SNOTEL Water Level Analysis

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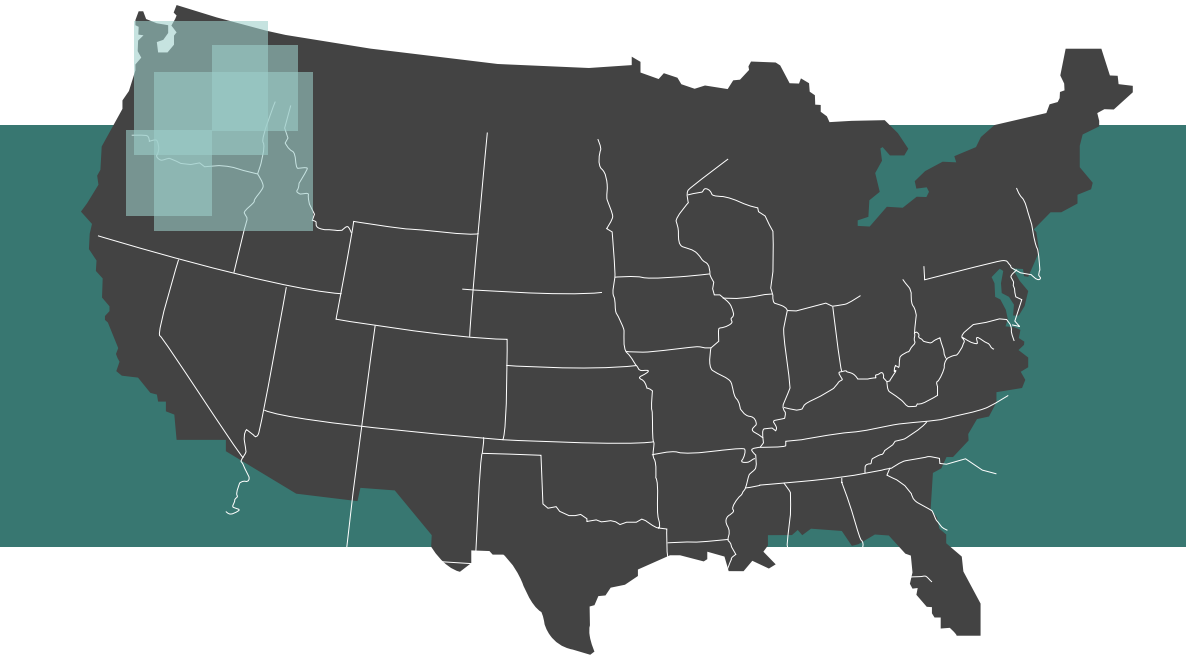
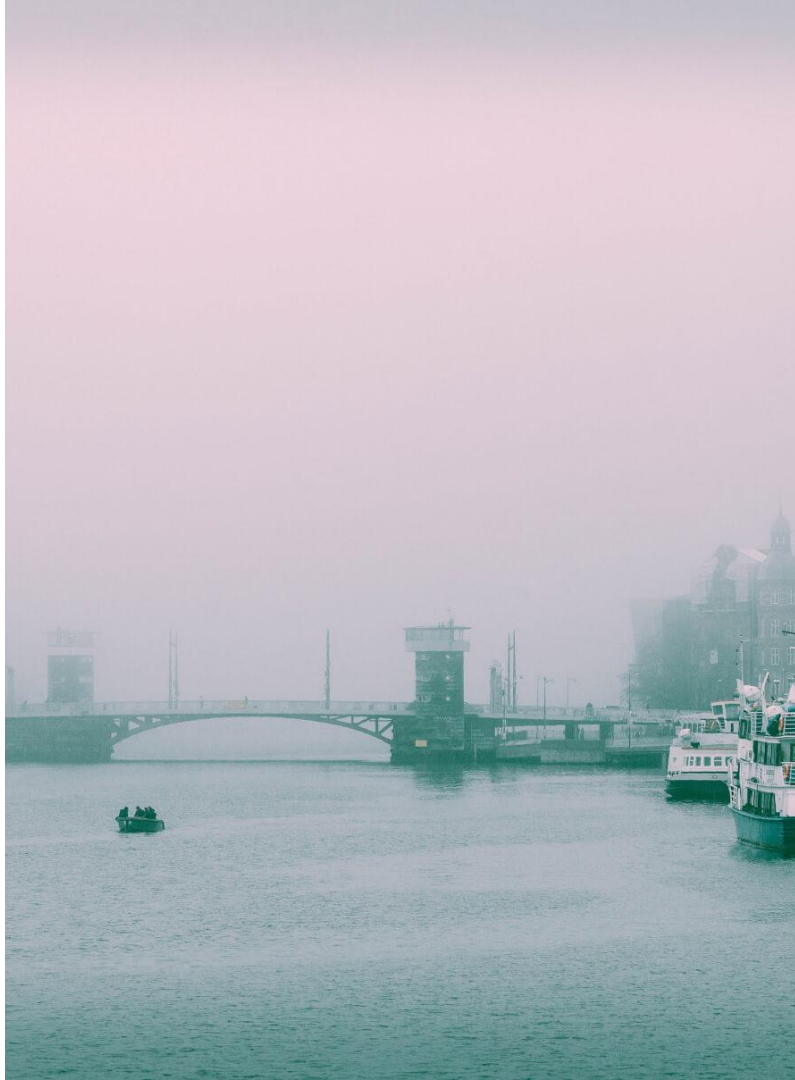


