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Alan R.P. Journet Ph.D.

Cofacilitator

Southern Oregon Climate Action Now

[alan@socan.eco](mailto:alan@socan.eco)

541-500-2331

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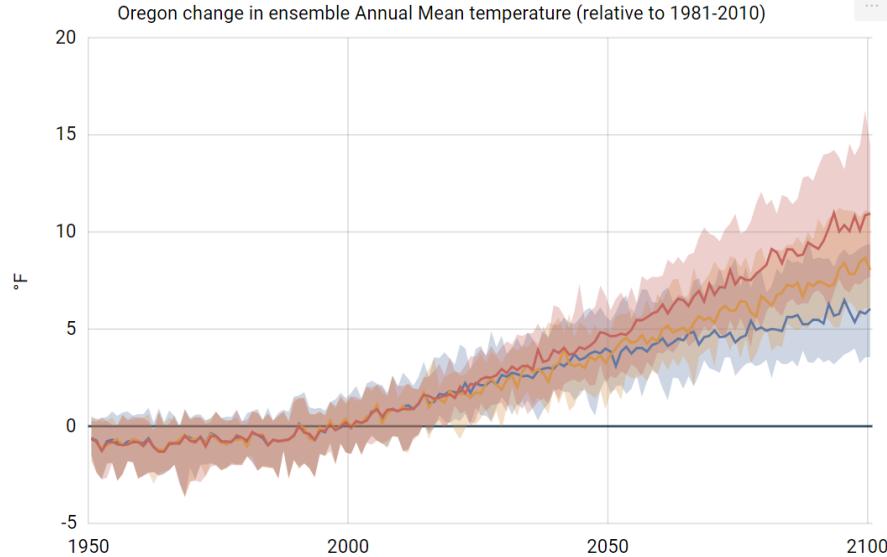
Chair Helm and members of the House Committee on Agriculture, Land Use, Natural Resources and Water:

I write as cofacilitator of Southern Oregon Climate Action Now, an organization of some 2,000 Southern Oregonians who are concerned about the climate crisis and encourage state action to address it. As rural and coastal Southern Oregonians, we live on the frontlines of the warming, reducing snowpack, heatwaves, drought and the increasing wildfire risk that these trends conspire to produce. Because of this, we pay close attention to what is happening in Salem in terms of legislative proposals.

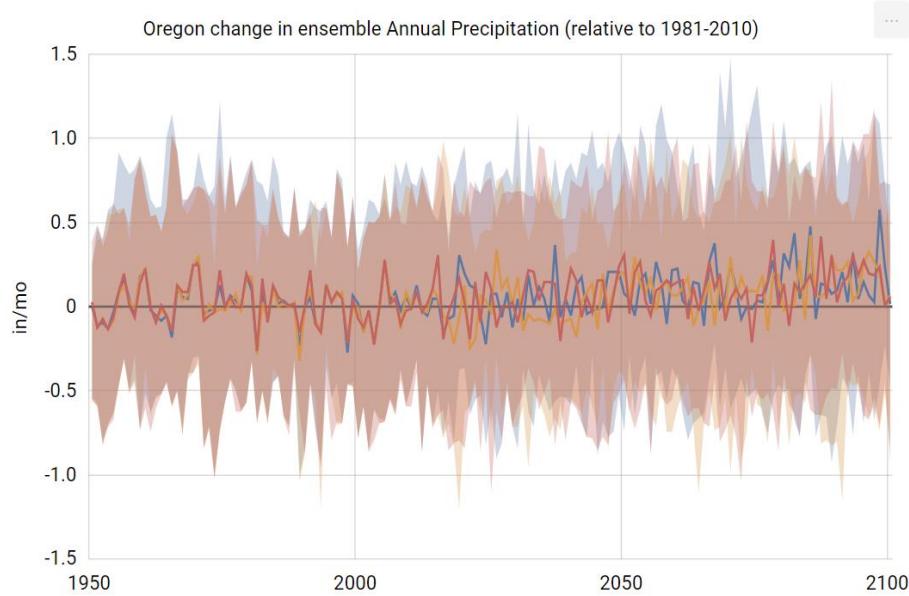
I write today to offer our support for HB4128. Those of us following the reports of the Intergovernmental Panel on Climate Change are very much aware that this body argued several years ago (IPCC 2018) that it is necessary to limit global warming to 1.5°C above pre-industrial levels. This has become sufficiently well accepted that it has become generally assumed as the target (e.g., IPCC 2023). The industrial revolution is identified as having occurred in the mid – late 1700s through the early 1800s (Wilkinson 2023). By 2018, IPCC indicated that global temperatures had reached 1°C above pre-industrial temperature while IPCC (2023) identified warming as then reaching 1.1°C above the 1850-1900 immediate post-industrial revolution average. In fact, according to NASA (2024) last year the temperature anomaly over land was already above that critical 1.1°C value (NASA 2024) with every month from June onwards beating historic records.

Restricting warming that upper 1.5°C target was argued by the IPCC (2018) to require our collectively achieving net zero emissions of greenhouse gases by 2050 where net zero is defined to exist when "...the amount of CO<sub>2</sub> entering the atmosphere must equal the amount that is removed." The simplest way to achieve this globally is for every jurisdiction to identify at least

net zero as its individual goal and identify intermediate targets consistent with achieving that 2050 target.



