

# Los Angeles Geologic Labels

<b>ptype</b>	<b>name</b>	<b>source_ptype</b>	<b>source_name</b>	<b>source_age</b>
af	Artificial Fill	af	Artificial fill	latest Holocene
Qsu	Undifferentiated Surficial Deposits; includes colluvium, slope wash, talus deposits, and other surface deposits of all ages	Qd	Debris trains	Holocene, late Pleistocene
Qsu	Undifferentiated Surficial Deposits; includes colluvium, slope wash, talus deposits, and other surface deposits of all ages	Qdt	Debris trains and talus	Holocene, late Pleistocene
Qls	Landslide Deposits; may include debris flows and older landslides	Qls	Landslide deposits	Holocene, late Pleistocene
Qb	Beach Deposits	Qb	Beach Deposits	late Holocene
Qw	Alluvial Wash Deposits	Qw	Wash deposits	late Holocene
Qw	Alluvial Wash Deposits	Qw1	Young wash deposits	Holocene
Qw	Alluvial Wash Deposits	Qw2	Young Wash Deposits	Holocene
Qf	Alluvial Fan Deposits	Qf	Alluvial fan deposits	late Holocene, Holocene
Qf	Alluvial Fan Deposits	Qf1	Alluvial fan deposits, unit 1	late Holocene
Qa	Alluvial Valley Deposits	Qa	Alluvium, undifferentiated, active channel	late Holocene
Qt	Terrace Deposits; includes marine and stream terrace deposits	Qt	Terrace Deposits	late Holocene, Holocene and late Pleistocene
Ql	Lacustrine, Playa and Estuarine (Paralic) Deposits	pa	Ponded alluvium, fanlomerate and lacustrine deposits	latest Holocene
Qe	Eolian and Dune Deposits	Qe?	Eolian deposits	late Holocene
Qyf	Young Alluvial Fan Deposits	Qyf	Young alluvial fan deposits, undivided	Holocene to late Pleistocene
Qyf	Young Alluvial Fan Deposits	Qyf1	Young alluvial fan deposits, unit 1	Holocene to late Pleistocene
Qyf	Young Alluvial Fan Deposits	Qyf2	Young alluvial fan deposits, unit 2	Holocene to late Pleistocene
Qyf	Young Alluvial Fan Deposits	Qyf3	Young alluvial fan deposits, unit 3	Holocene to late Pleistocene
Qyf	Young Alluvial Fan Deposits	Qyf5	Young alluvial fan deposits, unit 5	Holocene
Qya	Young Alluvial Valley Deposits	Qya	Young alluvium, undivided	Holocene to late Pleistocene
Qya	Young Alluvial Valley Deposits	Qya1	Young alluvium, unit 1	late Pleistocene
Qya	Young Alluvial Valley Deposits	Qya2	Young alluvium, unit 2	late Pleistocene

Qya	Young Alluvial Valley Deposits	Qya3	Young alluvium, unit 3	Holocene to late Pleistocene
Qof	Old Alluvial Fan Deposits	Qof	Old alluvial fan deposits, undivided	late to middle Pleistocene
Qof	Old Alluvial Fan Deposits	Qof1	Old alluvial fan deposits, unit 1	middle Pleistocene
Qof	Old Alluvial Fan Deposits	Qof2	Old alluvial fan deposits, unit 2	late Pleistocene
Qof	Old Alluvial Fan Deposits	Qof3	Old alluvial fan deposits, unit 3	late Pleistocene
Qof	Old Alluvial Fan Deposits	Qof4	Old alluvial fan deposits, unit 4	late Pleistocene
Qoa	Old Alluvial Valley Deposits	Qoa	Old alluvium, undivided	late to middle Pleistocene
Qoa	Old Alluvial Valley Deposits	Qoa1	Old alluvium, unit 1	middle Pleistocene
Qoa	Old Alluvial Valley Deposits	Qoa2	Old alluvium, unit 2	late Pleistocene
Qoa	Old Alluvial Valley Deposits	Qoa3	Old alluvium, unit 3	late Pleistocene
Qot	Old Terrace Deposits	Qm1	Marine terrace deposits	Pleistocene
Qol	Old Lacustrine, Playa and Estuarine (Paralic) Deposits	Qop	Old paralic deposits, undivided	late to middle Pleistocene
Qol	Old Lacustrine, Playa and Estuarine (Paralic) Deposits	Qop?	Old paralic deposits, undivided	late to middle Pleistocene
Qvof	Very Old Alluvial Fan Deposits	Qvof	Very old alluvial fan deposits	middle to early Pleistocene
Qvof	Very Old Alluvial Fan Deposits	Qvof2	Very old alluvial fan deposits, unit 2	early Pleistocene
Qvoa	Very Old Alluvial Valley Deposits	Qvoa	Very old alluvium, undivided	middle to early Pleistocene
Qvoa	Very Old Alluvial Valley Deposits	Qvoa?	Very old alluvium, undivided	middle to early Pleistocene
Qvoa	Very Old Alluvial Valley Deposits	Qvoa1	Very old alluvium, unit 1	early Pleistocene
Qvoa	Very Old Alluvial Valley Deposits	Qvoa2	Very old alluvium, unit 2	early Pleistocene
Qvoa	Very Old Alluvial Valley Deposits	Qvoab	Very old alluvium	middle to early Pleistocene
Qvoa	Very Old Alluvial Valley Deposits	Qvoab?	Very old alluvium	middle to early Pleistocene
Qss	Coarse-grained formations of Pleistocene age and younger	Qpa	Pacoima Formation, fanglomerate	middle to early Pleistocene
Qss	Coarse-grained formations of Pleistocene age and younger	Qs	Saugus Formation, undivided, sandstone	Pleistocene
Qss	Coarse-grained formations of Pleistocene age and younger	Qsc	Saugus Formation, upper coarse grained facies	Pleistocene
Qss	Coarse-grained formations of Pleistocene age and younger	Qsg	Saugus Formation, basal conglomerate	Pleistocene

