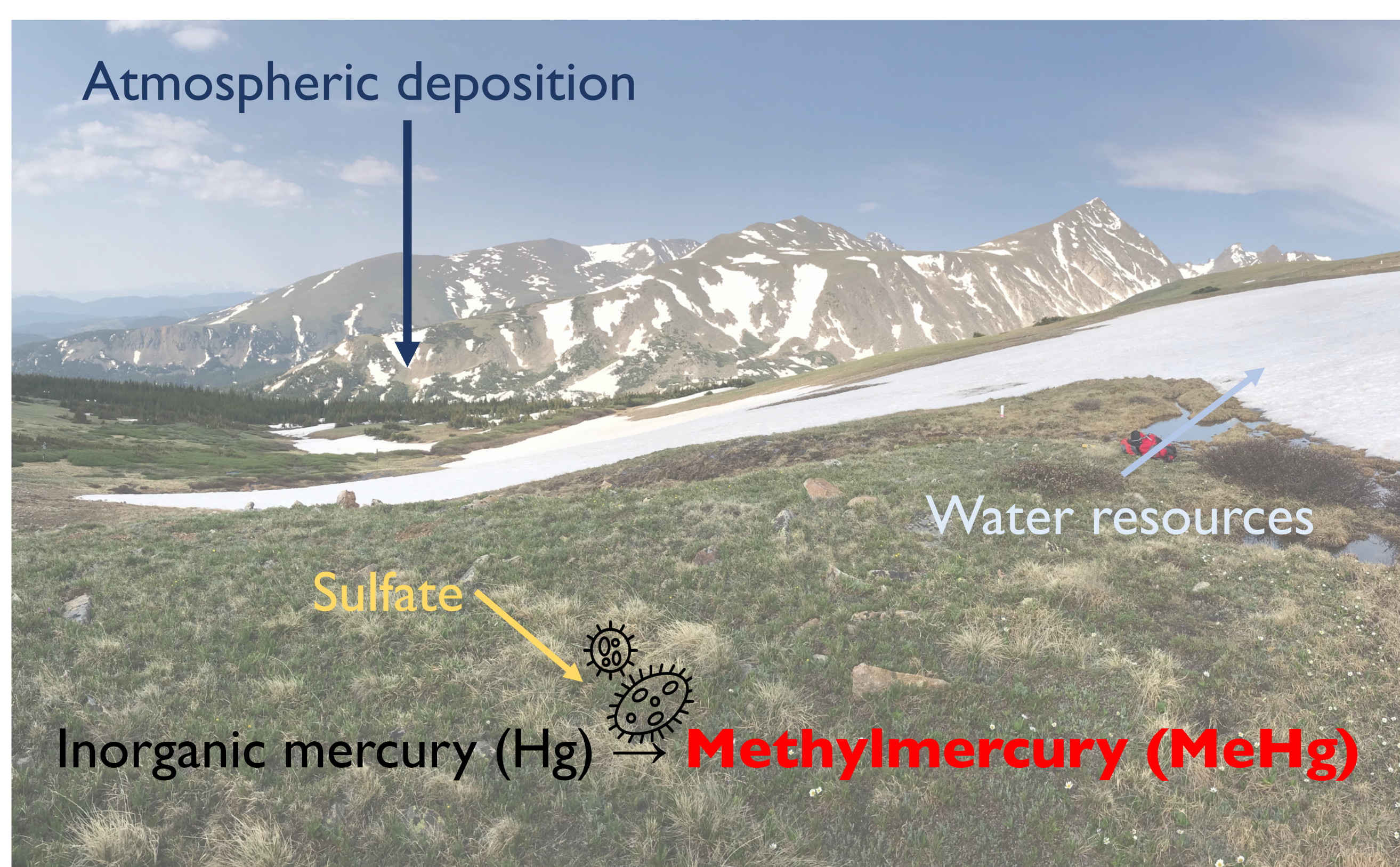
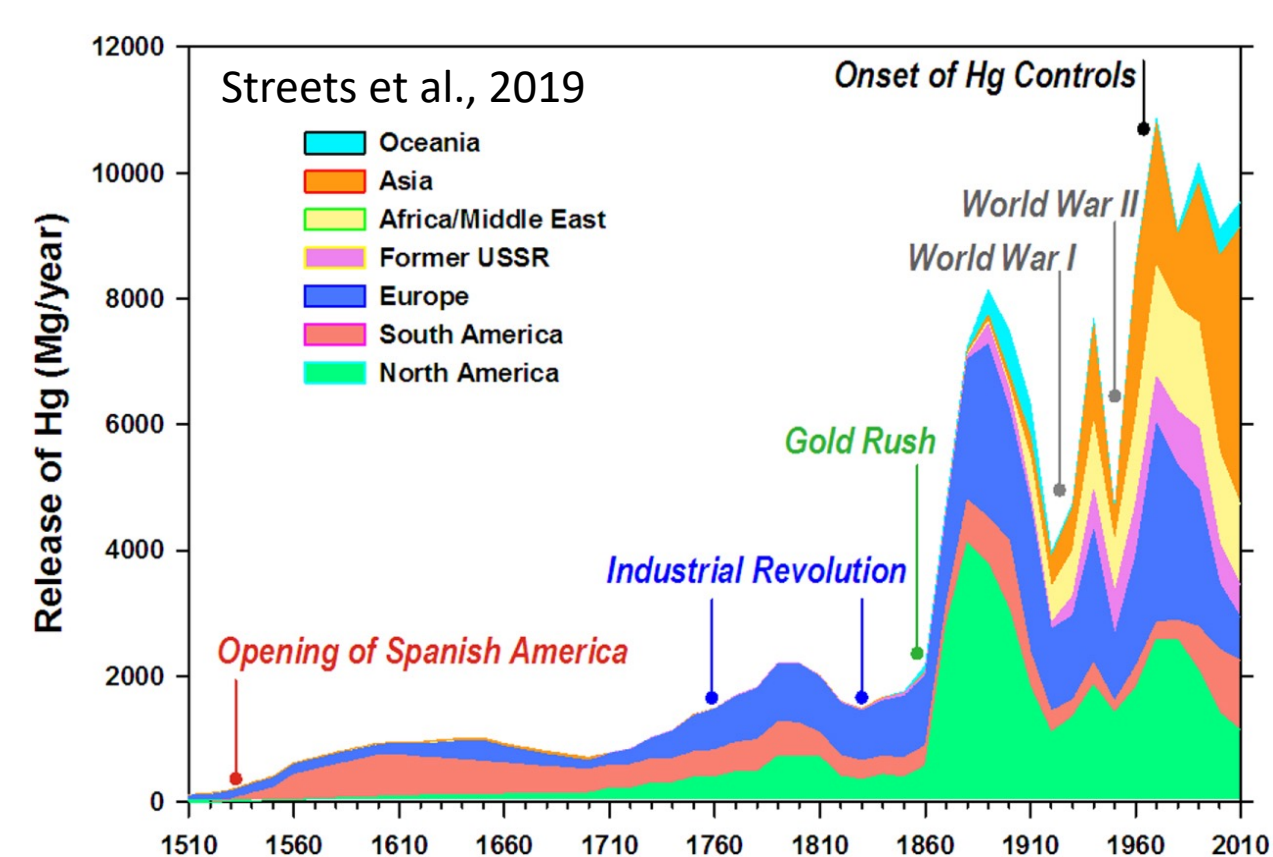


Mercury Methylation in Alpine and Subalpine Wetlands of the Colorado Rocky Mountains: Ecosystem Fate and Climate Change Implications

