

**TABLE 3-19
Soil Limitations and Overall Sensitivity to Water Erosion and Soil Compaction**

| Soil Map Unit # | Map Unit Name | Ecological Land Unit | Treatment Units | Water Erosion Hazard | Drainage Class | Permeability | Runoff | Depth to Seasonal High Water Table (feet) | Cut and Fill Slope Stability | Improved Unsurfaced Roads | Off Road Vehicle Traffic & Trails | Revegetation Limitation | Other Limitations and Mangement | Overall Sensitivity Rating |
|-----------------|---|---|--|------------------------------------|-------------------------------|-------------------------------------|--------------------|---|---------------------------------|--|--|--|---|----------------------------------|
| 9 or AG9 | Ansel-Anvik associations, 25 to 45 percent slopes | Spruce-Fir woodland | 118, 121, 122, 123, 128, 129, 201-208, 210, 211, 313 | moderate or severe on steep slopes | well | moderately slow and moderate | rapid | >6 | NA | NA | severe: slope and erosion | NA | Slope: harvesting timber; Slumping hazard: excavations or road cuts | SENSITIVE (erosion) |
| 10 or AG10 | Anvik-Skylick-Sligting association, 10 to 25 percent slopes | Aspen woodland | 118,121,124, 127 | moderate | well | moderate, moderately slow and slow | moderate | >6 | NA | NA | moderate: large stones and slope | NA | Sligting- very stony surface horizon | SENSITIVE (compaction) |
| 11 or AG11 | Anvik-Skylick-Sligting association, 25 to 50 percent slopes | Aspen woodland | 105, 106, 201-204, 207, 209, 213, 305, 313 | moderate or severe on steep slopes | well | moderate, moderately slow, and slow | rapid | >6 | NA | NA | severe: slope | NA | Sligting- very stony surface horizon | SENSITIVE (erosion & compaction) |
| 347B | Callings - Skylick families complex, 5 to 40 percent slopes. | Aspen on montane, north facing nearly level to moderately steep mountain slopes. | 115,116, 212 | NA | well | moderate | moderate | >6 | moderate: fine grained material | moderate: low load bearing strength | moderate:mud during seasonal wet periods, low load bearing strength, surface compaction and rutting | slight | Mechanical equipment can cause surface rutting and compaction. | SENSITIVE (compaction) |
| 20 or AG20 | Coulterg Loam, 12 to 50 percent slopes | Douglas Fir woodland | 101,214 | moderate or severe on steep slopes | well | moderate | moderate and rapid | >6 | NA | NA | severe slope | NA | high gypsum and slopes | SENSITIVE (erosion) |
| 345B | Doughspon family, 5 to 40 percent slopes. | Aspen on montane, south facing slumps and landslides. | 305,306 | NA | moderately well | moderately slow | moderate | >6 | moderate: fine grained material | moderate: low load bearing strength | moderate: low load bearing strength, mud during seasonal wet periods, surface rutting and compaction | slight | NA | Non Sensitive |
| 349C | Eyre - Quander families complex, 40 to 60 percent slopes. | Sagebrush and serviceberry on lower montane, south facing steep mountain slopes. | 302, 303, 305, 306, 309, 310 | NA | well | moderate | rapid and moderate | >6 | slight and severe: slope | severe: slope and shallow depth to bedrock | severe: slope and erosion hazard. | severe - slope, low available water capacity and shallow depth to bedrock; moderate: slope and erosion hazard | Plant drought tolerant plants on south facing slopes. Apply mulch and surface netting to reduce the erosion hazard. | SENSITIVE (erosion) |
| 45 or AG45 | Forsey Cobbly Loam, 3 to 12 percent slopes | Stony Loam range site | 118 | slight | well | moderate | slow | >6 | NA | NA | moderate: large stones | NA | surface covered in cobbles | Non Sensitive |
| 46 or AG46 | Forsey Cobbly Loam, 12 to 25 percent slopes | Stony Loam range site | 126,127,211 | moderate | well | moderate | moderate | >6 | NA | NA | moderate: large stones and slope | NA | slope | Non Sensitive |
| 47 | Forsey Cobbly Loam, 25 to 65 percent slopes | Stony Loam range site | 125, 128, 129, 210, 211, 620 | moderate | well | moderate | moderate | >6 | NA | NA | severe: slope | NA | slope | Non Sensitive |
| 346B | Gateview - Handran families complex, 5 to 40 percent slopes. | Aspen on montane, south facing gently sloping to moderately steep mountain slopes and benches | 101-104, 201, 303, 305, 306, 309, 310, 313, 411, 412, 514, 515, 617, 618, 619, 620 | NA | well and somewhat excessively | moderate and moderately rapid | moderate | >6 | slight | slight | moderate: surface compaction and rutting. | slight | NA | Non Sensitive |
| 346C | Gateview - Handran - Eyre families complex, 40 to 65 percent slopes | Aspen on montane, south facing steep mountain slopes. | 213, 214, 301, 303, 617, 618 | NA | well and somewhat excessively | moderate and moderately rapid | moderate and rapid | >6 | moderate: slope | severe: slope | severe: slope and erosion hazard | moderate: slope, shallow depth to bedrock, low available water capacity and erosion hazard | NA | SENSITIVE (erosion) |