Qss	Coarse-grained formations of Pleistocene age and younger	Qsm	Saugus Formation, marine sandstone	early Pleistocene
Qss	Coarse-grained formations of Pleistocene age and younger	Qsm?	Saugus Formation, marine sandstone	early Pleistocene
Qss	Coarse-grained formations of Pleistocene age and younger	Qsp	San Pedro Formation, unconsolidated sandy unit	early Pleistocene
Qss	Coarse-grained formations of Pleistocene age and younger	Qsu	Saugus Formation, sandstone, siltstone, conglomerate	early Pleistocene
Qss	Coarse-grained formations of Pleistocene age and younger	Qsv	Saugus Formation, breccia conglomerate	Pleistocene
Qss	Coarse-grained formations of Pleistocene age and younger	QTlp	Las Posas Formation, sandstone	Pleistocene
Qss	Coarse-grained formations of Pleistocene age and younger	QTs	Saugus Formation, undivided	early Pleistocene, late Pliocene
Qss	Coarse-grained formations of Pleistocene age and younger	QTs?	Saugus Formation, undivided	early Pleistocene, late Pliocene
Qss	Coarse-grained formations of Pleistocene age and younger	QTsm	Saugus Formation, marine sandstone	early Pleistocene
Qss	Coarse-grained formations of Pleistocene age and younger	QTss	Saugus Formation, pebbly sandstone	early Pleistocene
Qss	Coarse-grained formations of Pleistocene age and younger	QTsv	Saugus Formation, breccia conglomerate	Pleistocene and Pliocene
Qss	Coarse-grained formations of Pleistocene age and younger	Qvob	Shale-clast sedimentary breccia	middle Pleistocene
Qss	Coarse-grained formations of Pleistocene age and younger	Qvob?	Shale-clast sedimentary breccia	middle Pleistocene
Qss	Coarse-grained formations of Pleistocene age and younger	TQsm	Saugus Formation, marine sandstone	Pleistocene
Qsh	Fine-grained formations of Pleistocene age and younger	Qpi	Inglewood Formation, siltstone, fine sandstone	early Pleistocene
Qsh	Fine-grained formations of Pleistocene age and younger	QTpm	Pico Formation, Mudpit Claystone Member	early Pleistocene, late Pliocene
Tss	Coarse-grained Tertiary age formations	QTp	Pico Formation, undivided	Pliocene
Tss	Coarse-grained Tertiary age formations	QTpc	Pico Formation, conglomerate	Pliocene
Tss	Coarse-grained Tertiary age formations	Tcc	Coal Canyon Formation, sandstone, conglomerate, siltstone	Eocene and Paleocene
Tss	Coarse-grained Tertiary age formations	Tcd	Topanga Group, Calabasas Formation, Dry Canyon Sandstone Member	late middle Miocene
Tss	Coarse-grained Tertiary age formations	Tcl	Topanga Group, Calabasas Formation, Latigo Canyon Sedimentary Breccia Member	late middle Miocene

Tss	Coarse-grained Tertiary age formations	Tclc	Topanga Group, Calabasas Formation, Latigo Canyon Breccia Member	late Miocene
Tss	Coarse-grained Tertiary age formations	Tcmp	Topanga Group, Calabasas Formation, Mesa Peak Breccia Member	middle Miocene
Tss	Coarse-grained Tertiary age formations	Tcn	Topanga Group, Calabasas Formation, Newell Sandstone Member	middle Miocene
Tss	Coarse-grained Tertiary age formations	Tcsc	Topanga Group, Calabasas Formation, Stokes Canyon Breccia Member	middle Miocene
Tss	Coarse-grained Tertiary age formations	Tcw	Coldwater Formation, arkosic sandstone	late Eocene, Oligocene, early Miocene
Tss	Coarse-grained Tertiary age formations	Tcww	Coldwater Formation, locally pebbly sandstone	late Eocene
Tss	Coarse-grained Tertiary age formations	Tep	Sedimentary Rocks of Chatsworth Reservoir	Eocene and/or Paleocene
Tss	Coarse-grained Tertiary age formations	Tfl	Fernando Formation, lower member, silty sandstone and siltstone, conglomerate	Pliocene
Tss	Coarse-grained Tertiary age formations	Tfl?	Fernando Formation, lower member, silty sandstone and siltstone, conglomerate	Pliocene
Tss	Coarse-grained Tertiary age formations	Tflc	Fernando Formation, lower member, conglomerate	Pliocene
Tss	Coarse-grained Tertiary age formations	Tfu	Fernando Formation, upper member, silty sandstone	Pliocene
Tss	Coarse-grained Tertiary age formations	Tfuc	Fernando Formation, sandstone, conglomerate	Pliocene
Tss	Coarse-grained Tertiary age formations	Tfuf	Fernando Formation, fossiliferous sandstone	Pliocene
Tss	Coarse-grained Tertiary age formations	Tlc	Llajas Formation, conglomerate	middle to early Miocene
Tss	Coarse-grained Tertiary age formations	Tll	Llajas Formation, sandstone, siltstone, conglomerate	middle Eocene
Tss	Coarse-grained Tertiary age formations	Tls	Detrital sediments of Lindero Canyon, sandstone	middle and late Miocene
Tss	Coarse-grained Tertiary age formations	Tlv	Las Virgenes Formation, sandstone	early Paleocene
Tss	Coarse-grained Tertiary age formations	Tm2	Modelo Formation, lower sandstone unit	late Miocene
Tss	Coarse-grained Tertiary age formations	Tm4	Modelo Formation, upper sandstone unit	late Miocene
Tss	Coarse-grained Tertiary age formations	Tma	Matilija Formation, sandstone	late to middle Eocene/middle to late Miocene/Miocene
Tss	Coarse-grained Tertiary age formations	Tmasl	Matilija Formation, sandstone interbedded with shale	middle to late Eocene

