every drop counts

Beech Mountain Water Education/Information Sheet

Climate Change and Impact on Water

When people hear the term “climate change” they might think of global warming, melting ice caps or holes in the ozone layer. However, climate change also has more direct impacts on local water supplies. Climate change is real. NASA is a good source of scientific data and analysis on the subject https://climate.nasa.gov/evidence/. The winter of 2019-2020 was the warmest on record. While temperatures in Western North Carolina have not been significantly above average, snow fall totals continue to fall. As recorded by http://raysweather.com/, Beech Mountain saw only 43 inches of snow this winter, significantly below average. This means less snow melt and less water in the spring. As temperatures rise this also increases the chances of drought.

Historic data on climate change in North Carolina can be found at the NOAA National centers for Environmental Information https://statesummaries.ncics.org/chapter/nc/. According to NOAA’s data, since the late 1970s temperatures have steadily increased in North Carolina, with temperatures being consistently above normal since the late 1990s. Average winter temperatures have been above average since 1990, with the last four-year period (2015–2018) as warm as the early 1930s and early 1950s. Average summer temperatures have been the warmest on record over the last 14 years. Although North Carolina has not experienced an increase in the frequency of very hot days (days with maximum temperature at or above 95°F), the last nine years (2010–2018) have seen the largest number of very warm nights (nights with minimum temperature at or above 75°F) in the historical record. At present, while there is no overall trend in annual precipitation, there is a trend towards drier summers and winters.

According to the North Carolina Climate Office https://climate.ncsu.edu/ , a part of NC State University, rising average temperatures and more frequent and more intense heat waves due to climate change are affecting human health in several ways. Most directly, warmer average temperatures and more extreme temperatures put more people at risk for heat-related death and disease, such as heat stroke and dehydration. https://climate.ncsu.edu/edu/Impacts Rising temperatures may facilitate the melting of glaciers and ice caps in the ocean, contributing to rising sea levels. When coupled with more frequent storm surges, more frequent and intense flooding may result. These extreme weather events can reduce the availability of drinkable water and compromise the integrity of public health infrastructure.

Since Beech Mountain currently depends on stream flow from Buckeye Creek, these effects are a direct threat to the Town’s current water supply. The drought experienced in 2010, which actually began several years earlier, is likely to reoccur in the future. Climate change and the potential for periods of drought means the Town needs a secondary water source to insure an adequate water supply during those times.