The past four years have been the hottest on planet Earth in recorded history. Ocean temperatures in 2017 were even warmer than the previous record set in 2015. The average acidity of ocean waters has increased by 25% over the past two centuries due to absorption of carbon dioxide, and the ability of oceans to support future marine life is uncertain. Oregon, now caught in the midst of this growing planetary chaos like every other jurisdiction on Earth, faces devastating effects to its natural resources, economy, and communities, as fossil fuel combustion continues to emit carbon dioxide. The Oregon State Legislature is positioned during a special legislative session to transition the state to renewable energy and thereby contribute to a global solution while creating local jobs.

**COSTS OF CLIMATE DISRUPTION ACROSS THE STATE OF OREGON**

Climate disruption increasingly brings to Oregon severe drought, wildfires, floods, crop losses, ocean acidification, loss of salmon, reduced snow pack, and more extreme weather events. These harms will worsen without rapid efforts to control carbon emissions, both in Oregon and elsewhere.

**Drought & Agriculture**

Oregon’s agriculture, food, and fiber industries have a combined economic footprint of over $52 billion. But prolonged drought has gripped Oregon’s agricultural communities, particularly those in eastern Oregon. Some Oregon farmers have experienced up to a 50 percent drop in projected revenues during intense drought conditions. Some Oregon ranchers lack enough water to irrigate fields and water their cattle in these conditions. In 2015, 13 Oregon counties – more than half of the state -- needed emergency federal assistance. Oregon’s snowpack, which naturally stores water and supplies streams used by farmers for irrigating crops during the summer growing season, reached the lowest level in recorded history in 2015, and this winter’s snowpack is about 50% below normal.

**Oregon Forests**

Oregon’s forest products sector is valued at $12.7 billion, and forests also bring recreation dollars to the state’s economy. In 2017, multiple regions of the state (including Southern Oregon, the Coast, the Gorge, and Central Oregon Cascades) simultaneously experienced catastrophic wildfires and forced evacuations. The Chetco Bar wildfire alone destroyed over 175,000 acres across Southern Oregon. Business sales dropped 30-60% in areas affected by the Gorge’s Eagle Creek fire. Thick smoke descended into the Willamette Valley and elsewhere in the state, causing broad-based health effects and keeping Oregonians inside. More than 600 jobs were lost in the leisure and hospitality sectors alone due to road closures and low air quality caused by the 2017 fires.

"I’ve got to know that I’ve got water next year to get through. . . .” Scott Seus, third-generation farmer in the Tule Lake basin, KQED News

"[T]here are always limits to adaptation. We can only engineer so much. . . . Ultimately we need to remove the primary causes of ocean acidification if we value shellfish for their economic and ecological roles.” Oregon State University researcher George Waldbusser

**Fishing**

Oregon’s on-shore commercial fishing industry was valued at $144 million in 2016. Oregonians and visitors annually spend $2.5 billion on fish and wildlife activities and equipment. But Oregon’s once stable fishing industry faces potential resource collapse from climate stressors. Abnormally warm water temperatures were to blame for the loss of an estimated 250,000 adult sockeye salmon in 2015. River managers anticipate less than 12,000 Chinook

Humanity faces a “different, practically uninhabitable planet,” unless it slashes carbon emissions. Dr. James Hansen, former U.S. chief climate scientist, NASA

Prepared by Zoe Grant, UO ENR Fellow. An annotated version of this paper, with source citations, will be posted on the UO ENR website.
Sometimes doing your best is not good enough. Sometimes you must do what is required.

--Winston Churchill