



[2017 Montana Climate Assessment](#) has a lot of good information, it is stakeholder driven and science informed

Proven trend of 0.39° increase per decade – there is no doubt on warming.

Water is essential for life and essential for the infrastructure we've created.

Water inputs are controlled by climate and water outputs are affected by climate and controlled by geology and precipitation.

70% of water in the West comes from snowpack.

The water year starts in October, when water starts accumulating in the system.

April 1st is used as a date to project where we're at for the year with water supply.

The ratio of snowfall to rainfall is important in building snowpack.

Noted Trends

- Reduced snowpack in mid to low elevations
- Earlier snowmelt
- Earlier peak spring runoff
- Reduced late summer availability - Low flows becoming more intense

In the Bitterroot we have a buffer with the storage facilities we have in place.

Irrigation practices help recharge the aquifer. Infrastructure is important to maintain lest we lose what we have.

Fish Trends

- Bull and Cutthroat trout are moving into headwater areas where the water temperatures are cooler. Brown trout are filling in behind them as they are more tolerant of warmer water than the native species.
- Similar trend is happening with two native species Sculpin (prefer cold water) and Long-nose Dace (are more tolerant of warmer water).
- Summer Mortality Floats find disproportionate number of cutthroat dead as compared to overall population. Two theories are that cutthroat are less tolerant of warmer temperatures than the non-native rainbow and brown trout and that cutthroats get handled more as an easier fish to catch.

Areas we can work together for solutions

- Aquatic Invasive Species
- Beaver management/natural storage
- Off stream storage (small dams)

Take away – We need to talk and communicate to work together for solutions
Resilience + Cooperation go hand in hand