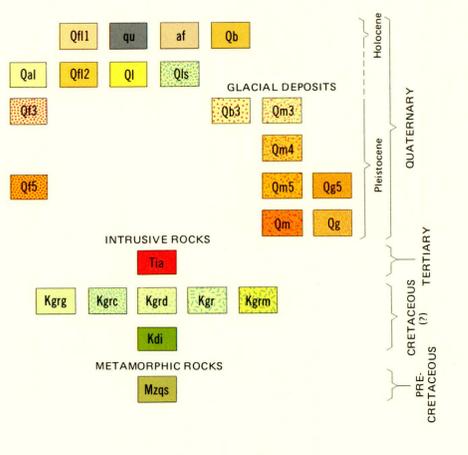
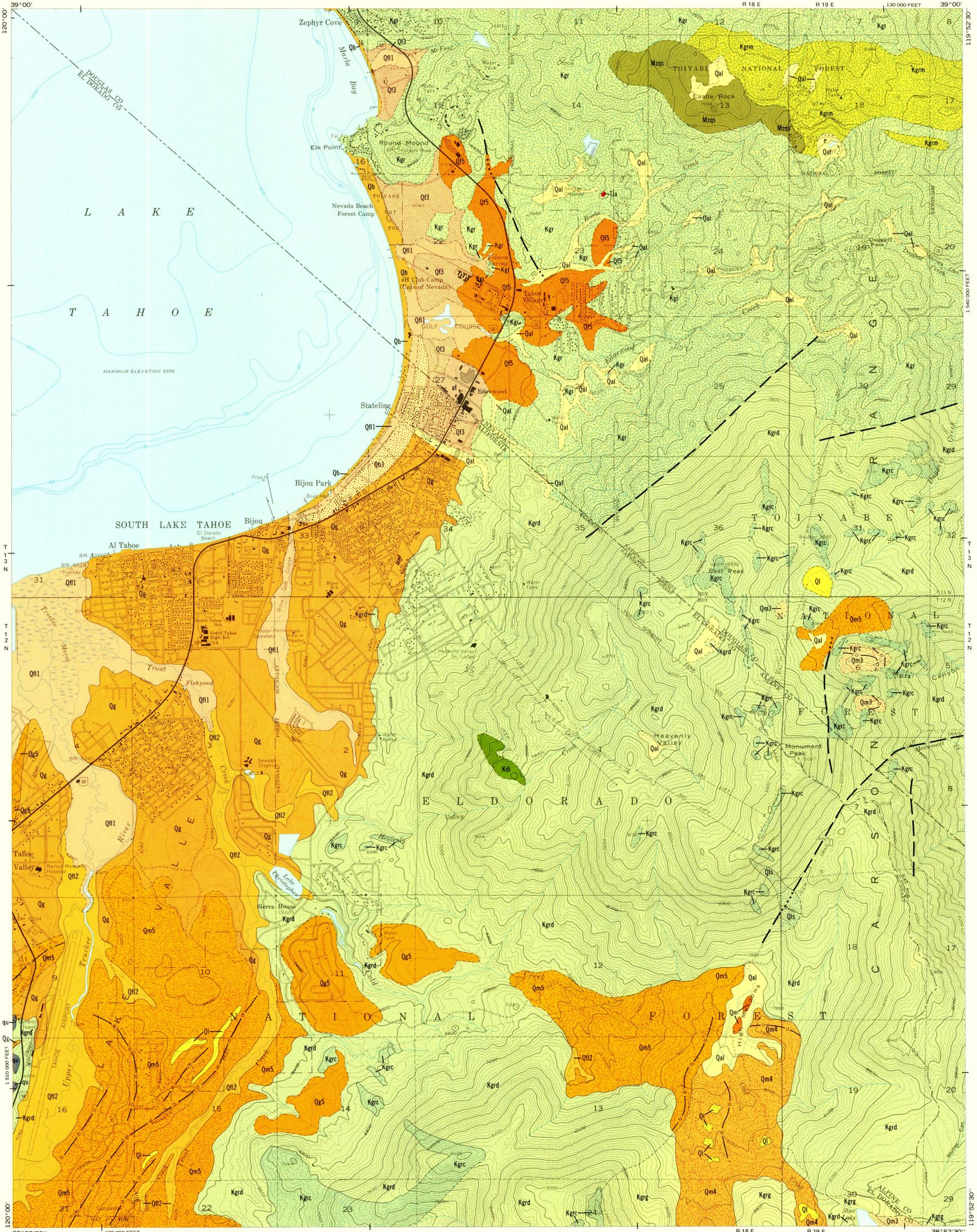


