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Caveat 1: Hydrology needs to be sensitive to temperature
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Caveat 1: Hydrology needs to be sensitive to temperature

Caveat 2: We are NOT using precipitation predictions, so with delta or resample historical precipitation doesn’t change
Decision-relevant metric, April 1 – July 31 accumulated volume, is sensitive to temperature

![Graph showing volume (mil acre-feet/year) vs. Climatology (1980-2010) with a line at 39 mAF/yr]
Decision-relevant metric, April 1 – July 31 accumulated volume, is sensitive to temperature

- Climatology (1980-2010) volume: 39 mAF/yr
- Delta Clim+0.9C volume: 37 mAF/yr
Decision-relevant metric, April 1 – July 31 accumulated volume, is sensitive to temperature.

![Graph showing volume in mil acre-feet/year for different climate scenarios.]

- Climatology (1980-2010): 39 mAF/yr
- Delta Clim+0.9C: 37 mAF/yr
- Resample (0/27/73): 34 mAF/yr
Decision-relevant metric, April 1 – July 31 accumulated volume, is sensitive to temperature.
But annual reservoir volume is variable!
But annual reservoir volume is variable!

especially when we are comparing different sample sizes
But annual reservoir volume is variable!

Especially when we are comparing different sample sizes.

And when we aren’t accounting for precipitation variability.
Hydrograph of weekly average inflows shows climatological snowmelt...
Hydrograph of weekly average inflows shows climatological snowmelt... and delta and resample show sensitivity to temperature...
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But 2015 has a “miracle May” with high precipitation which skews variability.
Conclusions

• Decadal predictions are still experimental, but framework provides water managers with systematic alternatives to using climatology.
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• Decadal predictions are still experimental, but these approaches give water managers systematic alternatives to using climatology.

• Many potential users will use decadal predictions with impact models – but outputs will only reflect underlying skill (trend vs. variability)
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• Decadal predictions are still experimental, but these approaches give water managers systematic alternatives to using climatology.

• Many potential users will require pairing decadal prediction information with impact models – but outputs will only reflect underlying skill (trend vs. variability)

Thank you!
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