*Figure 1 Mean annual temperature change from the 1981-2010 baseline across Oregon (Adler and Hostettler 2013)*



*Figure 2 Mean annual precipitation change from the 1981-2010 baseline across Oregon (Adler and Hostettler 2013)*

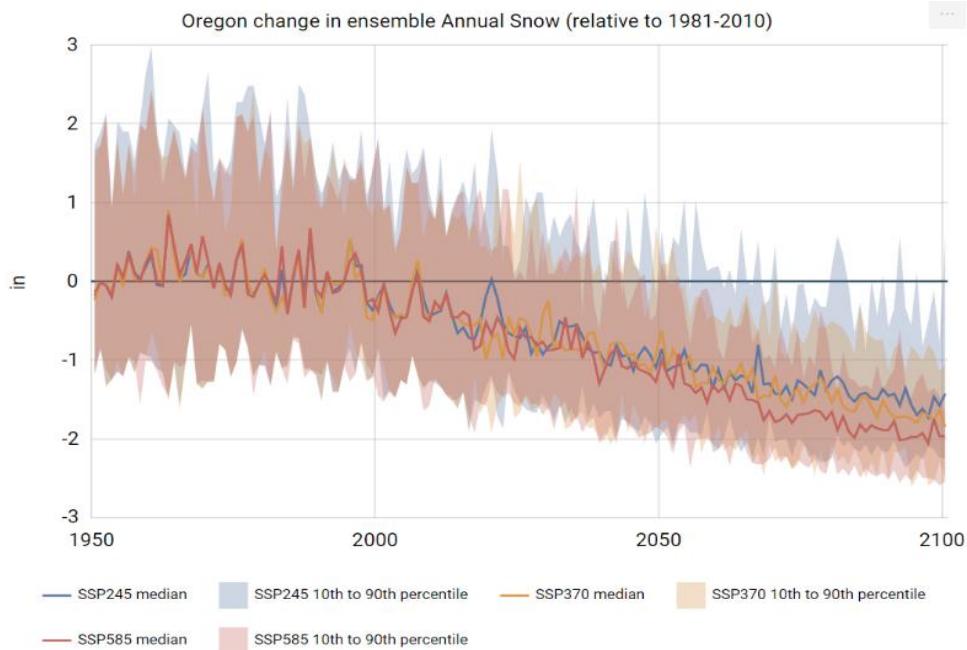
and their immediate predecessor scenarios, the Representative Concentration Pathways (RCPs), Hausfather (2019) indicated that those developing this scenario identified it as: “a high-

Projections by the United States Geological Survey (USGS) for Oregon regarding temperature, Precipitation, Snow Water Equivalent based on the latest scenarios and models incorporating Shared Sociopolitical Pathways (Alder and Hostettler 2013) are presented in Figure 1-3. In these figures, the red line represents the SSP 8.5 scenario, with pink shading the 10% to 90% percentile range, the orange line and shading represent the SSP7.0 scenario line and range. Finally, the blue line and blue shading represent the same for the SSP 4.5 scenario. In discussing the Shared Socioeconomic Pathways (SSPs)

emission business as usual scenario". Meanwhile IPCC (2014) stated: "Scenarios without additional efforts to constrain emissions ('baseline scenarios') lead to pathways ranging between RCP6.0 and RCP8.5." Unfortunately, recent observed data suggest that our current and possible future trajectory closely resemble the SSP8.5 scenario. In the following comments, I focus on the SSP8.5 scenario. Caution in developing adaptive responses would argue that we anticipate the more extreme future among the ranges offered.

Employing the SSP8.5 scenario the trends reveal temperatures across the state will likely climb some 10°F (over 6°C) compared to the 1981-2010 baseline (Figure 1) with summers warming

substantially more than winters. The general trend is for precipitation to show little change statewide (Figure 2) but generally a slight possible winter increase and slight summer decrease. Meanwhile, snowfall, measured as



*Figure 3 Mean annual change in snow water equivalent from the 1981-2010 baseline across Oregon (Adler and Hostettler 2013)*

the ecologically critical value of Snow Water Equivalent (SWE) is likely to exhibit an annual decrease (Figure 3). Water availability for human use is also dependent on the SWE value. This is especially critical since western states have historically used high elevation snowpack as the reservoir (e.g., USDA undated) supplying snowmelt irrigation and drinking water through summer and into fall.

Although there are slight differences in these projections among regions of the state related to altitude and topography, the overall outcome of the combined trends depicted above is that water availability will probably become an increasing problem for Oregonians across the state, but maybe most especially for rural Oregonians dependent on agriculture or natural resources (forest and fish) for their livelihood.

Given this threat, it seems entirely reasonable for the Oregon Legislature to initiate a study of water infrastructure needs. No doubt this will also result in consideration being given to the underlying problem of water availability.

For these reasons, Southern Oregon Climate Action Now supports HB4128. Assessing, and potentially suggesting remedies to our water infrastructure needs, comprises a sound step moving the state towards critical adaptation to climate change. While it is essential that we invest in adaptation to the climate crisis, we must not allow that effort to undermine our statewide efforts also to mitigate the underlying climate problem by reducing greenhouse gas emissions and promoting carbon sequestration in our natural and working lands.

Respectfully Submitted



Alan Journet Ph.D.

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