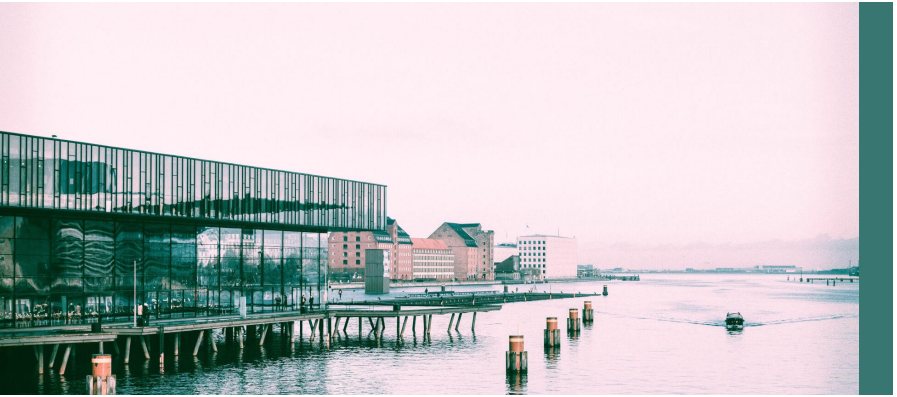
Background

- SNOTEL (SNOwpack TELemetry)
- 730 sites in 11 states
- Data from SNOTEL sites in the Columbia River Basin
- Feb 10, 1990 - 2021

