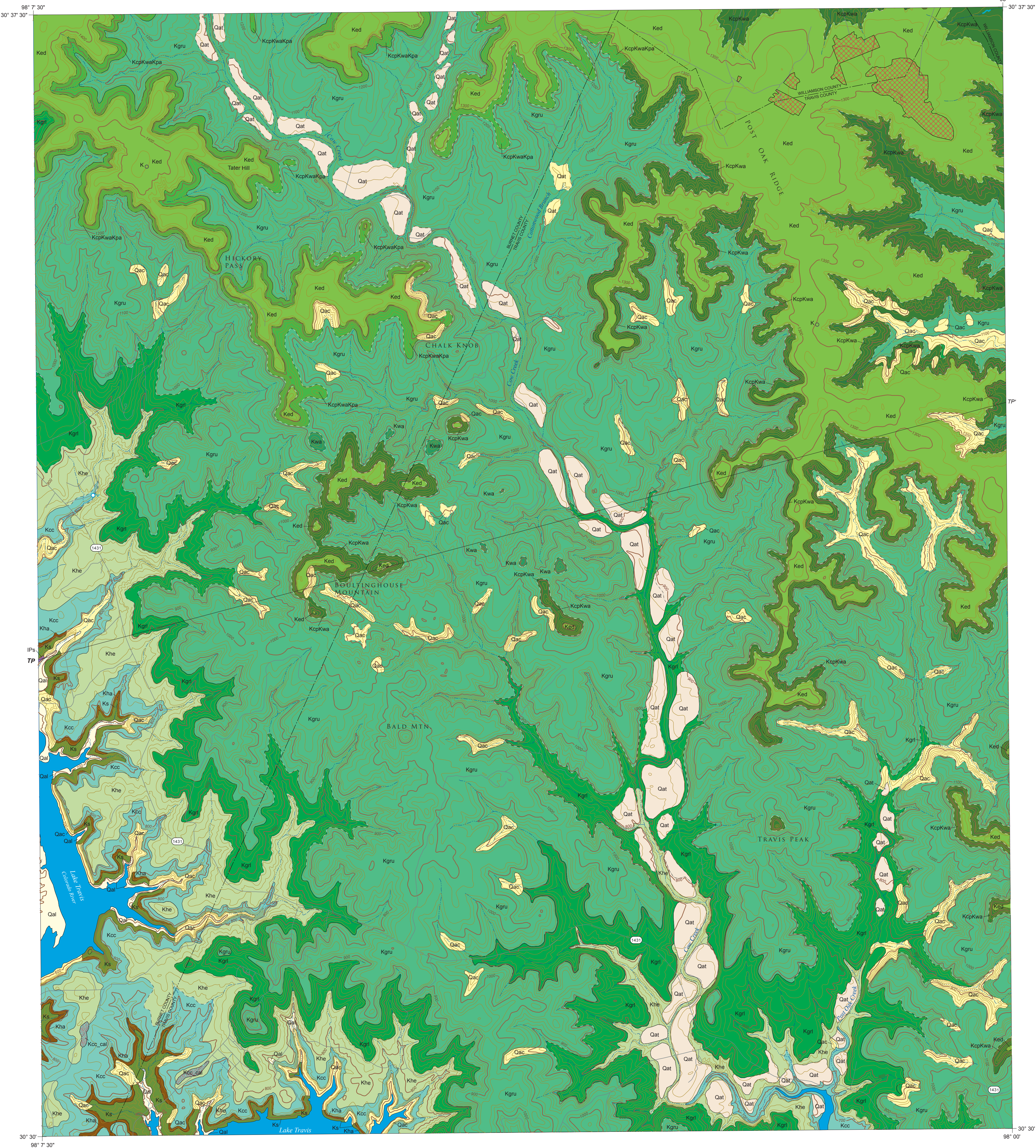




- Quaternary**
- Qal—Alluvium along margins of Lake Travis, including Colorado River deposits near spillway level and lower reaches of tributary streams: sand, silt, and clay; local gravel; exposed thickness less than 20 ft.
 - Qat—Alluvium and terrace deposits along valley margins of Cow Creek and tributaries; occurs as disjunct arable land parcels with thick soils; substrate sand, gravel, silt, and clay; thickness variable but commonly as much as 20 ft thick.
 - Qac—Alluvium and colluvium; both side-slope deposits on steep uplands and water-gathering slopes along upper reaches of various drainage courses; substrate highly variable materials derived from mass wasting and sheet wash; includes massive breakdown blocks of limestone admixed with clay soil and stony rubble to valley-bottom sediments consisting of eroded clay soils and calcareous fragments ranging from silt to gravel; local caliche cement; thickness variable but deposits mainly veneer 2 to 10 ft thick.