Tss	Coarse-grained Tertiary age formations	Tmc	Mint Canyon Formation, undivided, fluvial and lacustrine deposits	late and middle Miocene
Tss	Coarse-grained Tertiary age formations	Tmc?	Mint Canyon Formation, undivided, fluvial and lacustrine deposits	late and middle Miocene
Tss	Coarse-grained Tertiary age formations	Tmc1	Mint Canyon Formation, lacustrine and fluvial	late and middle Miocene
Tss	Coarse-grained Tertiary age formations	Tmc2	Mint Canyon Formation, lacustrine bottom facies, interbedded sandstone	late and middle Miocene
Tss	Coarse-grained Tertiary age formations	Tmc3	Mint Canyon Formation, lacustrine deltaic facies	late and middle Miocene
Tss	Coarse-grained Tertiary age formations	Tmcg	Mint Canyon Formation, conglomerate, fanglomerate	late and middle Miocene
Tss	Coarse-grained Tertiary age formations	Tmcv	Mint Canyon Formation, arkosic sandstone	middle Miocene
Tss	Coarse-grained Tertiary age formations	Tmss	Modelo Formation, sandstone and shale	late Miocene
Tss	Coarse-grained Tertiary age formations	Tmss?	Modelo Formation, sandstone and shale	late Miocene
Tss	Coarse-grained Tertiary age formations	Tmsu	Monterey Formation, upper sandstone member, arkose	middle to late Miocene
Tss	Coarse-grained Tertiary age formations	Tmz	Martinez Formation, sandstone	Paleocene
Tss	Coarse-grained Tertiary age formations	Tpbs	Punchbowl Formation, sandstone	early Pliocene to late Miocene
Tss	Coarse-grained Tertiary age formations	Tpsc	Puente Formation, Sycamore Canyon Member, sandstone	late Miocene
Tss	Coarse-grained Tertiary age formations	Tpscc	Puente Formation, Sycamore Canyon Member, conglomerate	early Pliocene to late Miocene
Tss	Coarse-grained Tertiary age formations	Tpsg	Puente Formation, Soquel Member, sandstone and siltstone	Miocene
Tss	Coarse-grained Tertiary age formations	Tpss	Puente Formation, sandstone	late Miocene
Tss	Coarse-grained Tertiary age formations	Ts	Sespe Formation, undivided, conglomerate, sandstone	late Eocene, Oligocene, early Miocene
Tss	Coarse-grained Tertiary age formations	Tsc	Simi Conglomerate, undivided, sandstone and cobble conglomerate	Paleocene
Tss	Coarse-grained Tertiary age formations	Tsc1	Simi Conglomerate, conglomerate unit	Paleocene
Tss	Coarse-grained Tertiary age formations	Tsc3	Simi Conglomerate, sandstone unit	Paleocene
Tss	Coarse-grained Tertiary age formations	Tsi	Simi Conglomerate, undivided, sandstone and cobble conglomerate	Paleocene
Tss	Coarse-grained Tertiary age formations	Tsp	Sespe Formation, Piuma Member, sandstone	early Miocene to late Eocene
Tss	Coarse-grained Tertiary age formations	Tsq	Sisquoc Formation, sandstone	late Miocene

