

The Mendenhall Glacier

The Mendenhall Glacier is a massive glacier near Alaska's capital, Juneau. Climate change – consistently warmer weather – is causing it to melt and shrink.



The shrinking glacier has had considerable effects on the nearby land. Glaciers weigh so much that their weight depresses the land beneath them. With the Mendenhall Glacier retreating, the land is rising. Former wetlands are becoming dry, streams are becoming mud-filled, and so on. Someone who built a 9-hole golf course next to water now owns enough dry land to consider building an 18-hole golf course. But outside of golf courses, the news is less encouraging because wetland wildlife habitat may disappear and salmon migration routes are threatened. Salmon is strongly linked to the cultural identity of the residents, especially the native peoples, of Juneau.

Your challenge is to quantify this change.

First, how quickly is the glacier receding? Multiple scientific groups are providing data on the size of the glacier. Also, try to calculate its change in mass per year.

Second, search for data on the rising land, or look for estimates of this effect.

Third, look for information about some of the economic effects, both positive and negative, caused by the land shifts.

Finally, analyze some of the qualitative changes of the receding glacier. How does it affect

- Wildlife?
- Recreation?
- Cultural identity?
- Other areas?