Southcentral Alaska / Dena'ina, Ahtna, Alutiiq Regional Listening Session Notes

Southcentral

Stream forecasting is based on conceptual models that lack real data on glacier extent, and this is a concern regarding our understanding of what they contribute and how they are behaving as climate conditions change. Currently used models use a water balance-based calibration process that is 20 years old, so an update is needed.

More information is necessary to effectively help many areas prepare for and manage drought conditions.

Concerns about whether recent drought and dryness is a long-term trend and thinking ahead to contingency planning.

Long-term predictive information would be ideal. March and April precipitation timing indicates when break up will happen and this helps with the later season water and fire conditions outlook.

Data are limited, only 6-8 wells tracked in AK.

Impacts to Salmon returns can be seen 4-5 years after spawning (few eggs laid leads to few fish returning in 4-5 years).

Anchorage

In Anchorage some properties even in urban area are on more than one well. Well water has been impacted water quality-wise by rapid development, which can compound drier conditions.

Groundwater information is unknown and untracked, even in Anchorage. So unknown what water losses are.

Water infiltration in Anchorage is unique orographic precipitation mechanism and critical to hydrological functions. Locally, there’s an increasingly common rain shadow effect referred to as “downsloping” where air masses are dry within the “Anchorage bowl” and wet on the other side of the mountain ranges.

Very few reported problems for wells around Anchorage in 2019 until mid-August (mostly isolated, deep, bedrock wells in non-porous substrate.

Low water affects the navigability on rivers, which makes timing barges headed upstream challenging for villages.

Recreation is important and people look for water height and snow depth information for recreation activities.

Potential low elevation snow drought is important, ex: Lower Susitna valley

Iditarod had cases when snow wasn’t enough in March. Snows in November and December are important too.

Mat-Su Valley

More complaints in 2019 about wells water and concerns about fish passage in lower elevation streams that were running low.

Lower Willow Creek was an example that lead to finding Temporary Water Use Authorization holders are tracked and diverted to an alternative source when water levels are low and fish passage is a concern.

Municipalities of Wasilla, Willow, and Palmer supply water within city limits, everyone else is on personal wells. No tracking of well water. Water delivery is common in area and may be cheaper than filtering fine sediment out of well water if water quality degrades due to drought or flooding.

Irrigation comes from well water.

Groundwater is close to the surface (high water tables) due to lots of rivers, lakes, wetlands in the area. Concerns about drought negatively affecting agriculture and reduction of ground water levels leading to perched aquifers and lack of access.

Wetlands not drying out but many lower elevation rivers are ephemeral, especially during dry periods. Upstream, closer to mountains these rivers flow year-round or close to it.

Municipal water shortages have not been discussed (to his knowledge), but in-home conservation or agriculture water conservation is already being practiced. Discussing grey water usage, rainwater catchment for home gardeners. Rainwater catchment currently regulated against in Mat Su.

Seldovia

Forecasting was limited during the drought due to limited information on streamflow inputs. Similar lesson learned for areas also lacking data.

2019 was a weird hunting year. Wildfires meant you could not see mountain top and smoke prevented hunting.

2019 impact on stream salmons was not as bad in terms of drying up as 2015 when tens of thousands of pinks and silvers were lost.

Lack of berries bushes just empty in 2020 this last year (precipitation can affect berry production in years 1 and 2 as flowers to fruit is a two-year process).

Snow machine used to be huge, but not anymore as the snows are not right or there's not enough. They are seeing less snow trend-wise over the last several years.

With more rain and less snow there's less of a reserve/melt water during the summer to create run off and regenerate groundwater. It doesn't seem like we're seeing groundwater regeneration like we used to in the past.

Several people outside of city limits have wells, and their wells are going dry on a regular basis now. Example parents well used to be enough for two adults and four teenagers in the home using water. The well never went dry, but the past 4-5 years when it's been just the two of them for years (using much less water) their well dries up on a regular basis.