

Climate Change and Flooding in Central Appalachia

Communities in rural Appalachia face multiple water challenges that climate change is already impacting. These include extreme flooding events, lack of household water access, poor water quality, and lack of wastewater services.¹ Appalachia has some of the highest rates in the United States of households with Safe Drinking Water Act violations and without complete plumbing.² Here we present the observed and projected impacts of climate changes in Central Appalachia (shown in yellow in Figure 1) with a focus on increased extreme precipitation events and how flooding affects rural water and sanitation systems.

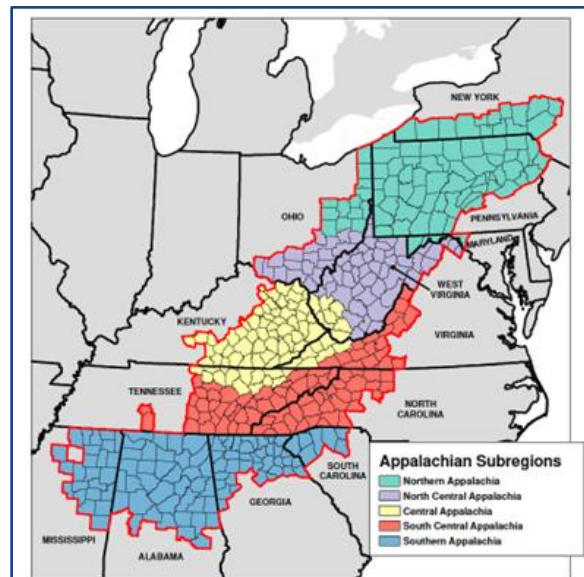


Figure 1: Appalachian Subregions

Source: *Appalachian Regional Commission*.³

KEY TAKEAWAYS

- Water access and infrastructure in Central Appalachia are already affected by climate change.
- Central Appalachia's varied geography, demographic composition, and legacy of extractive industries combined with climate change put the region at high risk for catastrophic flooding impacts.
- Extreme precipitation events such as floods can damage water infrastructure and compromise water quality.
- Climate change is projected to increase the frequency and severity of extreme precipitation in Central Appalachia, likely leading to more catastrophic floods in the region.