

The Daily Transcript

San Diego's Business Daily

Monday, October 1, 2007 | Vol. 122, No. 196 | www.sddt.com

Surf Stream could have McFarlands sitting on top of the world

By JERAN WITTENSTEIN
The Daily Transcript

SAN DIEGO — Bruce McFarland and his wife Marie know how to build things.

As seasoned engineers, they have worked on projects in the aerospace, biotechnology and transportation industries.

However, the couple's latest project has presented them with an altogether novel challenge: building a market for a new kind of product — a water system called Surf Stream that creates a standing wave that can be ridden with a real surfboard with fins.

"We've been reading a lot of business books," Marie McFarland said with a gregarious laugh, from inside the couple's Solana Beach home overlooking the Pacific Ocean.

Their home serves as the offices of their company, **American Wave Machines Inc.** Aside from an intern, the company has no other employees.

After more than six years of technical development, discussions with resorts around the world, sales meetings and more than \$500,000 in personal capital invested, the couple is at the threshold of what could be a banner year.

Although the McFarlands are engaged in a handful of contracts for Surf Stream systems and confirmed construction is under way to install a system at an undisclosed five-star resort in a tropical location, there are no operational Surf Streams in existence, save for the miniature model in the McFarlands' backyard. A prototype that produced a two-foot wave was built in an industrial lot in Riverton, N.J.; however, it has since been dismantled. A new model is slated to debut in the same location in October.

In all, American Wave Machines anticipates between \$2 million and \$5 million in revenue from contract payments for 2007 and to achieve profitability by in 2008.

One of the biggest hurdles the McFarlands have faced in creating the market is making would-be customers

understand what their product is and what sets it apart from the competition.

Most people don't fully grasp the concept until they see the wave in action, Marie McFarland said.

"Once they see the water, it's like a light bulb goes off."

The standing wave industry has been dominated by Wave Loch Inc. — the company behind the 10-foot barreling wave that is the centerpiece of the Wave House in Mission Beach — for most of the company's 16-year history.

"The perception of what a surf machine is really based on that technology," said Bruce McFarland, who worked as an independent consultant with Wave Loch for nine years prior to developing his own technology.

In 1999, Bruce McFarland, who grew up surfing in Manhattan Beach, Calif., and still surfs regularly, caught wind of an entrepreneur working on a new kind of wave system inspired by a wave created by a river mouth at Oahu's Waimea Bay.

In his research, McFarland stumbled upon a video of legendary surfer Kelly Slater surfing the river mouth wave "really well," as McFarland put it, on one of his regular professional tour-grade shortboards.

"I knew that the hydrodynamics of that type of wave were conducive to regular surfing on a regular surfboard," he said. "That was really it."

Although McFarland licensed the basic idea from a patent holder, he has added additional patents and expanded the scope of the product to include more uses and a pre-manufactured, scaleable design.

Surf Stream is a similar concept to Wave Loch. But whereas Wave Loch waves require a special board without fins due to the thin layer of water it propels over a fiberglass bank, the McFarlands have developed a wave using a stream that travels slower and is much thicker.

This makes for a much more surfer-friendly wave, according to Bruce McFarland, as opposed to a wave suited more for finless sport enthusiasts such

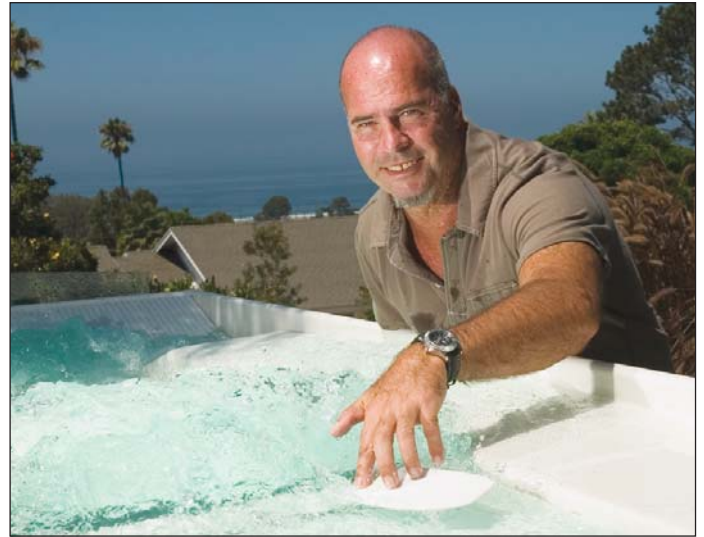


Photo by: J. Kat Woronowicz
Bruce McFarland says he can't wait to ride the wave his company, American Wave Machines, has the potential to create.

as wakeboarders, he said.

Among the things Bruce McFarland lists as advantages of his system are a greater cushion of water for injury-free falls and the ability for participants to ride in groups, which is highly valuable in the water-park industry.

For Bruce McFarland, the resulting system, which in theory can be scaled to accommodate a barreling wave as high as four feet, is something he envisions as a major attraction for everyone from kids and families on soft-top longboards to the most experienced recreational surfers.

"We can really build to any specification," he said.

Though the systems are not cheap — they range in cost from \$250,000 for a narrow 2-foot beginner's wave to \$1.5 million for a wave nearly twice that size and wider — McFarland envisions investors bundling his technology into water parks and family entertainment center-type megaplexes across the country.

According to Aleatha Ezra, director of park member development at the World Water Park Association in Overland Park, Kan., surfing-inspired technologies are becoming more and more popular in the approximately \$1.6 billion water-park industry.

"It really has started to grow its own identity," Ezra said. "Whenever somebody can take an idea to the next level certainly it's something that's starting to gain momentum."

Ezra said North American water parks have been averaging about 3 percent to 5 percent growth in customers.

All of the parts required for a Surf Stream system, such as electric water pumps, can either be bought on the open market or are pre-fabricated by contractors the McFarlands have teamed with. Fiber Reinforced Products, a San Marcos-based company, manufactures the contoured walls of the system that helps form the wave and contain the water.

In May, American Wave Machine waded deeper into wave technologies when it introduced a new take on large pool wave generation systems using circular particle motion that aims to recreate open ocean swells.

The McFarland's system, which was developed in concert with surf-industry veteran Carl Ekstrom, beat out engineering teams from top universities such as the Massachusetts Institute of Technology and Stanford University when it was granted a contract from the Aquarium of the Pacific in Long Beach to build a small-scale model, according to Bruce McFarland. There are currently no developments in progress for the construction of a full-scale wave pool using the technology, although there have been negotiations, according to the McFarlands.

"I can't wait to ride it," Bruce McFarland said.

jeran.wittenstein@sddt.com
Source Code: 20070928tbj

American Waves Machines

Founded: 2000

Founder: Bruce McFarland

Address: 615 Marvista Dr. Solana Beach, CA 92075

Phone: (858) 755-3865

Email: info@surfstream.com

Web site: americanwavemachines.com