

Plant Propagation Protocol for *Sidalcea nelsoniana*


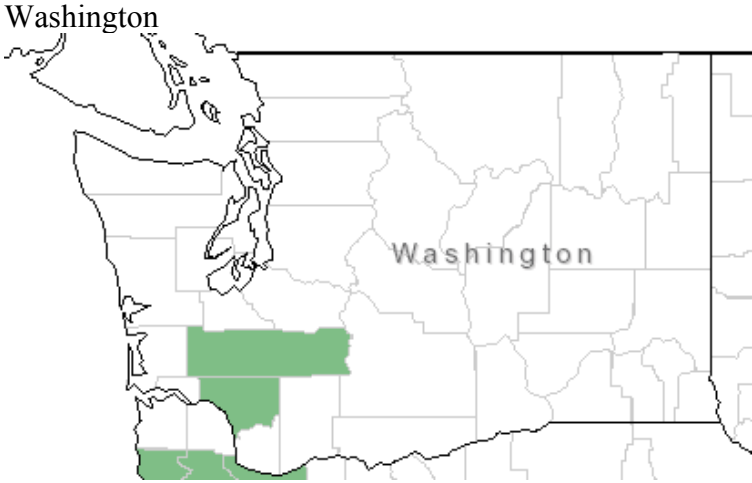
ESRM 412 – Native Plant Production

Protocol URL: <https://courses.washington.edu/esrm412/protocols/SINE2.pdf>



Oregon Department of Agriculture

| TAXONOMY | |
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| Plant Family | |
| Scientific Name | Malvaceae |
| Common Name | Mallow |
| Species Scientific Name | |
| Scientific Name | <i>Sidalcea nelsoniana</i> Piper |
| Varieties | N/A |
| Sub-species | N/A |
| Cultivar | N/A |
| Common Synonym(s) | N/A |
| Common Name(s) | Nelson's Checkerbloom (1,3,4) |
| Species Code (as per USDA Plants database) | SINE2 (1) |
| GENERAL INFORMATION | |
| Geographical range | North America |

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| |   <p>(1)</p> |
| Ecological distribution | <p>Nelson's checkerbloom is mostly found in the Willamette Valley as well as the Coast Range in Oregon. Nelson's checkerbloom has also been found in Lewis County and Cowlitz County in southern Washington. The ecosystem this plant grows in is a moist and open habitat. (2)</p> |
| Climate and elevation range | <p>The climate where Nelson's checkerbloom grows is mild and moist and the elevation can start at sea level and reach 497 meters (2)</p> |
| Local habitat and abundance | <p>The local habitat of Nelson's checkerbloom is a wetland prairie as well as areas where prairies meet woodland habitats. Other plant species that may grow in the</p> |

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| | same areas as the checkerbloom include: Oregon ash, Tufted hairgrass, Reed canarygrass, Common rush, and Slough sedge. (6). |
| Plant strategy type / successional stage | Nelson's checkerbloom uses a weed like strategy to survive. It is able to reproduce and spread quickly through both asexual and sexual reproduction. Nelson's checkerbloom can also easily adapt to different soil types, different amounts of moisture, and different habitats. (6) |
| Plant characteristics | Nelson's checkerbloom is a forb. It is an erect perennial and the stems can grow anywhere from 40 to 100 cm tall and be covered in short hairs. The plant also has basal toothed palmately lobed leaves. Each plant can have 30 to 100 magenta flowers that will produce 7 to 9 seeds annually. (5,6,7) |
| PROPAGATION DETAILS | |
| Ecotype | N/A |
| Propagation Goal | Plants (8) |
| Propagation Method | Seed (8) |
| Product Type | Container (plug) (8) |
| Stock Type | N/A |
| Time to Grow | Weeks (8) |
| Target Specifications | The target specifications that are being observed in Nelson's checkerbloom is that there needs to be well-developed crowns and the roots and rhizomes need to fill the soil in the container plug. (8) |
| Propagule Collection Instructions | To collect seeds, catch debris and ripened seeds from the flowers with weed fabric. After all debris has been collected, use a seed stripper to sweep the remaining seeds off of the weed fabric. (9) |
| Propagule Processing/Propagule Characteristics | Nelson's checkerbloom can produce 75,000 to 150,000 seeds per pound of material. (9) |
| Pre-Planting Propagule Treatments | After cleaning the seeds, a 120-day stratification treatment needs to take place. This is a cool and moist stratification at 38F to induce germination. (8) |
| Growing Area Preparation / Annual Practices for Perennial Crops | The growing media should be a loamy soil that can become saturated with water during the rainy season. Seeds can be directly planted into the media, but higher survival will be yielded if planted in plugs and then transplanted into the soil. For container production, the seeds should be sown in 7 cubic inch containers. |
| Establishment Phase Details | Add slow release fertilizer into the cones and keep the plants in a moderate temperature greenhouse (70F days and 50F nights) (9) |
| Length of Establishment Phase | 2 weeks (9) |
| Active Growth Phase | Regularly water the plants and keep them in a moderate temperature greenhouse (70F days/50F nights) throughout the active growth phase. (9) |
| Length of Active Growth Phase | N/A |
| Hardening Phase | N/A |
| Length of Hardening Phase | N/A |

