



Thermal water in Bad Kreuznach

The abundant spa clinics/sanatoria and wellness centres in Bad Kreuznach, located 6 km north of Bad Münster am Stein-Ebernburg in the renowned Nahe river wine area, use naturally thermal water with a temperature up to 28.8 °C. The water found in Bad Kreuznach is furthermore characterized by its high salinity and F-content (Käβ and Käβ, 2008). Water from the Theodorshaller Brönnen has been validated as “Heilwasser” (SGS Institut Fresenius, 2012; Jäger, 2002).

See also

[Thermal springs in Bad Münster am Stein-Ebernburg](#)

Anomalies

The water temperature in Bad Kreuznach varies between 14 °C at 20 m depth and 28.8 °C at 505 m depth (Bräuer et al., 2013; Griesshaber et al., 1992; Jäger, 2002; Käβ and Käβ, 2008; SGS Institut Fresenius, 2012). In all cases, this exceeds the maximum temperature of 12 °C for shallow groundwater (< 500 m). Two geological elements have been brought forward to explain the occurrence of (mineralized) thermal water in Bad Kreuznach: the chaotic tectonic structure of the Nahe-valley in combination with the boundary between sandstone and porphyric bodies (Käβ & Käβ, 2008).

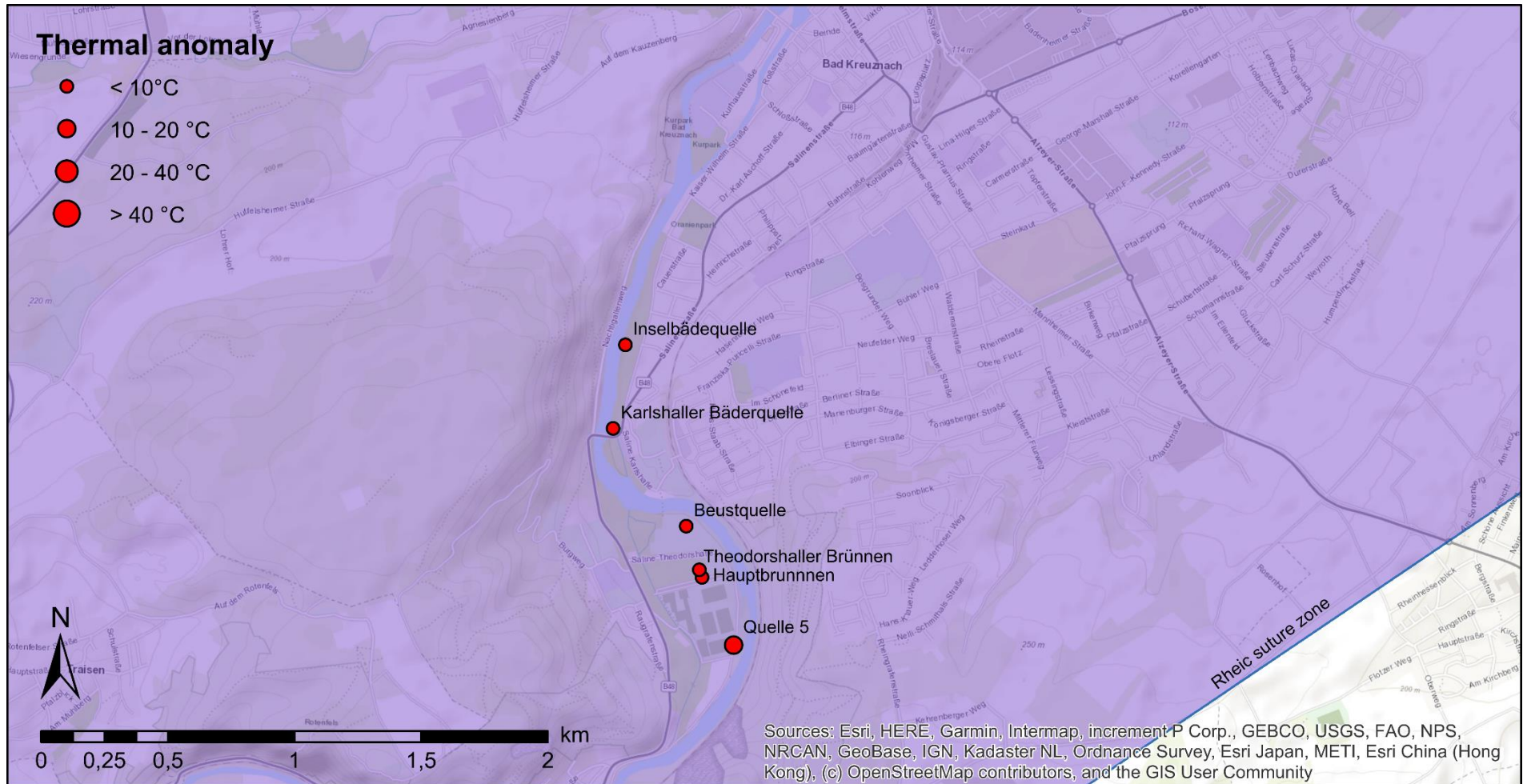


Figure 1: Thermal water in Bad Kreuznach



Data

ID	Coordinates	T	Depth	TDS°	Cl	Na	SO4	Free CO ₂	He	³ He/ ⁴ He	Analysis year	References
		°C	m	g/l	mg/l	mg/l	mg/l	mg/l	ppmv			
Quelle 5	49°49'19" North 07°51'21" East	22			9377	4945	3	117			<1992	Griesshaber et al. (1992)
										0.09	1992	
		23.7	196	9.3							<2008	Käβ and Käβ (2008)
Hauptbrunnen	49°49'28" North 07°51'14" East	21.9	80.2	12.6							<2008	Käβ and Käβ (2008)
Beustquelle	49°49'34" North 07°51'11" East	14.2	127.9	6.2							<2008	Käβ and Käβ (2008)
Karlshaller Bäderquelle	49°49'47" North 07°50'55" East	14			7780	4140	1	101			<1992	Griesshaber et al. (1992)
										0.09	1992	
		20.1	20	16.0							<2008	Käβ and Käβ (2008)
Inselbädequelle	49°49'58" North 07°50'57" East	12.8	75	18.5							<2008	Käβ and Käβ (2008)
Theodorshaller Brünnen	49°49'28" North 07°51'14" East	28.8	505	18.3	10840	5550	5	86.2			2002	Jäger (2002)
		28.3							17200	0.1	2003	Bräuer et al. (2013)
		27	505	16.8	9920	5160	<1	151			2012	SGS Institut Fresenius (2012)

°TDS = Total Dissolved Solids

References

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- Griesshaber, E., O'Nions, R.K., Oxburg, E.R., 1992. Helium and carbon isotope systematics in crustal fluids from the Eifel, the Rhine Graben and Black Forest, F.R.G. *Chemical Geology* 99, 213-235.
- Jäger, W., 2002. Heilwasseranalyse Theodorshaller-Brunnen, Bad Kreuznach. Institut Prof. Dr. Jäger, Tübingen, p. 11.
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- SGS Institut Fresenius, 2012. Heilwasseranalyse "Theodorshaller Brunnen" in Bad Kreuznach, p. 20.

Cite this source

Van Daele, J. & Ferket, H., 2021. Thermal water in Bad Kreuznach [Fact sheet]. Flemish Planning Bureau for the Environment and Spatial Development (VPO).

This file is part of the GeoConnect^{3d} project that has received funding by the European Union's Horizon 2020 research and innovation programme under grant agreement n.731166.