

Appendix 1. Transect means of basal cover (BC) and physiographic characteristics on different vegetation types measured in 2006.

| Photo Document             | Elevation | Aspect | Slope | Transect Direction | Soil_BC | Rock_BC | Litter_BC | Shrub_BC | SubShrub-BC | Grass_BC | Sedge-BC | Legume-BC | Lamiaceae | Other Forb-BC | Total Forb BC | Total Vegetation | Vegetation Type              |
|----------------------------|-----------|--------|-------|--------------------|---------|---------|-----------|----------|-------------|----------|----------|-----------|-----------|---------------|---------------|------------------|------------------------------|
| July28_06Site1.pdf         | 3660      | md     | 4     | 134                | 76      | 21      | 2         | 0        | 1           | 0        | 0        | 0         | 0         | 0             | 0             | 1                | Halgri-Kralan/Stipa CD       |
| July29_06Site2Alisu.pdf    | 3677      | 295    | 2     | 205                | 36      | 0       | 64        | 0        | 0           | 0        | 0        | 0         | 0         | 0             | 0             | 0                | Salix-Elymus                 |
| July29_06Site3.pdf         | 3795      | 96     | 27    | 95                 | 62      | 22      | 14        | 0        | 0           | 2        | 0        | 0         | 0         | 0             | 0             | 2                | Kralan CD                    |
| July30_06Site1Tulabi.pdf   | 4004      | 0      | 3     | 124                | 73      | 8       | 8         | 1        | 9           | 0        | 0        | 1         | 0         | 0             | 1             | 11               | Artemisia-Acano-Kralan-Stipa |
| July31_06Site2Tulabi.pdf   | 3999      | 100    | 5     | 10                 | 0       | 0       | 86        | 0        | 0           | 0        | 8        | 6         | 0         | 0             | 6             | 14               | Sedge Meadow                 |
| July31_06Site3-4Tulabi.pdf | 4030      | 93     | 9     | 84                 | 72      | 5       | 16        | 6        | 1           | 0        | 0        | 0         | 0         | 0             | 0             | 7                | Artemisia-Kralan/Stipa       |
| July31_06Site5Tulabi.pdf   | 4034      | 90     | 1     | 338                | 89      | 0       | 9         | 0        | 0           | 1        | 0        | 1         | 0         | 0             | 1             | 2                | Elymus sandy site            |
| July31_06Site6Tulabi.pdf   | 4043      | 49     | 17    | 114                | 1       | 0       | 39        | 0        | 0           | 0        | 60       | 0         | 0         | 0             | 0             | 60               | Sedge Meadow (degraded)      |
| Aug01Cam300.pdf            | 4372      | 330    | 5     | 330                | 66      | 5       | 4         | 0        | 4           | 6        | 0        | 14        | 0         | 1             | 15            | 25               | Acano-Artemisia/Astragalus   |
| Aug01Cam150.pdf            | 4366      | 324    | 9     | 324                | 62      | 21      | 2         | 2        | 11          | 0        | 0        | 2         | 0         | 0             | 2             | 15               | Acano-Artemisia/Astragalus   |
| Aug01Cam450.pdf            | 4374      | 330    | 8     | 325                | 54      | 11      | 7         | 0        | 5           | 3        | 0        | 20        | 0         | 0             | 20            | 28               | Artemisia-Astragalus/Acano   |
| Aug02_Cam1.pdf             | 4417      | 317    | 12    | 330                | 67      | 17      | 10        | 2        | 2           | 1        | 0        | 1         | 0         | 0             | 1             | 6                | Acano-Artemisia/Astragalus   |
| Aug02_Cam1_5.pdf           | 4442      | 322    | 7     | 322                | 54      | 20      | 5         | 0        | 0           | 5        | 1        | 10        | 3         | 2             | 15            | 21               | Astragalus-Neptea/Artemisia  |
| Aug02_Cam2.pdf             | 4467      | 281    | 8     | 281                | 57      | 15      | 11        | 1        | 1           | 6        | 0        | 8         | 0         | 1             | 9             | 17               | Artemisia-Astragalus,        |
| Aug02_Cam22.pdf            | 4345      | 304    | 9     | 304                | 66      | 20      | 4         | 1        | 4           | 2        | 0        | 3         | 0         | 0             | 3             | 10               | Astragalus-Artemisia/Acano   |
| Aug02_Cam42.pdf            | 4350      | 330    | 8     | 123                | 57      | 33      | 2         | 1        | 7           | 0        | 0        | 0         | 0         | 0             | 0             | 8                | Acano-Artemisia              |
| Aug02_Cam005.pdf           | 4338      | 0      | 10    | 340                | 75      | 5       | 3         | 0        | 0           | 1        | 0        | 14        | 2         | 0             | 16            | 17               | Astragalus-Nepeta            |
| Aug02_Cam65.pdf            | 4350      | 327    | 9     | 327                | 69      | 19      | 4         | 1        | 5           | 0        | 0        | 1         | 1         | 0             | 2             | 8                | Astragalus-Neptea/Artemisia  |
| Aug02_Cam11.pdf            | 4339      | 310    | 6     | 310                | 65      | 11      | 2         | 4        | 15          | 0        | 0        | 1         | 2         | 0             | 3             | 22               | Acano-Artemisia/Astragalus   |
| Aug06_06_Site01-Men.pdf    | 4158      | 19     | 18    | 320                | 46      | 21      | 6         | 0        | 7           | 2        | 3        | 11        | 4         | 0             | 15            | 27               | Astragalus-Bromus sten       |

|                         |      |     |    |      |    |    |    |   |   |    |    |   |   |    |    |    |                          |
|-------------------------|------|-----|----|------|----|----|----|---|---|----|----|---|---|----|----|----|--------------------------|
| Aug06_06_Site02-Men.pdf | 4257 | 30  | 28 | 320  | 48 | 28 | 8  | 0 | 2 | 8  | 0  | 6 | 0 | 0  | 6  | 16 | Astragalus-Bromus sten   |
| Aug07_06_Dar.pdf        | 4100 | 220 | 6  | 39   | 88 | 2  | 5  | 0 | 5 | 0  | 0  | 0 | 0 | 0  | 0  | 5  | Artemisia-Acantholimon   |
| Aug07_06_Maw01-.pdf     | 4718 | 10  | 4  | 183  | 46 | 42 | 10 | 0 | 0 | 0  | 0  | 0 | 0 | 2  | 2  | 2  | Alpine grassland         |
| Aug07_06_She01-.pdf     | 4577 | 179 | 5  | 275  | 44 | 1  | 14 | 0 | 0 | 1  | 40 | 0 | 0 | 0  | 0  | 41 | Sedge Meadow             |
| Aug08_06_Site2.pdf      | 4196 | 310 | 8  | 126  | 73 | 12 | 11 | 1 | 1 | 2  | 0  | 0 | 0 | 0  | 0  | 4  | Artemisia-Festuca/Acano  |
| Aug08_06_Site3.pdf      | 4239 | 183 | 12 | 16   | 70 | 18 | 6  | 2 | 2 | 0  | 0  | 2 | 0 | 0  | 2  | 6  | Artemisia-Acano-Festuca  |
| Aug08_06_Site4.pdf      | 4129 | 196 | 4  | 20.5 | 80 | 13 | 5  | 0 | 0 | 3  | 0  | 0 | 0 | 0  | 0  | 3  | Artemisia-Acano-CarexDL  |
| Aug08_06_Site5.pdf      | 4118 | 223 | 5  | 47   | 80 | 10 | 6  | 0 | 4 | 0  | 0  | 0 | 0 | 0  | 0  | 4  | Artemisia-Acano-CarexDL  |
| Aug08_06_Site6.pdf      | 4115 | 207 | 6  | 30.5 | 82 | 12 | 2  | 2 | 0 | 0  | 2  | 0 | 0 | 0  | 0  | 4  | Artemisia-Acano-CarexDL  |
| Aug08_06_Site7.pdf      | 4115 | 223 | 5  | 57.5 | 84 | 10 | 0  | 0 | 6 | 0  | 0  | 0 | 0 | 0  | 0  | 6  | Artemisia-Acano-CarexDL  |
| Aug08_06_Site8-.pdf     | 4118 | 249 | 5  | 62.5 | 78 | 18 | 0  | 0 | 2 | 0  | 2  | 0 | 0 | 0  | 0  | 4  | CarexDL-Acano            |
| Aug09_06_Site01.pdf     | 4299 | 15  | 5  | 198  | 76 | 0  | 10 | 0 | 0 | 8  | 4  | 2 | 0 | 0  | 2  | 14 | Sedge Meadow (degraded)  |
| Aug09_06_Site2.pdf      | 4319 | 53  | 5  | 53   | 78 | 22 | 0  | 0 | 0 | 0  | 0  | 0 | 0 | 0  | 0  | 0  | Acano-Artemisia          |
| Aug20_TR01.pdf          | 4716 | 120 | 15 | 235  | 50 | 12 | 12 | 0 | 0 | 6  | 4  | 2 | 2 | 12 | 16 | 26 | Alpine grassland         |
| Aug21_TR01.pdf          | 4371 | 237 | 3  | md   | 52 | 2  | 24 | 0 | 0 | 12 | 2  | 0 | 0 | 8  | 8  | 22 | Alpine/Festuca grassland |
| Aug21_TR02.pdf          | 4288 | 250 | 1  | 90   | 30 | 46 | 14 | 0 | 0 | 4  | 0  | 0 | 0 | 6  | 6  | 10 | Alpine/Festuca grassland |
| Aug21_TR03.pdf          | 4272 | 153 | 6  | 340  | 78 | 10 | 8  | 2 | 0 | 0  | 0  | 2 | 0 | 0  | 2  | 4  | Artemisia-Astragalus     |
| Aug22_Transect01_.pdf   | 4216 | 170 | 7  | 340  | 62 | 30 | 0  | 6 | 0 | 2  | 0  | 0 | 0 | 0  | 0  | 8  | Low Sage-Stipa           |
| Aug22_TR02.pdf          | 4257 | 195 | 12 | 350  | 52 | 36 | 8  | 2 | 0 | 0  | 2  | 0 | 0 | 0  | 0  | 4  | Artemisia-Stipa/Low sage |
| Aug22_06_TR03.pdf       | 4126 | 200 | 10 | 31   | 78 | 4  | 6  | 8 | 2 | 0  | 2  | 0 | 0 | 0  | 0  | 12 | Artemisia-Acano/Stipa    |
| Aug22_06_TR04.pdf       | 4002 | 0   | 0  | 314  | 84 | 4  | 6  | 0 | 2 | 2  | 0  | 2 | 0 | 0  | 2  | 6  | Low Sage-Stipa           |

