USGS
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Legend for the USGS Interactive Map of the Colorado Front Range Infrastructure Resources

Railroads
- Carline
- Railroad
- Railroad in street
- Siding
- Turntable
- Railroad yard

Roads and Highways
- State Highway
- Interstate Highway
- U.S. Highway
- Roads

Miscellaneous Transportation
- Landing Strip/Airport
- Pipeline
- Transmission Line
- Airport/Landing Strip
- Airport/Landing Strip - abandoned
- Airport/Landing Strip - unimproved/loose surface
- Heliport
- Hydroelectric Plant
- Power Station
- Pumping or Compressor Station
- Substation

Oil and Gas
- Oil and Gas Wells
- High Potential and High Density for all Formations

All Formations Moderate and High Potential Resources
- Medium Potential Areas
- High Potential Areas

Well Density
- 1 - 4 Wells
- 4 - 20 Wells

Saline Soil Photo Tour
- Saline Soils Photo Links
- Saline Soils
- Saline Soils Study Area

Coal
- Vertical Shafts
- Adits
- Airshafts

Faults
- Inferred
- Certain

Depth to Mining (feet)
- 0 - 100
- 101 - 200
- 201 - 300
- 301 - 400
- 400 - 450

Extent of Mined Out Areas

Man-made Structures
- Archaeological site, ruin
- Boat Ramp
- Building
- Burner Stack
- Cache La Poudre Monument
- Campground, site
- Cemetery
- Church
- Communication Tower
- Drill Hole
- Drilled Well
- Firehouse
- Flagstaff Memorial
- Grain Elevator
- Historical Marker
- Hospital
- Library
- Lookout Tower
- Memorial - Shrine
- Memorial - Statue
- Mine Shaft
- Mine tunnel/cave entrance
- Navigation Tower
- Open Pit Mine
- Open Pit Mine/gravel
- Overland Stage Station
- Picnic Area
- Pillar of Hercules
- Pit, unconsolidated material
- Pit, unconsolidated material/clay
- Pit, unconsolidated material/gravel
- Pit, unconsolidated material/sand
- Post Office
- Prospect
- Quarry
- Radio or TV Facility
- School
- Sewage Disposal Plant
- Tank
- The Keyhole
- Tower
- Water Tank
- Water Tower
- Waterworks
- Recreation Slide
- Levee
- Drag Strip
- Breakwater Jetty/Pier/Dock/Wharf/Causeway
- Boat Ramp
- Amphitheater
- Armory
- Athletic Field
- Boat Ramp
- Building
- Built-up/urban area
- Campground
- Cemetery
- Church
- Church Complex
- City or Town Hall
- Courthouse
- Drilled Well Field
- Experimental Farm
- Fairgrounds
- Feedlot
- Firehouse
- Firing Range
- Golf Course
- Hospital
- Hospital Complex
- Library
- Mine Dump
- Museum
- Open Pit Mine
- Orphanage
- Orphanage Complex
- Pit, unconsolidated material
- Pit, unconsolidated material/clay
- Pit, unconsolidated material/gravel
- Post Office
- Prison Compound
- Quarry
- Racetrack or raceway
- Recreation or Public Use Area
- Refinery or industrial area
- Rodeo Grounds
- School
- School Campus
- Sewage Disposal Plant
- Shopping Center
- Ski Area
- Stadium
- Strip Mine
- Strip Mine/clay
- Swimming Pool
- Tank
- Trailer Park
- Water Tank
- Waterworks
- Zoo

Hydrography
- Flowing Well
- Gaging Station
- Non-Flowing Well
- Pumping Station
- Reservoir
- Riser
- Sewage Disposal Pond
- Spring
- Windmill
- Streams and Rivers
- Lakes

Geohydrology of Shallow Aquifers

Depth to Water, in feet
- 0
- 20
- 40
- 60
- 80

Water Table Altitude, in feet
- 4600 - 4700
- 4701 - 4800
- 4801 - 4900
- 4901 - 5000
- 5001 - 5100
- 5101 - 5200
- 5201 - 5300
- 5301 - 5400
- 5401 - 5500
- 5501 - 5600
- 5601 - 5700
- 5701 - 5800
- 5801 - 5900
- 5901 - 6000
- 6001 - 6100
- 6101 - 6200
- 6201 - 6300
- 6301 - 6400

Bedrock Surface Altitude, in feet
- 4520
- 4521 - 4600
- 4601 - 4700
- 4701 - 4800
- 4801 - 4900
- 4901 - 5000
- 5001 - 5100
- 5101 - 5200
- 5201 - 5300
- 5301 - 5400
- 5401 - 5500
- 5501 - 5600
- 5601 - 5700
- 5701 - 5800
- 5801 - 5900
- 5901 - 6000
- 6001 - 6100
- 6101 - 6200
- 6201 - 6300
- 6301 - 6400
- 6401 - 6500
- 6501 - 6600
- 6601 - 6700
- 6701 - 6800

