Title of presentation:	Interplay between regional climate and re-oligotrophicaton on lake thermal structure
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Abstract: (250 words max.)	Lakes are a major source of water in the Alps, and both climate change and re-oligotrophication have affected many of them during the last decades. Lake Caldonazzo (area = 5.6 km^2; southern Alps, Italy) with its 40-year dataset, can be a model system to understand the interacting forces of these environmental drivers on the thermal structure (temperature and thickness of the epilimnion, hypolimnion temperature, depth of the thermocline, Schmidt stability) of intermediate-size lakes. We used solar radiation, air temperature, wind and global circulation indices as climatic indicators and transparency, phosphorus and chlorophyll concentrations as trophic indicators. Trend patterns and the timing of change points in climate, lake thermal structure and trophic state were linked by a mechanistic model of interaction. Following re-oligotrophication, in Lake Caldonazzo water transparency increased that led to greater epilimnion depth. Within this deeper layer, the incoming heat of climate change was distributed without increasing epilimnetic temperature until restoration was accomplished. Afterwards, however, epilimnion thickness did not further increase and therefore could not prevent an upward shift in epilimnetic temperature. At the same time, the hypolimnetic temperature tended to decrease probably linked to a cooling trend in winter temperature. Thus, our study showed that in Lake Caldonazzo the hypolimnion mainly tracked winter climate while the epilimnion tracked the interaction between climate and restoration. The evolution of Schmidt stability, reflecting different aspects of a lake's thermal

	structure, indicated earlier and stronger stratification. This will have important repercussions on ecosystem services.