Appendix 2. Transect means of foliar cover (FC) and physiographic characteristics on different vegetation types measured in 2006.

| PhotoDoc                   | Elevation | Aspect | Slope | Shrub FC | Subshrub FC | Grass FC | Sedg FCs | Legume FC | Lamiaceae FC | Other Forbs FC | Total Forbs FC | Salix FC | Total FC | Community Type               |
|----------------------------|-----------|--------|-------|----------|-------------|----------|----------|-----------|--------------|----------------|----------------|----------|----------|------------------------------|
| July28_06Site1.pdf         | 3660      |        | 4     | 0        | 1           | 0        | 0        | 0         | 0            | 0              | 0              | 0        | 1        | Halgri-Kralan/Stipa CD       |
| July29_06Site2Alisu.pdf    | 3677      | 295    | 2     | 0        | 0           | 29       | 0        | 0         | 0            | 0              | 0              | 16       | 45       | Salix-Elymus                 |
| July29_06Site3.pdf         | 3795      | 96     | 27    | 12       | 0           | 10       | 0        | 0         | 0            | 0              | 0              | 0        | 22       | Kralan CD                    |
| July30_06Site1Tulabi.pdf   | 4008      | 0      | 5     | 10       | 11          | 1        | 0        | 1         | 0            | 0              | 1              | 0        | 23       | Artemisia-Acano-Kralan-Stipa |
| July31_06Site2Tulabi.pdf   | 3999      | 100    | 5     | 0        | 0           | 0        | 44       | 23        | 0            | 0              | 23             | 0        | 67       | Sedge Meadow                 |
| July31_06Site3-4Tulabi.pdf | 4030      | 93     | 9     | 21       | 1           | 5        | 1        | 0         | 0            | 0              | 0              | 0        | 28       | Artemisia-Kralan/Stipa       |
| July31_06Site5Tulabi.pdf   | 4034      | 90     | 1     | 0        | 0           | 36       | 0        | 2         | 0            | 0              | 2              | 0        | 38       | Elymus sandy site            |
| July31_06Site6Tulabi.pdf   | 4043      | 49     | 17    | 0        | 0           | 0        | 90       | 0         | 0            | 0              | 0              | 0        | 90       | Sedge Meadow (degraded)      |
| Aug01Cam300.pdf            | 4372      | 330    | 5     | 5        | 5           | 9        | 0        | 20        | 0            | 1              | 21             | 0        | 40       | Acano-Artemisia/Astragalus   |
| Aug01Cam150.pdf            | 4366      | 324    | 9     | 3        | 4           | 3        | 0        | 5         | 0            | 0              | 5              | 0        | 15       | Acano-Artemisia/Astragalus   |
| Aug01Cam450.pdf            | 4374      | 330    | 8     | 3        | 6           | 3        | 0        | 26        | 0            | 0              | 26             | 0        | 38       | Artemisia-Astragalus/Acano   |
| Aug02_Cam1.pdf             | 4417      | 317    | 12    | 9        | 2           | 6        | 1        | 2         | 3            | 1              | 6              | 0        | 24       | Acano-Artemisia/Astragalus   |
| Aug02_Cam1_5.pdf           | 4442      | 322    | 7     | 0        | 0           | 8        | 4        | 18        | 13           | 1              | 32             | 0        | 44       | Astragalus-Neptea/Artemisia  |
| Aug02_Cam2.pdf             | 4467      | 281    | 8     | 18       | 1           | 11       | 0        | 11        | 1            | 2              | 14             | 0        | 44       | Artemisia-Astragalus,        |
| Aug02_Cam22.pdf            | 4345      | 304    | 9     | 7        | 4           | 3        | 0        | 9         | 0            | 0              | 9              | 0        | 23       | Astragalus-Artemisia/Acano   |
| Aug02_Cam42.pdf            | 3854      | 330    | 8     | 5        | 8           | 0        | 0        | 0         | 0            | 0              | 0              | 0        | 13       | Acano-Artemisia              |
| Aug02_Cam005.pdf           | 4338      | 0      | 10    | 0        | 0           | 1        | 2        | 20        | 6            | 0              | 26             | 0        | 29       | Astragalus-Nepeta            |
| Aug02_Cam65.pdf            | 4350      | 327    | 9     | 5        | 5           | 1        | 0        | 4         | 4            | 0              | 8              | 0        | 19       | Astragalus-Neptea/Artemisia  |
| Aug02_Cam11.pdf            | 4339      | 310    | 6     | 10       | 15          | 1        | 0        | 1         | 3            | 0              | 4              | 0        | 30       | Acano-Artemisia/Astragalus   |
| Aug06_06_Site01-Men.pdf    | 4158      | 19     | 18    | 0        | 8           | 8        | 4        | 17        | 5            | 6              | 28             | 0        | 48       | Astragalus-Bromus sten       |
| Aug06_06_Site02-Men.pdf    | 4257      | 30     | 28    | 0        | 2           | 32       | 0        | 8         | 6            | 0              | 14             | 0        | 48       | Astragalus-Bromus sten       |
| Aug07_06_Dar.pdf           | 4100      | 220    | 6     | 11       | 13          | 1        | 2        | 2         | 0            | 0              | 2              | 0        | 29       | Artemisia-Acantholimon       |
| Aug07_06_Maw01-.pdf        | 4718      | 10     | 4     | 0        | 0           | 12       | 0        | 4         | 2            | 2              | 8              | 0        | 20       | Alpine grassland             |
| Aug07_06_She01-.pdf        | 4577      | 179    | 5     | 0        | 0           | 3        | 72       | 0         | 0            | 3              | 3              | 0        | 78       | Sedge Meadow                 |

|                       |      |     |    |    |    |    |    |   |   |    |    |   |    |                          |
|-----------------------|------|-----|----|----|----|----|----|---|---|----|----|---|----|--------------------------|
| Aug08_06_Site2.pdf    | 4196 | 310 | 8  | 10 | 1  | 6  | 2  | 3 | 0 | 1  | 4  | 0 | 23 | Artemisia-Festuca/Acano  |
| Aug08_06_Site3.pdf    | 4239 | 183 | 12 | 14 | 6  | 0  | 0  | 0 | 0 | 0  | 0  | 0 | 20 | Artemisia-Acano-Festuca  |
| Aug08_06_Site4.pdf    | 4129 | 196 | 4  | 8  | 8  | 8  | 0  | 0 | 0 | 0  | 0  | 0 | 23 | Artemisia-Acano-CarexDL  |
| Aug08_06_Site5.pdf    | 4118 | 223 | 5  | 2  | 14 | 0  | 0  | 0 | 0 | 0  | 0  | 0 | 16 | Artemisia-Acano-CarexDL  |
| Aug08_06_Site6.pdf    | 4115 | 207 | 6  | 4  | 2  | 0  | 14 | 0 | 0 | 0  | 0  | 0 | 20 | Artemisia-Acano-CarexDL  |
| Aug08_06_Site7.pdf    | 4115 | 223 | 5  | 6  | 18 | 0  | 0  | 0 | 0 | 2  | 2  | 0 | 26 | Artemisia-Acano-CarexDL  |
| Aug08_06_Site8-.pdf   | 4118 | 249 | 5  | 2  | 2  | 0  | 12 | 0 | 0 | 0  | 0  | 0 | 16 | CarexDL-Acano            |
| Aug09_06_Site01.pdf   | 4299 | 15  | 5  | 0  | 0  | 0  | 30 | 2 | 0 | 2  | 4  | 0 | 34 | Sedge Meadow (degraded)  |
| Aug09_06_Site2.pdf    | 4319 | 53  | 5  | 4  | 8  | 0  | 0  | 0 | 0 | 0  | 0  | 0 | 12 | Acano-Artemisia          |
| Aug20_TR01.pdf        | 4716 | 120 | 15 | 0  | 0  | 12 | 8  | 2 | 4 | 8  | 14 | 0 | 34 | Alpine grassland         |
| Aug21_TR01.pdf        | 4371 | 237 | 3  | 0  | 0  | 34 | 4  | 0 | 0 | 16 | 16 | 0 | 54 | Alpine/Festuca grassland |
| Aug21_TR02.pdf        | 4288 | 250 | 1  | 0  | 0  | 10 | 2  | 2 | 0 | 18 | 20 | 0 | 32 | Alpine/Festuca grassland |
| Aug21_TR03.pdf        | 4272 | 153 | 6  | 18 | 0  | 4  | 2  | 2 | 0 | 0  | 2  | 0 | 26 | Artemisia-Astragalus     |
| Aug22_Transect01_.pdf | 4216 | 170 | 7  | 12 | 0  | 2  | 0  | 0 | 0 | 4  | 4  | 0 | 18 | Low Sage-Stipa           |
| Aug22_TR02.pdf        | 4257 | 195 | 12 | 6  | 2  | 0  | 6  | 0 | 0 | 0  | 0  | 0 | 14 | Artemisia-Stipa/Low sage |
| Aug22_06_TR03.pdf     | 4126 | 200 | 10 | 10 | 2  | 4  | 12 | 0 | 0 | 0  | 0  | 0 | 28 | Artemisia-Acano/Stipa    |
| Aug22_06_TR04.pdf     | 4002 | 0   | 0  | 2  | 2  | 2  | 0  | 2 | 0 | 0  | 2  | 0 | 8  | Low Sage-Stipa           |

Foliar cover measured using point interception.