Unconsolidated Sediment Thickness, in feet
- 0
- 1 - 20
- 21 - 40
- 41 - 60
- 61 - 80
- 81 - 100
- 101 - 120

Saturated Thickness, in feet
- 10
- 30
- 50
- 70
- 90
- 110

Bedrock Outcrop

Bedrock Aquifers

Wells
- Wells used to map bedrock aquifer structure

Geologic Structure
- Horizontal Bed
- Overturned Bed
- Strike/Dip
- Vertical Bed

Structure contours of base of upper Arapahoe aquifer (in feet)
- 4200
- 4201 - 4300
- 4301 - 4400
- 4401 - 4500
- 4501 - 4600
- 4601 - 4700
- 4701 - 4800
- 4801 - 4900
- 4901 - 5000
- 5001 - 5100
- 5101 - 5200
- 5201 - 5300
- 5301 - 5400
- 5401 - 5500
- 5501 - 6000

Structure contours of top of Laramie-Fox Hills aquifer (in feet)
- 4600
- 4601 - 4700
- 4701 - 4800
- 4801 - 4900
- 4901 - 5000
- 5001 - 5100
- 5101 - 5200
- 5201 - 5300
- 5301 - 5400

Structure contours of base of Laramie-Fox Hills and Arapahoe aquifers (in feet)
- 4200
- 4201 - 4300
- 4301 - 4400
- 4401 - 4500
- 4501 - 4600
- 4601 - 4700
- 4701 - 4800
- 4801 - 4900
- 4901 - 5000
- 5001 - 5100
- 5101 - 5200
- 5201 - 5300
- 5301 - 5400
- 5401 - 5500

Geohydrologic unit boundaries
- Ka
- Kl
- Klau
- Klf
- Kp
- Ku
- MPu
- S
- TKd
- Tdw
- Tu
- nd
- pE

Bedrock Aquifers Study Area

To Page Two

Legend for the USGS Interactive Map of the Colorado Front Range Infrastructure Resources

Geology

Bedding Attitudes

- Horizontal bedding
- Inclined bedding - Showing strike and dip
- Overturned bedding - Showing strike and dip
- Vertical bedding - Showing strike

Linear Geologic Features

- Contact - Certain
- Fault - Certain
- Fault - Concealed
- Map boundary
- Shoreline
- Thrust fault - Certain
- Thrust fault - Concealed

Surface Geology (Northern FRIRP)

- Fault zone, Brecciated rock
- w, Open water
- af, Artificial fill
- Qpp, Post-Piney Creek Alluvium (upper Holocene)
- Qt, Talus (upper Holocene to Pleistocene)
- Qc, Colluvium (upper Holocene to Pleistocene)
- Qe, Eolium (windblown clay, silt (loess), sand, and granules) (upper Holocene to Bull Lake Glaciation)
- Ql, Landslide deposits (Holocene to Pleistocene)
- Qpc, Piney Creek Alluvium (upper Holocene)
- Qb, Broadway Alluvium (Pinedale Glaciation, Pleistocene)
- Qlo, Louviers Alluvium (Bull Lake Glaciation, Pleistocene)
- Qs, Slocum Alluvium (Sangamon Interglaciation or Illinoian Glaciation, Pleistocene)
- Qv, Verdos Alluvium (Yarmouth Interglaciation or Kansan Glaciation, Pleistocene)
- Qrf, Rocky Flats Alluvium (Aftonian Interglaciation or Nebraskan Glaciation, Pleistocene)
- Qprf, Pre-Rocky Flats Alluvium (Nebraskan(?) Glaciation, Pleistocene)
- Tb, Boulder deposits (Pliocene?)
- Tqm, Quartz monzonite (Eocene)
- Ti, Rhyodacite and basalt (Paleocene)
- TKda, Denver (Paleocene and Upper Cretaceous) and Arapahoe (Upper Cretaceous) Formations
- Kl, Laramie Formation (Upper Cretaceous)
- Kfh, Fox Hills Sandstone (Upper Cretaceous)
- Kptz, Upper transition member of Pierre Shale (Upper Cretaceous)
- Kpu, Upper shale member of Pierre Shale (Upper Cretaceous)
- Kprl, Richard Sandstone Member, unnamed shale member, Larimer Sandstone Member, unnamed shale member, and Rocky Ridge Sandstone Member of Pierre Shale (Upper Cretaceous)
- Kpm, Middle shale member of Pierre Shale (Upper Cretaceous)
- Kph, Hygiene Sandstone Member of Pierre Shale (Upper Cretaceous)
- Kpl, Lower shale member of Pierre Shale (Upper Cretaceous)
- Kn, Niobrara Formation (Upper Cretaceous)
- Kcg, Carlile Shale (Upper Cretaceous), Greenhorn Limestone (Upper Cretaceous), and Graneros Shale (Upper and Lower Cretaceous)
- Kd, Dakota Group (Lower Cretaceous)
- JTRmj, Morrison Formation (Upper Jurassic), Canyon Springs Member of Sundance Formation (Upper Jurassic), and Jelm Formation (Upper Triassic)
- TRPl, Lykins Formation (Triassic and Permian)
- Ply, Lyons Sandstone (Permian)
- Psi, Satanka and Ingleside Formations (Permian)
- Pi, Ingleside Formation (Permian)
- PIPf, Fountain Formation (Permian and Pennsylvanian)
- Ysp, Silver Plume Quartz Monzonite (Precambrian Y)
- YXp, Pegmatite (Precambrian Y or X)
- Xbc, Boulder Creek Granodiorite (Precambrian X)
- Xt, Tonalite (Precambrian X)
- Xq, Quartzofeldspathic schist and gneiss interbedded with mica schist and gneiss (Precambrian X)
- Xk, Knotted mica schist (Precambrian X)
- Xb, Porphyroblastic biotite schist (Precambrian X)
- Xa, Amphibolite (Precambrian X)

