

Growing with the seasons: Incarcerated adults cultivate native plants and a gardening curriculum



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Conservation Nursery Projects

- Taylor's checkerspot butterfly recovery - nursery seed and plant production, restoration sites in the Salish lowland prairie
- Seed Production of *Viola spp.* and recalcitrant species
- Wetland Emergent Vegetated Mats
- Horticultural Mentoring



Nursery Production

A woman with her hair in a bun, wearing a grey t-shirt and khaki pants, is kneeling in a large greenhouse. She is focused on examining a small plant in her hands. The greenhouse is filled with rows of young plants in yellow pots, which are arranged on black trays. The structure of the greenhouse is made of metal arches and translucent plastic covering. The background shows a clear blue sky and the interior of the greenhouse.

Some plants for TCB recovery include: Armeria maritima, Balsamorhiza deltoidea, Castilleja hispida, Fragaria virginiana, Lomatium triternatum, Lomatium utriculatum, Plantago lanceolata

Seed Production

- Focus on species that benefit from hand cultivation and harvest:
Hieracium scouleri, *Silene douglasii*, *Silene scouleri*, *Viola adunca*, *Viola howellii*, *Viola praemorsa*, and *Packera macounii*.





Emergent Vegetated Mats

- Project partners include Center for Natural Lands Management, Joint Base Lewis-McChord, WA Dept. Fish & Wildlife, U.S. Fish & Wildlife Service, and Samish Nation.
- Wetland plants pre-installed in coir mats for plant establishment and weed suppression.
- Experiments to establish habitat for the Oregon spotted frog and outcompete invasive species.



Species grown for Emergent Vegetated Mats: *Carex exsiccata*, *Carex comosa*,
Carex obnupta, *Carex lenticularis*, *Juncus supiniformis*, *Glyceria elata*





Sustainability in Prisons Project - Oregon

- CCCF growing native plants for threatened Oregon silverspot butterfly (*Speyeria zerene ippolyta*)
- *Viola adunca* for larvae and nectar species (*Solidago elongate*, *Anaphalis margaritacea*, *Symphyotrichum chilense*) for adults



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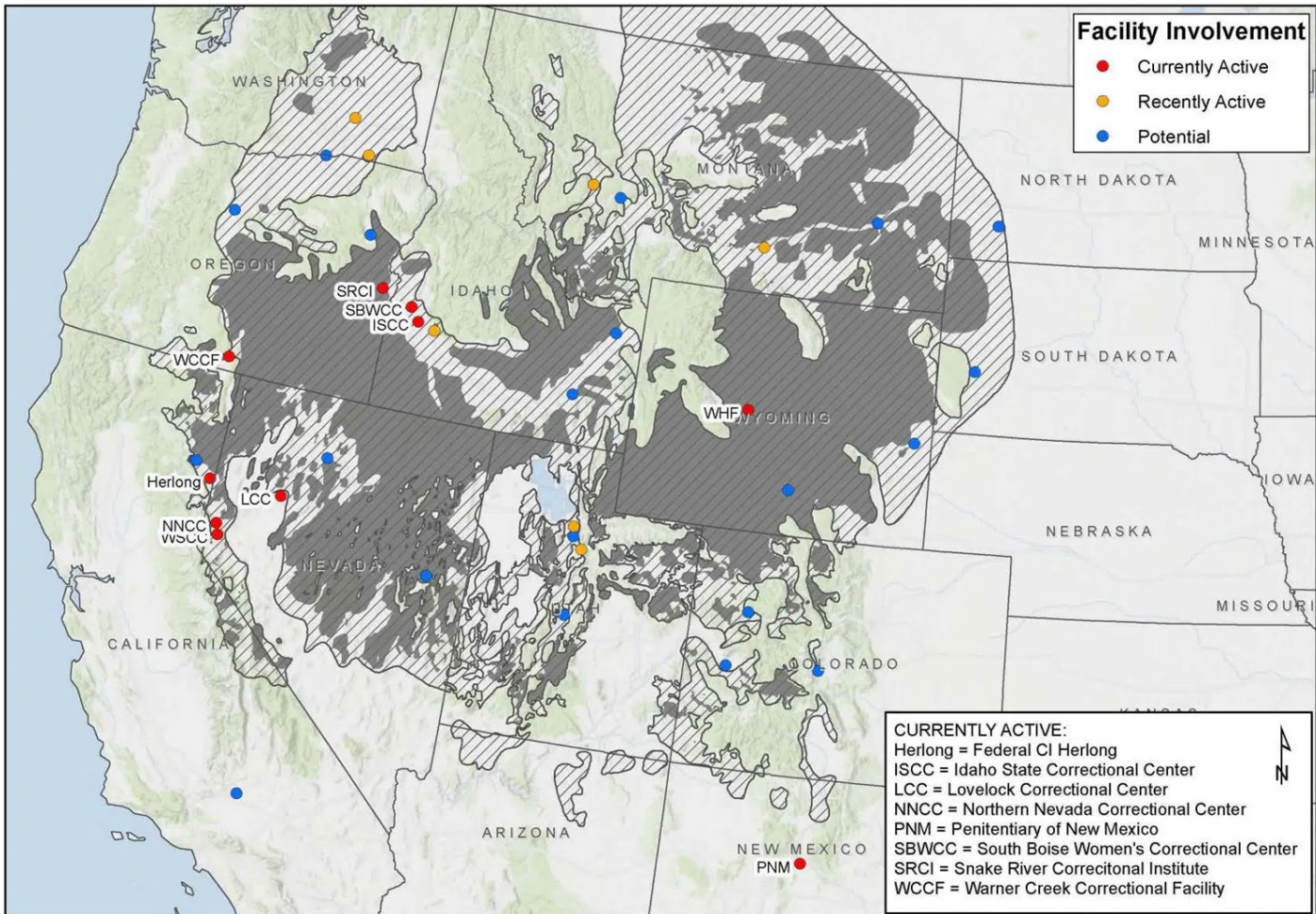