Appendix 3. Transect means of foliar cover by line intercept method (LI) and physiographic characteristics on different vegetation types measured in 2006.

| Photo Documentation        | Elev | Shrub LI | Subshrub LI | Grass LI | Sedge LI | Legume LI | Lamiaceae LI | Other Forbs | Total Forbs | Salix LI | Total-LI | VEG TYPE                     |
|----------------------------|------|----------|-------------|----------|----------|-----------|--------------|-------------|-------------|----------|----------|------------------------------|
| July28_06Site1.pdf         | 3660 | 4.0      | 0.0         | 0.1      | 0.0      | 0.0       | 0.0          | 0.4         | 0.4         | 0.0      | 4.4      | Halgri-Kralan/Stipa CD       |
| July29_06Site2Alisu.pdf    | 3677 | 0        | 0           | 4.7      | 0        | 0         | 0            | 0           | 0           | 4.8      | 9.46     | Salix-Elymus                 |
| July29_06Site3.pdf         | 3795 | 9.8      | 0           | 0.1      | 0        | 0         | 0            | 0.3         | 0.3         | 0        | 10.17    | Kralan CD                    |
| July30_06Site1Tulabi.pdf   | 4004 | 9.9      | 7.1         | 1.8      | 0.0      | 1.6       | 0.0          | 0.0         | 1.6         | 0.0      | 20.3     | Artemisia-Acano-Kralan-Stipa |
| July31_06Site2Tulabi.pdf   | 3999 | 0.0      | 0.0         | 0.0      | 5.1      | 0.0       | 0.0          | 0.9         | 0.9         | 0.0      | 6.0      | Sedge Meadow                 |
| July31_06Site3-4Tulabi.pdf | 4030 | 16.4     | 1.6         | 2.4      | 0.8      | 0.0       | 0.0          | 0.0         | 0.0         | 0.0      | 21.2     | Artemisia-Kralan/Stipa       |
| July31_06Site5Tulabi.pdf   | 4034 | 0.0      | 0.0         | 0.0      | 0.0      | 0.0       | 0.0          | 0.0         | 0.0         | 0.0      | 0.0      | Elymus sandy site            |
| July31_06Site6Tulabi.pdf   | 4043 | 0.0      | 0.0         | 0.0      | 10.7     | 0.0       | 0.0          | 0.0         | 0.0         | 0.0      | 10.7     | Sedge Meadow (degraded)      |
| Aug01Cam300.pdf            | 4372 | 5.9      | 3.9         | 4.1      | 0.0      | 16.7      | 0.0          | 0.2         | 16.9        | 0.0      | 30.7     | Acano-Artemisia/Astragalus   |
| Aug01Cam150.pdf            | 4366 | 9.5      | 10.6        | 1.0      | 0.0      | 2.7       | 0.0          | 0.0         | 2.7         | 0.0      | 23.9     | Acano-Artemisia/Astragalus   |
| Aug01Cam450.pdf            | 4374 | 6.8      | 2.4         | 3.6      | 0.0      | 15.6      | 0.0          | 0.7         | 16.2        | 0.0      | 29.0     | Artemisia-Astragalus/Acano   |
| Aug02_Cam1.pdf             | 4417 | 11.8     | 2.3         | 2.9      | 0.2      | 3.7       | 0.2          | 0.5         | 4.4         | 0.0      | 21.6     | Acano-Artemisia/Astragalus   |
| Aug02_Cam1_5.pdf           | 4442 | 1.4      | 0.0         | 4.8      | 2.0      | 16.7      | 12.1         | 1.0         | 29.8        | 0.0      | 38.0     | Astragalus-Neptea/Artemisia  |
| Aug02_Cam2.pdf             | 4467 | 17.2     | 0.2         | 3.3      | 0.0      | 12.6      | 2.5          | 0.8         | 15.9        | 0.0      | 36.6     | Artemisia-Astragalus,        |
| Aug02_Cam22.pdf            | 4345 | 5.1      | 3.4         | 1.2      | 0.0      | 7.2       | 1.1          | 0.0         | 8.3         | 0.0      | 17.9     | Astragalus-                  |

|                           |      |      |      |      |      |      |     |      |      |     |      |                             |
|---------------------------|------|------|------|------|------|------|-----|------|------|-----|------|-----------------------------|
|                           |      |      |      |      |      |      |     |      |      |     |      | Artemisia/Acano             |
| Aug02_Cam42.pdf           | 4350 | 4.4  | 5.2  | 1.1  | 0.0  | 0.0  | 0.0 | 0.0  | 0.0  | 0.0 | 10.7 | Acano-Artemisia             |
| Aug02_Cam005.pdf          | 4338 | 0.0  | 0.0  | 1.5  | 7.9  | 20.1 | 5.1 | 0.0  | 25.2 | 0.0 | 34.5 | Astragalus-Nepeta           |
| Aug02_Cam65.pdf           | 4350 | 4.3  | 8.1  | 1.6  | 0.0  | 3.3  | 2.4 | 0.4  | 6.1  | 0.0 | 20.0 | Astragalus-Nepeta/Artemisia |
| Aug02_Cam11.pdf           | 4339 | 5.9  | 6.3  | 0.9  | 0.0  | 1.1  | 1.1 | 0.0  | 2.2  | 0.0 | 15.3 | Acano-Artemisia/Astragalus  |
| Aug05_06_Site01-Men.pdf   | 4158 | 5.1  | 5.7  | 6.6  | 1.0  | 12.6 | 1.0 | 3.6  | 17.3 | 0.0 | 35.6 | Astragalus-Bromus sten      |
| Aug06_06_Site02-Men.pdf   | 4257 | 0.2  | 0.0  | 10.7 | 0.0  | 8.7  | 5.8 | 3.2  | 17.7 | 0.0 | 28.6 | Astragalus-Bromus sten      |
| Aug06_06_Dar.pdf          | 4100 | 6.2  | 4.0  | 1.0  | 1.8  | 0.2  | 0.0 | 0.1  | 0.4  | 0.0 | 13.3 | Artemisia-Acantholimon      |
| Aug07_06_Maw01-Photos.pdf | 4718 | 0.0  | 0.0  | 7.9  | 0.0  | 4.7  | 1.6 | 5.1  | 11.4 | 0.0 | 19.3 | Alpine grassland            |
| Aug07_06_She01-Photos.pdf | 4577 | 0.0  | 0.0  | 1.8  | 45.5 | 0.0  | 0.0 | 5.4  | 5.4  | 0.0 | 52.6 | Sedge Meadow                |
| Aug08_06_Site2Photos.pdf  | 4196 | 5.2  | 4.7  | 3.7  | 0.7  | 0.8  | 1.3 | 2.3  | 4.4  | 0.0 | 18.7 | Artemisia-Festuca/Acano     |
| Aug08_06_Site3Photos.pdf  | 4239 | 14.0 | 9.1  | 1.0  | 0.7  | 0.2  | 0.0 | 0.0  | 0.2  | 0.0 | 25.0 | Artemisia-Acano-Festuca     |
| Aug08_06_Site4Photos.pdf  | 4129 | 5.5  | 6.6  | 0.1  | 1.5  | 0.0  | 0.0 | 0.0  | 0.0  | 0.0 | 13.7 | Artemisia-Acano-CarexDL     |
| Aug08_06_Site5Photos.pdf  | 4118 | 0.9  | 11.7 | 0.5  | 0.1  | 0.0  | 0.0 | 0.3  | 0.3  | 0.0 | 13.4 | Artemisia-Acano-CarexDL     |
| Aug08_06_Site6Photos.pdf  | 4115 | 3.0  | 4.4  | 0.0  | 8.2  | 0.0  | 0.0 | 0.1  | 0.1  | 0.0 | 15.8 | Artemisia-Acano-CarexDL     |
| Aug08_06_Site7Photos.pdf  | 4115 | 2.7  | 8.4  | 0.0  | 0.3  | 0.0  | 0.0 | 0.6  | 0.6  | 0.0 | 12.1 | Artemisia-Acano-CarexDL     |
| Aug08_06_Site8-Photos.pdf | 4118 | 0.3  | 0.2  | 0.0  | 21.7 | 0.0  | 0.0 | 0.3  | 0.3  | 0.0 | 22.5 | CarexDL-Acano               |
| Aug09_06_Site01.pdf       | 4299 | 0.0  | 0.0  | 0.1  | 20.9 | 3.0  | 0.0 | 0.3  | 3.3  | 0.0 | 24.3 | Sedge Meadow (degraded)     |
| Aug09_06_Site2.pdf        | 4319 | 1.0  | 7.8  | 0.5  | 0.0  | 0.2  | 0.1 | 0.6  | 0.8  | 0.0 | 10.1 | Acano-Artemisia             |
| Aug20_TR01Photos.pdf      | 4716 | 0.0  | 0.0  | 10.4 | 4.3  | 3.8  | 1.3 | 9.4  | 14.5 | 0.0 | 29.2 | Alpine grassland            |
| Aug21_TR01Photos.pdf      | 4371 | 0.0  | 0.0  | 14.6 | 2.7  | 0.0  | 0.0 | 11.9 | 11.9 | 0.0 | 29.2 | Alpine/Festuca              |

|                             |      |     |     |     |     |     |     |      |      |     |      |  |                             |
|-----------------------------|------|-----|-----|-----|-----|-----|-----|------|------|-----|------|--|-----------------------------|
|                             |      |     |     |     |     |     |     |      |      |     |      |  | grassland                   |
| Aug21_TR02Photos.pdf        | 4288 | 0.0 | 0.0 | 3.4 | 0.2 | 1.8 | 0.0 | 16.2 | 17.9 | 0.0 | 21.5 |  | Alpine/Festuca<br>grassland |
| Aug21_TR03Photos.pdf        | 4272 | 6.5 | 2.1 | 1.6 | 0.3 | 3.6 | 0.0 | 0.3  | 3.9  | 0.0 | 14.3 |  | Artemisia-<br>Astragalus    |
| Aug22_Transect01_photos.pdf | 4216 | 7.3 | 0.5 | 3.2 | 0.4 | 0.0 | 0.0 | 0.4  | 0.4  | 0.0 | 11.7 |  | Low Sage-Stipa              |
| Aug22_TR02Photos.pdf        | 4257 | 7.6 | 0.0 | 4.5 | 0.3 | 0.0 | 0.0 | 0.5  | 0.5  | 0.0 | 12.9 |  | Artemisia-Stipa/Low<br>sage |
| Aug22_06_TR03Photos.pdf     | 4126 | 5.7 | 2.0 | 4.5 | 2.8 | 0.8 | 0.0 | 0.1  | 0.9  | 0.0 | 16.0 |  | Artemisia-<br>Acano/Stipa   |
| Aug22_06_TR04Photos.pdf     | 4002 | 1.7 | 1.1 | 1.1 | 1.0 | 1.2 | 0.0 | 0.3  | 1.5  | 0.0 | 6.3  |  | Low Sage-Stipa              |