| 446C | Handran - Eyre families complex, 40 to 65 percent slopes. | On subalpine, south facing steep mountain slopes. | 313 | NA | somewhat excessively and well | moderately rapid and moderate | moderate and rapid | >6 | moderate: slope | severe: slope and shallow depth to bedrock | severe: slope and erosion hazard | moderate: slope, low available water capacity and erosion hazard, shallow depth to bedrock | Plant drought tolerant plants on south facing slopes. Apply mulch and surface netting to reduce the erosion hazard. | SENSITIVE (erosion) |
| 315C | Handran - Eyre families complex, dry, 40 to 65 percent slopes. | Douglas fir on montane, north facing steep mountain slopes. | 617,619 | NA | somewhat excessively and well | moderately rapid and moderate | moderate and rapid | >6 | moderate: slope and slight. | severe: slope and shallow depth to bedrock | severe: slope, erosion and shallow depth to bedrock | moderate: slope low available water capacity, and erosion hazard; severe: slope, low available water capacity, shallow depth to bedrock and erosion hazard | Plant drought tolerant plants on south facing slopes. Apply mulch and surface netting to reduce the erosion hazard. | SENSITIVE (erosion) |
| 203C | Handran family, till substratum, 40 to 60 percent slopes. | Aspen on montane, south facing lateral moraines. | 116,117 | NA | well | moderately rapid | moderate | >6 | moderate: slope | severe: slope | severe: slope and cobbles and stones | severe: slope, erosion hazard and low available water capacity | Aspen regeneration better where precipitation > 20 inches. Grass and sagebrush regeneration better where precipitation < 20 inches. | SENSITIVE (erosion) |

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| Soil Map Unit # | Map Unit Name | Ecological Land Unit | Treatment Units | Water Erosion Hazard | Drainage Class | Permeability | Runoff | Depth to Seasonal High Water Table (feet) | Cut and Fill Slope Stability | Improved Unsurfaced Roads | Off Road Vehicle Traffic & Trails | Revegetation Limitation | Other Limitations and Mangement | Overall Sensitivity Rating |
|-----------------|--|--|--|----------------------|--------------------------------------|-------------------------------|--------------------|---|--|---|--|---|---|----------------------------------|
| 66 or AG66 | Jerry-Millerlake Loams, 6 to 25 percent slopes | Bushy and stony loam range site | 118, 121, 125, 126, 129, 210, 211 | severe and moderate | well | moderate and moderately slow | rapid and moderate | >6 | NA | NA | slight | | permeability | SENSITIVE (erosion & compaction) |
| 467B | Leadville family, sandstone substratum, 5 to 40 percent slopes. | Subalpine fir and Engelmann spruce on montane and subalpine, nearly level to moderately steep mountain slopes | 115-120 | NA | well | moderate | moderate | >6 | slight | slight | slight | slight | NA | Non Sensitive |
| 220B | Leadville family, till substratum, 5 to 40 percent slopes. | Subalpine fir and Engelmann spruce on montane and subalpine, ground and lateral moraines. | 117-119 | NA | well | moderate | moderate. | >6 | slight | slight | moderate: cobbles and stones | low to moderate: cobbles and stones | Inclusions of Cryaquolls soil (hydric soil) may require buffer zones to protect wetlands | Non Sensitive |
| 670C | Leighcan - Tolby families complex, 40 to 65 percent slopes. | Lodgepole pine, subalpine fir and Engelmann spruce on montane and subalpine, south facing steep mountain slopes. | 412 | NA | somewhat excessively and excessively | moderately rapid and rapid | moderate | >6 | moderate:slope | severe: slope | severe: slope and erosion hazard. | severe - low available water capacity, low inherent fertility, slope and erosion hazard. | Plant drought tolerant plants on south facing slopes. Apply mulch and surface netting to reduce the erosion hazard. Site index low due to low available water capacity and low inherent fertility. | SENSITIVE (erosion) |
| 290C | Leighcan family, till substratum, 40 to 60 percent slopes. | Subalpine fir and Engelmann spruce on subalpine, lateral moraines | 129,411,514 | NA | somewhat excessively | moderately rapid | slow | >6 | moderate:slope and sandy substratum | severe: slope | severe: slope and erosion hazard | severe - slope, erosion hazard, low available water capacity and low inherent fertility. | Mulch will conserve soil moisture. Fertilizer will supplement low inherent fertility. Surface netting in conjunction with mulching will reduce the erosion hazard. Low site indexes due to low available water capacity and inherent fertility. | SENSITIVE (erosion) |
