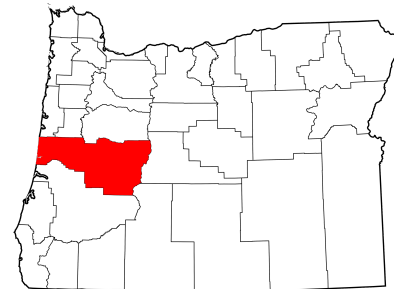


# Climate Report Card

## Lane County, Oregon



Climate change is affecting communities and natural resources around the globe. Like all communities, Lane County needs to be prepared for impacts and take action to protect people, property, and nature from climate-related risks. Lane County is expected to experience loss of snowpack and water storage, dramatic declines in native species, larger extreme storms associated with flooding, larger and more wildfire events, and increasing incidence of heat waves and disease, among other risks. The scientific information in this primer is intended to support an assessment of Lane County's climate change vulnerabilities.



### Lane County Climate Change Snapshot<sup>1</sup>

**GEOS**  
INSTITUTE

#### Historical Changes

- ↑ Avg. temp. +1° F
- ↓ Precipitation -6%
- ↑ Frost free period 1 week longer
- ↓ Snowpack declines of 15-30% throughout West

#### Mid-Century (2050s) Projections

- ↑ Avg. temp. +4-7° F
- ↑ Summer temp +5-9° F
- ↑↓ Precipitation -6% to +10%
- ↑ Drought stress +19 to 49%
- ↑ Frost free period +43 to +85 days longer
- ↓ Snowfall -47 to -69%
- ↑ Days over 90° F in Eugene +31 per year

#### Late-Century (2080s) Projections

- ↑ Avg. temp +7-10° F
- ↑ Summer temp +7-14° F
- ↑↓ Precipitation -4% to +12%
- ↑ Drought stress +32 to 59%
- ↑ Frost free period +79 to +126 days longer
- ↓ Snowfall -67 to -85%
- ↑ Days over 90° F in Eugene +58 per year
- ↑ Days over 100° F in Eugene +21 per year

# Lane County, Oregon

## Climate Change Projections<sup>1</sup>



### Emissions: Continued Business-as-Usual (RCP 8.5)

Climate Variable	Baseline (1971-2000)	Mid-century (2040-69)			Late-century (2070-99)		
Temperature		low	mean	high	low	mean	high
Annual	49° F	+4°	+5°	+7°	+7°	+8°	+10°
Summer	62° F	+5°	+7°	+9°	+7°	+11°	+14°
Winter	39° F	+3°	+5°	+6°	+6°	+7°	+9°
Extreme max.	100° F	+4°	+6°	+9°	+7°	+10°	+14°
Frost free days	267 days/yr.	+33	+44	+56	+54	+65	+75
Frost free period	175 days	+45	+64	+85	+79	+102	+126
Precipitation							
Annual (% change)	64 inches	+10%	+2%	-6%	+12%	+4%	-4%
Summer (% change)	4 inches	-2%	-21%	-39%	-1%	-23%	-45%
Winter (% change)	27 inches	+18%	+7%	-3%	+24%	+11%	-2%
Snowfall (% change)	5 inches	-47%	-58%	-69%	-67%	-76%	-85%
Drought Stress							
Hargreaves climatic moisture deficit	14 inches	+19%	+34%	+49%	+32%	+45%	+59%

### Emissions: Aggressive Reductions (RCP 4.5)

Climate Variable	Baseline (1971-2000)	Mid-century (2040-69)			Late-century (2070-99)		
Temperature		low	mean	high	low	mean	high
Annual	49° F	+3°	+4°	+5°	+4°	+5°	+6°
Summer	62° F	+3°	+5°	+7°	+4°	+6°	+8°
Winter	39° F	+3°	+4°	+5°	+3°	+4°	+6°
Extreme max.	100° F	+1°	+5°	+8°	+2°	+6°	+10°
Frost free days	267 days/yr.	+26	+35	+44	+31	+42	+52
Frost free period	175 days	+31	+48	+64	+40	+60	+79
Precipitation							
Annual (% change)	64 inches	+5%	+1%	-3%	+10%	+3%	-4%
Summer (% change)	4 inches	-4%	-20%	-36%	0%	-18%	-36%
Winter (% change)	27 inches	+14%	+6%	-2%	+17%	+7%	-2%
Snowfall (% change)	5 inches	-35%	-48%	-62%	-44%	-55%	-66%
Drought Stress							
Hargreaves climatic moisture deficit	14 inches	+15%	+26%	+38%	+15%	+30%	+46%

<sup>1</sup> Historical change data from [www.climatetoolbox.com](http://www.climatetoolbox.com). Future projections from ensemble of 12 Global Climate Models available at <http://tinyurl.com/ClimateNA>.