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| Harvesting, Storage and Shipping | Seeds can be harvested through a thresher and are sent through an air-screen machine to clean off debris that was left on the seed. Dry all of the seeds before stratification. (9) |
| Length of Storage | N/A |
| Guidelines for Outplanting / Performance on Typical Sites | The percent survival of the Nelson's checkerbloom grown from seed is relatively high given the right conditions to grow. The plant is very adaptable to different environments and soils, allowing it to perform well on different wetland prairie sites. Once planted on the site, the checkerbloom can grow up to 100 cm tall. (7,9) |
| Other Comments | The status of this plant is currently listed as Critically Imperiled |
| INFORMATION SOURCES | |
| References | <ol style="list-style-type: none"> 1. "Sidalcea Nelsoniana." <i>Plants Profile for Sidalcea Nelsoniana (Nelson's Checkerbloom)</i>, plants.usda.gov/core/profile?symbol=SINE2. 2. "Sidalcea Nelsoniana - Piper." <i>NatureServe Explorer</i>, 2009, explorer.natureserve.org/servlet/NatureServe?searchName=Sidalcea%2Bnelsoniana. 3. "Sidalcea Nelsoniana ." <i>ITIS Standard Report Page: Sidalcea Nelsoniana</i>, www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=21890#null. 4. "Taxon: Sidalcea Nelsoniana Piper." <i>GRIN</i>, npgsweb.ars-grin.gov/gringlobal/taxonomydetail.aspx?320103. 5. "Sidalcea nelsoniana." <i>Burke Herbarium Image Collection</i>. The University of Washington, http://biology.burke.washington.edu/herbarium/imagecollection/taxon.php?Taxon=Sidalcea%20nelsoniana 6. Pendergrass, Kathy, and Steve Gisler. "Introduction to Nelson's Checker-Mallow, a Federally-Listed Threatened Species, and a Key and Photo Guide to the Checker-Mallow Species That Occur within Its Range ." <i>Technical Notes</i>, US Department of Agriculture , Sept. 2010, www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_042947.pdf. 7. "Nelson's Checkermallow (Sidalcea Nelsoniana) ." <i>Oregon Department of Agriculture</i>, www.oregon.gov/ODA/shared/Documents/Publications/PlantConservation/SidalceaNelsonianaProfile.pdf. 8. "Malvaceae (Sidalcea)." <i>Reforestation, Nurseries and Genetics Resources</i>, npn.rngr.net/npn/propagation/protocols/malvaceae-sidalcea-4075/?searchterm=Sidalcea%2Bnelsoniana. |

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| | 9. "ROSE CHECKERMALLOW <i>Sidalcea Virgata</i> Howell." <i>Plant Guide</i> , USDA and NRCS, 2012, plants.usda.gov/plantguide/pdf/pg_sivi3.pdf . |
| Other Sources Consulted | <p>"Plant Profile • Center for Plant Conservation." <i>Center for Plant Conservation</i>, saveplants.org/national-collection/plant-search/plant-profile/?CPCNum=3980.</p> <p>Wilson, Mark V. <i>Response to Two Years of Restoration Techniques in an Existing <i>Sidalcea Nelsoniana</i> Habitat: Final Report</i>. Oregon State University, 2004, people.oregonstate.edu/~wilsomar/PDF/W_Sine_04.pdf.</p> |
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