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Climatology in the Bear Lake basin, Utah

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CLIMATOLOGY

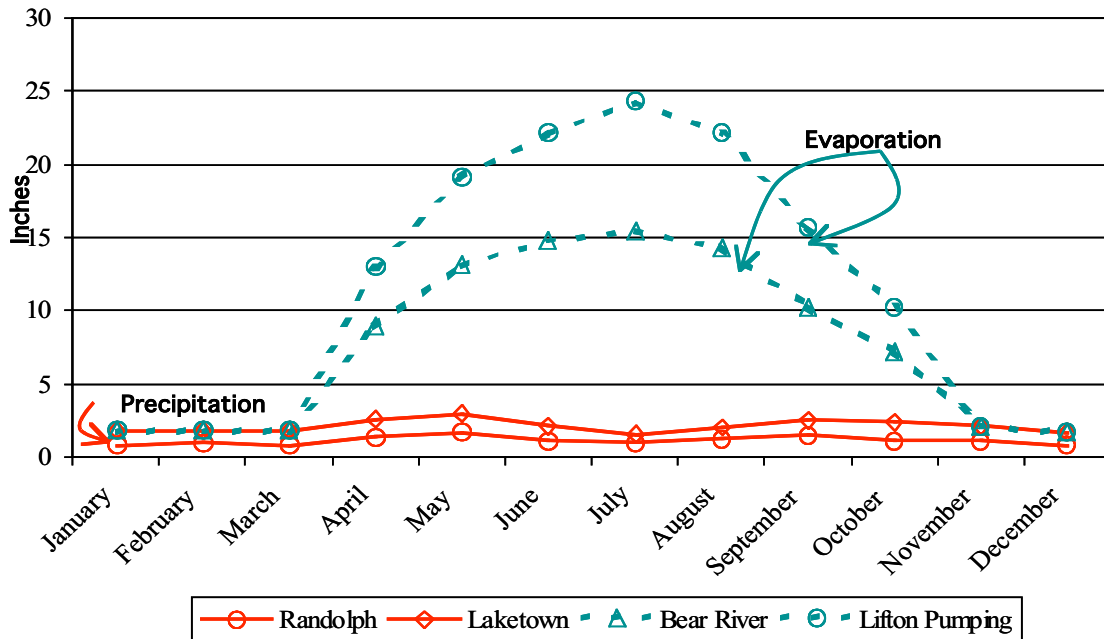
The climate in the valley is warm and dry during the summer, with the first snowfall coming during fall. Fog and snow are common during the winter. The lake is icebound during winter and most of spring. Generally the climatic conditions in Rich County are considered rather severe. Killing frosts are common until June and again in early September affecting a short growing season. It's high elevation makes this region one of the coldest areas in the state. The intense inversion also accounts for some extremely cold temperatures in winter. The coldest temperature on record, 50°F below zero, was recorded at Woodruff in February of 1899. The warmest temperature at Woodruff was 96°F degrees in July of 1931. The maximum temperature recorded at Laketown was 98°F degrees in 1940.

The dominant precipitation in the area falls in the form of snow during the winter months. The seasonal accumulation is quite variable, ranging from only 40 inches on the lower valley bottoms to nearly 200 inches at the higher elevations. The normal annual precipitation ranges from a little less than 10 inches in the driest part of the county to nearly 50 inches at higher elevations. On average, Bear Lake receives a yearly total of 13.40 inches of precipitation. See table 6.

| Climatology of Bear Lake Valley | | | | | | | |
|---------------------------------|---------------------------------------|------|-------------|---------|---------------------|-------------|-----------------|
| | Average Temperature (F ^o) | | | | Precipitation (in.) | | Frost Free Days |
| | January | July | Mean Annual | Records | Avg. Snow Depth | Mean Annual | |
| Randolph | | | 38 | | 34 | 11 | 50 |
| Maximum | 26 | 81 | | 92 | | | |
| Minimum | 0 | 43 | | -43 | | | |
| Woodruff | | | 39 | | 42 | 9 | 56 |
| Maximum | 29 | 82 | | 94 | | | |
| Minimum | 2 | 44 | | -47 | | | |
| Bear Lake, UT | | | 45 | | 41 | 14 | 109 |
| Maximum | 32 | 85 | | 92 | | | |
| Minimum | 12 | 50 | | -25 | | | |
| Laketown | | | 42 | | 43 | 12 | 85 |
| Maximum | 32 | 83 | | 96 | | | |
| Minimum | 11 | 48 | | -37 | | | |

Table 6. Climatology of Rich County, Utah and the Bear Lake Utah/Idaho (Western Regional Climate Center, <http://www.wrcc.dri.edu>).

As is normal for this part of the country, evaporation exceeds precipitation in the Bear Lake area during the summer. The Bear Lake Basin has several stations that have been recording climatological data for many years. Evaporation measurements at the Bear Lake / Laketown station show that the season of evaporation is from May to October. According to these measurements evaporation is from 4.9 inches in October to 13.9 inches in July. Evaporation from the lake surface exceeds precipitation for most years. The Lifton pumping station just north of the lake shows similar rates with the low of 3.0 inches in October to a high of 8.73 inches in July. See graph 3 for average precipitation and evaporation in the Bear River Basin (Western Regional Climate Center, 2003).



Graph 3. Average 25-Year Monthly Precipitation and Evaporation in the Bear River Basin 1975-2000. Red line indicates precipitation collected at Randolph and Laketown climate stations and the green lines represent pan evaporation from the Bear River, ID and the Lifton Pumping climate stations. (Western Regional Climate Center, 2003).