Tss	Coarse-grained Tertiary age formations	Tsr	Saugus Formation, Sunshine Ranch Member, sandstone	late Pliocene
Tss	Coarse-grained Tertiary age formations	Tsrl	Saugus Formation, Lower Sunshine Ranch Member, sandstone	late Pliocene
Tss	Coarse-grained Tertiary age formations	Tsrl?	Saugus Formation, Lower Sunshine Ranch Member, sandstone	late Pliocene
Tss	Coarse-grained Tertiary age formations	Tt	Topanga Group, undivided, sedimentary and volcanic rocks	middle Miocene
Tss	Coarse-grained Tertiary age formations	Tt?	Topanga Group	middle Miocene
Tss	Coarse-grained Tertiary age formations	Tt4	Topanga Group, unit 4, sandstone interbedded with siltstone and conglomerate	middle Miocene
Tss	Coarse-grained Tertiary age formations	Ttc	Topanga Canyon Formation, undivided, sandstone with interbedded siltstone	early middle Miocene
Tss	Coarse-grained Tertiary age formations	Ttc1	Topanga Canyon Formation	early middle Miocene
Tss	Coarse-grained Tertiary age formations	Ttc1?	Topanga Canyon Formation	early middle Miocene
Tss	Coarse-grained Tertiary age formations	Ttc2	Topanga Canyon Formation	early middle Miocene
Tss	Coarse-grained Tertiary age formations	Ttc2?	Topanga Canyon Formation	early middle Miocene
Tss	Coarse-grained Tertiary age formations	Ttcc	Topanga Canyon Formation, Cold Creek Member, sandstone, siltstone	early middle Miocene
Tss	Coarse-grained Tertiary age formations	Ttcg	Topanga Group, conglomerate	middle Miocene
Tss	Coarse-grained Tertiary age formations	Ttf	Topanga Canyon Formation, Fernwood Member, paralic-fluvial, estuarine and marine sandstone	early middle Miocene
Tss	Coarse-grained Tertiary age formations	Ttk	Tick Canyon Formation, undivided, sandstone, siltstone, claystone, conglomerate	middle to early Miocene
Tss	Coarse-grained Tertiary age formations	Ttkc	Tick Canyon Formation, conglomerate	middle Miocene
Tss	Coarse-grained Tertiary age formations	Ttls	Topanga Canyon Formation, lower, sandstone	middle and early Miocene
Tss	Coarse-grained Tertiary age formations	Ttlsv	Topanga Canyon Formation, lower, sandstone with conglomerate	middle and early Miocene
Tss	Coarse-grained Tertiary age formations	Tto	Towsley Formation, sandstone with micaceous claystone	late Miocene and early Pliocene
Tss	Coarse-grained Tertiary age formations	Ttog	Towsley Formation, basal conglomerate	late Miocene and early Pliocene
Tss	Coarse-grained Tertiary age formations	Ttos	Towsley Formation, sandstone with some claystone	late Miocene and early Pliocene
Tss	Coarse-grained Tertiary age formations	Tts	Topanga Canyon Formation, Saddle Peak Member, sandstone and conglomerate	middle and early Miocene
Tss	Coarse-grained Tertiary age formations	Ttsp	Topanga Canyon Formation, Saddle Peak Member, sandstone and conglomerate	middle Miocene

Tss	Coarse-grained Tertiary age formations	Ttss	Topanga Canyon Formation, sandstone	middle Miocene
Tss	Coarse-grained Tertiary age formations	Ttss?	Topanga Canyon Formation, sandstone	middle Miocene
Tss	Coarse-grained Tertiary age formations	Tttc	Topanga Canyon Formation, Cold Creek Member, sandstone, siltstone	middle Miocene
Tss	Coarse-grained Tertiary age formations	Ttub	Topanga Canyon Formation, upper blueschist breccia	middle Miocene
Tss	Coarse-grained Tertiary age formations	Ttus	Topanga Canyon Formation, upper sandstone	middle Miocene
Tss	Coarse-grained Tertiary age formations	Tv	Vaqueros Formation, undivided, sandstone with interbedded siltstone and mudstone	early Miocene
Tss	Coarse-grained Tertiary age formations	Tvca	Vasquez Formation, conglomerate, fanglomerate, breccia	Miocene to Oligocene
Tss	Coarse-grained Tertiary age formations	Tvcal	Vasquez Formation, coarse conglomerate, fanglomerate, breccia	Miocene to Oligocene
Tss	Coarse-grained Tertiary age formations	Tvcg	Vasquez Formation, coarse conglomerate, fanglomerate, breccia	Miocene to Oligocene
Tss	Coarse-grained Tertiary age formations	Tvcs	Vasquez Formation, conglomerate	Miocene to Oligocene
Tss	Coarse-grained Tertiary age formations	Tvs	Vaqueros and Sespe Formations, undivided, sandstone	Miocene to Oligocene
Tss	Coarse-grained Tertiary age formations	Tvsb	Vasquez Formation, marker bed	Miocene to Oligocene
Tss	Coarse-grained Tertiary age formations	Tvss	Vasquez Formation, arkosic sandstone	early Miocene, Oligocene, late Eocene
Tss	Coarse-grained Tertiary age formations	Tvssl	Vasquez Formation, sandstone with granitic pebbles	Oligocene
Tss	Coarse-grained Tertiary age formations	Tvz	Vasquez Formation, undivided, sandstone and conglomerate interbedded with andesite-basalt	early Miocene to Oligocene
Tss	Coarse-grained Tertiary age formations	Tw	Towsley Formation, undivided, sandstone,	early Pliocene and late Miocene
Tss	Coarse-grained Tertiary age formations	Twc	Towsley Formation, conglomerate	early Pliocene and late Miocene
Tsh	Fine-grained Tertiary age formations	QTps	Pico Formation, siltstone	Pliocene
Tsh	Fine-grained Tertiary age formations	Tca	Castaic Formation, marine shale with sandstone beds	late Miocene
Tsh	Fine-grained Tertiary age formations	Tcb	Topanga Group, Calabasas Formation, undivided, clayey to silty sandstone and silty shale	early late Miocene and late middle Miocene
Tsh	Fine-grained Tertiary age formations	Tccl	Coal Canyon Formation, algal limestone	Eocene and Paleocene

