

Machine starting to make waves

By Ed Machado

Waimea Bay, birthplace of machine producing new type of man-made wave.

Surfersvillage Global Surf News, 01 February 2005: - - Hawaii's Waimea Bay, on Oahu's North Shore, is the birthplace of big-wave surfing. It has spawned a whole new era of tow-in surfing as surfers attempt to ride the biggest waves in the world.

Now, Waimea Bay is also the birthplace of a machine that produces a new type of man-made wave. Surfers love to ride waves, whether they are 60-foot bombs or 1-foot rollers. No matter how big or how small, if it can be ridden, a surfer will figure out a way to ride it. A myriad of wave-riding platforms have been created, from 12-foot big gun rhino chasers to 3-foot bodyboards.

The latest addition to man-made waves began on a winter day when Waimea Bay was flat. It had been raining a lot on the North Shore, and the mass of water from the Waimea River broke through the sand berm and began pouring into the bay. The ensuing river created some 2- to 3-foot standing waves. The surfers standing around saw the possibility and thought, "Hey, I think I can ride that." Before long, surfers, including Kelly Slater, and bodyboarders were having a great time experimenting in muddy-brown waters.

One of the riders was local bodyboarder Ken Hill. As he was riding and watching the action, his brain began to spin. Here's a wave that's confined to a small area and can be ridden for as long as the rider wants.

Everyone was having a blast. Why not build one and duplicate the Waimea River mouth? The idea for the next man-made wave machine was born.

Hill spent the next few months tinkering with the idea, and developed some small-scale models. He eventually applied for and received a license and patent for the idea of a river-type standing wave. Bruce McFarland of Solana Beach, who had been in the water-park industry, crossed paths with Hill accidentally.

"When I saw Hill's vision, I immediately realized his type of river wave was exactly what water parks needed," McFarland said. "It had a deep enough water cushion, was actually re-creating a natural phenomenon, and could be ridden for as long as you liked."

Prior to Hill's invention, there were two types of artificial wave-riding venues. The first was the wave pool that relied on a massive release of

water to form a wave that traveled across a pool and broke as the bottom became shallower. This type of wave required huge amounts of water and a large area. The second man-made wave was the flow rider that utilized a fast-moving, shallow sheet of water that traveled over a contoured surface that formed a breaking wave. Hill's hydraulic standing wave is the third type to join the field.

McFarland and Hill, with design help from Carl Ekstrom, began the development of a full-scale model. The first prototype was unveiled at the end of last year in New Jersey. With approximately 3,000 water parks worldwide and more than 1,000

in the United States, these water-based recreation centers require state-of-the-art technology.

"Surfing is now accepted as a requirement for any high-profile water park," McFarland said. "Especially in the indoor parks found in the colder states.

"They are very popular with families. Everyone wants to go surfing now, no matter where they live." McFarland's company, American Wave Machines, is negotiating with parks in Mississippi and Maryland for the installation of their first permanent machines.