### **OPINIONS**

## Our critical climate: Trends, impacts and solutions

#### **BY ALAN JOURNET**

A recent visit to Applegate Lake revealed a stunningly low water level and smoke hiding the horizon. Checking the records, we find that since the mid-1900s regional temperatures have increased about 1.5 degrees Fahrenheit, snowfall has decreased 20 percent, and soil moisture has dropped 2 percent. Decreasing snowpack leads to low summer streamflow and water level, and hot, dry conditions lead to high fire risk.

If we wonder whether these figures are an aberration or a taste of the future, we can check climate projections. They reveal what will happen within 85 years, possibly within the lifetime of our grandchildren, if we continue on our current path of accelerating fossil fuel use: an annual temperature rise of 9 degrees Fahrenheit, with July and August increasing 12 to 13 degrees; an increase in the number of days over 100 degrees; a 90 percent drop in snowfall; and a 20 percent decline in soil moisture. Our forests, grasslands, rivers, and wetlands will suffer dramatically, with some species unable to exist. Current conditions are predicted to deteriorate further and not return to some historic norm. Rather, our beautiful valley will be a vastly different place from what it is now.

If we wish to preserve the Rogue Basin as we know it for our children and grandchildren, we need to take note of both trends and projections and respond accordingly. We may not be able to solve the global problem entirely on our own, but the moral imperative is surely for us to do our part. Whether we have

a conviction that we should protect God's Creation or we simply wish to provide a decent world for future generations, the conclusion is the same: we must become informed and take action the sooner the better and before we're too fossil fuel use is causing and the last generation with time to do something about it. The trajectory we are on will soon lead us across the tipping point the point of no return.

We have enjoyed a fine run with fossil fuels driving our economies and standard of living. However, responsible attention to the cost of this era requires that we eliminate fossil fuels through reduced energy consumption and conversion to renewable energy. It can be done without our economy tanking. All we require is the will.

But even as we reduce our fossil fuel use, we should acknowledge that climate change will continue to some extent, and we must prepare for it.

To provide an opportunity for promoting local action to address these issues, Southern Oregon Climate Action Now (http://socan.info) is organizing "Our Critical Climate: Trends, Impacts & Solutions—A Rogue Basin Summit," scheduled for Tuesday, October 13, and Wednesday, October 14, at Inn at the Commons in Medford.

Conference information can be found at http://socanclimatesummit. info where registration is available until September 30. I urge Applegate residents, city employees, and council members throughout the basin to get involved so we can be proactive in this arena rather than reactive!

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# Climate change deniers' grab bag of information

#### BY JEFFREY G. BORCHERS

The opinion piece in the summer Applegater by Alan Voetsch titled "Natural history of climate changes" reveals all that is false in the climate change deniers' grab bag of misleading information. For example, there is little comfort in reading that "today's climate is perfectly normal and in line with historical averages." As Mr. Voetsch himself points out, this historical "normal" included drastic fluctuations in sea levels, temperature, and precipitation. But he neglects to mention that these "normal" historical changes had large and disruptive impacts on the earth's human populations and the ecosystems on which they depended.

Whether human-caused or not, we would be foolhardy to ignore climate changes that come our way. They have the potential to disrupt human societies and the natural systems that support us. Fortunately, because human activities are the root cause of climate change over the past century, we know how to fix the problem. Simply put, if you find yourself in a hole, the first rule is to *stop digging*.

Humanity has been digging its own climate change hole with excess greenhouse gas emissions for over a century now. Back in the 1990s, when I was a scientist working on climate change impacts on national forests, I came to know and trust the work done by the Intergovernmental Panel on Climate Change (IPCC) (www. ipcc.ch). Their most recent summary report for policy makers (see bit.ly/ipccchange) represents the best available scientific information on climate change. It also expresses a general scientific agreement on the fundamental issues of climate change. Here's their global warning: "Anthropogenic greenhouse gas emissions have increased since the pre-industrial era, driven largely by economic and population growth, and

are now higher than ever. This has led to atmospheric concentrations of carbon dioxide, methane and nitrous oxide that are unprecedented in at least the last 800,000 years. Their effects...have been detected throughout the climate system and are *extremely likely* to have been the dominant cause of the observed warming since the mid-20th century."

This is indeed an "inconvenient truth" for life on this planet. Much of the inconvenience comes in the form of potential economic and political losses by major industries that are heavily invested in pollution and denial. They and their minions who deny the overwhelming scientific evidence for human-caused climate change offer us a more convenient and palatable "truth." In a sense they say, "Hey, we didn't make the mess, so why clean it up?" But there *is* a mess, we *did* make it, and we now face a choice: adapt to it or do something about it.

There is no vast global conspiracy of scientists attempting to hoodwink us on climate change. It is not a liberal plot to make us go solar. The IPCC does good science, and we've always relied on good science to lead us out of the darkness of our own false perceptions. But the IPCC's message is unpopular, as was Galileo's in the 16th century when he claimed that the earth revolved around the sun. Eventually, Galileo faced down his deniers with indisputable evidence. So too will the IPCC, but it will take time. In the words of Nobel prizewinner Max Planck, "A new scientific truth does not triumph by convincing its opponents and making them see the light, but rather because its opponents eventually die, and a new generation grows up that is familiar with it."

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Applegate Lake level (August 2, 2015) compromised by low 2014-2015 snowpack accumulation. Smoky haze due to numerous regional wildfires promoted by dry conditions. Photo: Alan Journet.

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