Problem Statement

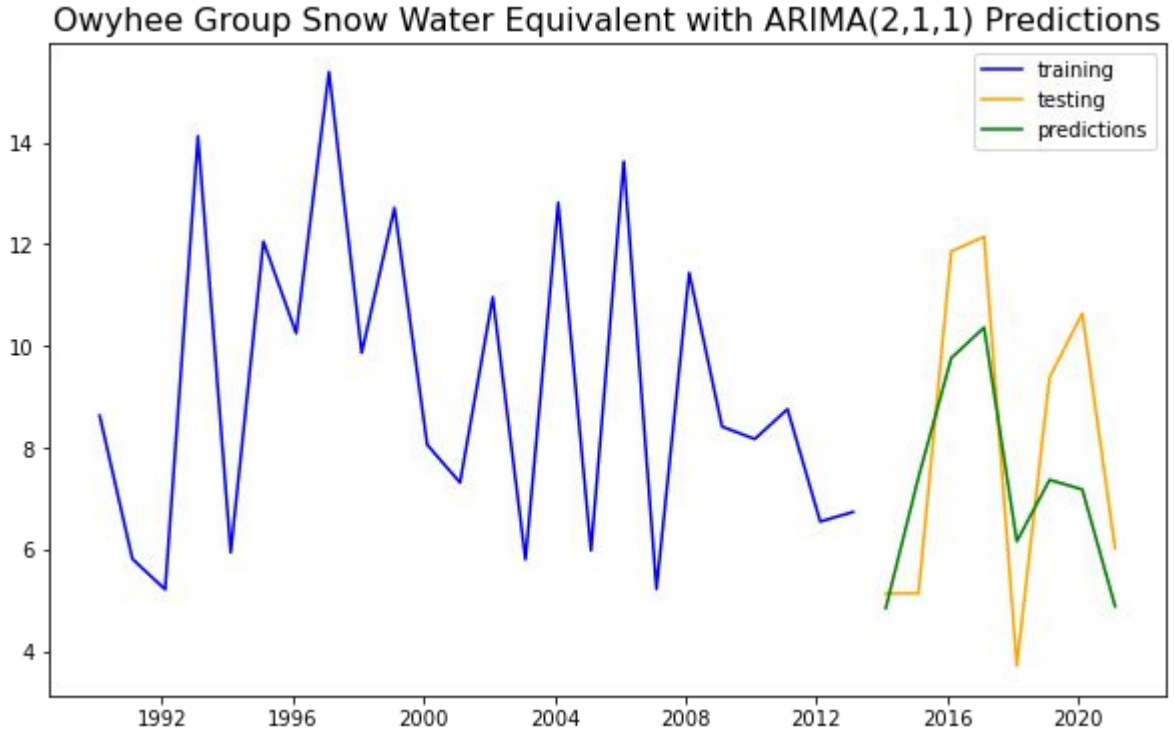
- Can we produce a model to predict precipitation levels in a water basin using data gathered from NRCS SNOTEL sites?





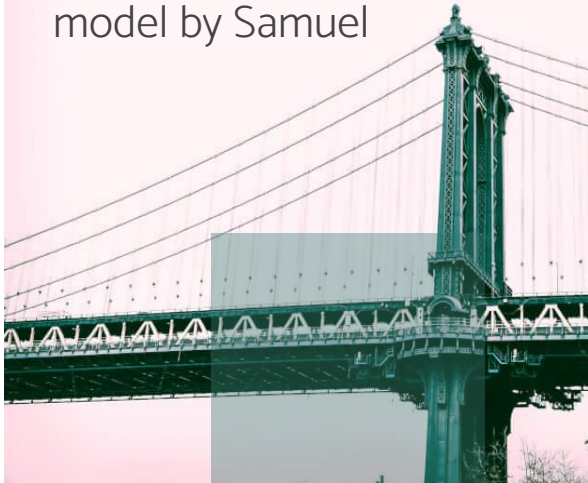
The Process

- CSVs collected from USDA website
- 24 stations in the Columbia River Basin
- Timeseries (ARIMA)
    - Used the model with best AIC



