Supplemental

**Table S1.** Recognition of *Salsola* species in the U.S. as identified by commonly used plant taxonomy resources: Integrated Taxonomic Information System (ITIS, https://www.itis.gov/), the Plants Database (Plants, https://plants.usda.gov/java/), the Flora of North America (Flora, http://floranorthamerica.org/), and the Jepson eFlora (eFlora, http://ucjeps.berkeley.edu/eflora/).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **ITIS** | **Plants** | **Flora** | **eFlora** |
| *Salsola aphylla* | x |  |  |  |
| *Salsola australis* | x |  |  | x |
| *Salsola collina* | x | x1 | x |  |
| *Salsola damascena* |  |  |  | x |
| *Salsola gobicola* |  |  |  | x |
| *Salsola kali2* | x | x | x | x |
| *Salsola kali* ssp. *kali* | x | x | x |  |
| *Salsola kali* ssp. *pontica* | x | x | x | x |
| *Salsola paulsenii3* | x | x1 | x | x |
| *Salsola ryanii* | x |  |  | x |
| *Salsola soda* | x | x | x | x |
| *Salsola tragus3* | x | x1 | x | x |
| *Salsola vermiculata* | x | x | x | x |

1 Recognized in Arizona and Utah only.

2 Previously *S. kali* L. or *S. kali* ssp *tragus* were recognized in the southwest USA; however, *S. kali* is no longer accepted nomenclature for *Salsola* species found in the Southwest (ITIS, Plants Database). Historic literature on the currently recognized *S. tragus* may refer to synonyms (S*. kali, S. kali ssp. tenuifolia, S. kali ssp. ruthenica, S. kali ssp. tragus, S. ruthenica, S. iberica, S. pestifer*; (ITIS).

3 Hrusa (Jepson eFlora). proposed that naturalized *Salsola* *gobicola*, may exist in Arizona and represents a naturalized hybrid of *S. paulsenii* and *S. tragus.* Either of the latter species may have misapplied names and may be *S. x gobicola*. The species are difficult to distinguish; neither *S. paulsenii* nor *S. collina* have been reported widely on the southern Colorado Plateau and documentation of *S. x gobicola* is scant (Flora of North America).

**Table S2**. Counts of erosion measuring stakes with either sediment accumulation (Accum) or erosion for each plot at the sand dune (19 total) and sand sheet (12 total) sites. Each plot had two erosion measuring stakes with washers so total possible count for erosion and accumulation (Accum) is twice the number of plots. Each washer with 2 mm or more sediment accumulated on the washer and/or missing from below the washer (erosion) was counted. Accumulated sediment was counted only for washers with at least one-half covered with sediment and washers could exhibit both erosion and accumulation of sediment. As precise measurement of sediment was difficult because of the configuration of the stake and washer set up and that sediment frequently did not cover the washer evenly, these metrics should be interpreted as indication of the magnitude of sediment movement into (accumulation) and from (erosion) each plot.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | June | | July/Aug | | Sept | |
|  |  | Accum | Erode | Accum | Erode | Accum | Erode |
| Sand Sheet | 2015 | 7 | 0 | 4 | 2 | 9 | 25 |
|  | 2016 | 15 | 14 | 36 | 1 | 19 | 14 |
| Sand Dune | 2015 | 4 | 0 | 1 | 2 | 6 | 8 |
|  | 2016 | 11 | 6 | 17 | 1 | 4 | 6 |
|  |  |  |  |  |  |  |  |

**Table S3** Average cover estimates (%) for control plots in 2015 and 2016 sampling periods and the standard deviations of those estimates (SD). The sand dune site had six control plots and the sand sheet had four control plots in 2015 and eight in 2016. The averages do not include the targeted coppice mound on the sand dune.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | May | June | July/Aug | Sept |
| Sand Dune | 2015 | 0.4 (SD 0.2) | 1.3 (SD 1.4) | 1.7 (SD 1.5) | 1.7 (SD 1.5) |
| 2016 | 0.2 (SD 0.3) | 0.0 | 0.3 (SD .4) | 0 |
| Sand Sheet | 2015 | 3.4 (SD 2.7) | 29.0 (SD 0) | 38.0 (SD 6.0) | 29.0 (SD 9.8) |
| 2016 | 2.6 (SD 5.3) | 1.7 (SD 2.6) | 2.9 (SD 2.9) | 3.6 (SD 5.1) |

Fig. S1 Soil texture composition at the sand dune and sand sheet sites. All sites had a high percentage of sand. The sand sheet site had more silt than the sand dune site. At the sand dune site, the coppice mounds also had more silt than the interspaces, indicative of wind winnowing within site. On the graph legend sand sheet sites are indicated as HC and sand dune sites as BS.