Appendix 4. Summary of site characteristics and plant cover (%) attributes for all transects established in 2007. In the GIS the data includes start and end point latitude and longitude, transect direction, photo documentation information, and species or genera groupings for foliar, basal, and canopy cover estimates and standing crop (kg/ha).

| DATE      | TIME | ELEVATION (M) | ASPECT | SLOPE (%) | Total Canopy Cover | Total Foliar Cover | Total Litter Cover | Total Soil Cover | Total Basal Cover | Rock Cover | Canopy Cover Grass | Canopy Cover Carexdl | Canopy Cover Sedges | Canopy Cover Forbs | Canopy Cover Subshrubs | Canopy Cover Shrub | Canopy Cover Juniper | Canopy Cover Birch | Canopy Cover Salix | Cover Type/Community Type <sup>1</sup> |          |
|-----------|------|---------------|--------|-----------|--------------------|--------------------|--------------------|------------------|-------------------|------------|--------------------|----------------------|---------------------|--------------------|------------------------|--------------------|----------------------|--------------------|--------------------|--|----------|
| 7_27_2007 | 730  | 4352          | 344    | 22        | 34                 | 28                 | 20                 | 68               | 18                | 14         | 2                  | 0                    | 0                   | 32                 | 0                      | 0                  | 0                    | 0                  | 0                  | ALP                                    |          |
| 7_27_2007 | 1000 | 4356          | 344    | 24        | 46                 | 30                 | 20                 | 76               | 14                | 10         | 10                 | 0                    | 10                  | 26                 | 0                      | 0                  | 0                    | 0                  | 0                  | ALP                                    |          |
| 6_27_2007 | 1730 | 4172          | 8      | 10        | 46                 | 28                 | 22                 | 46               | 10                | 4          | 6                  | 0                    | 8                   | 32                 | 0                      | 0                  | 0                    | 0                  | 0                  | ALLIUM                                 |          |
| 6_29_2007 | 800  | 4131          | 224    | 14        | 28                 | 20                 | 8                  | 68               | 4                 | 28         | 0                  | 0                    | 0                   | 4                  | 0                      | 24                 | 0                    | 0                  | 0                  | ART-GRS                                |          |
| 6_29_2007 | 1000 | 4142          | md     | 18        | 30                 | 18                 | 12                 | 94               | 4                 | 2          | 6                  | 0                    | 0                   | 2                  | 0                      | 22                 | 0                    | 0                  | 0                  | ART-GRS                                |          |
| 6_29_2007 | 1400 | 4133          | 240    | 14        | 36                 | 28                 | 2                  | 41               | 12                | 6          | 14                 | 0                    | 0                   | 4                  | 0                      | 20                 | 0                    | 0                  | 0                  | ART-GRS                                |          |
| 6_29_2007 | 1500 | 4121          | 270    | md        | 16                 | 10                 | 4                  | 82               | 4                 | 14         | 10                 | 0                    | 2                   | 4                  | 0                      | 0                  | 0                    | 0                  | 0                  | OVGRZ                                  |          |
| 6_29_2007 | 1600 | 4121          | md     | 8         | 18                 | 12                 | 4                  | 68               | 2                 | 30         | 8                  | 0                    | 0                   | 10                 | 0                      | 0                  | 0                    | 0                  | 0                  | OVGRZ                                  |          |
| 6_30_2007 | 635  | 4109          | 267    | 16        | 28                 | 22                 | 0                  | 48               | 16                | 36         | 16                 | 0                    | 0                   | 12                 | 0                      | 0                  | 0                    | 0                  | 0                  | OVGRZ                                  |          |
| 6_30_2007 | 730  | 4102          | 270    | 12        | 20                 | 18                 | 0                  | 50               | 10                | 36         | 14                 | 0                    | 0                   | 6                  | 0                      | 0                  | 0                    | 0                  | 0                  | OVGRZ                                  |          |
| 6_30_2007 | 830  | 4108          | 260    | 8         | 32                 | 8                  | 4                  | 74               | 6                 | 20         | 8                  | 14                   | 14                  | 10                 | 0                      | 0                  | 0                    | 0                  | 0                  | OVGRZ                                  |          |
| 6_30_2007 | 900  | 4108          | 260    | 8         | 30                 | 12                 | 0                  | 72               | 2                 | 26         | 8                  | 14                   | 16                  | 6                  | 0                      | 0                  | 0                    | 0                  | 0                  | OVGRZ                                  |          |
| 6_30_2007 | md   | 4402          | md     | md        | md                 | md                 | md                 | md               | md                | md         | md                 | md                   | md                  | md                 | md                     | md                 | md                   | md                 | md                 | md                                     | SED/ ALP |
| 7_2_2007  | 1610 | 4453          | 300    | 10        | 58                 | 46                 | 34                 | 68               | 18                | 18         | 26                 | 0                    | 0                   | 32                 | 0                      | 0                  | 0                    | 0                  | 0                  | NEP/ ACAN                              |          |



|          |      |      |     |    |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |            |
|----------|------|------|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|------------|
| 7_3_2007 | 1530 | 4185 | 311 | 0  | 34 | 22 | 20 | 84 | 4  | 12 | 0  | 12 | 12 | 2  | 4  | 16 | 0 | 0 | 0 | ART/SBSRB  |
| 7_3_2007 | 1600 | 4187 | 311 | 3  | 30 | 20 | 30 | 84 | 10 | 6  | 0  | 8  | 8  | 0  | 10 | 12 | 0 | 0 | 0 | ART/SBSRB  |
| 7_3_2007 | 1640 | 4205 | 322 | 7  | 48 | 24 | 38 | 92 | 4  | 4  | 22 | 0  | 0  | 26 | 0  | 0  | 0 | 0 | 0 | ASTMA      |
| 7_3_2007 | 1745 | 4206 | 322 | 9  | 58 | 32 | 40 | 88 | 12 | 0  | 32 | 10 | 10 | 12 | 0  | 4  | 0 | 0 | 0 | ART-GRS    |
| 7_4_2007 | 730  | 4166 | 360 | 2  | 88 | 60 | 74 | 76 | 24 | 0  | 2  | 0  | 86 | 0  | 0  | 0  | 0 | 0 | 0 | WL         |
| 7_4_2007 | 830  | 4173 | 360 | 2  | 88 | 36 | 80 | 84 | 16 | 0  | 0  | 0  | 86 | 0  | 0  | 0  | 0 | 0 | 0 | WL         |
| 7_4_2007 | 900  | 4154 | 238 | 3  | 28 | 18 | 22 | 72 | 12 | 16 | 4  | 2  | 2  | 0  | 8  | 14 | 0 | 0 | 0 | ART-SBSRB  |
| 7_4_2007 | 930  | 4154 | 238 | 3  | 30 | 14 | 20 | 80 | 6  | 14 | 4  | 8  | 8  | 0  | 4  | 14 | 0 | 0 | 0 | ART-SBSRB  |
| 7_4_2007 | 1115 | 4137 | md  | md | 52 | 30 | 50 | 94 | 6  | 0  | 42 | 0  | 0  | 6  | 4  | 0  | 0 | 0 | 0 | UNC        |
| 7_5_2007 | 715  | 4140 | 1   | 1  | 26 | 16 | 2  | 90 | 6  | 4  | 2  | 0  | 0  | 0  | 4  | 20 | 0 | 0 | 0 | KRLA/ ACAN |
| 7_5_2007 | 730  | 4140 | md  | md | 22 | 8  | 22 | 66 | 4  | 0  | 10 | 0  | 0  | 0  | 2  | 10 | 0 | 0 | 0 | KRLA/ ACAN |
| 7_6_2007 | 700  | 4419 | 50  | 4  | 52 | 34 | 6  | 72 | 28 | 2  | 2  | 0  | 0  | 20 | 6  | 24 | 0 | 0 | 0 | ART-SBSRB  |
| 7_6_2007 | 700  | 4410 | 50  | 4  | 48 | 28 | 8  | 80 | 20 | 0  | 10 | 0  | 0  | 32 | 0  | 6  | 0 | 0 | 0 | ART-GRS    |
| 7_6_2007 | 810  | md   | md  | md | 32 | 14 | 18 | 80 | 12 | 8  | 8  | 0  | 0  | 8  | 0  | 16 | 0 | 0 | 0 | ART-GRS    |
| 7_6_2007 | 910  | 4407 | 0   | 8  | 30 | 20 | 12 | 80 | 16 | 4  | 0  | 0  | 0  | 4  | 4  | 22 | 0 | 0 | 0 | ART-SBSRB  |
| 7_6_2007 | 910  | 4409 | 0   | 8  | 36 | 26 | 12 | 72 | 24 | 4  | 4  | 0  | 0  | 12 | 6  | 14 | 0 | 0 | 0 | ART-SBSRB  |
| 7_6_2007 | 1000 | 4391 | 16  | 8  | 62 | 46 | 42 | 22 | 28 | 4  | 20 | 0  | 0  | 26 | 0  | 16 | 0 | 0 | 0 | ART-GRS    |
| 7_6_2007 | 1000 | 4373 | 40  | 9  | 62 | 46 | 12 | 40 | 28 | 4  | 12 | 0  | 0  | 38 | 0  | 12 | 0 | 0 | 0 | ART-GRS    |
| 7_6_2007 | 1100 | 4373 | 40  | 9  | 54 | 36 | 14 | 48 | 30 | 0  | 20 | 0  | 0  | 26 | 0  | 8  | 0 | 0 | 0 | ART-GRS    |
| 7_6_2007 | 1110 | 4373 | 40  | 9  | 52 | 40 | 28 | 34 | 22 | 2  | 10 | 0  | 0  | 10 | 0  | 32 | 0 | 0 | 0 | ART-GRS    |