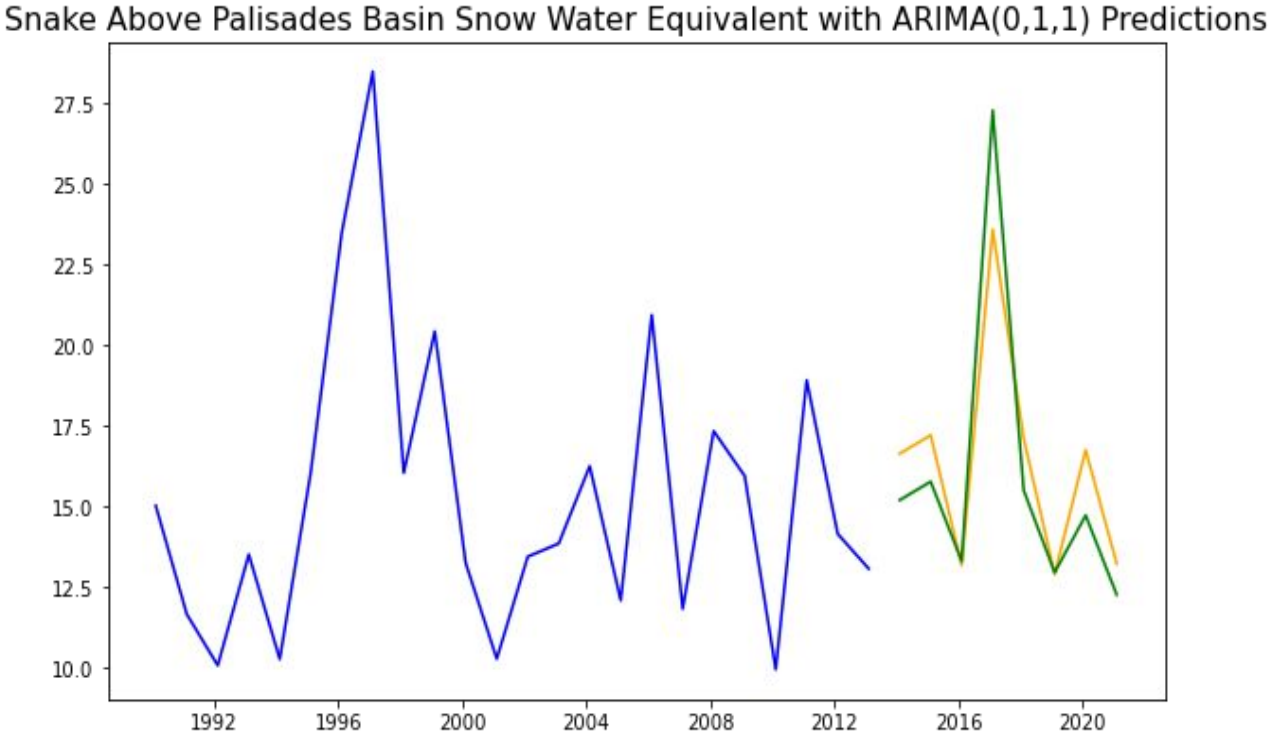
Results

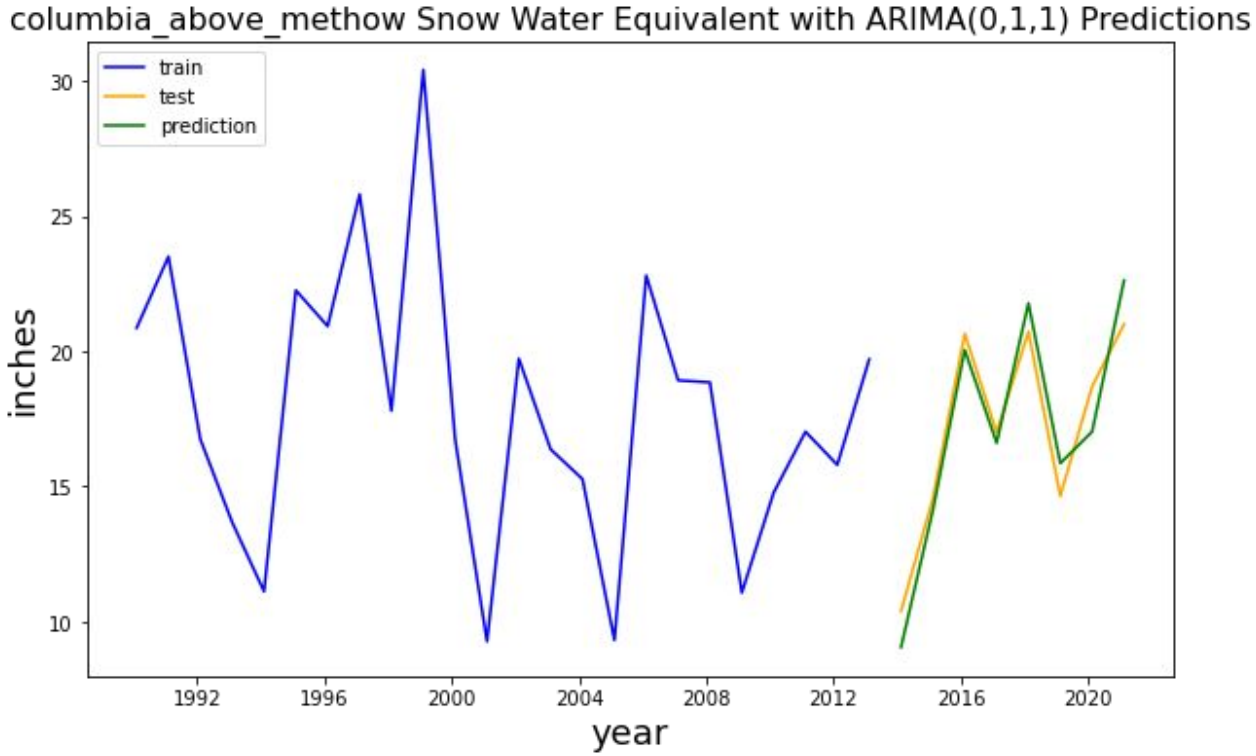
model by Samuel



Results

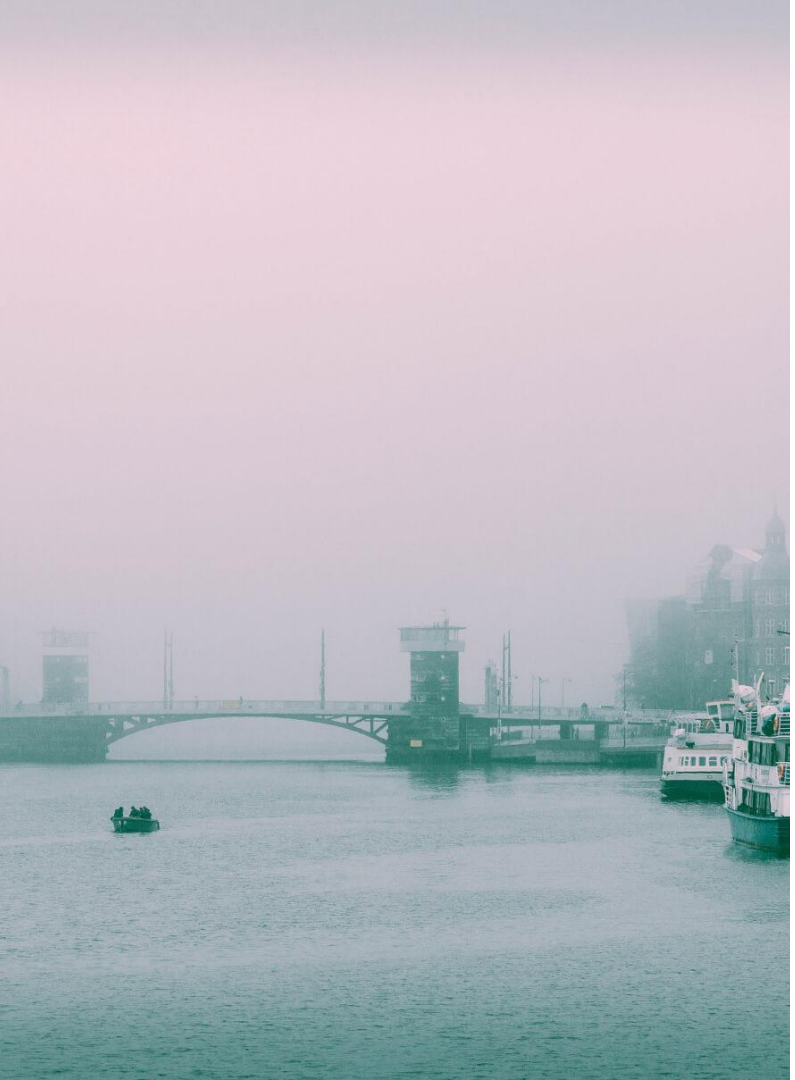
model by Grant





Results

model by Kathleen



Conclusions

- Overall, the ARIMA model was pretty good at predicting water levels
- Similar results should be seen when testing on other days of the year as well.
- We recommend further testing and use of the full data for every day of the year before implementing a model for short term predictions.

THANK YOU FOR LISTENING