

**Table S1.**

Supplemental Table 1: For California sagebrush (*Artemisia californica*), the mean shoot length ( $p = 0.0383$ ; uninvaded soil  $13.45\text{mm} \pm 2.76\text{mm SE}$ , and post-invasive soil  $6.35\text{mm} \pm 1.58\text{mm SE}$ ), but not the mean root length ( $p = 0.062$ ), was higher in the uninvaded soil. The Harding grass (*Phalaris aquatica*), Purple sage (*Salvia leucophylla*), and Coyote brush (*Baccharis pilularis*) mean total lengths were not significantly different between soil types. All  $\pm$  values represent standard error. \* represents significant difference between treatments.

| Species                      | Soil Type     | Mean Plant Length  | Mean Root Length | Mean Shoot Length | Root:Shoot Length | Mean Plant Mass    | Mean Root Mass   | Mean Shoot Mass  | Root:Shoot Mass   |
|------------------------------|---------------|--------------------|------------------|-------------------|-------------------|--------------------|------------------|------------------|-------------------|
| <i>Artemisia californica</i> | Uninvaded     | $27.15 \pm 5.55^*$ | $13.7 \pm 2.88$  | $13.45 \pm 2.76$  | $1.037 \pm 0.051$ | $0.125 \pm 0.02^*$ | $0.035 \pm 0.01$ | $0.09 \pm 0.01$  | $0.376 \pm 0.051$ |
| <i>Artemisia californica</i> | Post-invasive | $13.25 \pm 3.38^*$ | $6.9 \pm 1.84$   | $6.35 \pm 1.58$   | $1.091 \pm 0.096$ | $0.036 \pm 0.01^*$ | $0.01 \pm 0$     | $0.026 \pm 0.01$ | $0.524 \pm 0.096$ |
| <i>Baccharis pilularis</i>   | Uninvaded     | $17.8 \pm 6.6$     | $10.1 \pm 3.85$  | $7.7 \pm 2.77$    | $1.274 \pm 0.107$ | $0.039 \pm 0.01$   | $0.011 \pm 0$    | $0.029 \pm 0.01$ | $0.452 \pm 0.107$ |
| <i>Baccharis pilularis</i>   | Post-invasive | $21.1 \pm 5.35$    | $12.95 \pm 3.32$ | $8.15 \pm 2.06$   | $1.501 \pm 0.136$ | $0.024 \pm 0$      | $0.009 \pm 0$    | $0.016 \pm 0$    | $0.685 \pm 0.136$ |

|                           |               |                |                |               |               |               |              |              |               |
|---------------------------|---------------|----------------|----------------|---------------|---------------|---------------|--------------|--------------|---------------|
| <i>Salvia leucophylla</i> | Uninvaded     | 85.9 ± 7.39    | 51.2 ± 4.41    | 34.7 ± 3.11   | 1.483 ± 0.05  | 0.189 ± 0.02  | 0.036 ± 0.01 | 0.153 ± 0.01 | 0.228 ± 0.050 |
| <i>Salvia leucophylla</i> | Post-invasive | 93.4 ± 8.17    | 51.75 ± 4.55   | 41.65 ± 3.81  | 1.251 ± 0.043 | 0.19 ± 0.02   | 0.029 ± 0    | 0.161 ± 0.01 | 0.177 ± 0.043 |
| <i>Phalaris aquatica</i>  | Uninvaded     | 198.51 ± 41.59 | 100.45 ± 21.99 | 98.06 ± 19.95 | 1.003 ± 0.047 | 0.605 ± 0.11* | 0.293 ± 0.05 | 0.312 ± 0.07 | 1.019 ± 0.047 |
| <i>Phalaris aquatica</i>  | Post-invasive | 308.15 ± 55.52 | 149.85 ± 27    | 158.3 ± 28.76 | 0.947 ± 0.029 | 0.337 ± 0.05* | 0.164 ± 0.03 | 0.173 ± 0.03 | 0.939 ± 0.029 |