|           |      |      |     |    |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |                               |
|-----------|------|------|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|-------------------------------|
| 7_6_2007  | 1110 | 4382 | 40  | 10 | 58 | 44 | 28 | 46 | 16 | 0  | 4  | 0  | 0  | 54 | 0  | 0  | 0 | 0 | 0 | NEP/ ASTMA                    |
| 7_6_2007  | 1230 | 4382 | 40  | 10 | 56 | 34 | 16 | 90 | 10 | 0  | 8  | 0  | 0  | 48 | 0  | 0  | 0 | 0 | 0 | NEP/ ASTMA                    |
| 7_8_2007  | 1615 | 4190 | 326 | 3  | 22 | 10 | 10 | 80 | 6  | 2  | 4  | 0  | 0  | 0  | 10 | 8  | 0 | 0 | 0 | ART-SBSRB                     |
| 7_8_2007  | 1730 | 4214 | 326 | 2  | 32 | 20 | 16 | 38 | 14 | 2  | 0  | 0  | 0  | 0  | 10 | 22 | 0 | 0 | 0 | ART-SBSRB                     |
| 7_10_2007 | 1520 | 4499 | 61  | 22 | 70 | 26 | 26 | 16 | 18 | 20 | 24 | 0  | 4  | 42 | 0  | 0  | 0 | 0 | 0 | ALP/ OVGRZ                    |
| 7_10_2007 | 1613 | 4590 | 299 | 24 | 54 | 28 | 18 | 28 | 14 | 34 | 16 | 2  | 2  | 34 | 2  | 0  | 0 | 0 | 0 | ALP/ OVGRZ                    |
| 8_15_2007 | 1340 | 4060 | 42  | 1  | 28 | 12 | 14 | 80 | 6  | 14 | 8  | 6  | 6  | 2  | 2  | 10 | 0 | 0 | 0 | ART/ KRLA/<br>ACONT/<br>STIPA |
| 8_15_2007 | 1340 | 4067 | 42  | 1  | 32 | 12 | 6  | 80 | 4  | 14 | 14 | 6  | 6  | 2  | 4  | 6  | 0 | 0 | 0 | ART/ KRLA/<br>ACONT/<br>STIPA |
| 8_15_2007 | 320  | 4077 | 322 | 6  | 60 | 24 | 14 | 94 | 6  | 0  | 20 | 2  | 2  | 38 | 0  | 0  | 0 | 0 | 0 | ART-GRS-<br>OVGRZD            |
| 8_15_2007 | 320  | 4087 | 322 | 6  | 64 | 18 | 12 | 86 | 6  | 8  | 30 | 6  | 6  | 24 | 0  | 4  | 0 | 0 | 0 | ART-GRS-<br>OVGRZD            |
| 8_16_2007 | 715  | 4071 | 142 | 11 | 46 | 10 | 2  | 60 | 0  | 40 | 16 | 24 | 24 | 0  | 0  | 6  | 0 | 0 | 0 | ART-<br>ARARGRS               |
| 8_16_2007 | 715  | 4053 | 140 | 11 | 18 | 2  | 4  | 64 | 0  | 36 | 2  | 14 | 14 | 0  | 0  | 2  | 0 | 0 | 0 | ART-<br>ARARGRS               |
| 8_16_2007 | 325  | 4060 | 330 | 10 | 24 | 12 | 12 | 92 | 6  | 2  | 4  | 8  | 8  | 2  | 4  | 6  | 0 | 0 | 0 | ART/ KRLA/<br>ACONT/<br>STIPA |
| 8_16_2007 | 325  | 4060 | 330 | 10 | 26 | 16 | 12 | 86 | 8  | 14 | 14 | 2  | 2  | 4  | 2  | 4  | 0 | 0 | 0 | ART/ KRLA/<br>ACONT/<br>STIPA |
| 8_20_2007 | 200  | 4033 | 324 | 24 | 58 | 10 | 8  | 60 | 3  | 38 | 15 | 35 | 35 | 0  | 5  | 3  | 0 | 0 | 0 | ART-SBSRB                     |

|           |     |      |     |    |    |    |    |    |    |    |    |    |     |     |   |    |   |   |   |                     |
|-----------|-----|------|-----|----|----|----|----|----|----|----|----|----|-----|-----|---|----|---|---|---|---------------------|
| 8_20_2007 | 200 | 4055 | 324 | 2  | 40 | 13 | 0  | 53 | 3  | 45 | 10 | 20 | 20  | 2.5 | 5 | 3  | 0 | 0 | 0 | ART-SBSRB           |
| 8_20_2007 | 300 | 4075 | 338 | 3  | 46 | 8  | 50 | 88 | 0  | 12 | 46 | 0  | 0   | 0   | 0 | 0  | 0 | 0 | 0 | SALT GRS            |
| 8_20_2007 | 300 | 4075 | 338 | 3  | 62 | 8  | 52 | 88 | 4  | 8  | 62 | 0  | 0   | 0   | 0 | 0  | 0 | 0 | 0 | SALT GRS            |
| 8_20_2007 | 410 | 4096 | 341 | 3  | 14 | 6  | 2  | 90 | 2  | 8  | 4  | 0  | 0   | 0   | 2 | 8  | 0 | 0 | 0 | KRLA/ ART/<br>SBSRB |
| 8_20_2007 | 410 | 4096 | 341 | 3  | 16 | 6  | 2  | 90 | 2  | 8  | 8  | 0  | 0   | 2   | 0 | 6  | 0 | 0 | 0 | AR/ KR/ ACO/        |
| 8_20_2007 | 510 | 4142 | 340 | 11 | 32 | 6  | 10 | 94 | 6  | 0  | 26 | 0  | 0   | 0   | 2 | 4  | 0 | 0 | 0 | FESCUE              |
| 8_20_2007 | 510 | 4150 | 340 | 11 | 54 | 8  | 4  | 96 | 2  | 2  | 38 | 0  | 0   | 14  | 0 | 2  | 0 | 0 | 0 | FESCUE              |
| 8_21_2007 | 500 | 4277 | 330 | 19 | 42 | 20 | 58 | 90 | 10 | 0  | 32 | 0  | 0   | 10  | 0 | 0  | 0 | 0 | 0 | FESCUE              |
| 8_21_2007 | 500 | 4288 | 330 | 19 | 56 | 18 | 66 | 96 | 4  | 0  | 52 | 2  | 2   | 2   | 0 | 0  | 0 | 0 | 0 | FESCUE              |
| 8_23_2007 | 220 | 4690 | 29  | 12 | 70 | 24 | 24 | 80 | 16 | 4  | 30 | 0  | 2   | 38  | 0 | 0  | 0 | 0 | 0 | FESCUE              |
| 8_23_2007 | 220 | 4690 | 29  | 12 | 56 | 26 | 18 | 76 | 14 | 10 | 28 | 0  | 0   | 28  | 0 | 0  | 0 | 0 | 0 | POA                 |
| 8_23_2007 | 410 | 4609 | 120 | 10 | 66 | 14 | 49 | 88 | 6  | 6  | 12 | 0  | 50  | 4   | 0 | 0  | 0 | 0 | 0 | CAREX<br>MEADOW     |
| 8_23_2007 | 410 | 4607 | 120 | 10 | 84 | 30 | 36 | 70 | 20 | 10 | 2  | 0  | 68  | 14  | 0 | 0  | 0 | 0 | 0 | CAREX<br>MEADOW     |
| 8_24_2007 | 800 | 4490 | 24  | 6  | 68 | 8  | 56 | 96 | 2  | 2  | 10 | 0  | 26  | 28  | 0 | 4  | 0 | 0 | 0 | CAREX/<br>FESCUE    |
| 8_24_2007 | 800 | 4490 | 24  | 6  | 62 | 12 | 36 | 90 | 8  | 2  | 18 | 0  | 30  | 12  | 2 | 0  | 0 | 0 | 0 | CAREX/<br>FESCUE    |
| 8_24_2007 | 915 | 4503 | 40  | 22 | 64 | 8  | 64 | 94 | 6  | 0  | 30 | 0  | 20  | 14  | 0 | 0  | 0 | 0 | 0 | CAREX/<br>FESCUE    |
| 8_24_2007 | 915 | 4503 | 40  | 22 | 66 | 8  | 60 | 94 | 4  | 2  | 46 | 0  | 12  | 8   | 0 | 0  | 0 | 0 | 0 | CAREX/<br>FESCUE    |
| 8_25_2007 | 710 | 4164 | 180 | 14 | 28 | 8  | 6  | 68 | 8  | 25 | 20 | 0  | 0   | 0   | 0 | 8  | 0 | 0 | 0 | ARAR-KRLA<br>TRAN   |
| 8_25_2007 | 710 | 4164 | 180 | 14 | 25 | 8  | 8  | 70 | 3  | 28 | 13 | 10 | 10  | 0   | 0 | 3  | 0 | 0 | 0 | ARAR/ STIPA         |
| 8_25_2007 | 810 | 4164 | 0   | 20 | 25 | 8  | 20 | 78 | 8  | 15 | 20 | 0  | 0   | 0   | 3 | 3  | 0 | 0 | 0 | FESCUE              |
| 8_25_2007 | 810 | 4164 | 0   | 20 | 48 | 15 | 15 | 78 | 8  | 15 | 33 | 8  | 7.5 | 7.5 | 0 | 0  | 0 | 0 | 0 | FESCUE              |
| 8_25_2007 | 245 | 4030 | 332 | 3  | 12 | 2  | 0  | 80 | 2  | 18 | 8  | 0  | 0   | 0   | 0 | 4  | 0 | 0 | 0 | ARAR                |
| 8_25_2007 | 245 | 4030 | 332 | 3  | 18 | 6  | 0  | 88 | 4  | 8  | 0  | 0  | 0   | 2   | 0 | 16 | 0 | 0 | 0 | ARAR                |

