

Lake water levels in King County

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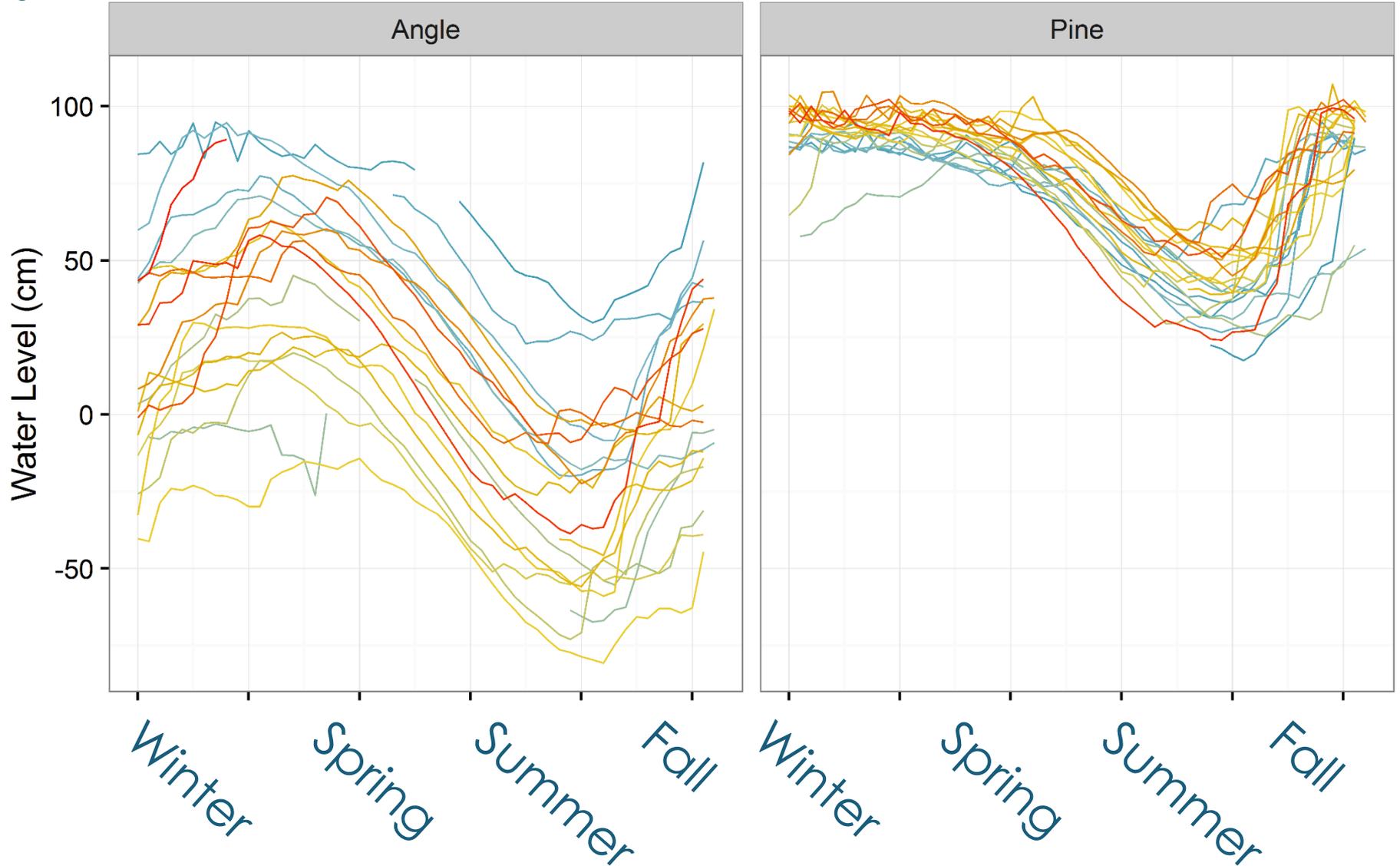
Supervisor: Julian D. Olden



Why study lake levels?

- Water level in lakes fluctuate naturally in response to both precipitation and temperature.
- In the region, lakes follow a similar pattern.
- But not all lakes fluctuate in the same way.

