

TABLE F-1 SOIL CHARACTERISTICS FOR THE PORTIONS OF THE PROJECT AREA THAT ARE IN FREMONT COUNTY

Map Unit #	Map Unit Name	Series (percent of Map Unit)	Taxonomic Classification	Landscape Position	Slope	Soil Parent Material	Horizon	Depth (inches)	Texture	Shrink/Swell Potential	Depth to Bedrock (inches)	Erosion Factor		Wind Erodibility Group*	Available Water Capacity	Runoff	Drainage Class	Permeability	Erosion Hazard	
												K	T (tons/acre/yr)						Water	Blowing
103	Abston-Diamondville Complex	Abston - 55%	Fine, montmorillonitic Borollic Natrargids	Hill slopes	1-12%	Sodic shale and sandstone	A	0-3	Sandy loam	Low	20-40	0.24	2	3	Moderate	Medium	Well drained	Slow	Slight	Severe
							B	3-34	Sandy clay, loam	Low - high		0.28-0.49								
		Diamondville loam - 30%	Fine-loamy, mixed Borollic Haplargids		1-12%	Shale and siltstone	A	0-2	Loam	Low	20-40	0.37	2	5	Moderate	Medium	Well drained	Moderately slow	Moderate	Moderate
							B	2-24	Clay loam	Moderate		0.49								
C	24-36	Loam	Low	0.49																
117	Blackhall - Carmody association, hilly	Blackhall - 45%	Loamy, mixed (calcareous), frigid, shallow Ustic Thorriorthents	Hills, ridges and Knobs	5-45 %	Sandstone	A	0-2	Fine sandy Loam	Low	6-20	0.32	1	3	Low	Rapid	Well drained	Moderate	Severe	Severe
							B	2-17	Sandy loam	Low		0.37								
		Carmody - 35%	Coarse-loamy, mixed (calcareous), frigid Ustic Thorriorthents		5-25 %	Sandstone	A	0-4	Fine sandy Loam	Low	20-40	0.37	3	3	Low	Medium	Well drained	Moderate	Severe	Severe
							C	4-24	Fine sandy Loam	Low		0.43								
119	Bluerim - Onason complex, hilly	Bluerim - 55%	Fine-loamy, mixed Borollic Haplargids	Side slopes of Hills and Ridges	3-15%	Sandstone	A	0-3	Sandy loam	Low	20-40	0.24	2	3	Low	Medium	Well drained	Moderate	Moderate	Moderate
							B	3-17	Sandy clay loam	Low		0.37								
							C	17-36	Sandy Loam	Low		0.2								
		Onason - 30 %	Loamy, mixed, nonacid, frigid, shallow Ustic Thorriorthents	Summit and shoulder slopes of hills and ridges	5-30%	Sandstone	A	0-6	Gravelly sandy loam	Low	10-20	0.1	1	7	Low	Medium	Well drained	Moderately Rapid	Moderate	Moderate
C	6-17	Gravelly sandy loam	Low	0.1																
120	Bosler-Rock River sandy loams	Bosler - 45%	Fine-loamy, over sandy or sandy-skeletal, mixed Borollic Haplargids	Fan aprons and terraces	1-6%	Alluvium of various sources	A	0-6	Fine sandy loam	Low	60	0.28	2	3	Moderate	Slow	Well drained	Moderate	Slight	Severe
							B	6-60	Gravelly sandy clay loam	Low - Moderate		0.05 - 0.37								
		Rock River - 40%	Fine-loamy, mixed Borollic Haplargids		1-8%	Alluvium of various sources	A	0-3	Sandy clay loam	Low	60	0.24	5	5	High	Slow	Well drained	Moderate	Slight	Severe
							B	3-34	Sandy clay loam	Low		0.24								
C	34-60	Sandy clay loam	Low	0.28																
140	Cushool-Rock River association	Cushool - 55%	Fine-loamy, mixed Borollic Haplargids	Hill slopes and fan aprons	3-15%	Sandstone	A	0-3	Sandy loam	Low	20-40	0.24	3	3	Low	Medium	Well drained	Moderate	Moderate	Severe
							B	3-35	Sandy clay loam	Low-Moderate		0.28								
		Rock River - 35%	Fine-loamy, mixed Borollic Haplargids	Terraces and Fan aprons	1-8%	Alluvium of various sources	A	0-3	Sandy clay loam	Low	60	0.28	5	5	High	Slow	Well drained	Moderate	Moderate	Severe
							B	3-34	Sandy clay loam	Low		0.24								
C	34-60	Sandy clay loam	Low	0.28																
148	Forelle-Poposhia association	Forelle - 45%	Fine-loamy, mixed Borollic Haplargids	Fan aprons	2-8%	Alluvium of various sources	A	0-6	Loam	Moderate	60	0.37	5	5	High	Slow	Well drained	Moderately slow	Slight	Moderate
							B	6-26	Clay loam	Moderate		0.37								
							C	26-60	Loam	Low		0.24								
		Poposhia - 40%	Fine-loamy, mixed (calcareous), frigid Ustic Thorriorthents	Toe slopes and fan aprons	2-12%	Alluvium of various sources	A	0-3	Loam	Moderate	60	0.32	5	4L	High	Medium	Well drained	Moderate	Moderate	Moderate
B	3-15	Clay loam	Moderate	0.37																
C	15-60	Loam	Moderate	0.37																
157	Havre-Absher-Forelle loams	Havre - 40%	Fine-loamy, mixed (calcareous), frigid Ustic Thorriorthents	Flood Plains	0-3%	Alluvium of various sources	A	0-3	Loam	Low	60	0.37	5	4L	High	Slow	Well drained	Moderate	Slight	Moderate
							C	3-60	Loam	Low		0.32								
		Absher-20%	Fine, montmorillonitic Borollic Natrargids	Terraces and toe slopes	1-6%	Alluvium of various sources	E	0-3	Loam	Moderate	60	0.49	5	5	Moderate	Slow	Well drained	Very slow	Moderate	Moderate
							B	3-60	Silty clay loam	Moderate-High		0.49-0.55								
Forelle - 20%	Fine-loamy, mixed Borollic Haplargids	Toe slopes	1-6%	Alluvium of various sources	A	0-6	Loam	Moderate	60	0.37	5	5	High	Slow	Well drained	Moderately slow	Slight	Moderate		
					B	6-26	Clay loam	Moderate		0.37										
C	26-60	Loam	Moderate	0.37																
183	Peyton sandy loam	Fine-loamy, mixed Aridic Argiborolls	Fan aprons and valley side slopes	1-10%	Alluvium of various sources	A	0-2	Sandy loam	Low	60	0.1	5	3	Moderate	Slow	Well drained	Moderate	Slight	Severe	
						B	2-22	Sandy clay loam	Low		0.37									
						C	22-60	Loamy sand	Low		0.1									
186	Poposhia-Blazon-Carmody complex, hilly	Poposhia - 35%	Fine-loamy, mixed (calcareous), frigid Ustic Thorriorthents	Fan aprons	3-20%	Alluvium of various sources	A	0-3	Loam	Moderate	60	0.32	5	4L	High	Medium	Well drained	Moderate	Moderate	Moderate
							B	3-15	Clay loam	Moderate		0.37								
							C	15-60	Loam	Moderate		0.37								
		Blazon - 30%	Loamy, mixed	Hills and	6-40%	Soft shale	A	0-2	Clay loam	Moderate	17	0.37	1	4L	Low	Rapid	Well	Moderately	Severe	Moderate