|           |      |      |     |    |    |    |    |    |    |    |    |    |    |    |   |    |   |   |   |                   |
|-----------|------|------|-----|----|----|----|----|----|----|----|----|----|----|----|---|----|---|---|---|-------------------|
| 8_27_2007 | 400  | 4039 | 329 | 0  | 16 | 6  | 6  | 78 | 4  | 18 | 8  | 0  | 0  | 0  | 0 | 8  | 0 | 0 | 0 | ARAR              |
| 8_27_2007 | 400  | 4039 | 329 | 0  | 6  | 0  | 0  | 76 | 0  | 24 | 0  | 0  | 0  | 0  | 0 | 6  | 0 | 0 | 0 | ARAR              |
| 8_28_2007 | 830  | 4033 | 322 | 15 | 16 | 8  | 0  | 80 | 4  | 16 | 6  | 0  | 0  | 0  | 0 | 10 | 0 | 0 | 0 | ARAR              |
| 8_28_2007 | 830  | 4033 | 322 | 15 | 12 | 8  | 0  | 68 | 6  | 26 | 2  | 0  | 0  | 0  | 0 | 10 | 0 | 0 | 0 | ARAR              |
| 8_28_2007 | 920  | 4040 | 350 | 11 | 12 | 8  | 0  | 66 | 6  | 26 | 2  | 0  | 0  | 0  | 0 | 10 | 0 | 0 | 0 | ARAR              |
| 8_28_2007 | 920  | 4040 | 350 | 11 | 10 | 4  | 2  | 86 | 2  | 8  | 0  | 4  | 0  | 2  | 0 | 8  | 0 | 0 | 0 | ARAR              |
| 8_28_2007 | 1015 | 4037 | 342 | 9  | 10 | 0  | 0  | 78 | 0  | 22 | 6  | 0  | 0  | 0  | 0 | 4  | 0 | 0 | 0 | KRLA              |
| 8_28_2007 | 1015 | 4037 | 342 | 9  | 6  | 4  | 4  | 78 | 4  | 18 | 2  | 0  | 0  | 0  | 0 | 4  | 0 | 0 | 0 | KRLA              |
| 8_28_2007 | 1100 | 4056 | 350 | 12 | 14 | 2  | 0  | 80 | 0  | 20 | 4  | 0  | 0  | 2  | 0 | 8  | 0 | 0 | 0 | ARAR/ KRLA        |
| 8_28_2007 | 1100 | 4056 | 350 | 12 | 10 | 4  | 0  | 88 | 4  | 8  | 8  | 0  | 0  | 0  | 0 | 2  | 0 | 0 | 0 | ARAR/ KRLA        |
| 8_28_2007 | 1130 | 4056 | 10  | 11 | 24 | 6  | 0  | 82 | 2  | 16 | 16 | 0  | 0  | 0  | 0 | 8  | 0 | 0 | 0 | ARAR/ KRLA        |
| 8_28_2007 | 1130 | 4056 | 10  | 11 | 14 | 4  | 0  | 84 | 4  | 12 | 2  | 0  | 0  | 0  | 0 | 12 | 0 | 0 | 0 | ARAR/ KRLA        |
| 8_28_2007 | 1415 | 4019 | 0   | 0  | 72 | 12 | 22 | 90 | 10 | 0  | 6  | 0  | 58 | 6  | 2 | 0  | 0 | 0 | 0 | CAREX<br>MEADOW   |
| 8_28_2007 | 1415 | 4019 | 0   | 0  | 66 | 36 | 54 | 70 | 30 | 0  | 6  | 14 | 58 | 2  | 0 | 0  | 0 | 0 | 0 | CAREX/<br>MEADOW  |
| 8_28_2007 | 1520 | 4030 | 0   | 0  | 92 | 44 | 30 | 76 | 24 | 0  | 2  | 0  | 76 | 14 | 0 | 0  | 0 | 0 | 0 | CAREX/<br>MEADOW  |
| 8_28_2007 | 1520 | 4030 | 0   | 0  | 78 | 0  | 0  | 94 | 6  | 0  | 2  | 0  | 64 | 12 | 0 | 0  | 0 | 0 | 0 | CAREX/<br>MEADOW  |
| 8_29_2007 | 1445 | 4063 | 162 | 3  | 18 | 4  | 10 | 88 | 2  | 10 | 12 | 0  | 0  | 6  | 0 | 0  | 0 | 0 | 0 | SALT GRS          |
| 8_29_2007 | 1445 | 4063 | 162 | 3  | 40 | 2  | 6  | 62 | 36 | 2  | 36 | 0  | 0  | 4  | 0 | 0  | 0 | 0 | 0 | SALT GRS          |
| 8_29_2007 | 1340 | 4037 | 168 | 3  | 42 | 10 | 22 | 42 | 58 | 0  | 34 | 0  | 0  | 8  | 0 | 0  | 0 | 0 | 0 | SALT GRS          |
| 8_29_2007 | 1340 | 4037 | 168 | 3  | 36 | 8  | 40 | 54 | 2  | 0  | 36 | 0  | 0  | 0  | 0 | 0  | 0 | 0 | 0 | SALT GRS          |
| 8_29_2007 | 1530 | 4085 | 150 | 3  | 24 | 10 | 4  | 82 | 6  | 12 | 16 | 0  | 0  | 0  | 0 | 8  | 0 | 0 | 0 | ARAR              |
| 8_29_2007 | 1530 | 4085 | 150 | 3  | 24 | 10 | 4  | 82 | 4  | 14 | 0  | 0  | 0  | 0  | 0 | 0  | 0 | 0 | 0 | ARAR              |
| 8_29_2007 | 1630 | 4152 | 142 | 18 | 18 | 0  | 4  | 66 | 0  | 34 | 10 | 6  | 6  | 0  | 0 | 2  | 0 | 0 | 0 | ART-KRLA-<br>ARAR |

|           |      |      |     |    |    |    |    |    |    |    |    |    |    |   |   |    |   |   |   |                   |
|-----------|------|------|-----|----|----|----|----|----|----|----|----|----|----|---|---|----|---|---|---|-------------------|
| 8_29_2007 | 1630 | 4152 | 142 | 18 | 32 | 20 | 0  | 58 | 6  | 36 | 6  | 24 | 24 | 0 | 0 | 2  | 0 | 0 | 0 | ART-KRLA-ARAR     |
| 8_30_2007 | 1420 | 4073 | 160 | 8  | 18 | 6  | 0  | 98 | 0  | 2  | 4  | 0  | 0  | 0 | 0 | 14 | 0 | 0 | 0 | ARAR              |
| 8_30_2007 | 1420 | 4073 | 160 | 8  | 20 | 6  | 2  | 90 | 4  | 6  | 4  | 2  | 2  | 0 | 0 | 14 | 0 | 0 | 0 | ARAR              |
| 8_30_2007 | 1520 | 4094 | 160 | 4  | 10 | 4  | 0  | 96 | 4  | 0  | 0  | 0  | 0  | 0 | 0 | 10 | 0 | 0 | 0 | ARAR              |
| 8_30_2007 | 1520 | 4094 | 160 | 4  | 16 | 2  | 0  | 86 | 2  | 12 | 10 | 0  | 0  | 2 | 0 | 4  | 0 | 0 | 0 | ARAR              |
| 8_30_2007 | 1620 | 4087 | 320 | 0  | 14 | 4  | 4  | 99 | 0  | 0  | 12 | 0  | 0  | 0 | 2 | 0  | 0 | 0 | 0 | ARAR              |
| 8_30_2007 | 1620 | 4087 | 320 | 0  | 32 | 10 | 0  | 80 | 10 | 0  | 10 | 10 | 10 | 0 | 2 | 10 | 0 | 0 | 0 | ARAR              |
| 8_31_2007 | 1530 | 3970 | 166 | 12 | 16 | 4  | 8  | 94 | 0  | 6  | 6  | 0  | 0  | 0 | 0 | 10 | 0 | 0 | 0 | KRLA              |
| 8_31_2007 | 1530 | 3970 | 166 | 12 | 20 | 4  | 6  | 92 | 0  | 8  | 10 | 0  | 0  | 0 | 0 | 10 | 0 | 0 | 0 | KRLA              |
| 8_31_2007 | 1610 | 4006 | 166 | 10 | 8  | 2  | 2  | 99 | 0  | 0  | 2  | 0  | 0  | 0 | 0 | 6  | 0 | 0 | 0 | KRLA              |
| 8_31_2007 | 1610 | 4006 | 166 | 10 | 6  | 2  | 2  | 70 | 0  | 30 | 4  | 0  | 0  | 0 | 0 | 2  | 0 | 0 | 0 | KRLA-SBSRB        |
| 9_1_2007  | 800  | 3960 | 142 | 14 | 16 | 8  | 4  | 84 | 8  | 8  | 0  | 0  | 0  | 0 | 2 | 14 | 0 | 0 | 0 | KRLA              |
| 9_1_2007  | 800  | 3960 | 142 | 14 | 10 | 4  | 10 | 96 | 0  | 4  | 0  | 0  | 0  | 0 | 4 | 6  | 0 | 0 | 0 | KRLA              |
| 9_1_2007  | 840  | 3972 | 152 | 13 | 16 | 2  | 6  | 94 | 0  | 6  | 6  | 0  | 0  | 0 | 0 | 10 | 0 | 0 | 0 | KRLA              |
| 9_1_2007  | 840  | 3972 | 152 | 13 | 2  | 2  | 2  | 98 | 0  | 2  | 0  | 0  | 0  | 0 | 2 | 0  | 0 | 0 | 0 | KRLA-SBSRB        |
| 9_1_2007  | 910  | 3963 | 156 | 12 | 8  | 2  | 8  | 92 | 2  | 6  | 6  | 0  | 0  | 0 | 2 | 0  | 0 | 0 | 0 | KRLA-SBSRB        |
| 9_1_2007  | 910  | 3963 | 156 | 12 | 18 | 4  | 4  | 99 | 0  | 0  | 6  | 0  | 0  | 0 | 0 | 12 | 0 | 0 | 0 | KRLA-SBSRB        |
| 9_1_2007  | 945  | 3958 | 136 | 11 | 28 | 6  | 8  | 70 | 4  | 26 | 22 | 0  | 0  | 2 | 2 | 2  | 0 | 0 | 0 | KRLA LEYMUS       |
| 9_1_2007  | 945  | 3958 | 136 | 11 | 18 | 2  | 2  | 82 | 0  | 18 | 12 | 0  | 0  | 2 | 2 | 0  | 0 | 0 | 0 | KRLA LEYMUS       |
| 9_1_2007  | 1030 | 3948 | 154 | 8  | 34 | 6  | 10 | 72 | 6  | 18 | 14 | 10 | 10 | 6 | 0 | 6  | 0 | 0 | 0 | ARAR              |
| 9_1_2007  | 1030 | 3948 | 154 | 8  | 40 | 0  | 14 | 92 | 0  | 8  | 26 | 0  | 0  | 0 | 2 | 12 | 0 | 0 | 0 | KRLA ARAR/ LEYMUS |
| 9_1_2007  | 1115 | 3936 | 15  | 12 | 6  | 2  | 2  | 90 | 0  | 10 | 0  | 0  | 0  | 0 | 0 | 6  | 0 | 0 | 0 | KRLA              |
| 9_1_2007  | 1115 | 3936 | 15  | 12 | 6  | 4  | 0  | 88 | 0  | 12 | 0  | 0  | 0  | 0 | 0 | 6  | 0 | 0 | 0 | KRLA              |
| 9_2_2007  | 1515 | 3850 | 186 | 1  | 92 | 56 | 82 | 92 | 8  | 0  | 92 | 0  | 0  | 0 | 0 | 0  | 0 | 0 | 0 | SALT GRS          |
| 9_2_2007  | 1515 | 3850 | 186 | 1  | 76 | 24 | 6  | 88 | 12 | 0  | 74 | 0  | 0  | 2 | 0 | 0  | 0 | 0 | 0 | SALT GRS          |

