Eagle Basin-Central Colorado Trough

Geologic Period	Phase	Stratigraphic Unit	Hydrogeologic Unit
Quaternary	Modern-Glaciation	Alluvium associated with present rivers	Alluvial Aquifers
Neogene	Extension	Basin-fill sediments, volcanic and instrusive rocks form local mountaious	Multiple
Paleogene	Transition		
	Laramide	Laramide basin formations form multiple aquifers; include Piceance and Sand Wash basins	Multiple
Cretaceous	Interior Seaway	Sedimentary formations of marine and coastal environments make up a	Multiple
Jurassic	Mesozoic Sandstones	Sedimentary formations of non-marine continental environments make up a series of sandstone and shale regional hydrogeologic units of Colorado Plateaus and Colorado Piedmont regions	Multiple
Triassic			
Permian	Ancestral Rocky Mountains	Weber Sandstone- Schoolhouse Member of Maroon Formation	Weber Aquifer
		Maroon-Sangre de Cristo Formations	Maroon-Minturn Aquifer
		Minturn Formation: Upper Member-Eagle Valley Formation	
Pennsylvanian		Minturn Formation: Middle Member-Eagle Valley Evaporite	Eagle Valley evaporite unit
		Minturn Formation: Lower Member	Belden-Molas confining unit
		Belden Formation	
		Molas Formation	
Mississippian	Paleozoic Carbonates	Leadville Limestone	Mississippian-Devonian carbonate aquifer
		Gilman sandstone	
Devonian		Chaffee Group-Dyer Dolomite	
		Parting Formation	Parting confining unit
Silurian			
Ordovician		Freemont Limestone-Harding Sandstone	Ordovician-Cambrian carbonate aquifer
		Manitou-Dotsero formations	
Cambrian		Gros Ventre Formation	Gros Ventre confining unit
		Sawatch Sandstone	Sawatch Aquifer
Precambrian	Precambrian	Crystalline rocks of igneous and metamorphic origin in mountainous region	Crystalline bedrock

Table 11b-01-01-01. Eagle Basin-Central Colorado Trough stratigraphic chart.

Eagle Basin-Central Colorado Trough

Geologic Period	Phase	Stratigraphic Unit		Unit Thickness (ft)	Physical Characteristics	Hydrogeologic Unit	Hydrologic Characteristics
Quaternary	Modern-Glaciation	Alluvium associated with present rivers				Alluvial Aquifers	
Neogene	Extension	Basin-fill sediments, volcanic and instrusive rocks form local mountaious region aquifers				Multiple	
Paleogene	Transition						
	Laramide	Laramide basin formations form multiple aquifers; include Piceance and Sand Wash basins				Multiple	
Cretaceous	Interior Seaway	Sedimentary formations of marine and coastal environments make up a series of shale-dominated regional hydrogeologic units of Colorado Plateaus and Colorado Piedmont regions				Multiple	
Jurassic	Mesozoic Sandstones	Sedimentary formations of non-marine continental environments make up a series of sandstone and shale regional hydrogeologic units of Colorado Plateaus and Colorado Piedmont regions				Multiple	
Triassic							
Permian	Ancestral Rocky Mountains	Weber Sandstone- Schoolhouse Member of Maroon Formation		400	Tan cross-bedded and well sorted quartz sandstone	Weber Aquifer	Can be the most porous bedrock sedimentary unit in the Upper Colorado River Basin
		Maroon-Sangre de Cristo Formations		<200 - 15,000	Red, tan, and gray interbedded sandstone, gravelly sandstone, and conglomerate interbedded with mudstone; occasional limestone and dolomite	Maroon-Minturn Aquifer	Very thick, heterogenous unit with varying capability to yield water; production depends of rock type and degree of fracturing
Pennsylvanian		Minturn Formation	Upper Member-Eagle Valley Formation		Sandstone, siltstone, limestone in various shades of gray with some red,orange and brown beds		
			Middle Member-Eagle Valley Evaporite	200- >5,000	Pale gray to white gypsum, anhydrite and halite interbedded with gray siltstone, shale, sandstone and limestone	Eagle Valley evaporite unit	Generally a confining unit but locally yields brackish water to wells and springs
			Lower Member	< 200 - 3,000	Dark gray, tan and red shale, siltstone and sandstone with rare limestone and dolomite	Belden-Molas confining unit	Predominanatly shale but limestone and sandstone beds may transmit water
		Belden Formation			Gray to black shale, sandy shale, limestone and dolomite;		
		Molas Formation			Red to purple siltstone, sandstone, and conglomerate		
Mississippian	Paleozoic Carbonates	Leadville Limestone		<400 - 1,200	Bluish-gray limestone and dolomite; paleokarst in upper part locally filled with red to purple siltstone, sandstone and conglomerate of the Molas Formation	Mississippian-Devonian carbonate aquifer	Transmits water through interconnected solution channels and fractures; source for Glenwood Hot Springs
		Gilman sandstone			Gray sandstone interbedded with dolomite		
Devonian		Chaffee Group-Dyer Dolomite			Gray to black finely crystalline dolomite, often thinly laminated		
		Parting Formation		<50 - >150	White, pink and gray quartzite and quartz sandstone, sandy dolomite	Parting confining unit	Unit is heterogenous and ability to yield water depends on rock type and fracturing
Silurian							
Ordovician		Freemont Limestone-Harding Sandstone		<200 - 400	Sandstone and limestone	Ordovician-Cambrian carbonate aquifer	Transmits water through interconnected solution channels and fractures
		Manitou-Dotsero formations			Dolomite, dolomite conglomerate, sandy dolomite, calcareous shale and sandstone and liimestone		
Cambrian		Gros Ventre Formation		<200 - 400	Shale with subordinate sandstone and carbonate interbeds	Gros Ventre confining unit	Found only in the deep Sand Wash Basin
		Sawatch Sandstone		200-800	Quartzitic sandstone and dolomitic sandstone with shale partings, arkosic conglomerate at base	Sawatch Aquifer	Porosity and permeability depend on cementation and fracturing
Precambrian	Precambrian	Crystalline rocks of igneous and metamorphic origin in mountainous region				Crystalline bedrock	

Table 11b-01-01-01. Eagle Basin-Central Colorado Trough stratigraphic chart, detailed. Colorado Geological Survey ON-010 Colorado Groundwater Atlas.

Sources: Geldon (1989); Lindsey (1995); Baltz (1999); Kirkham and Scott (2002); Geldon (2003); Raynolds and Hagadorn (2017)