

The Impact of Climate Change: Projected Adaptation Costs for Boulder County, Colorado Resilient Analytics, April 2018

A new report by Dr. Paul Chinowsky, founder of Resilient Analytics, shares that climate change is projected to impact all aspects of daily life in Boulder County including infrastructure, human health, energy demands, and forest lands among others. The initial analysis projected several of the potential climate impact costs for Boulder County-owned assets through 2050 with an additional highlight on the City of Boulder. Specific climate impact costs are based on projected maintenance and retrofit costs and/or changes in design costs anticipated due to climate projections.

Several key findings from the analysis include:¹

- Wildfire risk is projected to increase with projected damage from wildfires increasing by almost 50% from 2020 to 2050. Mitigation efforts to prevent additional property damage, which only includes privately-owned homes, are projected to total upwards of \$20 million.
- Severe and extreme droughts are projected to double between 2020 and 2050.
- Increasing temperatures will impact public health costs due to extreme heat events as well as potential increases in allergy and asthma symptoms as a result of extended growing seasons.
- More intense, short duration precipitation events will impact urban drainage systems increasing the likelihood of localized flooding.
- The projected annual road maintenance cost per mile of road could increase from \$650 per mile historically to \$1,130 per mile by 2030 due to increased damages from changes in precipitation and flooding events.
- Projected improvements to Boulder County bridges could exceed \$68 million.
- Government-owned buildings in Boulder County will experience a cumulative increase in cooling costs of 31% to 45% by 2030 with an increase of 54% to 75% by 2050.

In summary, the estimated total cost of mitigating only some of the potential effects of climate change across the geographic area of Boulder County through 2050 is conservatively placed at \$96 million to \$157 million for the median and high impact scenarios for the areas looked into with the City of Boulder incurring \$16 million to \$36 million of these adaptation costs.²

Additional costs not included in this total include; residential costs for installing air conditioners in residences where they are not currently installed, increasing water availability during extreme drought events, removal of dead trees resulting from future mountain pine beetle infestation, public health costs due to increased hospital costs, and additional economic costs due to business interruptions during infrastructure repair and replacement periods.

While the costs presented are initial findings and a starting point for further climate risk analysis, they indicate that potential climate impacts should be a top planning concern for Boulder County. Infrastructure projects and public health planning decisions made today will be impacted by projected climate change. **Read the [full report](#).**

¹ Specific climate impact costs are based on projected maintenance and retrofit costs and/or changes in design costs anticipated due to climate projections.

² These totals are presented with the understanding that different jurisdictions may be responsible for different impacts within this geographic area.