Tsh	Fine-grained Tertiary age formations	Tce	Topanga Group, Calabasas Formation, Escondido Canyon Shale Member	Miocene
Tsh	Fine-grained Tertiary age formations	Tcs	Castaic Formation, undivided, tuffaceous or diatomaceous shale	late Miocene
Tsh	Fine-grained Tertiary age formations	Tcz	Cozy Dell Shale	late Eocene
Tsh	Fine-grained Tertiary age formations	TI	Llajas Formation, very fine sandstone and siltstone	middle to early Miocene
Tsh	Fine-grained Tertiary age formations	Tm	Modelo Formation, undivided, mudstone, siltstone, shale	late Miocene
Tsh	Fine-grained Tertiary age formations	Tm?	Modelo Formation, undivided, mudstone, siltstone, shale	late Miocene
Tsh	Fine-grained Tertiary age formations	Tm1	Modelo Formation, lower shale unit	late Miocene
Tsh	Fine-grained Tertiary age formations	Tm3	Modelo Formation, middle shale unit	late Miocene
Tsh	Fine-grained Tertiary age formations	Tmb	Modelo Formation, shale	Miocene
Tsh	Fine-grained Tertiary age formations	Tmcl	Mint Canyon Formation, siltstone and claystone	middle Miocene
Tsh	Fine-grained Tertiary age formations	Tmd	Modelo Formation, diatomaceous shale	late Miocene
Tsh	Fine-grained Tertiary age formations	Tml	Monterey Formation, mudstone	middle to early Miocene
Tsh	Fine-grained Tertiary age formations	Tmo	Modelo Formation, marine shale and sandstone	late Miocene
Tsh	Fine-grained Tertiary age formations	Tms	Modelo Formation, siltstone, shale, clay shale	late Miocene
Tsh	Fine-grained Tertiary age formations	Tmu	Monterey Formation, mudstone	late to middle Miocene
Tsh	Fine-grained Tertiary age formations	Tp	Pico Formation, clayey siltstone, sandy siltstone	Pliocene
Tsh	Fine-grained Tertiary age formations	Tp?	Pico Formation	Pliocene
Tsh	Fine-grained Tertiary age formations	Tpbc	Punchbowl Formation, claystone	early Pliocene to late Miocene
Tsh	Fine-grained Tertiary age formations	Tpds	Puente Formation, diatomaceous shale	late Miocene
Tsh	Fine-grained Tertiary age formations	Tpn	Puente Formation, undivided, siltstone, sandstone, shale	early Pliocene and late Miocene
Tsh	Fine-grained Tertiary age formations	Tps	Pico Formation, siltstone	Pliocene
Tsh	Fine-grained Tertiary age formations	Tpsh	Puente Formation, La Vida Member, shale	Miocene
Tsh	Fine-grained Tertiary age formations	Tpsl	Puente Formation, siltstone and very fine sandstone	late Miocene
Tsh	Fine-grained Tertiary age formations	Tpy	Puente Formation, Yorba Member, siltstone	late Miocene
Tsh	Fine-grained Tertiary age formations	Tr	Trancas Formation, undivided, mudstone, silty shale, claystone	middle and early Miocene
Tsh	Fine-grained Tertiary age formations	Trn	Rincon Formation, shale	late Miocene
Tsh	Fine-grained Tertiary age formations	Tsc2	Simi Conglomerate, shale unit	Paleocene

Tsh	Fine-grained Tertiary age formations	Tsq	Sisquoc Formation, mudstone, shale	Pliocene to Miocene
Tsh	Fine-grained Tertiary age formations	Tsql	Sisquoc Formation, lower clay-shale and diatomaceous shale	late Miocene
Tsh	Fine-grained Tertiary age formations	Tsqu	Sisquoc Formation, upper silty clay shale	late Miocene
Tsh	Fine-grained Tertiary age formations	Tsru	Saugus Formation, Upper Sunshine Ranch Member, siltstone and mudstone	late Pliocene
Tsh	Fine-grained Tertiary age formations	Tss	Santa Susana Formation, clay and mudrock	early to late Paleocene
Tsh	Fine-grained Tertiary age formations	Tsu	Santa Susana Formation, shale, sandstone and basal conglomerate	Paleocene
Tsh	Fine-grained Tertiary age formations	Ttce	Topanga Canyon Formation, Encinal Member, siltstone and mudstone	early middle Miocene
Tsh	Fine-grained Tertiary age formations	Ttlc	Topanga Canyon Formation, lower, micaceous clay-shale	middle to early Miocene
Tsh	Fine-grained Tertiary age formations	Ttlcv	Topanga Canyon Formation, lower, gray micaceous shale	middle to early Miocene
Tsh	Fine-grained Tertiary age formations	Ttoc	Towsley Formation, silty claystone and siltstone	late Miocene and early Pliocene
Tsh	Fine-grained Tertiary age formations	Ttsl	Topanga Canyon Formation, siltstone, sandstone and siliceous shale	middle Miocene
Tsh	Fine-grained Tertiary age formations	Tvcd	Vaqueros Formation, Danielson Member, siltstone and mudstone	Miocene to Oligocene
Tsh	Fine-grained Tertiary age formations	Tvcgl	Vasquez Formation, reddish clay paleosol	Miocene to Oligocene
Tsh	Fine-grained Tertiary age formations	Tvq	Vaqueros Formation, fine-grained sandstone	early Miocene to Oligocene
Tsh	Fine-grained Tertiary age formations	Tws	Towsley Formation, siltstone	early Pliocene and late Miocene
Tv	Tertiary age formations of volcanic origin	Tb	Basalt dikes, flows and breccias	Miocene
Tv	Tertiary age formations of volcanic origin	Tc	Conejo Volcanics, undifferentiated	middle Miocene
Tv	Tertiary age formations of volcanic origin	Tc?	Conejo Volcanics, undifferentiated	middle Miocene
Tv	Tertiary age formations of volcanic origin	Tcab	Conejo Volcanics; andesite, dacite, breccia	middle Miocene
Tv	Tertiary age formations of volcanic origin	Tcbb	Conejo Volcanics, basalt dacite flows	middle Miocene
Tv	Tertiary age formations of volcanic origin	Tco	Conejo Volcanics, undivided	middle Miocene
Tv	Tertiary age formations of volcanic origin	Tcoa	Conejo Volcanics, andesitic central zone, andesite	middle Miocene
Tv	Tertiary age formations of volcanic origin	Tcob	Conejo Volcanics, basaltic lower zone, basalt and andesitic basalt	middle Miocene
Tv	Tertiary age formations of volcanic origin	Tcof	Conejo Volcanics, basaltic and andesitic flows	middle Miocene
Tv	Tertiary age formations of volcanic origin	Tcof?	Conejo Volcanics, basaltic and andesitic flows	middle Miocene

