwater collection tanks for toilet flushes

Reuse: Entire building was retrofitted instead of torn down and rebuilt; anyone using the center must use the available dishware; many items within the center, such as the espresso machine, were purchasing used

Recycling: Extensive recycling that matches the 17 categories at the transfer station

Green energy: Solar panels provide about twice as much energy as needed for the building; passive heating and cooling reduce use of HVAC system.

CERTIFICATIONS

Painter's Hall was certified EarthWISE in 2010. It is also a LEED Platinum building and Oregon's first net-zero energy commercial building.

Pringle Creek Community is a place where living sustainably comes naturally.

The 32-acre site, where 130 homes are planned, incorporates green space, community activities and environmentally friendly practices. Each of the nine homes constructed on site so far are LEED Gold or Platinum, the highest green building standards in the industry.

At the center of the Pringle Creek Community is Painter's Hall: a spacious, inviting community center, café, office, and meeting space. James Santana, vice president at Pringle Creek Community, keeps an office at Painter's Hall, and experiences firsthand how the investment in the building's environmental aspects and the attention to green details pays off.

Painter's Hall was the 100th business to earn EarthWISE certification through Marion County's innovative green business

program in 2010. It also earned the highest green building certification possible: LEED Platinum.

Painter's Hall was remodeled from an 80-year-old building. Developers saved money – and significant environmental resources – by reusing the foundation, walls, trusses and roof. But to transform it into a model green building took dozens of energy-saving additions and some ingenious ideas.

The old drafty windows were replaced with new, locally sourced windows that are four times more efficient as the original panes.

Lighting designers did more than install energy-efficient lighting to keep energy costs down. Light-colored paint on the walls, floors and ceilings bounces sunlight through the large space. The lights are on motion sensors and dimmer switches that are divided into six different zones in the main room. A small group, for example, could turn on just one zone of lights. Blown-in cellulose insulates the walls,



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The entire space is well lit, well insulated and inviting.

ceiling and floor – at a value better than conventional building code. The extra insulation allowed designers to downsize the HVAC (heating, ventilation, and air conditioning) system from a 10-ton unit to a 6-ton unit, saving Pringle Creek thousands of dollars.

The results are remarkable: A conventionally built building of the same size would use about 45,415 kilowatt-hours per year of electricity, according to Solarc Architecture and Engineering Inc. Painter's Hall uses about 15,292 kilowatt-hours per year.

The energy saving measures pay off regularly—to the tune of \$3,600 per year in reduced energy costs compared to a conventional building.

The simple passive cooling system and ground-source heat pump are so efficient at heating and cooling the space, the building's total HVAC operational system cost is about \$350 per year.

But the operators of Painter Hall don't have to pay a dime. The sun covers those costs.

Over 210 solar panels installed on the building's roof produce more than enough electricity to run the heat pump and everything else in Painter's Hall. The panels produce \$2,743 worth of electricity a year – nearly double what's needed to operate the building.

The panels cost about \$211,000, but federal and state tax incentives plus the annual savings in energy bills will allow Pringle Creek Community to recoup its costs in four years.

Excess energy produced by Painter's Hall offsets the neighborhood's district geothermal loop, which pumps ground-temperature water to 77 home sites and eight commercial building sites. Each home or building is able to use the constant temperature water for ground-source heat pump heating or air conditioning. It's the most efficient heating and cooling system because ground temperature is warmer than the air above it during the winter and cooler than the air in the summer.

The sun and the ground's heat aren't the only natural resource harnessed at Painter's Hall. A rainwater harvesting system allows about 2,000 gallons of rainwater to be stored at any given time.



The kitchen area is filled with all of the bowls, plates, glasses and utensils needed by people who rent the space.

Dual-flush toilets installed in both bathrooms save almost two gallons of water per flush over conventional toilets. The low-flow faucets in the bathroom sinks and kitchen areas further reduce water demand.

All of these built-in features at Painter's Hall keep utility bills rock bottom. But because Painter's Hall is a community center—rented out for parties, fairs, rallies or classes—the developers wanted it to demonstrate sustainability in a tangible, interactive way, and educate the public.

The comprehensive garbage, recycling and composting system has done just that—while also generating incredible savings.

The first part of their strategy is to eliminate waste by prohibiting single-use disposable items, such as plastic water bottles, soda cans or plastic utensils, from being used in the building during events and activities. All



Painter's Hall can be used for large events and community gatherings, but the café area also provides a cozy, warm area for more intimate meetings.



Pringle Creek Community's Don Myers, Shannon Stewart and James Santana with their 2010 EarthWISE certification award.

of the servingware, dishes, napkins, and silverware is reusable and available for rent for up to 120 guests, then washed on site with a commercial dishwasher.

Then, under a huge open-air building on the property, sits a line of rollcars that match the 17 categories of recyclables at the Salem-Keizer Recycling and Transfer station. Different colors of glass, various

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Inside Painter's Hall, guests can separate dirty dishware and recycle many items.



Outside, a line of 17 rollcarts further separate recyclables for a trip to the transfer station.



Photograph of photo-voltaic panels atop Painter's Hall.

types of paper and plastic, Styrofoam, batteries, cans, and the other recyclables are sorted here.

Once nine rollcarts are full, the carts are rolled onto a trailer and taken to the transfer station for recycling. In 2011, only three trips needed to be made. A total of 280 pounds of garbage was disposed and 2,220 pounds were recycled. The garbage bill for the year was \$45, or \$135 including labor and transportation costs.

Food waste is composted on site in a worm bin. In two months, Painter's Hall

composts about 120 pounds of food. The developers' strategy also emphasizes reused materials.

For the rainwater storage system, they reused large storage containers previously used for transporting milk or soy sauce. The seven containers cost \$50 a piece and hold 275-gallons each. Buying the containers used saved Pringle Creek thousands of dollars compared to a new rainwater storage tank.

The used commercial-size espresso machine cost \$1,000 – less than one-third of a new one.

The ceiling slates were salvaged from a building on site. The community table was built with reused wood from a gym floor that was salvaged during the demolition of the Salem Senior Center.

The deck that runs the length of Painter's Hall was pulled from other buildings on site, as was the metal work that forms the trellis, which came from old steam stanchions and steam pipe infrastructure.

"We always looked to reuse existing resources first because not only does it save money, it's great for the environment too," Santana said.

EarthWISE Certification

Pringle Creek Community's certification in December of 2010 is especially noteworthy because they became the 100th business to become EarthWISE certified in Marion County.



WANT TO DO THIS AT YOUR BUSINESS?

Marion County's EarthWISE program can help. Visit mcEarthwise.net, call 503.365.3188 or email Earthwise@co.marion.or.us