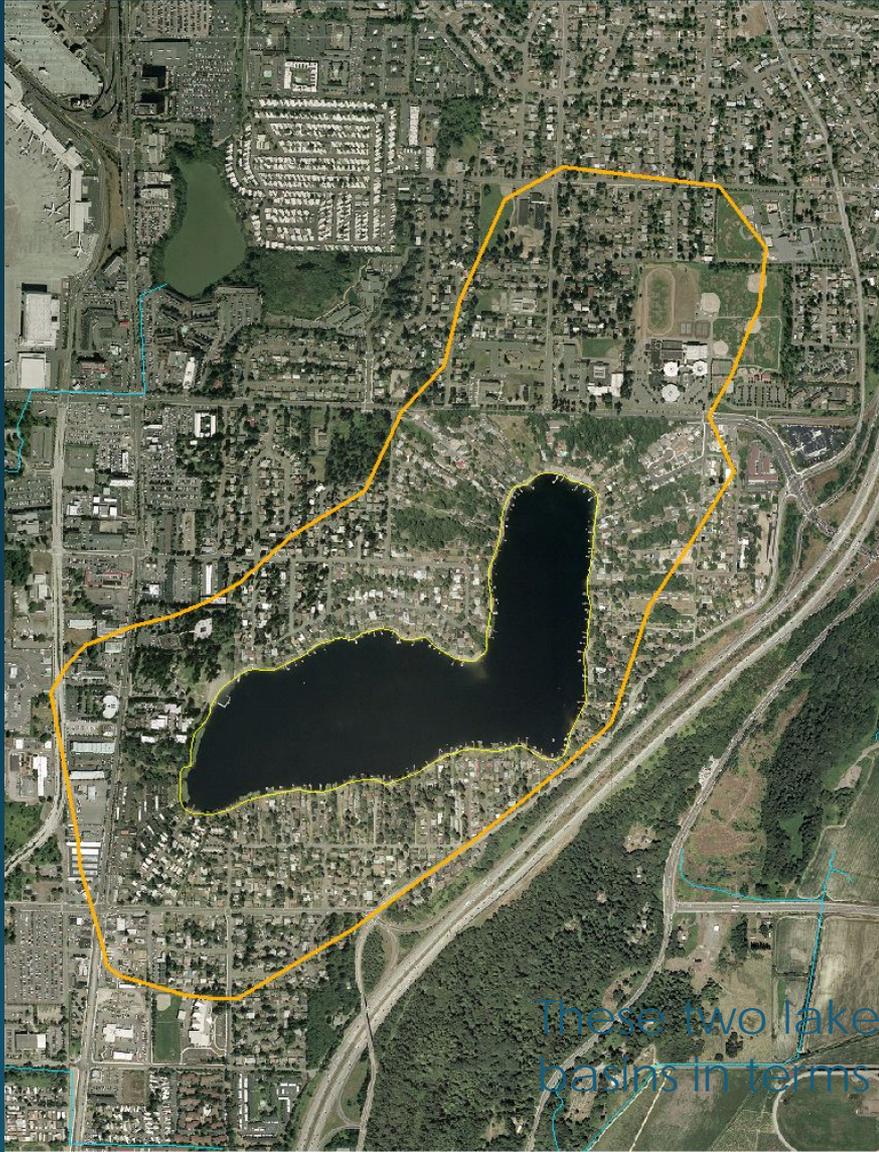
These two lakes in the program show the same seasonal pattern but Angle lake has distinct changes between years.



Why study lake levels?

- Water level in lakes fluctuate naturally in response to both precipitation and temperature.
- In the region, lakes follow a similar pattern.
- But not all lakes fluctuate in the same way.
- Differences can be due to:
 - Different types of soils
 - Size of the watershed draining in the lake
 - Degree of development in the watershed
 - etc