|          |      |      |     |    |    |    |    |    |    |    |    |    |    |     |    |    |    |    |    |                 |
|----------|------|------|-----|----|----|----|----|----|----|----|----|----|----|-----|----|----|----|----|----|-----------------|
| 9_2_2007 | 1630 | 3841 | 0   | 0  | 99 | 60 | 44 | 0  | 80 | 0  | 0  | 0  | 96 | 0   | 0  | 0  | 0  | 0  | 4  | WL              |
| 9_2_2007 | 1630 | 3882 | 0   | 0  | 99 | 98 | 66 | 0  | 88 | 0  | 0  | 0  | 98 | 0   | 0  | 0  | 0  | 0  | 0  | WL              |
| 9_3_2007 | 800  | 3945 | 342 | 25 | 40 | 28 | 10 | 74 | 14 | 12 | 16 | 0  | 0  | 12  | 10 | 2  | 0  | 0  | 0  | ART-SBSRB       |
| 9_3_2007 | 800  | 3945 | 342 | 25 | 36 | 26 | 8  | 86 | 8  | 6  | 22 | 0  | 0  | 2   | 8  | 4  | 0  | 0  | 0  | ART-SBSRB       |
| 9_3_2007 | 915  | 3887 | 0   | 0  | 32 | 12 | 0  | 96 | 4  | 0  | 12 | 8  | 8  | 4   | 0  | 8  | 0  | 0  | 0  | ART-SBSRB       |
| 9_3_2007 | 915  | 3887 | 0   | 0  | 32 | 14 | 2  | 92 | 8  | 0  | 12 | 12 | 12 | 0   | 0  | 8  | 0  | 0  | 0  | ARAR/<br>ARGRSS |
| 9_3_2007 | 1030 | 3923 | 155 | 1  | 24 | 8  | 4  | 52 | 0  | 48 | 8  | 0  | 0  | 0   | 0  | 16 | 0  | 0  | 0  | ART-STIPA       |
| 9_3_2007 | 1030 | 3923 | 155 | 1  | 18 | 8  | 6  | 32 | 2  | 66 | 8  | 0  | 0  | 2   | 0  | 8  | 0  | 0  | 0  | ART-STIPA       |
| 9_4_2007 | 705  | 3465 | 160 | 1  | 30 | 16 | 30 | 52 | 4  | 44 | 0  | 0  | 0  | 0   | 6  | 8  | 16 | 0  | 0  | JUNIPER         |
| 9_4_2007 | 700  | 3435 | 161 | 1  | 44 | 32 | 18 | 46 | 10 | 44 | 0  | 0  | 0  | 12  | 0  | 0  | 18 | 0  | 0  | JUNIPER         |
| 9_4_2007 | 1100 | 3491 | 176 | 5  | 53 | 40 | 18 | 43 | 3  | 53 | 0  | 0  | 0  | 3.3 | 0  | 3  | 0  | 30 | 17 | BIRCH           |
| 9_4_2007 | 1100 | 3491 | 176 | 5  | 83 | 69 | 40 | 50 | 3  | 47 | 0  | 0  | 0  | 0   | 0  | 0  | 0  | 53 | 30 | BIRCH           |
| 9_4_2007 | 1330 | 3717 | 208 | 40 | 14 | 8  | 2  | 48 | 4  | 48 | 0  | 0  | 0  | 0   | 2  | 10 | 2  | 0  | 0  | ARWH-JUN        |
| 9_4_2007 | 1330 | 3707 | 208 | 40 | 12 | 8  | 2  | 34 | 0  | 66 | 0  | 0  | 0  | 0   | 0  | 12 | 0  | 0  | 0  | ARWH-JUN        |

<sup>1</sup> Cover type/Community type were designated in the field.

Data on life-forms for basal cover, foliar cover by point and line intercept are not shown.

Appendix 5. Canopy cover (%) by life-form of permanent monitoring plots established in 2008. In GIS the data includes latitude and longitude, transect direction, photo documentation information, and species or genera groupings canopy cover estimates and standing crop (kg/ha).

|                              | Shrub cover | Subshrub cover | Grass Cover | Sedge Cover | Legume cover | Lamiaceae cover | Other forb cover | Total forb cover | Total Vegetation | Total shrub cover | Total Veg Cover | Vegetation Type               |
|------------------------------|-------------|----------------|-------------|-------------|--------------|-----------------|------------------|------------------|------------------|-------------------|-----------------|-------------------------------|
| July 20_08_1620Sitephoto     | 0.0         | 0.0            | 2.0         | 75.0        | 2.0          | 0.0             | 3.0              | 5.0              | 82.0             | 0.0               | 82.0            | Carex meadow                  |
| July 20_08_1700Sitephoto     | 0.0         | 2.0            | 6.1         | 10.0        | 15.0         | 0.1             | 12.0             | 27.1             | 45.2             | 2.0               | 45.0            | Astragalus/Carex meadow       |
| July22_08_1615-30Sitephoto   | 0           | 0              | 5           | 5           | 55           | 10              | 0                | 60               | 70.0             | 0                 | 100             | Carex meadow/alpine           |
| July22_08_1615-30Sitephoto   | 0.0         | 0.0            | 1.0         | 90.0        | 2.0          | 0.0             | 3.0              | 5.0              | 96.0             | 0.0               | 100             | Carex meadow/degrading        |
| July22_08_1730Sitephoto      | 0.0         | 0.0            | 2.0         | 0.1         | 10.0         | 0.0             | 30.0             | 40.0             | 42.1             | 0.0               | 43.0            | Dried Carex meadow            |
| July24_08_1500TRphoto        | 3.8         | 2.0            | 0.7         | 0.0         | 0.0          | 0.0             | 0.1              | 0.1              | 6.6              | 5.8               | 13.2            | Art/Acano-Stipa/Poa           |
| July24_08_1600TRphoto        | 1.3         | 0.4            | 3.5         | 2.0         | 0.3          | 0.0             | 0.1              | 0.3              | 7.4              | 1.6               | 14.9            | Artemisia/Acano-Stipa/Hordeum |
| July25_08_1100TRphoto        | 0.0         | 8.8            | 14.0        | 1.8         | 31.3         | 0.0             | 5.3              | 36.5             | 61.0             | 8.8               | 61.0            | Astmatty/Hordeum              |
| July25_08_1200TRphoto        | 0.0         | 0.0            | 5.0         | 0.0         | 0.8          | 2.0             | 2.3              | 5.1              | 10.1             | 0.0               | 10.1            | Poa/Neppam/Hordeum            |
| July25_08_1400TRphoto        | 0.0         | 8.5            | 1.3         | 0.0         | 0.0          | 0.0             | 0.3              | 0.3              | 10.0             | 8.5               | 10.0            | Acano/Hordeum                 |
| July25_08_1530TRphoto        | 6.0         | 7.8            | 0.2         | 0.3         | 0.1          | 0.0             | 0.0              | 0.1              | 14.3             | 13.8              | 14.3            | Artemisia-Acano               |
| July27_08_1140TRphoto        | 0.0         | 0.0            | 16.7        | 7.5         | 2.6          | 0.0             | 8.2              | 10.8             | 35.0             | 0.0               | 35.0            | Alpine Grassland              |
| 2007 transect                | 1.0         | 0.0            | 1.0         | 0.0         | 0.0          | 0.0             | 0.0              | 0.0              | 2.0              | 1.0               | 2.0             | Cerlan/Artemisa-Leymus        |
| 2007 transect                | 5.0         | 2.0            | 1.0         | 0.0         | 0.0          | 0.0             | 0.0              | 0.0              | 8.0              | 7.0               | 8.0             | Artemisa/Ceraln-Stipa         |
| 2007 transect                | 10.0        | 2.0            | 2.0         | 0.0         | 0.0          | 0.0             | 0.0              | 0.0              | 14.0             | 15.0              | 17.0            | Artemisa/Cerlan-Stipa         |
| 2007 transect                | 5.0         | 1.0            | 2.0         | 0.0         | 0.0          | 0.0             | 0.0              | 0.0              | 8.0              | 6.0               | 8.0             | Artemisa/Cerlan-Stipa         |
| July29_08_1630/1700sitephoto | 0.0         | 0.0            | 5.0         | 80.0        | 2.0          | 0.0             | 3.0              | 5.0              | 90.0             | 0.0               | 90.0            | Carex meadow                  |
| July29_08_1630/1700sitephoto | 0.0         | 0.0            | 20.0        | 5.0         | 40.0         | 0.0             | 10.0             | 50.0             | 75.0             | 0.0               | 75.0            | Deg. Carex or Alpine GL       |

