AWRI
Alpine Water Research Institute

Saturday 5 June 2027 · 10:00 – 17:00

OPEN DAY

Follow the water: from the glacier to your tap



Free entry, all ages. Visit our laboratories, meet the scientists who measure snow, ice and rivers across the Alps, and find out what a warmer climate means for the water we drink and the power we use.

Programme

10:00 — Welcome and opening · A · TALK
Prof. Laura Imesch, Director

10:30 — Inside the cold lab · B · TOUR
Ice cores from the Glacier de la Sorne, −25 °C

11:30 — Measuring snow from space · A · TALK
Satellites, drones and a 40-year snow record

13:00 — Little hydrologists · D · KIDS
Build a dam, race a river (ages 5–12)

14:00 — Water in the town · A · TALK
With the City of Montvallier water service

15:00 — River lab on the lake shore · E · TOUR
Sampling insects and water quality

16:00 — Hydropower and the glacier · A · TALK
Panel with Hydro Val-Sorne SA

Campus map



Getting here

Bus 4 from Montvallier station, every 15 minutes, stop “AWRI”. Bike parking at the entrance; car park P limited.

Good to know

Cold-lab tours: warm clothes provided, ages 10+, book a slot at the information desk. All buildings are step-free.

Scan the code for the full programme.

WITH THE SUPPORT OF

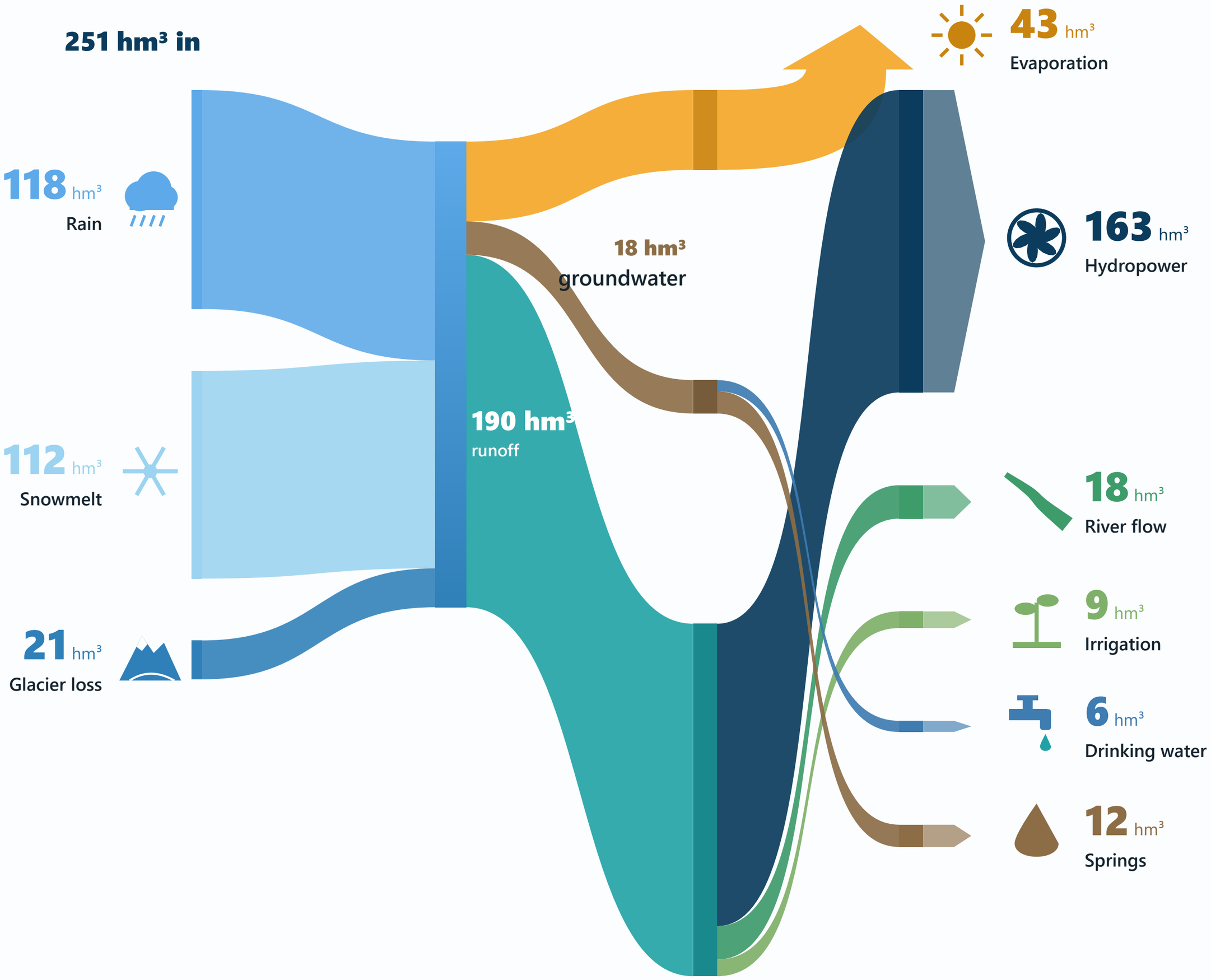
Ville de Montvallier · Hydro Val-Sorne SA · École polytechnique de Montvallier · Canton research fund

