

Great Salt Lake, the density of the waters of which is 1.168; the wind alone sometimes makes a change in the level of the water of several feet, and a consequent change of density from 1.009 to 1.014 within five minutes has been observed. The water is not alkaline, but contains an excessive quantity of saline material, chiefly sodium chloride.¹

Sevier Lake in Utah, the waters of which are intensely saline, is virtually a "playa"² of variable dimensions, attaining in humid seasons an extent of from 180 to 200 square miles, while during periods of drought it practically dries up, leaving a crystalline bed of sodium chloride and sodium sulphate to mark its site.

Soda, Walker, Winnemucca, and Pyramid Lakes in Nevada; Albert Lake in Oregon; Mono Lake and Owen's Lake in California, also belong to this category.

Great Salt Lake of Utah, 4200 feet above sea-level, about 75 miles long by 50 miles in maximum width, lies at the western base of the Wasatch range, from which it receives numerous streams. The inflow to the lake is variable in amount owing to irregularity in rainfall, and as evaporation, the only means of discharge, is uniform, the lake is subject to fluctuations in area and volume. The lake-bed is shallow and the shores quite flat, so that a slight reduction in water-level causes a notable diminution in the area of the lake, which has varied from 1750 to 2000 square miles.

Evaporation from the surface of the lake must be enormous. It has been estimated, from a calculation of the area of the evaporating ponds used in preparing salt from the waters of the lake, and of the amount discharged into them by the pumps per day, that the evaporation from the lake-surface during at least three months of the year may represent about 11,424 million gallons of water per day. In a paper entitled "Why the Salt Lake has fallen,"³ Murdoch says that the fall in the Salt Lake (1903) appears to have been due to a combination of shortage in precipitation and loss of water through irrigation, but that the shortage in precipitation is undoubtedly the predominating factor.⁴ The soil in the drainage basin of the Great Salt Lake is generally a sandy loam, which would favour rapid per-

¹ See second footnote on p. 515.

² Saline lakes of arid regions, where the mean annual influx and the mean annual loss by evaporation are nearly evenly balanced, frequently disappear entirely during the hotter portions of the year, leaving behind wide mud plains, called "playas." The temporary lakes to which the playas owe their origin are called "playa lakes."

³ *Nat. Geogr. Mag.*, vol. xiv. p. 75, 1904.

⁴ Figures showing the average precipitation, and the rise and fall of the lake, for a certain number of years will be found in the *Monthly Weather Review*, vol. xxix. p. 23, Washington, 1901.