

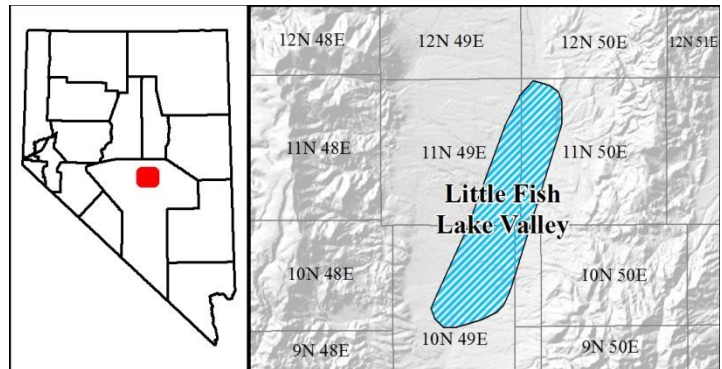
Site Description

Little Fish Lake Valley

(Updated 2014)

Geologic setting:

Little Fish Lake Valley is located approximately 100 kilometers southwest of Eureka, Nevada and 100 kilometers northeast of Tonopah, Nevada. The valley lies along the Hot Creek Range on the east, and Monitor Range and Table Mountain on the west. The area is of classic Basin and Range structure found throughout Nevada. The valley contains alluvium that overlies Paleozoic limestone at a depth of up to a few thousand feet. The area is characterized by several north trending faults. Pre-Tertiary rocks of several lithologies have been identified in the general area. Paleozoic marine sedimentary strata are found in the eastern and central portions of northern Nye County, with the western portion containing late Paleozoic and Mesozoic marine sedimentary strata interbedded with metavolcanic rocks (Kleinhampl and Ziony, 1985).



Geothermal features: The warmest springs in Little Fish Lake Valley are located in the lowest parts of the valley. They rise through alluvium which overlies Paleozoic limestone at depth. Fiero (1986) reported a large number of generally north-trending faults in valley alluvium and the surrounding mountains; it seems likely that warm springs rise along the high permeability zone created by faulting. Springs are undeveloped but are used by stock.

Upper Warm Spring: One thermal spring (Sec. 14, T10N, R49E) is reported at 41°C in 1969 with a Na-K-Ca geothermometer temperature of 39°C (U.S. Geological Survey, 2012).

Test Well UCE-10: (Sec. 22, T10N, R49E) NWIS Test Well UCE-10 was 48°C when tested in 1967, with a Na- K-Ca geothermometer temperature of 47°C (U.S. Geological Survey, 2012).

Hot Spring: (Sec. 14, T10N, R49E) Hot spring displayed a temperature of 41°C when tested in 1967 with a Na-K-Ca geothermometer of 41°C, a quartz geothermometer of 73.6°C, and a chalcedony geothermometer of 41.9°C (Great Basin Groundwater Geochemical Database).

Fish Spring: (Sec. 6, T11N, R50E) Fish spring is recorded in the Great Basin Groundwater Geochemical Database as a cold spring with a temperature of 18°C and a Na-K-Ca geothermometer temperature of 65.33°C (Fournier, 1981), a quartz geothermometer of 110.51°C (Fournier, 1977), and a chalcedony geothermometer of 81.26°C (Fournier, 1981).

Leasing information:

N/A

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Bibliography:

Fiero, B., 1986, Geology of the Great Basin: University of Nevada Press, Reno, Nevada.

Great Basin Groundwater Geochemical Database, Nevada Bureau of Mines and Geology:
<<http://www.nbmg.unr.edu/Geothermal/GeochemDatabase.html>>.

Kleinhampl, F. J., and Ziony, J., 1985, Geology of Northern Nye County, Nevada: Nevada Bureau of Mines and Geology Bulletin 99A.

U.S. Geological Survey, 2012, National Water Information System: USGS Water Data for the Nation,
<<http://waterdata.usgs.gov/nwis/>> Accessed 18 March 2014.