| 281B | Quander family, 5 to 40 percent slopes. | Sagebrush and grass on montane, ground and lateral moraines. | 412,515 | NA | well | moderate | moderate and slow | >6 | slight | slight | slight | slight | NA | Non Sensitive |
| 281C | Quander family, 40 to 60 percent slopes. | Sagebrush and grass on montane, south facing lateral moraines | 412, 515, 617, 619 | NA | well | moderate | moderate | >6 | moderate - slope | severe: slope | severe: slope and erosion hazard | moderate - slope, erosion hazard | Plant drought tolerant plants on south facing slopes. Apply mulch and surface netting to reduce the erosion hazard. | SENSITIVE (erosion) |
| 254D | Rock outcrop - Leighcan - Hechtman families complex, 40 to 150 percent slope | Subalpine fir and Engelmann spruce on subalpine, south facing ice scoured trough walls. | 412 | NA | somewhat excessively | moderately rapid | moderate and rapid | >6 | severe: slope and shallow depth to bedrock | severe: slope and shallow depth to bedrock. | severe: slope, cobbles and stones and shallow depth to bedrock. | severe - slope, low available water capacity and low inherent fertility; severe: slope and shallow depth to bedrock | Plant drought tolerant plants on south facing slopes. Apply mulch and surface netting to reduce the erosion hazard. Regeneration potential is low due to low available water capacity and inherent soil fertility. Fertilizer will supplement low inherent fertility. | SENSITIVE (erosion) |
| 365B | Routt family, 5 to 40 percent slopes. | Sagebrush and Thurber fescue on montane, nearly level to moderately steep mountain slopes and benches | 115 | NA | somewhat poorly | moderately slow | rapid | >6 | moderate:fine grained material | moderate: low load bearing strength | moderate: mud during seasonal wet periods, surface rutting and compaction | slight | NA | SENSITIVE (erosion) |
| 367B | Scout - Leadville families complex, 5 to 40 percent slopes. | Subalpine fir and Engelmann spruce on montane and subalpine, nearly level to moderately steep mountain slopes and benches. | 103-105, 213, 305, 411, 412, 617 | NA | somewhat excessively and well | moderately rapid and moderate | moderate | >6 | slight | slight | slight | moderate:low available water capacity and slight. | NA | Non Sensitive |
| 395D | Scout family - Rock outcrop - Cryoborolls complex, dry, 40 to 150 percent slopes | Douglas fir on montane, steep to very steep mountain slopes. | 617 | NA | somewhat excessively and well | moderately rapid and moderate | moderate and rapid | >6 | moderate: slope and slight | severe: slope and shallow depth to bedrock | severe: slope and erosion hazard | moderate: slope, low available water capacity and erosion hazard; severe: slope, shallow depth to bedrock, low available water capacity and erosion hazard. | Plant drought tolerant plants on south facing slopes. Apply mulch and surface netting to reduce the erosion hazard. Limited by slope, rock outcrop and erosion hazard | SENSITIVE (erosion) |
| 351C or 353C | Scout family, 40 to 65 percent slopes | Subalpine fir and Engelmann spruce on montane and subalpine, north facing steep mountain slopes | 101-106, 202, 203, 209, 212-214, 313, 412, 515 | NA | somewhat excessively | moderately rapid | moderate | >6 | moderate: slope | severe: slope | severe: slope and erosion hazard | moderate - slope, low available water capacity. | Plant drought tolerant plants on south facing slopes. Apply mulch and surface netting to reduce the erosion hazard. Harvest is limited by slope and erosion hazard. | SENSITIVE (erosion) |
| 212C | Scout family, till substratum, 40 to 60 percent slopes | Subalpine fir and Engelmann spruce on montane and subalpine, lateral moraines | 117-119, 122 | NA | somewhat excessively | moderately rapid | moderate | >6 | moderate: slope | severe: slope | severe: slope and cobbles and stones | severe - slope, low available water capacity and erosion hazard | Conventional logging operations are limited on this map unit because of steepness. | SENSITIVE (erosion) |
| 348B | Tellura family, 5 to 40 percent slopes. | Sagebrush on lower montane, nearly level to moderately steep hills. | 301-303, 310 | NA | well | slow | moderate | >6 | moderate:fine grained material | moderate: low load bearing strength | moderate: mud during seasonal wet periods, surface compaction and rutting. | slight | Plant drought tolerant plants to survive cold lower montane climate. Apply mulch. | SENSITIVE (compaction) |
| 104 or AG 104 | Torriorrhents-Camborhids-Rock Outcrop Complex, 6 to 65 percent | No range site assigned | 121, 202, 205, 211, 313 | severe | well | moderate | rapid | >6 | NA | NA | severe: slopes | NA | NA | SENSITIVE (erosion) |

Source: USFS 1995
Note: NA = Data not available.