Sagebrush in Prisons Project

- Improve habitat for Greater sage-grouse by engaging incarcerated adults in the production of sagebrush for habitat restoration on BLM lands.
- Provide ecological education and vocation training to incarcerated adults.



Overlay of Greater Sage-Grouse Habitat and Prison Facilities*







Sagebrush Data Sheet - 2017				
Date	Daily Watering 1 (Y/N)	Daily Watering 2 (Y/N)	Fertilize (Y/N)	Daily Observations
7/2	Y	Y	N	58° GREENHOUSE TRANSPLANTS 55 AMB 88° GREENHOUSE 85 AMB 60° GREENHOUSE 53 AMB TRANSPLANTS
7/3	Y	Y	N	85° GREENHOUSE 80 AMB 55° GREENHOUSE 50 AMB
7/4	Y	Y	N	89° GREENHOUSE 90 AMB 60° GREENHOUSE 60 AMB MOVED MORE OUTSIDE
7/5	Y	Y	N	98° GREENHOUSE 90 AMB 60° GREENHOUSE 60 AMB
7/6	Y	Y	N	80° GREENHOUSE 80 AMB 60° GREENHOUSE 60 AMB MOVED OUTSIDE - SODI HERE THINNING ORANGE
7/7	Y	Y	N	88° GREENHOUSE 84 AMB 60° GREENHOUSE 60 AMB
7/8	Y	Y	N	95° GREENHOUSE 95 AMB 55° GREENHOUSE 55 AMB THINNING ORANGE
7/9	Y	Y	N	87° GREENHOUSE 85 AMB 50° GREENHOUSE 50 AMB SODI CONSTRUCTION
7/10	Y	Y	N	86° GREENHOUSE 80 AMB 55° GREENHOUSE 50 AMB FERTILIZED ALL EXCEPT ORANGE
7/11	Y	Y	N	80° GREENHOUSE 80 AMB 56° GREENHOUSE 50 AMB STAND MADE STEEL 4 TABLES
7/12	Y	Y	N	90° GREENHOUSE 80 AMB 60° GREENHOUSE 55 AMB THINNING ORANGE / SODI
7/13	Y	Y	N	95° GREENHOUSE 90 AMB

Please note plant activity each day. Write down your concerns or questions and give them to the office to pass on to the contractor.

Germination as of 6/2/2015
overall: 80.8%
- Band: 98%
non-germ trays 8 out of 100
- Regular: 89.4%
non-germ trays 54 out of 509

Germination as of 6/3/2015
overall: 91.6%
- Band: 99%
non-germ trays 1 out of 100
- Regular: 90.2%
non-germ trays 20 out of 509

Germination as of 6/4/2015
overall: 92.2%
- Band: 99.2%
non-germ trays 0.8 out of 100
- Regular: 90.9%
non-germ trays 46.5 of 509

Germination as of 6/5/2015
overall: 92.8% (reseeded trays)
- Band: 99.4%
non-germ trays 26 of 100
- Regular: 91.6%
non-germ trays 43 of 509

Germination as of 6/8/2015
overall: 94.3%
- Band: 99%
non-germ trays 1 of 100 (reseed)
- Regular: 93.4%
non-germ trays 33 out of 509

Germination as of 6/9/2015
overall: 93.8%
- Band: 99%
non-germ trays 1 of 100
- Regular: 93.7%
non-germ trays 37 of 509