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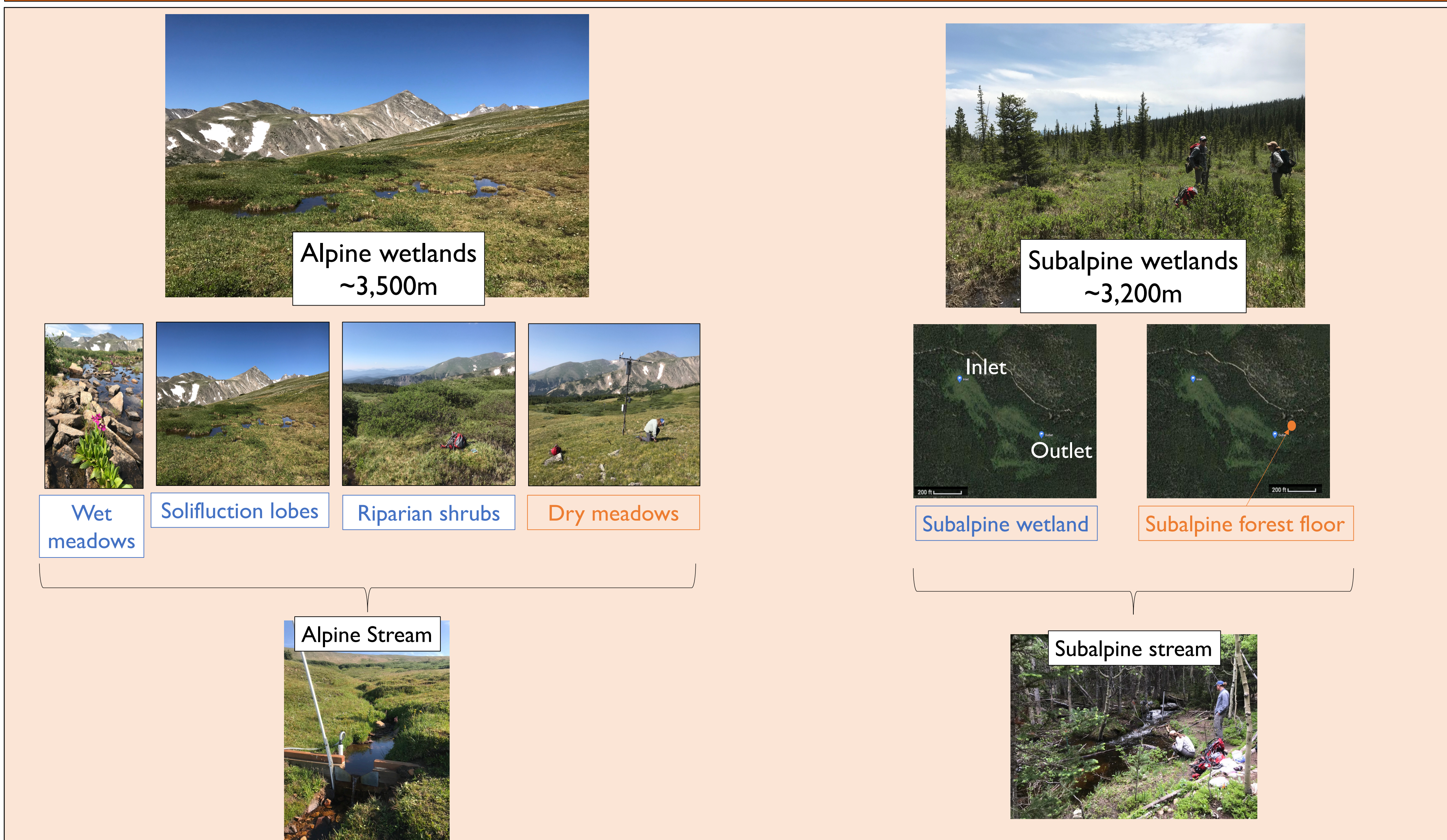
Mercury contamination and why it matters



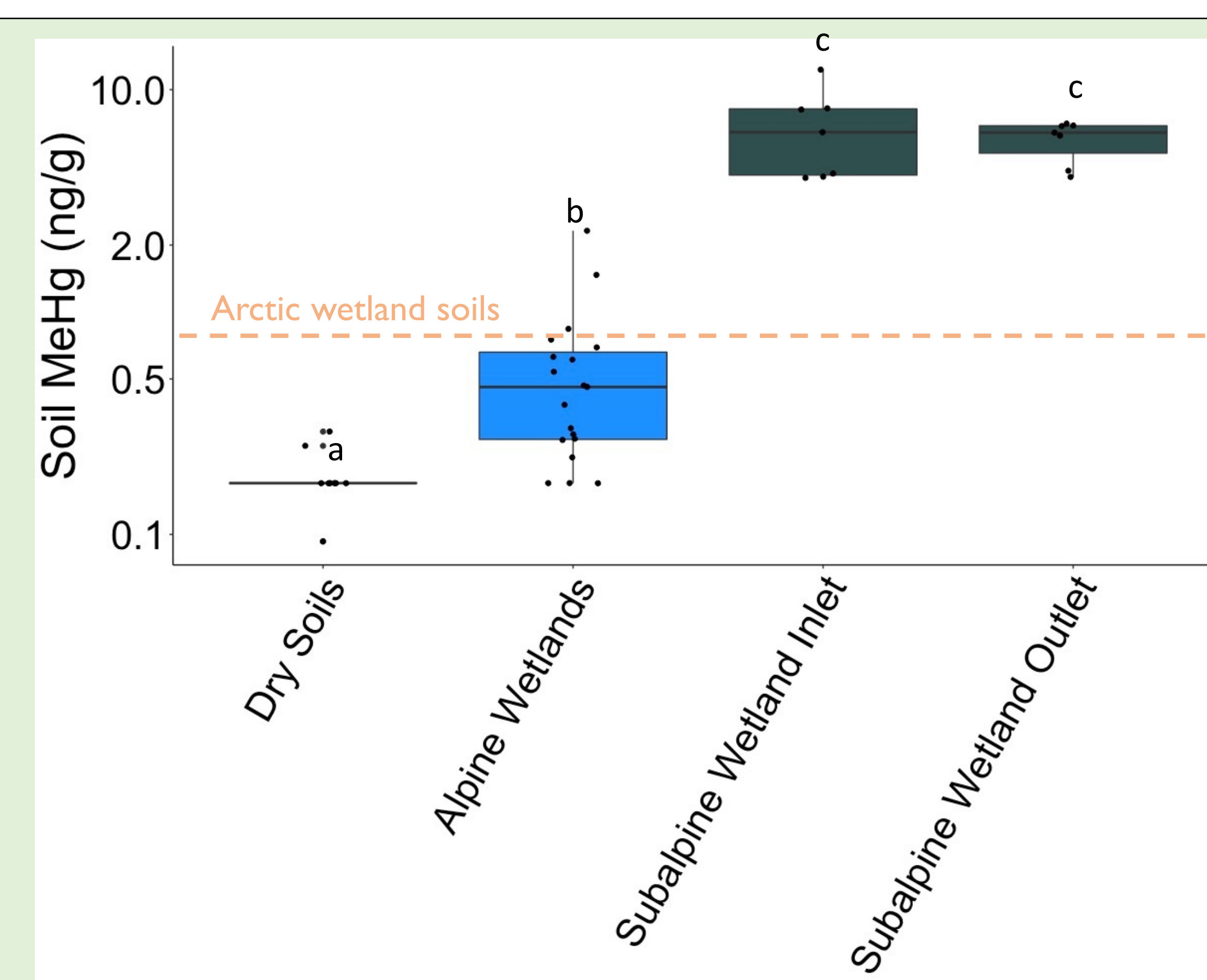
Global Change Impacts:

- 300% increase in sulfate export
- ↑ summer air temps, primary productivity, snowmelt rate
- Changes in hydrologic connectivity

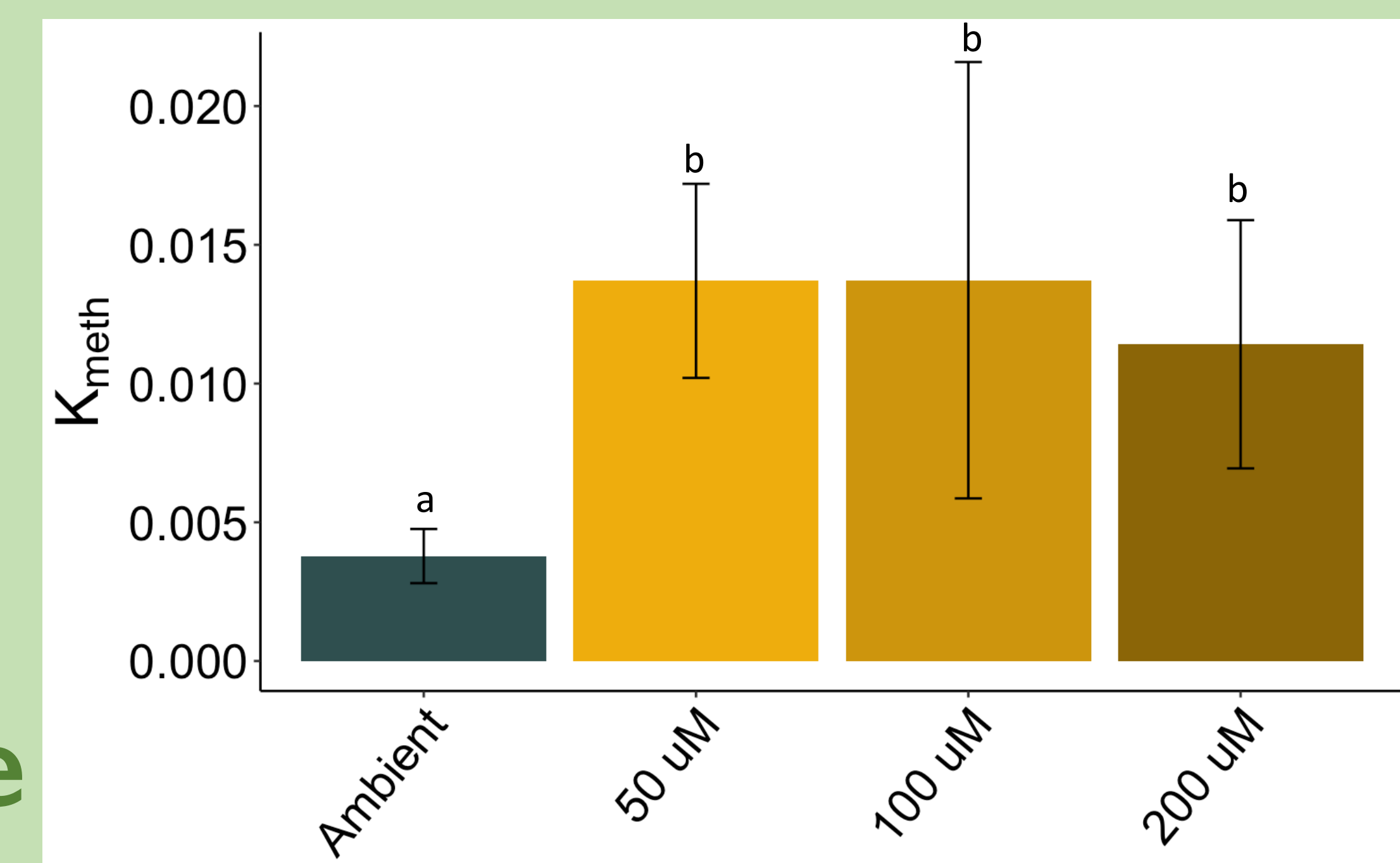
Alpine and subalpine sampling sites at Niwot Ridge LTER