Tv	Tertiary age formations of volcanic origin	Tcom	Conejo Volcanics, Malibu Bowl tongue, andesitic and basaltic flows and flow breccia	middle Miocene
Tv	Tertiary age formations of volcanic origin	Tcop	Conejo Volcanics, basaltic lower zone, pillow basalt	middle Miocene
Tv	Tertiary age formations of volcanic origin	Tcor	Conejo Volcanics, Ramera Canyon tongue, basaltic and andesitic breccia, tuff breccia	middle Miocene
Tv	Tertiary age formations of volcanic origin	Tcos	Conejo Volcanics, Solstice Canyon tongue, basaltic and andesitic flow breccia, tuff	middle Miocene
Tv	Tertiary age formations of volcanic origin	Tcosc	Conejo Volcanics, basaltic and andesitic flows, breccia, tuff, and sandstone	middle Miocene
Tv	Tertiary age formations of volcanic origin	Tcosr	Conejo Volcanics, Solstice Canyon and Ramera Canyon tongues, undifferentiated	middle Miocene
Tv	Tertiary age formations of volcanic origin	Tcv	Conejo Volcanics, basalt flows, breccia, diabase	middle Miocene
Tv	Tertiary age formations of volcanic origin	Tcva	Conejo Volcanics, andesitic breccia	middle Miocene
Tv	Tertiary age formations of volcanic origin	Tcvab	Conejo Volcanics, andesitic flow breccia	middle Miocene
Tv	Tertiary age formations of volcanic origin	Tcvb	Conejo Volcanics, basaltic flows and flow breccia	middle Miocene
Tv	Tertiary age formations of volcanic origin	Tcvb?	Conejo Volcanics, basaltic flows and flow breccia	middle Miocene
Tv	Tertiary age formations of volcanic origin	Tcvbb	Conejo Volcanics, basaltic flow breccia	middle Miocene
Tv	Tertiary age formations of volcanic origin	Tcvdb	Conejo Volcanics, dacite flow breccia	middle Miocene
Tv	Tertiary age formations of volcanic origin	Tcvi	Conejo Volcanics, basaltic intrusions	middle Miocene
Tv	Tertiary age formations of volcanic origin	Td	Dikes of basaltic composition	middle to late Tertiary
Tv	Tertiary age formations of volcanic origin	Td1	Dikes of basaltic composition	middle to late Tertiary
Tv	Tertiary age formations of volcanic origin	Td2	Dikes of basaltic composition	middle to late Tertiary
Tv	Tertiary age formations of volcanic origin	Ti	Intrusive rocks, undivided	middle Miocene
Tv	Tertiary age formations of volcanic origin	Ttb	Basalt sills and flows	middle Miocene
Tv	Tertiary age formations of volcanic origin	Ttb?	Basalt sills and flows	middle Miocene
Tv	Tertiary age formations of volcanic origin	Ttv	Topanga Canyon Formation, interbedded andesite and basalt flows	middle and early Miocene
Tv	Tertiary age formations of volcanic origin	Tva	Vasquez Formation, andesitic volcanic rocks	Miocene to Oligocene
Tv	Tertiary age formations of volcanic origin	Tvb	Vasquez Formation, basaltic and andesitic volcanic rocks	Miocene to Oligocene
Tv	Tertiary age formations of volcanic origin	Tvv	Vasquez Formation, interbedded volcanics	early Miocene to Oligocene
Tv	Tertiary age formations of volcanic origin	Tz	Zuma Volcanics	early to middle Miocene
Kss	Coarse-grained Cretaceous age formations of sedimentary origin	Kc	Chatsworth Formation, sandstone	late Cretaceous