- Cretaceous**
- Ked—Edwards Limestone: resistant, massive carbonate strata at base of unit holding up edge of Post Oak Ridge and correlative outliers of once more-extensive Edwards Plateau; variable thicknesses of diverse carbonate rocks, including well-indurated limestone, vuggy burrowed rock, rudist boundstones, friable dolomitic beds, and local pulverlite (similar to caliche, but probably originated as dolomitic limestone leached by percolating groundwater); maximum thickness 100 ft; minimum thickness of erosional outliers less than 5 ft. Although bottom contact at different elevations locally, formation lies almost flat across Travis Peak Quadrangle, with east-west inclination of 17 ft per mile. Edwards has local karst features, and on upland surface may recharge seasonal perched aquifer. Many headwater reaches of drainage courses cutting into edge of Edwards Limestone fed by intermittent spring discharge. Travertine deposits and small outcrops local evidence of periodic spring flow.
 - KcpKwa—Comanche Peak Formation, Walnut Formation, undivided; owing to steep slopes (and widespread slope cover) mapped with either Walnut Formation (east-central, south, and east parts of map area) or composite of both Walnut Formation and underlying Paluxy Sand (north-central to northwest parts of map area). Composite section 10 to 30 ft thick; nodular, locally vuggy, limestone strata with highly weathered intervals and resistant beds. Because of steep slopes, strata commonly covered by soil and broken rock debris. Locally, rocky slope cover mapped as separate unit, Quaternary alluvium and colluvium (described above) possibly extending from beneath Edwards cap to stream valleys below. Steeply sloping upper interval overlying Walnut Formation, consisting of mainly friable limestone forming mostly recessive (weathered) slopes containing abundant fossils, especially *Exogyra texana*. Most exposures probably part of Bee Cave Marl Member of Walnut Formation, but thin intervals of Bull Creek Limestone Member also possibly present in lower reaches. Cedar Park Limestone Member also possibly present as resistant limestone intervals near presumed contact between Walnut and Comanche Peak (Moore, 1961); 30 to 60 ft thick, but locally interval thin erosional remnants on hilltops; map units forming low-permeability zone beneath perched water-bearing unit above.
 - KcpKwa/Kca—Comanche Peak Formation, Walnut Formation, and Paluxy Sand, undivided; in northwest, steeply sloping interval lying beneath Edwards caprock comprising local, thin sequences of friable sand above dolomitic strata of Glen Rose Formation and beneath clayey limestone strata of Walnut Formation. Sand sequence marks southwest limit of Paluxy Sand interfingering with basal strata of Walnut members, 3 to 10 ft thick. Overlying Paluxy Sand, Walnut and Comanche Peak Formations with similar rock types as farther east and south; nodular limestone (Comanche Peak) beneath Edwards cap and recessive, fossiliferous intervals typical of Walnut Bee Cave Member. Steeply sloping strata commonly covered by slope-wash debris, colluvium, or soil. As much as 100 ft thick; less-thick intervals also disjunct eroded outliers of Walnut Formation capping hills. Unit forms aquitard beneath perched water-bearing sections of Edwards Limestone.
 - Kgru—Glen Rose Limestone (upper member); most areally extensive geologic unit on Travis Peak Quadrangle; 250 to 360 ft thick. Unit forms dissected stepped terrain beneath prominent hilltops and ridge caps sculpted into resistant Edwards Limestone, underlain by less-resistant strata. Glen Rose stair steps formed on interbedded carbonate rocks, with ledges of resistant limestone or silty dolomite beds forming caps of "risers" and floors of overlying "treads." In contrast, so-called "marly" intervals form recessive slopes (risers) beneath resistant ledges. Most recessive strata not marls, but limestone with heterogeneous fabric containing multiple irregular clay partings that weather rapidly (Woodruff and Wilding, 2008); intervals contain abundant fossils, including casts of bivalves, gastropods, and echinoids. Friable sandstone beds occur near upper contact; well-cemented, granular, sandy limestone beds (and locally sparse granule conglomerate) occur near base of unit. Basal part of unit also leached evaporitic horizons, containing vuggy limestone, boxwork fabric, and poorly formed geodes. Upper Member of Glen Rose comprising Upper Trinity aquifer (Brune and Duffin, 1983), although viability of stratigraphic unit as water-bearing unit highly limited, owing to lack of continuous sequences of strata with porosity and permeability sufficient to allow efficient hydrologic communication. Also, because of local occurrence of leached evaporate minerals, water-quality possibly inferior.