|                       |      |     |      |     |      |      |      |      |      |      |      |                        |
|-----------------------|------|-----|------|-----|------|------|------|------|------|------|------|------------------------|
| Aug 1_08_0900-Trphoto | 8.0  | 0.3 | 6.3  | 0.0 | 0.1  | 1.3  | 8.4  | 9.7  | 24.2 | 8.3  | 24.2 | Artemisia-Festuca/Poa  |
| Aug 1_08_1000-Trphoto | 10.8 | 1.8 | 5.1  | 0.0 | 0.5  | 0.2  | 16.9 | 17.6 | 35.2 | 12.5 | 37.2 | Artemisia-Festuca/Poa  |
| Aug 1_08_1130-Trphoto | 10.9 | 0.0 | 7.3  | 0.0 | 1.4  | 0.0  | 16.3 | 16.3 | 34.4 | 9.8  | 32.6 | Artemisia-Festuca/Poa  |
| Aug 1_08_1530-Trphoto | 9.3  | 0.1 | 6.4  | 0.1 | 0.0  | 0.2  | 14.5 | 14.7 | 30.6 | 9.4  | 30.6 | Artemisia-Festuca/Poa  |
| Aug 1_08_1700-Trphoto | 8.3  | 1.0 | 6.9  | 0.0 | 0.0  | 0.1  | 17.5 | 17.6 | 33.7 | 9.3  | 33.7 | Artemisia-Festuca/Poa  |
| Aug 2_08_1430-Trphoto | 13.0 | 0.0 | 5.8  | 0.0 | 6.5  | 3.5  | 8.5  | 18.5 | 37.3 | 13.0 | 37.3 | Artemisia/Bromus/Stipa |
| Aug 2_08_1600-Trphoto | 9.3  | 0.0 | 16.0 | 0.0 | 6.3  | 0.0  | 3.3  | 9.5  | 34.8 | 9.3  | 34.8 | Artemisia/Bromus/      |
| Aug 2_08_1700-Trphoto | 1.3  | 0.0 | 12.3 | 0.0 | 11.3 | 0.1  | 6.5  | 17.8 | 31.3 | 1.3  | 31.3 | Artemisia/Bromus/      |
| Aug 4_08_0830-Trphoto | 0.0  | 0.0 | 7.3  | 1.3 | 13.3 | 0.0  | 7.8  | 21.0 | 29.6 | 0.0  | 29.6 | Astmatty/Poa           |
| Aug 4_08_0945-Trphoto | 0.0  | 0.0 | 2.0  | 0.0 | 20.0 | 0.0  | 26.2 | 46.2 | 48.2 | 0.0  | 48.2 | Astmatty/Potentilla    |
| Aug 5_08_0715-Trphoto | 0.0  | 0.0 | 17.0 | 0.0 | 7.0  | 15.0 | 6.0  | 28.0 | 45.0 | 0.0  | 45.0 | Bromus/Neppod          |



Appendix 6 . Summary of site characteristics and standing crop by total grass (kg/ha), total forb (kg/ha) and total shrub (kg/ha) for permanent photo points established in 2008. In GIS data includes latitude and longitude, transect direction, photo documentation information, and species or genera groupings canopy cover estimates and standing crop (kg/ha).

| Photo Documentation          | Elevation (m) | Aspect | Slope | Rock | Litter | BG | Total Dry grass wt (kg/ha) | Total Forb DWT kg/ha | Total Shrub DWT kg/ha | Vegetation Type               |
|------------------------------|---------------|--------|-------|------|--------|----|----------------------------|----------------------|-----------------------|-------------------------------|
| July 20_08_1620Sitephoto     | 4093          | 225    | 5     | 0    | 20     | 10 | 380                        | 5                    | 0                     | Carex meadow                  |
| July 20_08_1700Sitephoto     | 4113          | 225    | 25    | 15   | 1      | 45 | 150                        | 50                   | 0                     | Astragalus/Carex meadow       |
| July22_08_1615-30Sitephoto   | 4404          | 0      | 0     | 10   | 5      | 25 | nd                         | nd                   | nd                    | Carex meadow/alpine           |
| July22_08_1615-30Sitephoto   | 4418          | 0      | 0     | 0    | 5      | 5  | nd                         | nd                   | nd                    | Carex meadow/degrading        |
| July22_08_1730Sitephoto      | 4433          | 325    | 1     | 15   | 5      | 40 | nd                         | nd                   | 0                     | Dried Carex meadow            |
| July24_08_1500TRphoto        | 4104          | 120    | 8     | 2    | 1      | 92 | 9                          | 0                    | 142                   | Artemisia/Acano-Stipa/Poa     |
| July24_08_1600TRphoto        | 4076          | 273    | 4     | 2    | 3      | 88 | 145                        | 4                    | 49                    | Artemisia/Acano-Stipa/Hordeum |
| July25_08_1100TRphoto        | 4345          | 190    | 2     | 3    | 7      | 36 | 128                        | 100                  | 0                     | Astmatty/Hordeum              |
| July25_08_1200TRphoto        | 4350          | 45     | 4     | 40   | 1      | 55 | 85                         | 105                  | 0                     | Poa/Neppam/Hordeum            |
| July25_08_1400TRphoto        | 4322          | 220    | 1     | 2    | 1      | 90 | 30                         | 0                    | 0                     | Acano/Hordeum                 |
| July25_08_1530TRphoto        | 4266          | 80     | 1     | 7    | 1      | 86 | 6                          | 67                   | 0                     | Artemisia-Acano               |
| July27_08_1140TRphoto        | 4588          | 278    | 2     | 26   | 9      | 35 | 335                        | 158                  | 0                     | Alpine Grassland              |
| 2007 transect                | 3962          | 166    | 11    | 5    | 0      | 95 | 40                         | 0                    | 40                    | Cerlan/Artemisa-Leymus        |
| 2007 transect                | 3962          | 166    | 11    | 5    | 0      | 90 | 50                         | 0                    | 80                    | Artemisa/Ceraln-Stipa         |
| 2007 transect                | 3967          | 166    | 11    | 15   | 1      | 80 | 50                         | 0                    | 150                   | Artemisa/Cerlan-Stipa         |
| 2007 transect                | 3966          | 166    | 11    | 2    | 0      | 95 | 50                         | 0                    | 125                   | Artemisa/Cerlan-Stipa         |
| July29_08_1630/1700sitephoto | 4446          | 300    | 2     | 0    | 15     | 15 | 380                        | 20                   | 0                     | Carex meadow                  |

|                              |      |     |    |    |    |    |     |     |     |                             |
|------------------------------|------|-----|----|----|----|----|-----|-----|-----|-----------------------------|
| July29_08_1630/1700sitephoto | 4450 | 300 | 4  | 10 |    | 20 | 150 | 50  | 0   | Degraded Carex or Alpine GL |
| Aug 1_08_0900-Trphoto        | 4205 | 284 | 18 | 15 | 3  | 71 | 91  | 105 | 35  | Artemisia-Festuca/Poa       |
| Aug 1_08_1000-Trphoto        | 4244 | 278 | 18 | 11 | 11 | 55 | 49  | 209 | 114 | Artemisia-Festuca/Poa       |
| Aug 1_08_1130-Trphoto        | 4192 | 240 | 3  | 27 | 4  | 43 | 65  | 163 | 98  | Artemisia-Festuca/Poa       |
| Aug 1_08_1530-Trphoto        | 4207 | 286 | 20 | 6  | 7  | 63 | 89  | 276 | 74  | Artemisia-Festuca/Poa       |
| Aug 1_08_1700-Trphoto        | 4195 | 260 | 18 | 7  | 5  | 59 | 84  | 222 | 99  | Artemisia-Festuca/Poa       |
| Aug 2_08_1430-Trphoto        | 4062 | 86  | 12 | 11 | 9  | 53 | 122 | 247 | 153 | Artemisia/Bromus/Stipa      |
| Aug 2_08_1600-Trphoto        | 4080 | 131 | 16 | 16 | 20 | 49 | 314 | 218 | 87  | Artemisia/Bromus/           |
| Aug 2_08_1700-Trphoto        | 4103 | 116 | 28 | 14 | 39 | 26 | 134 | 254 | 14  | Artemisia/Bromus/           |
| Aug 4_08_0830-Trphoto        | 4482 | 22  | 8  | 5  | 1  | 69 | 45  | 248 | 0   | Astmatty/Poa                |
| Aug 4_08_0945-Trphoto        | 4490 | 20  | 12 | 26 | 8  | 29 | 8   | 369 | 0   | Astmatty/Potentilla         |
| Aug 5_08_0715-Trphoto        | 4078 | 80  | 34 | 59 | 16 | 4  | 234 | 223 | 0   | Bromus/Neppod               |