Kss	Coarse-grained Cretaceous age formations of sedimentary origin	Kt	Tuna Canyon Formation, undivided marine sandstone, siltstone, conglomerate	late Cretaceous
Kss	Coarse-grained Cretaceous age formations of sedimentary origin	Ktb	Tuna Canyon Formation, sandstone	late Cretaceous
Kss	Coarse-grained Cretaceous age formations of sedimentary origin	Ktc	Tuna Canyon Formation, pebble conglomerate	late Cretaceous
Kss	Coarse-grained Cretaceous age formations of sedimentary origin	Ktr	Trabuco Formation, conglomerate	late Cretaceous
Kss	Coarse-grained Cretaceous age formations of sedimentary origin	Ktt	Tuna Canyon Formation, marine sandstone	late Cretaceous
Ksh	Fine-grained Cretaceous age formations of sedimentary origin	Ktd	Tuna Canyon Formation, fine-grained fossiliferous sandstone	late Cretaceous
Ksh	Fine-grained Cretaceous age formations of sedimentary origin	Kte	Tuna Canyon Formation, shale	late Cretaceous
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	agn	Augen gneiss	Precambrian
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	dgn	Diorite gneiss	pre-Cretaceous
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	f	Franciscan rocks	Mesozoic
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	ggn	Gneiss rocks, granodiorite gneiss	Cretaceous
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	gn	Mixed metamorphic rocks	Unknown
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	Jsm	Santa Monica Slate	late Jurassic
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	Jsms	Santa Monica Slate, spotted	late Jurassic
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	Jsp	Santa Monica Slate, phyllite	late Jurassic

pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	m2	Mylonite, Vincent Thrust	Uncertain
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	m3	Black Belt Mylonite, metamorphic	Uncertain
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	m4b	High-grade metamorphic	Uncertain
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	mg	Granitic-metamorphic complex	Precambrian
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	mgf	Interlayered gneiss and schist	Precambrian
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	mm	Mixed metamorphic rocks	Unkown
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	mp	Metasedimentary rock	Precambrian
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	ms	Metasedimentary quartzite, phyllite and schist	Paleozoic
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	ms?	Metasedimentary quartzite, phyllite and schist	Paleozoic
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	msg	Gneiss rocks, schist-gneiss	Precambrian
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	msg?	Gneiss rocks, schist-gneiss	Precambrian
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	msl	Siliceous metamorphic rocks	Precambrian
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	Mzdg	Diorite gneiss	early to middle Mesozoic

pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	Pgn	Gneiss, quartz feldspar layers	Proterzoic, Precambrian
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	pm	Placerita Formation, graphite, sillimanite, biotite schists	Precretaceous
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	Pmgn	Mendenhall Gneiss	Proterozoic
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	ps	Pelona Schist, chlorite and actinolite schist, quartzite	Mesozoic
pKm	Cretaceous and pre-Cretaceous metamorphic formations of sedimentary and volcanic origin	Pzp	Placerita Formation, metasedimentary rocks, marble, gneiss, quartzite	Paleozoic
sp	Serpentinite of all ages	MzPzsp	Serpentinite	Mesozoic or Paleozoic
gr	Granitic and other intrusive crystalline rocks of all ages	ai	Andesitic intrusive rocks	middle Miocene
gr	Granitic and other intrusive crystalline rocks of all ages	ai?	Andesitic intrusive rocks	middle Miocene
gr	Granitic and other intrusive crystalline rocks of all ages	ap	Aplite dike, quartzite feldspar aggregate	Cretaceous and older
gr	Granitic and other intrusive crystalline rocks of all ages	api	Porphyritic andesite	Miocene
gr	Granitic and other intrusive crystalline rocks of all ages	bi	Intrusive rocks, black basaltic dike or sill	Miocene
gr	Granitic and other intrusive crystalline rocks of all ages	cc	Cataclastic rock	Mesozoic
gr	Granitic and other intrusive crystalline rocks of all ages	db	Diabase	middle Miocene
gr	Granitic and other intrusive crystalline rocks of all ages	di	Mafic dike rock, dioritic	Mesozoic
gr	Granitic and other intrusive crystalline rocks of all ages	ga	Alaskite	Unknown
gr	Granitic and other intrusive crystalline rocks of all ages	gb	Gabbro of Pleasant View Ridge	early Mesozoic
gr	Granitic and other intrusive crystalline rocks of all ages	gba	Gabbro- anorthosite	Precambrian
gr	Granitic and other intrusive crystalline rocks of all ages	gd	Granodiorite	Cretaceous