ENVIRONMENTAL SERIES

SOUTH LAKE TAHOE FOLIO GEOLOGIC MAP



qu Quarry (sand, gravel, and fill)
af Artificial fill
Ob Beach deposits. Grayish orange, moderately sorted, gravely very coarse arkosic sand. Derived by reworking of Quaternary glacial and alluvial deposits.
QH11 Flood plain and lacustrine deposits. Fluvial sediments, low-gradient flood plains. Typically dusky brown, poorly sorted, slightly gravely medium sand, locally organic-rich. Deposited by low-gradient streams in marsh and back-beach environments. Lacustrine sediments are thin-bedded silt and clay present in the delta formed by the Upper Truckee River.
Qls Landslide and rockfall deposits. Unsorted coarse to fine granodiorite debris.
Qal Alluvial deposits. Light brown, moderately to poorly sorted, gravely coarse arkosic sand and minor silt and gravel deposited in stream channels. Includes some sandy silt deposited in meadow areas.
QH12 Flood plain and lacustrine deposits. Essentially lithologically identical to QH11 deposits, but in part of Pleistocene age.
Q1 Lacustrine deposits. Thin-bedded sandy silt and clay deposited in shallow lakes of glacial origin.
Q13 Fluvial deposits of Tioga age. Mostly light brown moderately to poorly sorted, slightly weathered gravely coarse sand derived from erosion of granodiorite.
Qb3 Beach deposits of Tioga age. Arcuate beach ridge present only in Stately area. Grayish-orange, moderately sorted, gravely, coarse arkosic sand.
Qm3 Tioga till. Well-sorted, sharp-crested lateral moraines; slight erosion of terminal moraines. Slightly weathered granodiorite blocks in a matrix of sand and silt. Till is only slightly compacted. Approximately 10,000 years old.
Qm4 Tahoe till. Well-sorted, sharp-crested lateral moraines; moderate erosion of terminal moraines. Granitic cobbles in soil thoroughly disintegrated to grus. Larger granitic blocks in soil are usually spheroidally weathered to a depth of 10 cm. Volcanic and metamorphic clasts in soil only slightly weathered. Till only slightly compacted. Age, less than 100,000 years.
Q15 Fluvial deposits of pre-Tahoe age. Thin veneer (usually less than 3 m) of moderate yellowish-brown, very poorly sorted, sandy small pebbles gravel deposited on an erosion surface cut on granodiorite. Well-developed, moderate reddish-brown soil horizon. Granitic clasts in soil thoroughly disintegrated to grus. Slightly weathered apatite and metamorphic clasts form a lag gravel mantling the surface. Locally covered by 0.3 to 0.5 m of organic-rich silty sand of Holocene age.
Qm5 Pre-Tahoe till. Till is moderately dissected, terminal moraines are deeply eroded, some moderately well preserved lateral moraines with rounded crests. Well developed soil profile. Granitic blocks in soil thoroughly disintegrated to grus; volcanic and metamorphic rocks are weathered. Till is well-compacted. Age, more than 100,000 years.

Qg5 Glacial outwash of pre-Tahoe age. Gravel, sand, and silt deposited by glacial melt-water. Soil profile, degree of weathering, compaction, and composition similar to Qm5.
Qm Glacial till, undifferentiated.
Qa Glacial outwash, undifferentiated.
Tia Intrusive plug of basaltic andesite. Brownish gray, olivine-hornblende-biotite basaltic andesite. Abundant plagioclase (An 45-55). Numerous granodiorite xenoliths.
Kgr Granodiorite. Granodiorite with abundant residual corestones, Kgrc, surrounded by grus, Kgrd. Rock is biotite-hornblende granodiorite with oscillatory zoned plagioclase (An 35-45), orthoclase, and quartz and approximately 15 to 20 percent biotite and hornblende. Magnetite and sphene are common accessory minerals. Plagioclase shows partial alteration to sericite and epidote. Biotite is partly chloritized. Gradational contact with mafic granodiorite, Kgrm.
Kgrm Mafic granodiorite. Mineralogically similar to Kgr, but contains approximately 40 percent hornblende plus biotite and is correspondingly darker colored than Kgr.
Kgrc Granodiorite corestones. Areas of residual massive granodiorite surrounded by Kgrd.
Kgrd Decomposed granodiorite. Extensive areas where granodiorite is weathered to grus. Grus thickness is greatest (up to 30 m) in areas of low relief and is shallower near granitic corestones, Kgrc, and areas of high relief. Weathering is pre-Tioga in age.
Kdi Hornblende-biotite diorite. Mineralogically similar to Kgrm but contains little or no orthoclase or quartz.
Mzqs Quartzofelspathic schist. Gneissose rock consisting of quartz, plagioclase, orthoclase, biotite, muscovite, and minor garnet, zircon, and apatite. Foliation is defined by irregular concentrations of biotite and muscovite. Possibly derived from a rhyolitic pyroclastic rock. Unit forms resistant outcrops as at Castle Rock.

--- Contact. Solid where accurately located. Dashed where indefinite, inferred or gradational. Includes indefinite boundaries of surficial deposits.
--- Fault. Dashed where approximately located, dotted where concealed.
--- Crest line of glacial moraines.

By H. F. Bonham Jr. and J. L. Burnett, 1976

Nevada Bureau of Mines and Geology
California Division of Mines and Geology

1 INCH EQUALS 2000 FEET

0 0.5 1 MILE

0 2000 4000 FEET

0 0.5 1 KILOMETER

0 1000 METERS

Nevada geology by Bonham; California geology by Burnett.

Topographic base from U.S. Geological Survey South Lake Tahoe 7 1/2' quadrangle, 1969.

Cartography by Susan L. Nichols

CONTOUR INTERVAL 40 FEET
DOTTED LINES ARE 20-FOOT CONTOURS
DATUM IS MEAN SEA LEVEL

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