

student profiles

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— Chad Nelsen



Making Waves: Surfrider Foundation’s Environmental Director Fights to Protect Beaches, Oceans

GROWING UP IN LAGUNA BEACH, CALIFORNIA, as a “beach kid” who surfed and worked as a lifeguard, **CHAD NELSEN** saw his hometown transformed through development – and watched the beaches he loved suffer as a consequence. “At the time, everyone I knew accepted the beach-erosion and water-quality issues as something that just happened, even though it didn’t sit well with us,” he says.

It wasn’t until college that Nelsen realized he could do something about it. He got a master’s degree at Duke University’s Nicholas School of the Environment and Earth Sciences and eventually landed his dream position: as environmental director for the San Clemente, California-based Surfrider Foundation. Nelsen is continuing in that position while commuting to the UCLA School of Public Health, where he is in his third year as a doctoral student in the interdisciplinary Environmental Science and Engineering (ESE) program.

The nonprofit Surfrider Foundation works at the grass-roots level to protect beaches and oceans. In his role as environmental director, Nelsen provides science and policy support for 64 chapters – volunteer-run groups that address important coastal and ocean protection issues in their communities through public meetings and educational events. The 50,000-plus Surfrider Foundation members have proved to be potent advocates in their struggle to preserve the ocean environment they love; some of that success can be attributed to Nelsen, who heads a team of scientists who volunteer their expertise to assist the chapters as issues arise.

More than 180 million people visit the beach for recreation in this country every year, according to the Surfrider Foundation. But the organization also warns that beaches are disappearing at an alarming rate, with human interventions partly to blame. “Much of the erosion and water quality problems come down to our development patterns,” says Nelsen. “We’re building too close to the ocean and we’re paving too much of the watersheds. The coastal system is very dynamic, and we’re trying to build things that we want to stick around for hundreds of years, which is just not compatible. Meanwhile, if more than 10% of a watershed is impervious surface, it leads to all sorts of water quality problems.”

Nelsen was encouraged to enroll in the ESE program by Dr. Linwood Pendleton, associate professor at the school and a member of the program’s faculty, who had worked with the Surfrider Foundation on issues in the past. Nelsen, who tackles a broad array of issues in his position, was attracted to the program’s interdisciplinary nature, as well as its focus on engineering. With Pendleton, a resource economist, as his adviser, Nelsen is focusing on the economics of surfing – a sport that, like many other recreational activities, has a value that is difficult to calculate.

“We always know how much money a housing development is going to bring in to a community,” says Nelsen. “But when a recreational resource is going to be taken away or somehow damaged, if we can’t quantify its economic value it becomes more difficult to make the case that it should be preserved. Surfing supports a giant economy. By applying rigorous research methods to this recreational activity, I hope to be able to increase the appreciation for its value.”