

What is a water quality forecast?

- A **forecast** is a prediction of a future event with **uncertainty**
- A **water quality forecast** is a future prediction of a water quality variable (such as water temperature) with uncertainty

Drinking water forecast

Mon



20%

Tues



30%

Wed



60%

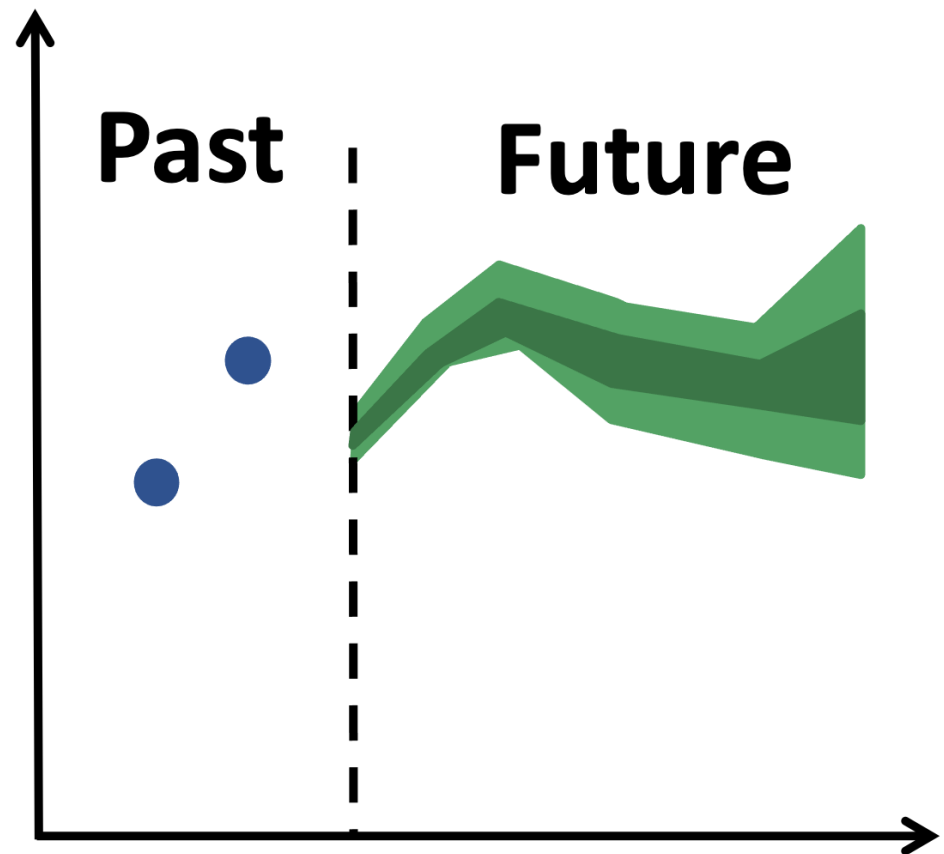
Thurs



80%

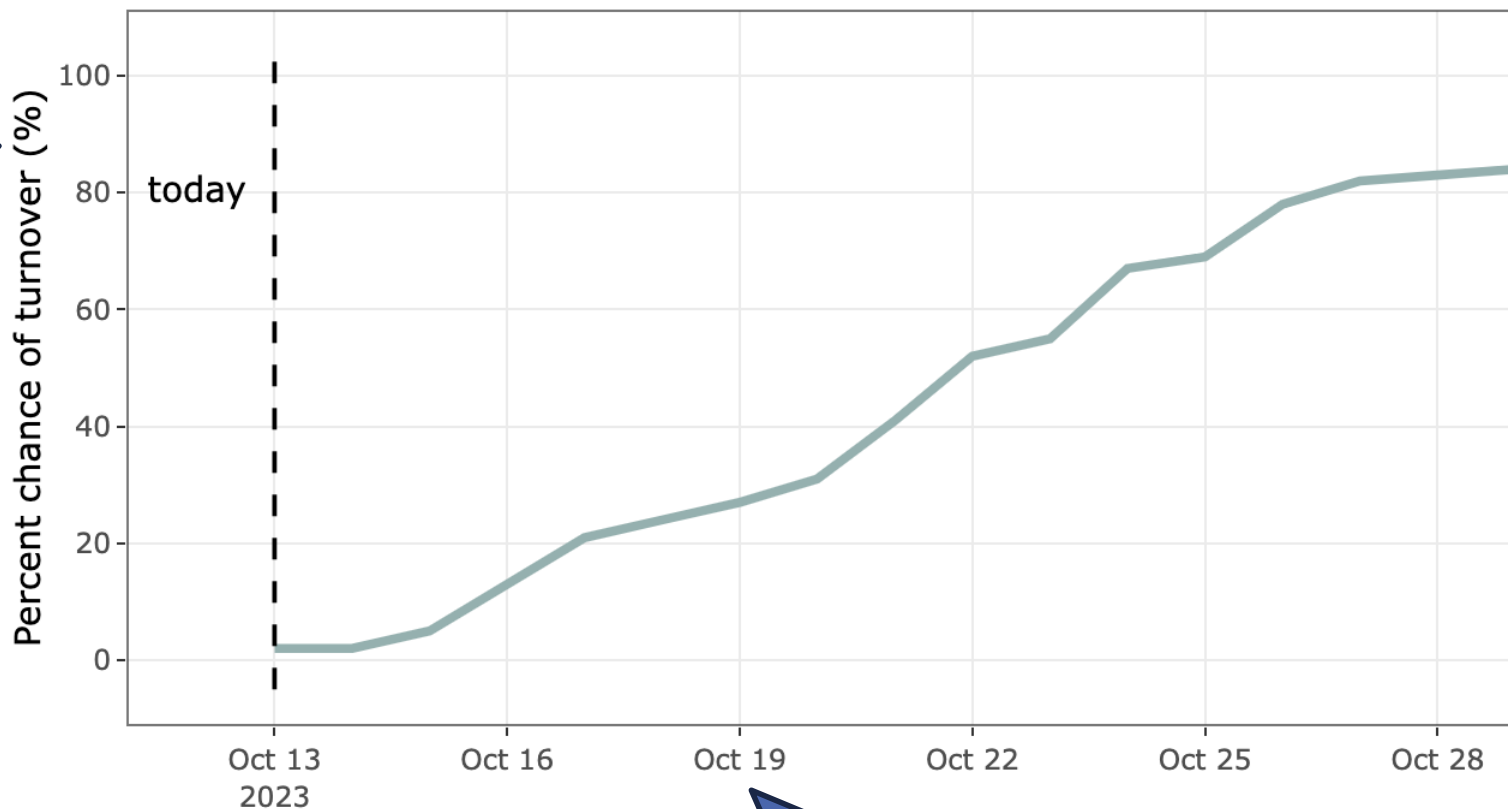
What is forecast uncertainty?

- **Forecast uncertainty**: the set of possible alternate future conditions predicted by a model and the chance of observing each outcome.
- We generate multiple different predictions of the future because the future is inherently unknown.
- Uncertainty generally increases as the time into the future increases.



How to interpret a turnover forecast

Turnover forecast



Y axis is the probability of turnover – this is where the uncertainty is! We are not sure if turnover will happen, so we provide a probability.

X axis is date that is being forecasted