INFOGRAPHIC · SORNE CATCHMENT, 112 km²

AWRI
Alpine Water Research Institute

Where Alpine water goes

An average year in the catchment of the Sorne, above the town of Montvallier: 251 million cubic metres of water arrive, and every drop takes one of these paths. Band widths are proportional to volume.



Volumes in million cubic metres (hm³) per year, average of the hydrological years 1991–2020. Glacier loss is the net melt of ice stored in earlier centuries.

86 %
of the surface runoff passes through turbines

1 in 12
litres in the catchment comes from glacier loss

6 hm³
of drinking water a year for Montvallier and four villages

The summer peak is shrinking

Today the Sorne carries most of its water in July, when the glacier melts fastest. As the glacier shrinks, the peak moves to May and June and late-summer flows fall by a third, just when irrigation and cooling water are most needed. Winter flows rise slightly as more precipitation falls as rain.

Data: AWRI gauging station Vernay; projection from the regional climate scenario ensemble, medium emissions.

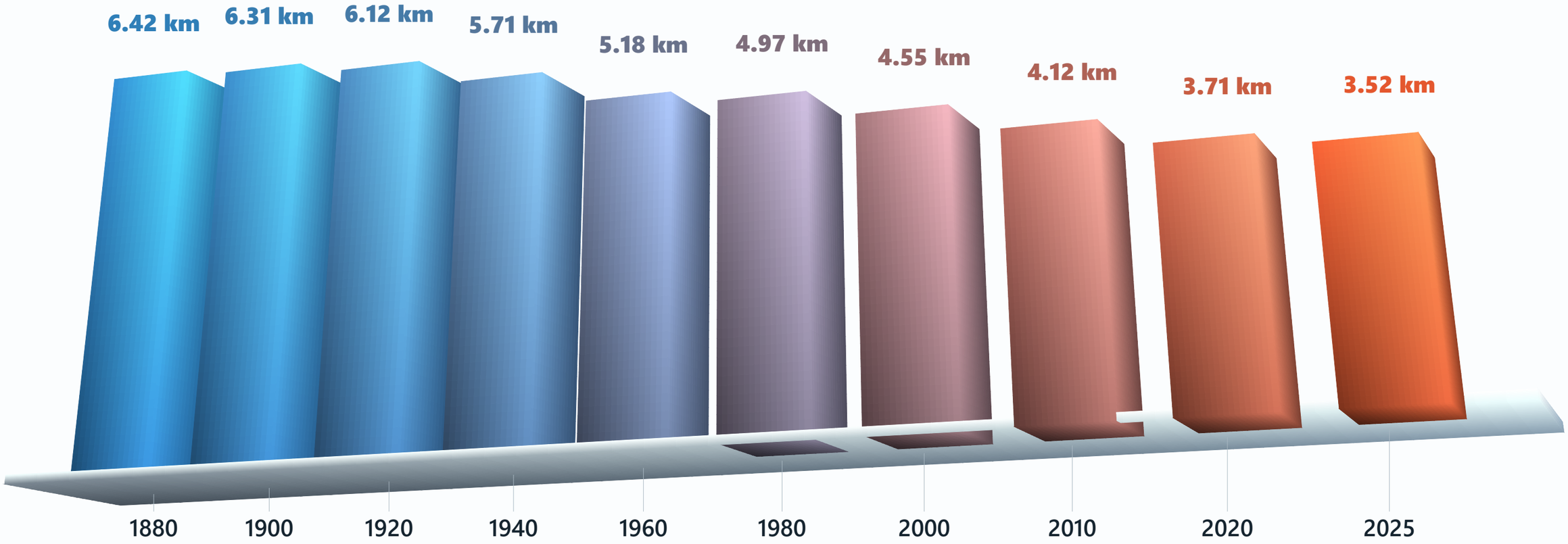
Monthly runoff of the Sorne at Vernay (hm³)

Alpine Water Research Institute · Chemin du Glacier 7 · Montvallier
www.awri.ch · info@awri.ch · +41 27 945 60 00

AWRI
Alpine Water Research Institute

145 years of retreat

Since the end of the Little Ice Age the Glacier de la Sorne has lost 2.9 km of length and more than half of its area. Each bar shows the glacier length at the end of a period, measured by AWRI and its predecessors since 1880.