RESEED on 6/12/2015
38 - Idaho - Weldon trays
1 - Band tray

Germination as of 6/19/2015
overall: 93.6%
- Band: 99%
non-germ trays 1 of 100
- Weldon: 92.5%
non-germ trays 38 of 509

Germination as of 6/19/2015
overall: 94.6%
- Band: 99%
non-germ trays 0 out of 100
- Weldon: 93.5%
non-germ trays 35 of 509

Germination as of 6/19/2015
overall: 95.7%
- Band: 99.4%
non-germ trays 0.1 of 100
- Weldon: 94.9%
non-germ trays 26 of 509

Germination as of 6/19/2015
overall: 96.7%
- Band: 99.9%
non-germ trays 0.1 of 100
- Weldon: 96.1%
non-germ trays 20 of 509

Germination as of 6/21/2015
overall: 97.4%
- Band: 99.9%
non-germ trays 0.1 of 100
- Weldon: 96.9%
non-germ trays 16 of 509

Germination as of 6/21/2015
overall: 98.2%
- Band: 99.9%
non-germ trays 0.1 of 100
- Weldon: 97.8%
non-germ trays 11 of 509

Germination as of 7/1/2015
overall: 96.5%
- Band: 99.9%
0.1 trays of 100
- Weldon: 95.8%
at 2 trays of 509

Reseed all new germination trays 7/2/15
additional 8.5 trays non-germ

Germination as of 7/2/15
overall: 95.1%
Band: 99.9%
non-germ trays 0.1 of 100
Weldon: 94.1%
non-germ trays 30 of 509

Germination as of 7/6/15
overall: 96.1%
Band: 99.9%
non-germ trays 2.75 of 100
Weldon: 95.7%
non-germ trays 235 of 509

Germination as of 7/1/2015
overall: 96.6%
Band: 99.3%
2.75 of 100
Weldon: 96.5%
18 of 509

Germination as of 7/4/2015
overall: 97.9%
Band: 99.8%
2.25 of 100
Weldon: 97.2%
15.5 of 509

Germination as of 7/9/2015
overall: 97.3%
Band: 99.3%
0.1 of 100
Weldon: 97.4%
14 of 509

Germination as of 7/10/2015
overall: 97.7%
Band: 99.9%
0.1 of 100
Weldon: 97.4%
13 of 509

RESEED on 7/1/2015
21.5 trays non-germ/lost
RESEED on 7/1/2015









Education Series



Gardening Curriculum



- Stafford Creek Corrections Center (SCCC) garden program & conservation nursery
- Monroe Correctional Complex-Washington State Reformatory Unit (MCC-WSRU) compost & gardening programs



the
evergreen
state college

- Carly Rose, SPP Curriculum Development Coordinator, with input from
- Joslyn Trivett, SPP Education & Outreach Manager
- Kelli Bush, SPP Co-Director and
- Carl Elliott, SPP Conservation Nursery Manager

SPP



Sustainability in Prisons Project
Gardening Curriculum



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Dionné Mejía, Advanced
Topics author and editor



SPP is revising the initial curriculum for relevancy to in-prison programs.

Core Curriculum

1. Guide to Teaching and Learning

Seed to Supper

2. Planning your garden
3. Getting started with healthy soil
4. Planting your garden
5. Caring for your growing garden: Part I
6. Caring for your growing garden: Part II
7. Harvesting, Nutrition, & Using the bounty

Advanced Topics

8. History and Social Context in U.S. Gardening
9. Horticulture
10. Mathematics for Horticulture
11. Composting

Botany

12. Naming & Classifying Plants
13. Plant Cells & Metabolism
14. Roots & Stems

Climate specific

15. Climate and Plant Hardiness Zones
16. Planting & Harvesting Vegetables
17. Tilt Guide (Guide to Regionally Specific Gardening)
18. How to Make a Proposal

Supplementary Topics

Aquaponics and Hydroponics

- Hydroponics
- Aquaponics
- Aquaponics & Hydroponics: Part II

Soil

- Alternative Composting: Vermicomposting and Bokashi
- Soil Science Part I: Soil Makeup and the Soil Food-Web
- Soil Science Part II: Soil Biochemistry

Seeds

- Seeds
- Seed Production
- Describing & Recognizing Seeds

Outside Community: Returning and Connecting

- Finding resources and programs
- Gardening Outside Prison
- Urban Gardening

Additional

- Beekeeping
- Identifying the Characteristics of Healthy Plants
- Gardening Techniques for Prison
- Organic Lawn Maintenance

Reflection: Reasons for Gardening

Look at the following wheel of life domains. What are the three areas of life that have the most potential to be affected by gardening? Everyone's reasons for gardening will vary. You may leave some areas blank, and that's okay.

Reconvene as a group and, if you choose, take turns sharing with one another ideas and thoughts that came up for you during this process.

