

# Halogeton (*Halogeton glomeratus*)



Photo credit: C. Shock



Photo credit: G.A. Monroe



Photo Credit: Bureau of Indian Affairs

### Key ID Tips

- Succulent with small sessile leaf clusters.
- Stems can appear red as plants mature
- Flowers have showy sepals that appear semi-transparent.
- Flowers also grow in clusters close to the stem.

**Navajo Name**  
Chil' bit'áąh t'ó

**Origin**  
Native to cold deserts of Eurasia

**Description**  
Halogeton is a succulent winter annual that grows to about 1.5 feet tall. It has small fleshy leaves that can appear slightly red or purple when older with an overall bluish-green color and a stiff bristle at the tip. Leaves grow in small clusters close the stem and are alternate and sessile. Flowers grow in clusters on most leaf axils and lack petals. They have small sepals that appear slightly yellow to green and are semi-transparent. Sepals may also look tooth-like. Stems become reddish as plants matures.



Photo credit: Bureau of Indian Affairs

**Biology**  
Halogeton is a succulent that prefers disturbed sites with sparse vegetation in arid to semi-arid regions. They are well adapted to alkaline and saline soils. Plants accumulate salt that can leach from dead plant materials, increasing soil salinity in the top soil. It reproduces solely by seed, which are dispersed by animals and when branches break off and scatter to new sites. Seeds can germinate quickly but do not persist for long in soils.

**Locations**  
Infestations have been found along roads and in disturbed areas such as on Black Mesa near coal mine operations. It is considered widespread on the Navajo Nation.

**Ecological Threat and Management Concerns**  
Halogeton invades disturbed and overgrazed sites. They can alter soil salinity, which favors the continued germination and spread of halogeton in invaded sites. They also produce sodium oxalates, which can be fatal to livestock, especially sheep. As a result, most livestock avoid the bitter plant, which lowers grazing capacity and forage quality in invaded sites.

Management Recommendations

Category B—Medium

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Additional safety measures and limitations may apply for each method. Refer to the [Navajo Nation Integrated Weed Management Plan](#) for more information.

### Mechanical/Manual Removal

Pulling and tilling are effective removal methods as plants have shallow roots. Treatments should occur when young and before flowering to prevent seed set. Mowing can be used to reduce seed production. All removed plant parts should be disposed of as they can continue to produce seeds after removal.

### Biological

No biological control organisms are available for use on the Navajo Nation.

### Cultural Control

Grazing is not recommended due to the toxicity of the plant on livestock. Fire is also not recommended as it can enhance seed germination and increase the density of populations, as halogeton is often one of the first plants to regrow following fire.

### Chemical

Use of herbicides can be effective. Refer to the product labels for information application rates, timing, and approved application methods.

Recommended herbicides include:

- 2,4-D
- Imazapic
- Indaziflam
- Metsulfuron methyl
- Picloram\*

### References

DiTomaso, J.M., G.B. Kyser et al. 2013. *Weed Control in Natural Areas in the Western United States*. Weed Research and Information Center. University of California. 544 pp.

USDA, NRCS. 2023. PLANTS Database. Available at <https://plants.sc.egov.usda.gov/>. National Plant Data Team, Greensboro, NC 27401-4901 USA



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