gr	Granitic and other intrusive crystalline rocks of all ages	gr	Granite, leucocratic plutonic rocks, quartz monzonite	early Cretaceous to late Jurassic
gr	Granitic and other intrusive crystalline rocks of all ages	gr?	Granite, leucocratic plutonic rocks, quartz monzonite	early Cretaceous to late Jurassic
gr	Granitic and other intrusive crystalline rocks of all ages	grd	Granitic rocks NE of San Gabriel Fault	early Cretaceous to late Jurassic
gr	Granitic and other intrusive crystalline rocks of all ages	grs+m	Granitic rocks with inclusions of metamorphics	Cretaceous and Precambrian
gr	Granitic and other intrusive crystalline rocks of all ages	hdg	Hornblende diorite gabbro	Mesozoic and older
gr	Granitic and other intrusive crystalline rocks of all ages	hdg?	Hornblende diorite gabbro	Mesozoic and older
gr	Granitic and other intrusive crystalline rocks of all ages	hdr	Coarse grained hornblende diorite	Paleozoic
gr	Granitic and other intrusive crystalline rocks of all ages	hdw	Medium grained hornblende diorite	Paleozoic
gr	Granitic and other intrusive crystalline rocks of all ages	Keg	Echo Granite	Cretaceous
gr	Granitic and other intrusive crystalline rocks of all ages	Kgl	Mixed leucocratic and granitic rocks	Cretaceous
gr	Granitic and other intrusive crystalline rocks of all ages	Kglm	Mixed anorthosite and granite	Cretaceous and Precambrian
gr	Granitic and other intrusive crystalline rocks of all ages	Kgr	Granitic rocks	late Cretaceous
gr	Granitic and other intrusive crystalline rocks of all ages	lgd	Low Granodiorite, undivided leucocratic	Mesozoic
gr	Granitic and other intrusive crystalline rocks of all ages	lgdb	Low Granodiorite, gneissoid biotite hornblende	Mesozoic
gr	Granitic and other intrusive crystalline rocks of all ages	lgdd	Low Granodiorite, hornblende-rich gneissoid facies	Mesozoic, Triassic
gr	Granitic and other intrusive crystalline rocks of all ages	lgdh	Low Granodiorite, hornblende granodiorite, small phenocrysts	Mesozoic
gr	Granitic and other intrusive crystalline rocks of all ages	lgdp	Low Granodiorite, porphyritic	Mesozoic
gr	Granitic and other intrusive crystalline rocks of all ages	mh	Diorite	Precambrian, Paleozoic
gr	Granitic and other intrusive crystalline rocks of all ages	Mzdbh	Biotite-hornblende diorite	Mesozoic
gr	Granitic and other intrusive crystalline rocks of all ages	Mzdhb	Granitic rocks	late Cretaceous

gr	Granitic and other intrusive crystalline rocks of all ages	Mzg	Granitic complex	Mesozoic
gr	Granitic and other intrusive crystalline rocks of all ages	Mzgd	Granodiorite	Mesozoic
gr	Granitic and other intrusive crystalline rocks of all ages	Mzhd	Granitic rocks	late Cretaceous
gr	Granitic and other intrusive crystalline rocks of all ages	Mzqdb	Biotite-quartz diorite	Mesozoic
gr	Granitic and other intrusive crystalline rocks of all ages	P_grp	Granite pegmatite	Proterozoic, late Jurassic or early Cretaceous
gr	Granitic and other intrusive crystalline rocks of all ages	Pagb	Anorthosite with gabbro	Proterozoic
gr	Granitic and other intrusive crystalline rocks of all ages	Pan	Anorthosite, medium to coarse grain plagioclase rock	Proterozoic
gr	Granitic and other intrusive crystalline rocks of all ages	Pfgb	Ferro-gabbro	Proterozoic
gr	Granitic and other intrusive crystalline rocks of all ages	Phgb	Hornblende gabbro	Proterozoic
gr	Granitic and other intrusive crystalline rocks of all ages	Pigb	Gabbro-norite	Proterozoic
gr	Granitic and other intrusive crystalline rocks of all ages	Pjgb	Jotunite-norite-gabbro-diorite	Proterozoic
gr	Granitic and other intrusive crystalline rocks of all ages	Pjgba	Jotunite-norite-gabbro-diorite with actinolite	Proterozoic
gr	Granitic and other intrusive crystalline rocks of all ages	Plgb	Leucogabbro	Proterozoic
gr	Granitic and other intrusive crystalline rocks of all ages	Psy	Syenite	Proterozoic
gr	Granitic and other intrusive crystalline rocks of all ages	qd	Quartz diorite	Cretaceous
gr	Granitic and other intrusive crystalline rocks of all ages	qd?	Quartz diorite	Cretaceous
gr	Granitic and other intrusive crystalline rocks of all ages	qd+m3	Quartz diorite and biotite gneiss	Cretaceous and older
gr	Granitic and other intrusive crystalline rocks of all ages	qd+m4a	Quartz diorite and hornblende orthogneiss	Cretaceous and older
gr	Granitic and other intrusive crystalline rocks of all ages	qd2	Quartz diorite and hornblende orthogneiss	Cretaceous and older

gr	Granitic and other intrusive crystalline rocks of all ages	qm	Quartz diorite, massive	Cretaceous
gr	Granitic and other intrusive crystalline rocks of all ages	qm1	Leucocratic quartz monzonite	Paleozoic and Mesozoic
gr	Granitic and other intrusive crystalline rocks of all ages	Qmc	Cataclastic quartz monzonite	Mesozoic
gr	Granitic and other intrusive crystalline rocks of all ages	qmc	Cataclastic quartz monzonite	Paleozoic
gr	Granitic and other intrusive crystalline rocks of all ages	syg	Syenite with gneiss	Precambrian
gr	Granitic and other intrusive crystalline rocks of all ages	Tai	Andesitic intrusive rocks	Tertiary, probably Oligocene
gr	Granitic and other intrusive crystalline rocks of all ages	Tia	Andesitic intrusive rocks	Oligocene
gr	Granitic and other intrusive crystalline rocks of all ages	Tib	Basaltic intrusive rocks	Tertiary
gr	Granitic and other intrusive crystalline rocks of all ages	TRlg	Mount Lowe Intrusive Suite, undivided	Triassic
gr	Granitic and other intrusive crystalline rocks of all ages	xqd	Quartz diorite	Cretaceous