Table S3. Soil Profile Descriptions.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Horizon | Depth(cm) | Boundary | Dry colora | Moist colora | Textureb | Gravel (%) | Structurec | Consistenced | Clay liningse |
| BC01/ Qf1 Lat/Long: 34.1946 / -117.3215 |  |  |  |  |  |
| A1 | 0-3 | a,s | 10YR3/2 | 10YR2/2 | SL | 15% granules | platy | S; SO,PO | no |
| A2/AB | 3-13 | g,w | 10YR5/4 | 10YR3/2 | SL | 25%granules | crumb, v1sbk | MH; SO,PO | no |
| Bt1 | 13-41 | g,w | 7.5YR4/6 | 7.5YR4/3 | SL-L | 15% granules | 2msbk | MH;SS,PS | 1npf, po |
| Bt2 | 41-92 | g,w | 7.5YR4/6 | 7.5YR4/4 | L – L+ | 5% granules | 2msbk, 3fabk | H, SS,PS | v1mkpf;1npf, po |
| Bt3 | 92-145 | cw | 7.5YR4/6, 7.5YR5/6 | 7.5YR4/4 | CL | 10% granules | 3mabk | SH; S,PS | 1mkpf, 1npo, br |
| Bt4 | 145-195 | a,s | 10YR5/6 | 10YR4/4 | L | 40 | 2msbk | MH; SO,PO | v1npo,br |
| B/Cox | 195-248 |  | 10YR5/4 | 10YR4/4 | L | 25 | 2fsbk | MH;SS,PS | 0 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| BC02/ Qt2-w Lat/Long: 34.1931 / -117.3180 |  |  |  |  |  |  |
| A1 | 0-6 | cs | 10YR4/2 | 10YR3/2 | SL |  | crumb | LO; SO,PO | 0 |
| A2 | 6-32 | cw | 10YR4/3 | 10YR4/3 | SL | <5 | 1fsbk | SH; SO,PO | 0 |
| B1 | 32-61 | gw | 7.5YR5/4 | 10YR4/4 | SL | 5 | 2msbk | MH; SS,PS | 1npo, pf |
| B2 | 61-100 | gw | 7.5YR6/6 | 7.5YR4/4 | SL+ | 60 | 3msbk | H; SS,PS | 1npf |
| BC | 100-130 | gw | 7.5YR5/6 | 10YR3/4 | SL | 70 | 3fsbk | MH; SO,PO | v1npf |
| Cox | 130-200 |  | 10YR5/5 | 10YR4/4 | SL | 40 | 2msbk | MH; SO,PO | 0 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Horizon | Depth(cm) | Boundary | Dry color | Moist color | Texture | Gravel (%) | Structure | Consistence | Clay linings |
|  |  |  |  |  |  |  |  |  |  |
| BC03/ Qf3 Lat/Long: 34.1908 / -117.3147 |
| A | 0-8 | as | 10YR4/3 | 10YR3/2 | SL | 12 | v1mpl, 1fsbk | SO; SO,PO | 0 |
| AB | 8-26 | cw | 10YR5/3 | 10YR4/3 | SL | 25 | v1msbk | SO;SO,PO | 0 |
| B1 | 26-50 | gw | 10YR5/4 | 10YR3/4 | SL | 25 | 2msbk | SH;SO,PO | 0 |
| B2 | 50-117 | cw | 10YR5/4 | 10YR3/4 | SL | 30 | 2msbk | SO+ SH; SO,PO | co. st. |
| 2Cox | 117-127 |  | 10YR5/4 | 10YR4/4 | LS | 50 | v1msbk to loose | SO; SO,PO | 0 |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| BC04 / Qc2 Lat/Long: 34.1917 / -117.3139 |  |  |  |  |  |  |
| A1 | 0-7 | cs | 10YR5/4 | 10YR3/3 | L to SL | <2 | crumb | SO; SO,PO | 0 |
| A2 | 7-15 | cs | 10YR5/4 | 10YR3/4 | L | <5 | v1msbk | SO-SH, SO,PO | 0 |
| B1 | 15-40 | gw | 7.5YR4/6 | 7.5YR4/6 | L-SL | <5 | 1msbk | MH, SS,SP | v1npf, co. st. |
| B2 | 40-76 | gw | 7.5YR4/6 | 7.5YR4/6 | L | <5 | 2msbk to abk | H; SS,PS | 1npf |
| 2B3 | 76-156 | gs | 7.5YR5/6 | 7.5YR4/6 | SL | >60 | 2+mabk | H; SO,PO | 1+npf, v1mkpf |
| C | 156-200 | arbitrary | 10YR6/4 | 10YR4/4 | SL | 10 | m | SH;SO,PO | 0 |
|  |  |  |  |  |  |  |  |  |  |

a Munsell Soil Color Chart

b S, sand;LS, loamy sand; SL, sandy loam; SiL, Silty loam; L, loam; SCL, sandy clay loam; SC, sandy clay; CL, clay loam; g, gravelly; vg, very gravelly

c GRADE: 1, weak; 2, moderate; 3, strong; SIZE: f, fine; m, medium; co, coarse; TYPE: m, massive; sg, single grain; sbk, subangular blocky; abk, angular blocky; pl, platy

d L, loose; S, soft; SH, slightly hard; MH, moderately hard; H, hard; VH, very hard; EH, extremely hard; SO, not sticky; VSS, very slightly sticky; SS, slightly sticky; S, sticky; VS, very sticky; PO, not plastic; VSP, very slightly plastic; SP, slightly plastic; P, moderately plastic; VP, very plastic.

e FREQUENCY: v1, very few; 1, few; 2, common; 3, many; 4, very many; THICKNESS: vn, very thin; n, thin; mk, moderately thick; k, thick; LOCATION: pf, ped face; po, pores; br, bridges between grains; gr, grains.