Surface Geology (Southern FRIRP)

- Fault zone, Fault zone - Zone of intense fault brecciation, usually associated with numerous en echelon faults
- w, Open water
- Qp, Post-Piney Creek and Piney Creek Alluvium (upper Holocene)
- Qco, Colluvium (upper Holocene)
- Qls, Landslide deposits (Holocene to middle? Pleistocene)
- Qes, Windblown sand (lower Holocene to upper Pleistocene)
- Qb, Broadway Alluvium (upper Pleistocene)
- Ql, Loess (upper Pleistocene)
- Qlo, Louviers Alluvium (upper Pleistocene)
- Qs, Slocum Alluvium (Pleistocene)
- Qv, Verdos Alluvium (Pleistocene)
- Qrf, Rocky Flats Alluvium (Pleistocene)
- Qn, Nussbaum Alluvium (Pleistocene)
- Tg, High-level gravel deposits (Pliocene to Oligocene)
- Tcr, Castle Rock Conglomerate (lower Oligocene)
- Twm, Wall Mountain Tuff (lower Oligocene)
- Tgm, Green Mountain Conglomerate (Paleocene)
- TKda, Dawson and Arapahoe Formations (Paleocene to Upper Cretaceous)
- TKd, Denver Formation (Paleocene and Upper Cretaceous)
- Ts, Shoshonite (lower Paleocene)
- Kl, Laramie Formation (Upper Cretaceous)
- Kf, Fox Hills Sandstone (Upper Cretaceous)
- Kp, Pierre Shale (Upper Cretaceous)
- Kn, Niobrara Formation (Upper Cretaceous)
- Kcgg, Carlile Shale, Greenhorn Limestone, and Graneros Shale, undifferentiated (Upper Cretaceous)
- Kd, Dakota Group (Lower Cretaceous)
- Jmr, Morrison and Ralston Creek Formations (Upper Jurassic)
- JPml, Morrison, Ralston Creeek, and Lykins Formations, undifferentiated (Upper Jurassic to Upper Permian)
- TRPl, Lykins Formation (Lower Triassic and Upper Permian)
- Ply, Lyons Sandstone (Permian)
- PIPfl, Lyons Sandstone and Fountain Formation, undifferentiated
- PIPf, Fountain Formation (Lower Permian to Middle Pennsylvanian)
- Cr, Unnamed rocks (Cambrian)
- Ypp, Pikes Peak Granite (Precambrian Y)
- YXp, Pegmatite (Precambrian Y and X)
- Ysp, Silver Plume Quartz Monzonite (Precambrian Y)
- Xqm, Quartz monzonite (Precambrian X)
- Xbc, Boulder Creek Granodiorite (Precambrian X)
- Xq, Quartzite (Precambrian X)
- Xs, Schist (Precambrian X)
- Xg, Gneiss (Precambrian X)
- Xfg, Felsic gneiss (Precambrian X)
- Xa, Amphibolite, hornblendite, and related rocks (Precambrian X)

Sand, Gravel and Quarry Aggregate Resources

Sample Sites

- Drill Hole
- Sand/Gravel Pit
- Quarry
- Sample Site
- No Value Shown

Aggregate Mineablility

- High
- Low
- Medium
- Unevaluated

Land Use and Land Cover

General

- Bare
- Developed
- Vegetated
- Water

Specific

- Agricultural Business
- Canal/Ditch
- Commercial/Light Industry
- Communications and Utilities
- Emergent Wetlands
- Entertainment/Recreation
- Forested
- Heavy Industry
- Institutional
- Lake/Pond
- Multi-family Residential
- Natural Herbaceous
- Orchards/Vineyards/Groves
- Planted/Cultivated
- Reservoir
- Shrubland
- Single-family Residential
- Stream/River
- Transportation
- Woody Wetlands

Cities and Boundaries

- City
- City Park
- County Park
- Federal Prison
- Military Reservation
- Misc Federal Reservation
- Misc State Reservation
- National Park/Monument/Rec Area
- National Forest/Grassland
- State Park/ Rec Area
- State Wildlife Area
- State Wildlife Refuge/Preserve/Hatchery
- Unincorporated
- Study Area
- Public Land Survey System
- County Boundaries

To Page One