Milestones

1880
Maximum extent after the Little Ice Age; moraine at 1,860 m

1915
First length measurement by the cantonal forest service

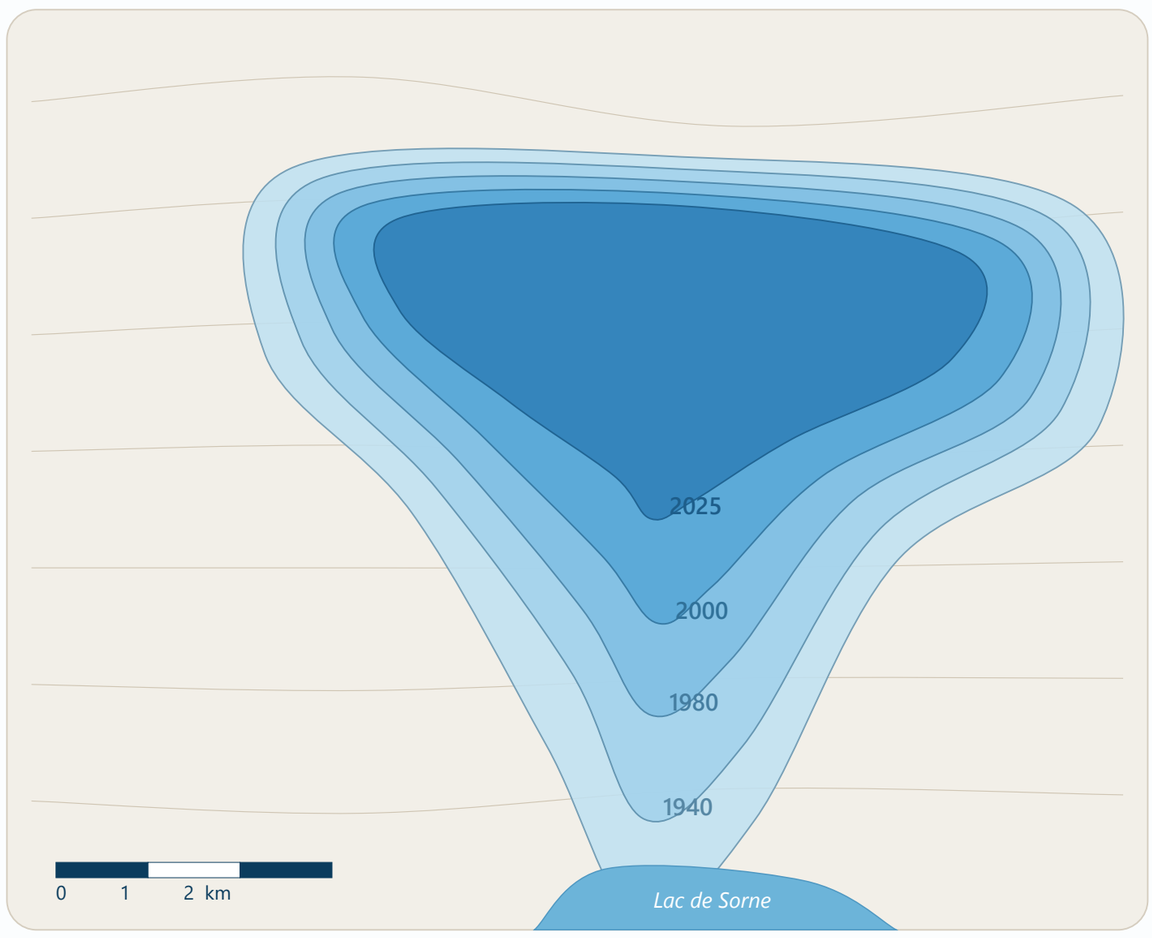
1961
Barrage de la Sorne completed; the lake floods the glacier forefield

1985
Short re-advance of 60 m after cool, snowy summers

2003
Heatwave summer: 3.1 m of ice thickness lost in one season

2022
Record loss; the tongue splits from the upper basin

Glacier extent



In numbers

Year	Length (km)	Area (km²)	Ice volume (km³)
1880	6.42	9.8	0.94
1940	5.71	8.6	0.79
1980	4.97	7.5	0.63
2000	4.55	6.6	0.51
2025	3.52	4.6	0.31
2050 (projection)	*2.4*	*2.9*	*0.15*