Angle



Sawyer

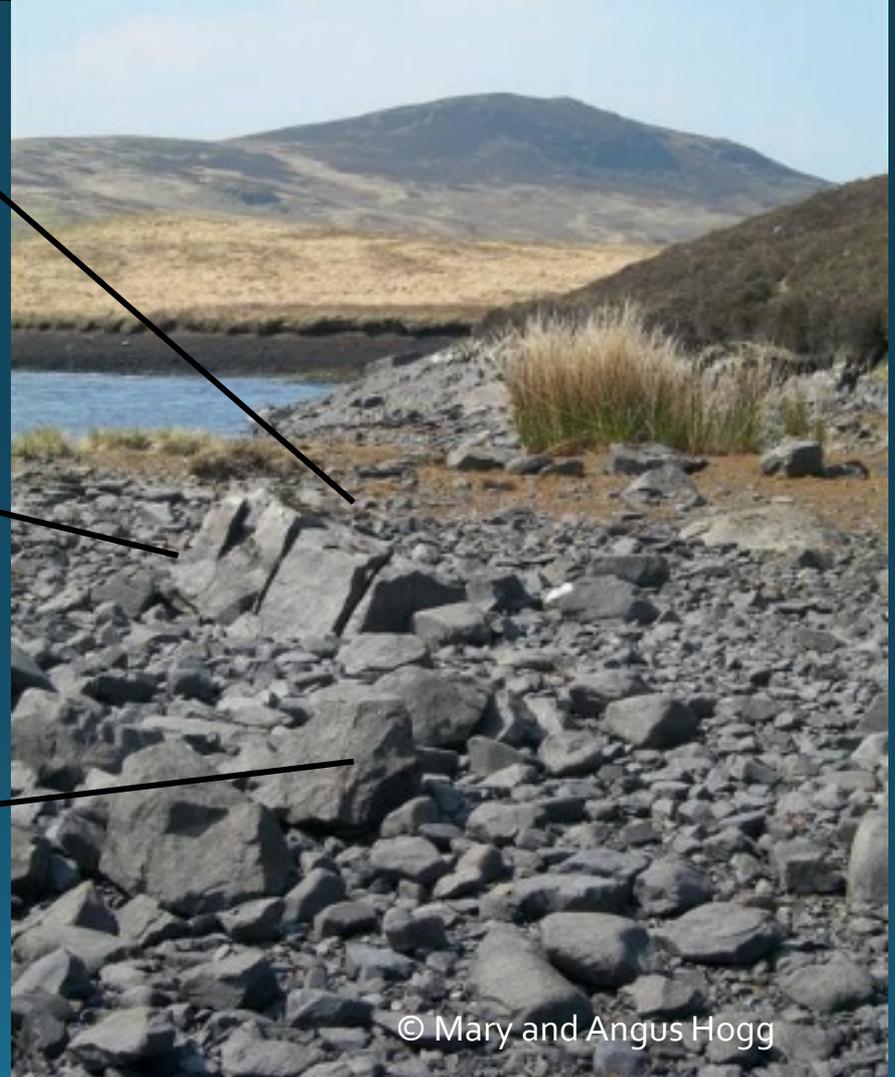


These two lakes have very different drainage basins in terms of size and human activity.

Why study lake levels?

- Changes of water level in lakes can have huge impacts

The impacts will affect directly the organisms living in the littoral zone on the edge of the lake.



Why study lake levels?

- Changes of water level in lakes can have huge impacts:
 - Weaken important native species
 - Facilitate invasion by non native species
 - Cause loss of biodiversity
- Despite their importance, deviations from natural fluctuations are still relatively understudied.
- Researchers expect the situation to get worse.

Climate change



Scientists expect that, due to climate change, human water consumption will increase and that extreme events like floods and droughts will be more frequent.



What will we do?

- Use the 20+ years of data collected by volunteers from the Lake Stewardship Program.
- Try to find patterns and differences between lakes.
- Relate the patterns to climate and human activity in the watershed
- Investigate how changes in water level affect organisms living in the lake.
- Install equipment to record temperature.

What can you do?

- Since you live next to the lake, you know more than we do. We'd like you to share your knowledge with us.
- If the lake has no public access and we need to collect data, we would be very grateful for you to let us access the lake via your property.

A serene landscape photograph of a lake at dawn or dusk. The sun is low on the horizon, creating a soft, hazy glow over the water and the forest in the background. A single duck is swimming in the foreground, leaving a trail of ripples behind it. The water reflects the light from the sky. The overall mood is peaceful and quiet.

Questions?
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