

# The Register-Guard

OPED OCTOBER 25, 2013

## Crater Lake snowpack shows climate change

By Brian Ettling

Almost 2,000 feet deep, Crater Lake is the deepest lake in the United States. It is Oregon's only national park. Fed by snow and rain, this lake is one of the cleanest and purest in the world.

During the past 21 years, I spent my summers living in Crater Lake National Park. During this time I noticed winters are becoming shorter, warmer and less snowy.

Science confirms this. In 1931, rangers first began keeping track of the average annual snowfall at Crater Lake. The totals have trended downward by decade from an average of 614 inches in the 1930s to about 455 inches last decade. Even more alarming, this last winter, 2012-13, Crater Lake received about 355 inches.

Climate researchers expect this trend to continue. They predict the Pacific Northwest will experience even less snow and warmer temperatures in the decades to come.

Most snow falling in the park eventually leaves to nourish the rivers of Southern Oregon. Less snow falling in the park means less water is leaving the park to support Oregon cities, ranches, farms and wildlife downstream.

Less snowpack in the Cascades is an alarm bell telling us that it is time for Oregonians to take action on climate change.

The National Academy of Sciences, the U.S. Department of Defense, the American Meteorological Society and the Catholic

Church all say climate change is real and caused by humans. According to NASA, more than 97 percent of climate scientists agree on this.

Humans pump more than 90 million tons of carbon dioxide a day into the atmosphere by burning fossil fuels, more than 33 billion tons each year. For more than 150 years, scientists have known that CO2 traps the Earth's heat. Since the Industrial Revolution, we've increased the amount of carbon dioxide in our atmosphere by over 40 percent.

Earth now has a "fever," and the global average surface temperature has increased by 1.5 degrees Fahrenheit or 0.8 degrees on the Celsius scale. The effects of climate change are felt worldwide by more extreme floods, heat waves, and droughts.

Dr. James Hansen, the recently retired and well-respected NASA climate scientist, says the best way to reduce the threat of climate change is for Congress to quickly pass "carbon fee and dividend" legislation.

A national carbon fee would tax fossil fuels — oil, coal and natural gas — as they are extracted from the ground or arrive in port. This tax would cause fossil fuels to become increasingly expensive. At the same time, non-polluting renewable energy — solar, wind and geothermal — would become increasingly attractive investments because of their relatively cheaper cost.

Revenue from the carbon fee would be used

to give Americans an evenly distributed dividend check to offset rising energy costs associated with the fee.

The beauty of Crater Lake National Park, with the diminishing snowpack, should inspire us to do everything we can to limit the threat of climate change for ourselves, our children and our grandchildren.

The best way to limit future droughts that are threatening our farms, cattle ranches, salmon fisheries and drinking water supply is to take action on climate change. That action, a national fee on carbon with revenue returned to households, will happen only if Oregon citizens tell our members of Congress — Reps. Peter DeFazio and Greg Walden and Sens. Ron Wyden and Jeff Merkley — to make it so.

<http://www.registerguard.com/rg/opinion/30628328-75/climate-lake-park-crater-national.html.csp>