

Tapping into the future

Craft beer giant Sierra Nevada opens green facility in Mills River

□ BY GARRET K. WOODWARD □

Cheri Chastain loves her job.

"It's really heartwarming and great to work for a company that has the same ethics and philosophy as I do, and is willing to put their money towards something that serves our environment, society and community better," she said.

Sustainability manager for Sierra Nevada Brewing Co., Chastain is at the forefront of the brewery's new \$100 million production facility in Mills River. With the official opening on Aug. 3, the facility is a modern testament to green building on not only a large scale, but also as a business entity.

"We're building it to LEED standards, which really encompasses everything you can do with a green building," she said. "Everything from making sure we have adequate bike and electric vehicle parking for guests and employees, to energy efficiency throughout the building, equipment selection, lighting control systems, structural design, sky lighting, water filtration systems, all the way down to materials and handling."

As one of the pioneers of the craft beer industry, Sierra Nevada has become a leader in their field and maker of some of the finest microbrews for the last 34 years. Based

out of Chico, Calif., the company hit 985,000 barrels for their 2013 production year. And with their expansion further into the East Coast, it was decided to build a facility in their emerging markets – an effort not only to increase barrel numbers, but also save time, money, flavor and energy consumption by products being shipped across the country.

"As far as a strategic business initiative, shipping beer is expensive and takes a lot of energy," said Sierra Nevada founder/owner Ken Grossman. "Both from the practicality of operating a single West Coast brewer and having a growing East Coast market, it didn't make

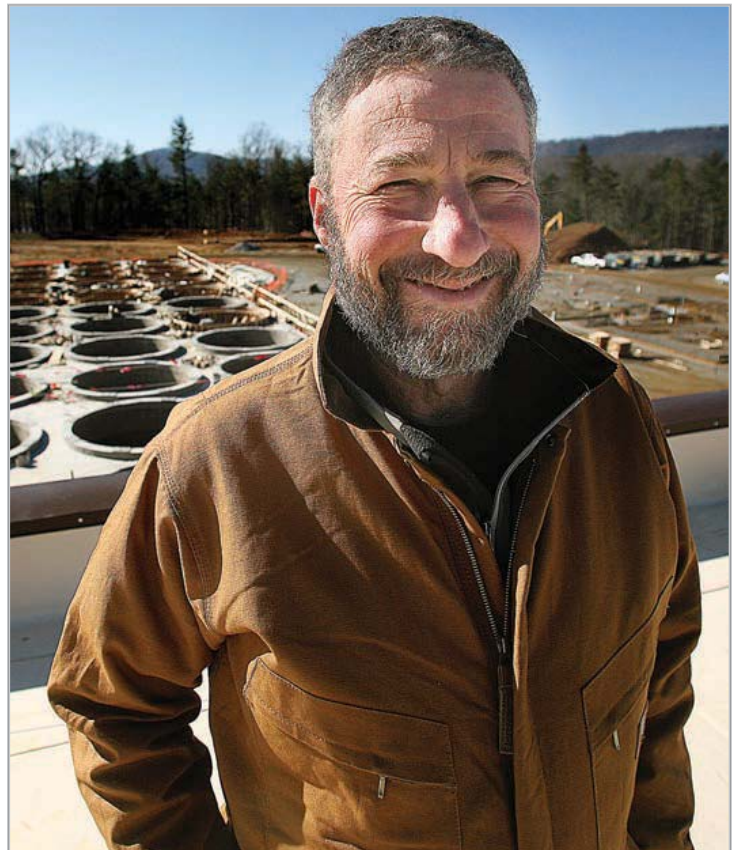
sense going into the future (with only the Chico facility)."

The Mills River facility is situated on a 180-acre property that borders the French Board River and the Asheville Regional Airport. Previously an unkempt forest, Sierra Nevada is underway with repairing the vegetation and native plants, ultimately transforming the site into a lush and vibrant landscape.

"It was full of invasive species and unhealthy trees, and we're going to manage it and create a healthy forest," Chastain said.

Of the 180 acres purchased, Sierra Nevada is going to develop around 20 to 30 acres into its pro-

Rainwater collection tanks at Sierra Nevada. (left) Ken Grossman, Sierra Nevada Brewing Co. founder/owner. Sierra Nevada Brewing Co. photos





Solar panels at the Sierra Nevada Brewing Co. facility in Mills River.

duction facility. Intricate preparations and designs were conceived to properly address and take advantage of the weather conditions of Western North Carolina, which is known for rainy seasons and hot, sunny summers.

"North Carolina gets a lot of rain, so managing our stormwater, and how it impacts the local environment, was a big thing for us," Chastain said. "We're recovering as much rainwater as possible. Everything that hits the pavement or the rooftop is recovered and used for flushing toilets and landscape irrigation needs."

And what about rainwater coming down on the other 150 acres of the property?

"The rest of the water will fall onto permeable surfaces, soak back into the ground, and prevent erosion," Chastain said. "If we get more rainwater than we can handle, we've also creating settling ponds to slow the flow of the water, and also stay onsite and not just erode back into the French Broad River."

When construction began, the brewery looked into using locally sourced or recycled materials. From the first step taken, the building was not created purely for aesthetics; rather it was designed for effi-

ciency and green initiatives.

"It takes a lot of time, money and detail," Chastain said. "You can't just pick something because it looks nice, you have to explore how much electricity it uses, how much water it uses, where did the materials come from, who manufactured the materials, so it does take a lot of time for a business to do this."

"North Carolina gets a lot of rain, so managing our stormwater, and how it impacts the local environment, was a big thing for us."

They also took proper care of all the debris left over from the building project.

"We are recycling the debris from the construction," Chastain said. "Although you can source materials relatively cheap, it probably doesn't take into consideration the entire life cycle of the materials. Where did it come from? How was it harvested? How was it processed?"

rich bio gas, with the energy cultivated from that pumping renewable electricity into two on-site 200 kW wind microturbines nearby.

"We all want to have a sustainable business and that means doing the same things we're doing generations from now, and being respectful of our resources," Chastain said.

Chastain encourages other businesses to look into sustainable green

— Cheri Chastain, Sustainability manager for Sierra Nevada Brewing Co.

Landscape Architect:

Design Workshop, Asheville, design-workshop.com

Building Architect: Russell, Galloway Associates, Inc., Chico, Calif., rga-chico.com

General Contractor: Modern Building, Chico, Calif., modern-buildinginc.com

Wastewater Treatment Plant/Microturbines:

Symbiont, Milwaukee, Wis., symbiontonline.com

Solar: Sundance Power Systems, Asheville, sundancepower.com

How do we recycle it?" Sierra Nevada has diverted more than three million pounds of construction debris from local landfills through creative reuse and recycling efforts.

On the rooftop, Sierra Nevada covered the enormous space with a white membrane that prevents heats from being absorbed by the building. A large chunk of that rooftop space was also installed with 550 kW solar panels. A 50 kW panel was also installed in the parking lot as tree-like canopies.

Adding to that energy generated onsite, there is also an anaerobic digester that creates a methane-

initiatives for their own facilities. She notes that though the initial construction estimates may seem like a lot at first, the long-term savings, in terms of money and energy, far outweigh the startup costs.

"Too frequently people think they can't afford an expensive infrastructure, but there are so many things you can do that cost little or no money, like recycling, which can cost you nothing, and sometimes make you money," she said. "Look into things like changing your light bulbs to LED bulbs – don't get overwhelmed, remember that every small step adds up to a big change."