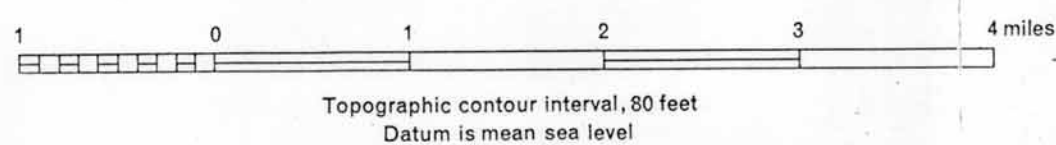


Base: U.S. Geological Survey  
1:62,500 topographic series:  
Carson City, Nev., 1956  
Fallen Leaf Lake, Calif., 1955  
Freel Peak, Nev.-Calif., 1956  
Tahoe, Calif., 1955

EXPLANATION

Lines of equal water depth, in feet; contour interval variable.  
Datum is lake surface at a stage of 6229 feet above mean sea level (U.S. Bureau of Reclamation datum of 1929, supplementary adjustment of 1959)

321  
Data point  
Number is depth of water in feet



Compiled from soundings made by the  
U.S. Coast and Geodetic Survey (1923)  
Cartography by Charles A. Bosch

INTRODUCTION

Lake Tahoe is on the Nevada-California State line, 10 miles west of Carson City, Nevada, as shown in figure 1. The natural outflow from Lake Tahoe, high in the Sierra Nevada, is to the Truckee River, which flows through Reno to Pyramid Lake. Since the beginning of the 20th century, a part of the Truckee River flow has been diverted through a canal of the Newlands Project (U.S. Bureau of Reclamation) for use in the Carson River Basin near Fallon, Nevada (60 miles east of Carson City).

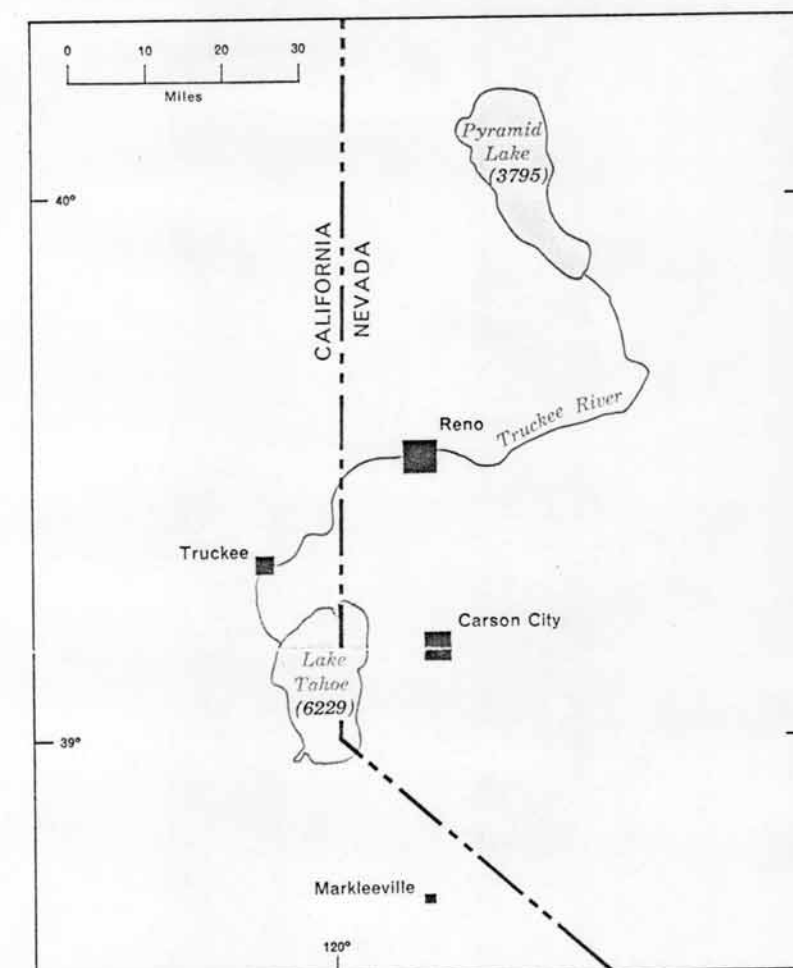


Figure 1.—Index map of northwestern Nevada and eastern California showing the location of Lake Tahoe (Numbers in parenthesis are water-surface altitudes)

Table 1 is an informational summary for the Lake Tahoe Basin. In addition, the U.S. Forest Service (1972) has published data on land-use capability. This report shows that approximately three-fourths of the land has either a high relative erosion potential or disturbance hazard. The 1970 U.S. Census indicates a total population in the basin of about 26,000. Table 2 summarizes facts about Lake Tahoe. The facts presented describe the lake at a stage of 6,229 feet above mean sea level, U.S. Bureau of Reclamation Lake Tahoe datum, which is the maximum stage regulated by use of a small dam (table 3). The Lake Tahoe datum is 1.14 feet higher than the sea level datum of 1929 used elsewhere in the area, as determined by the U.S. Geological Survey in November 1960. Reference stages of 6,223 feet and 6,225 feet have been used in other studies (Matthews and Schwarz, 1969), but for a series of bathymetric reconnaissances, of which this study is a part, the decision was made to evaluate each lake and reservoir when "full".

Table 1.—Summary for the Lake Tahoe Basin

Feature	Description
Basin area (mostly from Crippen and Pavelka, 1970)	506 square miles (324,000 acres)
Land area (approximate)	306 square miles (196,000 acres)
Water area (approximate)	200 square miles (128,000 acres)
Lakes in basin:	
Tahoe (stage 6,229 feet)	194 square miles (124,000 acres)
Fallen Leaf	1,400 acres
Marlette	381 acres
Upper and Lower Echo	330 acres
Cascade	210 acres
Spooner	97 acres
Numerous small lakes and ponds	600 acres
Length (north-south)	40 miles
Width	18 miles
Highest altitude (Freel Peak)	10,881 feet
Lowest altitude (deepest point of lake)	4,583 feet
Generalized rock distribution in order of outcropping abundance (adapted from Crippen and Pavelka, 1970)	
Granitic rocks (Sierra Nevada batholith)	East, south, and southwest ranges.
Glacial deposits	Mostly south and west of Lake Tahoe.
Volcanic rocks	Scattered, but mostly in northwest range.
Metamorphic rocks	Southwest range.
Lake beds	Along west, south, and north shores up to an altitude of about 7,000 feet. Underlying the floor of Lake Tahoe with a thickness of at least 400 feet (Hyne and others, 1972, p. 1435). Bottom sediments are summarized in figure 2.
Land ownership January 1972 (U.S. Forest Service, 1972)	
Federal Government:	
In Nevada	28
In California	153
State Government:	
Nevada	9.5
California	5.6
Private	110
Total (rounded)	306
Percent	100
Weather at Tahoe City (Crippen and Pavelka, 1970):	
Temperature (°F):	
Maximum	94
Minimum	-15
Mean annual	42
Average frost-free period	86 days
Mean annual precipitation	31 inches
Mean annual snowfall	18 feet

BATHYMETRIC RECONNAISSANCE OF LAKE TAHOE, NEVADA AND CALIFORNIA

By F. Eugene Rush