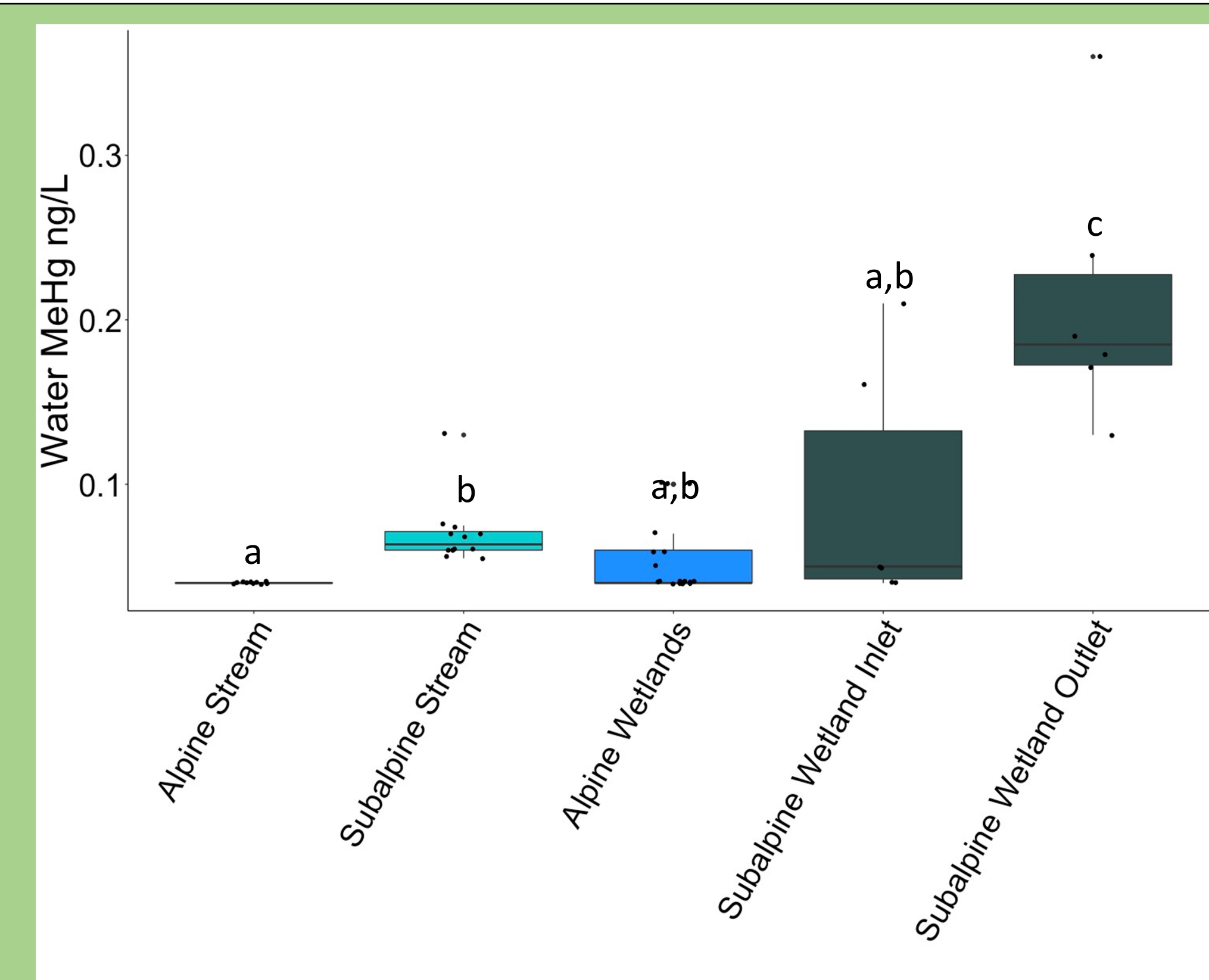
1. Alpine and subalpine wetlands store MeHg at levels comparable to wetlands in the Arctic



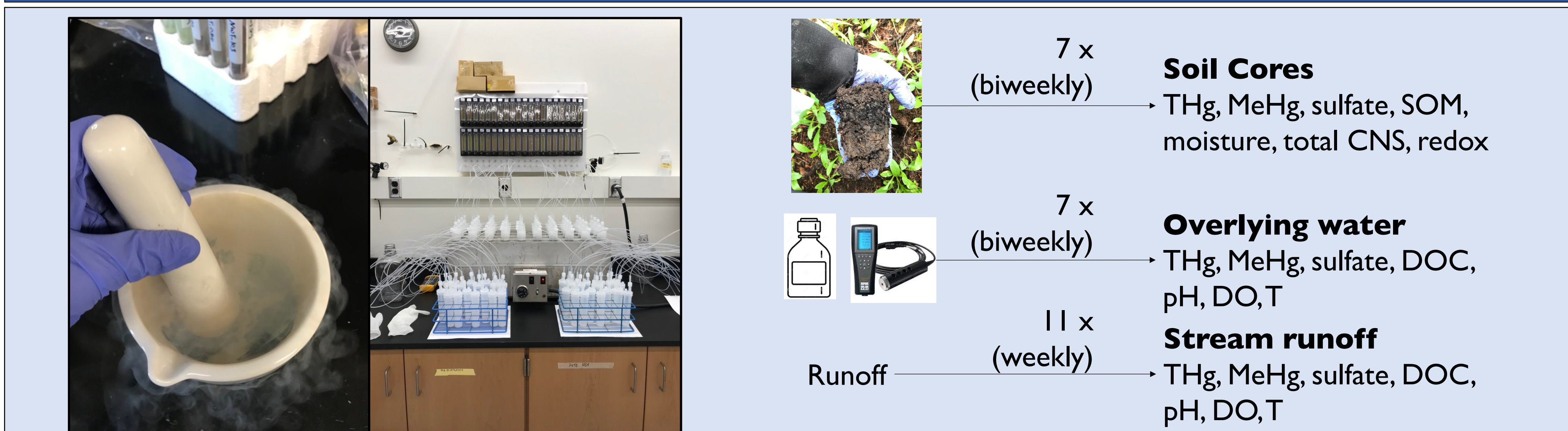
2. Additions of sulfate stimulate MeHg production → release of sulfate from melting permafrost and rock glaciers could exacerbate mercury methylation



3. MeHg production in wetlands impacts downstream ecosystems → higher MeHg in subalpine wetland outlet and subalpine stream



Lab work at the USGS Mercury Research Lab, Madison WI



4. Greater MeHg accumulation in organisms feeding from aquatic regions on the landscape and at higher trophic levels