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												K	T (tons/acre/yr)						Water	Blowing	
		Carmody - 15%	(calcareous), frigid, shallow Ustic Torriorthents	Ridges			C	2-17	Clay loam	Moderate		0.43		3	3	Low	Medium	Well drained	Moderate	Moderate	Severe
			Coarse-loamy, mixed (calcareous), frigid Ustic Thorriorthents	Hills and Ridges	3-25%	Sandstone	A	0-4	Fine sandy Loam	Low	28	0.37									
190	Relsob-Bluerim sandy loams	Relsob-55%	Fine-loamy, over sandy or sandy-skeletal, mixed Borollic Haplargids	Fan aprons and toe slopes	1-6%	Sandstone	A	0-3	Sandy loam	Low	60	0.32	2	3	Low	Slow	Well drained	Moderate	Slight	Severe	
							B	3-15	Sandy clay loam	Moderate		0.15-0.37									
							2C	15-60	Very gravelly loamy sand	Low		0.05									
		Bluerim - 30%	Fine-loamy, mixed Borollic Haplargids	Hill slopes	3-10%	Sandstone	A	0-3	Sandy loam	Low	20-40	0.24	1	3	Low	Medium	Well drained	Moderate	Moderate	Severe	
							B	3-17	Sandy clay loam	Low		0.37									
							C	17-35	Sandy Loam	Low		0.2									
212	Tisworth-Absher-Forelle complex	Tisworth - 35%	Fine-loamy, mixed Borollic Haplargids	Fan aprons	0-3%	Alluvium of various sources	A	0-3	Loamy sand	Low	60	0.32	5	3	Moderate	Slow	Well drained	Slow	Slight	Severe	
							B	3-60	Sandy clay loam	Low-Moderate		0.32-0.49									
		Absher - 30%	Fine, montmorillonitic Borollic Natrargids	Terraces and toe slopes	0-3%	Alluvium of various sources	E	0-3	Loam	Moderate	60	0.49	5	5	Moderate	Slow	Well drained	Very slow	Slight	Moderate	
							B	3-60	Silty clay loam	High		0.49									
		Forelle - 20%	Fine-loamy, mixed Borollic Haplargids	Fan aprons	1-6%	Alluvium of various sources	A	0-6	Loam	Moderate	60	0.37	5	5	High	Slow	Well drained	Moderately slow	Slight	Moderate	
							B	6-26	Clay loam	Moderate		0.37									
							C	26-60	Loam	Moderate		0.32									

* Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are defined as follows:
 1: Coarse sands, sands, fine sands, and very fine sands. 2: Loamy coarse sands, loamy sands, loamy fine sands, loamy very fine sands, ash material, and sapric soil material. 3: Coarse sandy loams, sandy loams, fine sandy loams, and very fine sandy loams. 4L: Calcareous loams, silt loams, clay loams, and silty clay loams. 4: Clays, silty clays, non-calcareous clay loams, and silty clay loams that are more than 35 percent clay. 5: Non-calcareous loams and silt loams that are less than 20 percent clay and sandy clay loams, sandy clays, and hemic soil material. 6: Non-calcareous loams and silt loams that are more than 20 percent clay and non-calcareous clay loams that are less than 35 percent clay. 7: Silts, non-calcareous silty clay loams that are less than 35 percent clay, and fibric soil material. 8: Soils that are not subject to wind erosion because of coarse fragments on the surface or because of surface wetness.

Table F-2 USGS Surface Water Quality Stations¹

Parameter	Lost Creek Tributary (above Arapahoe Creek)	Lost Creek (above Arapahoe Creek)	Lost Creek (below Arapahoe Creek)	Lost Creek (above Big Bend)	Lost Creek (at Goodford Crossing)	Lost Creek (above Eagles Nest Spring)	Lost Creek (below Eagles Nest Spring)	Lost Creek (above Lost Creek Lake)
USGS Station Number	421440108035001	421438108035001	421310108051501	421255108062001	420848108070001	420604108070701	420425108073001	420045108111001
Sample Period	1976-1976	1976-1976	1976-1976	1976-1976	1976-1976	1976-1976	1976-1978	1976-1976
Number of Samples ²	1	1	2	10	7	1	2	1
Temperature, degrees C	0	0	0.3	8.6	6.8	2	10.5	6
Discharge, cfs	5	2	11	11	8	12	3	15
Turbidity, JTU	300	240	360	188	166	450	150	280
Specific conductance, µmhos/cm	62	135	103	326	494	320	535	660
pH, standard units	7.1	7.1	7.8	8.0	8.1	NM	8.1	NM
Bicarbonate, mg/L	31	42	47	79	122	NM	131	92
Carbonate, mg/L	0	0	0	0	0	NM	0	NM
Nitrite-Nitrate, filtered mg/L	0.1	0.07	0.1	0.07	0.06	NM	0.17	0.04
Hardness, mg/L as CaCO ₃	12	18	20	49	95	NM	103	59
Calcium, mg/L	2.8	4.8	5.7	15.1	30.3	NM	31	18
Magnesium, mg/L	1.1	1.4	1.3	2.8	4.9	NM	6.3	3.5
Sodium, mg/L	8.3	20	18	45.3	55.8	NM	77	42
Sodium Adsorption Ratio	1	2	2	6	3	NM	3	2
Potassium, mg/L	3	2.5	2.5	2.8	3.7	NM	4.3	2.8
Chloride, mg/L	2.6	2.8	3.0	5.2	9.3	NM	11.8	4.8
Sulfate, mg/L	5.1	24	20	78.1	104	NM	140	73
Fluoride, mg/L	0.1	0.1	0.1	0.4	0.2	NM	0.5	0.1
Silica, mg/L	2.5	1.9	2.6	4.7	8.0	NM	8.3	4
Boron, µg/L, filtered	40	20	NM	35.7	47	NM	60	60
Iron, µg/L, filtered	310	90	190	293	94	NM	90	110
TDS, mg/L	41	79	77	193	277	NM	344	194
TSS, mg/L	762	369	680	646	374	1,020	901	NM

Source: USGS2005c.

¹ Total number of grab samples analyzed; not every parameter was analyzed in every sample.² For stations with more than one sample, the analytical results are averages for all the samples.CaCO₃ = Calcium carbonate; cfs = cubic feet per second; JTU = Jackson Turbidity Units; NM = not measured; TDS = Total Dissolved Solids; TSS = Total Suspended Sediment