 - Kgrl—Glen Rose Limestone (lower member); contact between lower and upper Glen Rose marked by locally prominent bed or sequence of thin-bedded (commonly iron-stained) and well-indurated limestone, Corbula bed, containing myriad fossils of tiny (sunflower-kernel-sized) clam initially classified as *Corbula harveyi* (Hill), although no longer of that genus or species (Molinueux and Comeaux, 2008). Corbula interval forming locally prominent bench above recessive, weathered interval containing diverse fossil casts of clams, gastropods, and echinoids (*Salenia texana* interval). Thin, ledge-forming limestone over light-colored "marly" sequence forming couplet commonly recognized on aerial photographs and in field; interval mapped across hundreds of square miles of Glen Rose outcrop. However, interval mapping difficult in parts of Travis Peak Quadrangle, and presence of quartz-granule-bearing limestone (or local limy sandstone) interval at presumed stratigraphic level of Corbula bed suggesting shallow-marine scour possibly removed diagnostic fossil-bearing beds. Contact interval marks top of 65- to 100-ft-thick sequence of stepped strata, largely dolomitic and containing horizons of silty dolomite and dolomitic limestone with vuggy porosity; also local rudist patch reefs. Lower Glen Rose sufficiently permeable to be upper part of middle Trinity aquifer, including Hensel Sand and Cow Creek Limestone (Brune and Duffin, 1983). At base, lower member of Glen Rose interfingering with underlying Hensel Sand. Fine-grained sand beds between intervals of silty (and sandy) dolomite.
 - Khe—Hensel Sand: at gradational contact with Glen Rose Limestone, silty dolomites interfingering with fine-grained dolomitic sands. Lower in section, clastic fraction more coarse-grained and more diverse—from quartz arenite, to subarkose, to granule, pebble, and cobble conglomerate. Cementation predominantly calcite, from weak to moderately strong. Fossiliferous crossbedding locally, especially near base of formation 50 to 80 ft thick. Sandy clay soils supporting mesquite and post oak; widespread, uniform permeability allowing infiltration into middle Trinity aquifer; contact with underlying Cow Creek Limestone unconformable.
 - Kca—Caliche facies of Cow Creek: discontinuous, weathered interval forming veneer at contact between Cow Creek Limestone and Hensel Sand, attesting to time interval when Cow Creek Limestone exposed to elements before deposition of basal part of Hensel (Stricklin and others, 1971). Paleosol consisting of earthy, mostly friable calcareous material, with local admixed, rounded, granule- to gravel-sized clasts; thickness less than 10 ft.
 - Kcc—Cow Creek Limestone: variety of carbonate rock types varying from fine-grained marine limestone strata interfingering with underlying Hammett Shale (including local sandy and silty beds) coarsening upward to include oyster-reef deposits, shell coquinas, and crossbedded shell-fragment beach rock. Local landforms occurring locally, especially above lake-shore bluffs, where joints enlarged by dissolution. Infiltration and storage of groundwater in bottommost formation composing middle Trinity aquifer; 40 to 65 ft thick.
 - Kha—Hammett Shale: calcareous claystone and siltstone admixed with local lenses of sand and conglomerate; typically about 20 ft thick (locally up to 30 ft). Outcrops rare owing to interval being covered by slump blocks of overlying limestone. Along lakeshore bluffs, mappable interval appear discontinuous. Locally light-colored bands along topographic benches formed on upper intervals of Sycamore Sand; contact with underlying Sycamore Sand unconformable; shale forms aquitard between middle and lower Trinity aquifers.
 - Ksy—Sycamore Sand: mostly conglomerate (moderately well cemented), local sand lenses deposited on irregular (eroded) surface on underlying Paleozoic terrain; 40 to 75 ft thick. Component sediment from silt-clay to cobble-boulder sizes; clasts typically well rounded consisting of assorted durable Paleozoic and Precambrian rocks of Llano Uplift. Bedding generally indistinct, but prominent, trough-fill crossbedding locally well expressed. Typical landscape steeply cut slopes above Lake Travis and resistant caps and benches with mesquite and post oak above Paleozoic claystones. Recharge zone for lower Trinity aquifer. Unconformable contact marking buried erosional surface termed Wichita Paleoplain (Hill, 1901), missing interval represented by unconformity, including Permian, Triassic, and Jurassic, as well as lower half of Cretaceous. Relief roughly 160 ft (O'Sullivan, 1967).
- Pennsylvanian**
- IPs—Smithwick Shale: claystone, nonfissile, greenish-gray to gray, weathered to olive brown; possibly flags of hard sandstone; interval about 50 ft thick exposed near lakeshore at west edge of map. Exposures commonly covered by colluvium on steep slopes; local slumping, low-permeability substrate forming aquitard beneath lower Trinity aquifer.

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Legend

- Contact; dashed where approximate, dotted where covered
- Stream
- Spring
- Karst feature (?) where questionable
- Road
- Elevation; contour interval 20 ft
- Travis Peak quarry area
- Normal pool elevation of Lake Travis = 681 ft (msl)

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