



GREAT BASIN SAGEBRUSH PROJECT



Working to bring science and nature education opportunities into prisons.
We provide unique and meaningful activities to incarcerated men and women with
the goal of helping our natural environment.



Institute
for
Applied
Ecology

Sage Grouse Habitat Conservation Through Prisons

Greater Sage-Grouse



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Institute for Applied Ecology



Mission

Conserve native species and habitats through restoration, research, and education.



Bureau of Land Management



Purpose

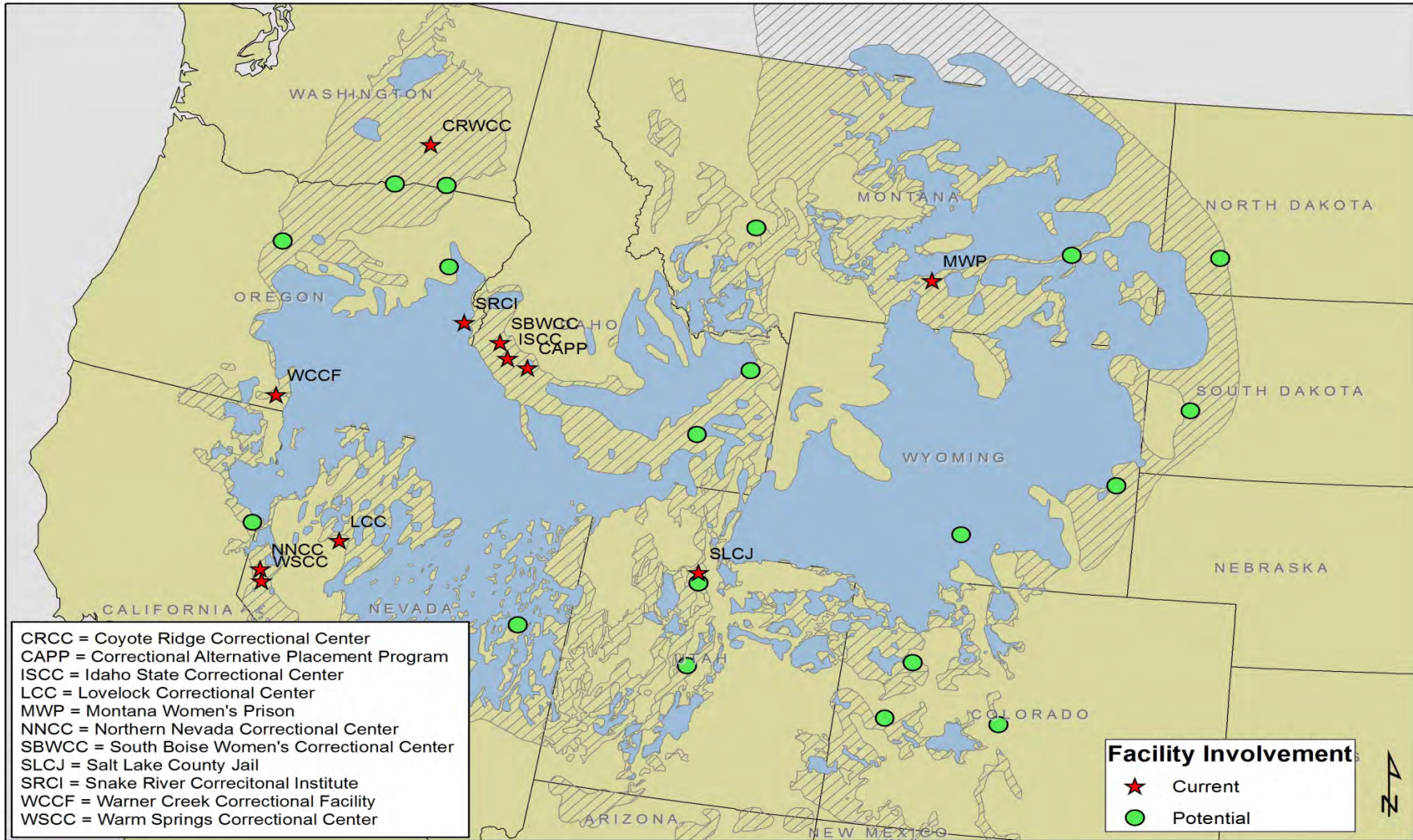
Improve habitat for Greater Sage-Grouse by engaging state prison systems in production of sagebrush for habitat restoration on BLM lands



Photo by Jeannie Stafford USFWS

Why Prisons??

Overlay of Greater Sage-Grouse Habitat and Prison Facilities*



0 50 100 200 300 400 Miles

*Only a sample of prisons shown.

Current Range Historic Range



What Do We Do?



Sowing Sagebrush

Growing Sagebrush



Watering

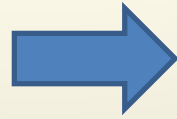


Fertilizing



Thinning/weeding

Pack Up



Plant Out

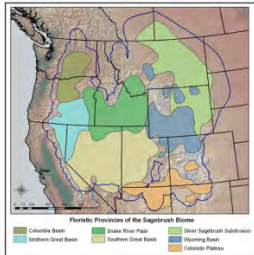


What Else Do We Do?

Education



Sagebrush Steppe Range



CREATURES OF THE SAGEBRUSH STEPPE



INVASIVE SPECIES



Buckwheat



What is Soil?

- "The unconsolidated mineral matter on the surface of the Earth that has been subjected to and influenced by genetic and environmental factors of parent material, climate, macro- and microorganisms, and topography, all acting over a period of time and producing a product..."



Awards



Where it All Started

- In 2014, started working with Snake River Correctional Institution in Ontario, OR
- Grew 20,000 sagebrush plugs (*Artemisia tridentata* subsp. *Wyomingensis*) for Vale, OR BLM



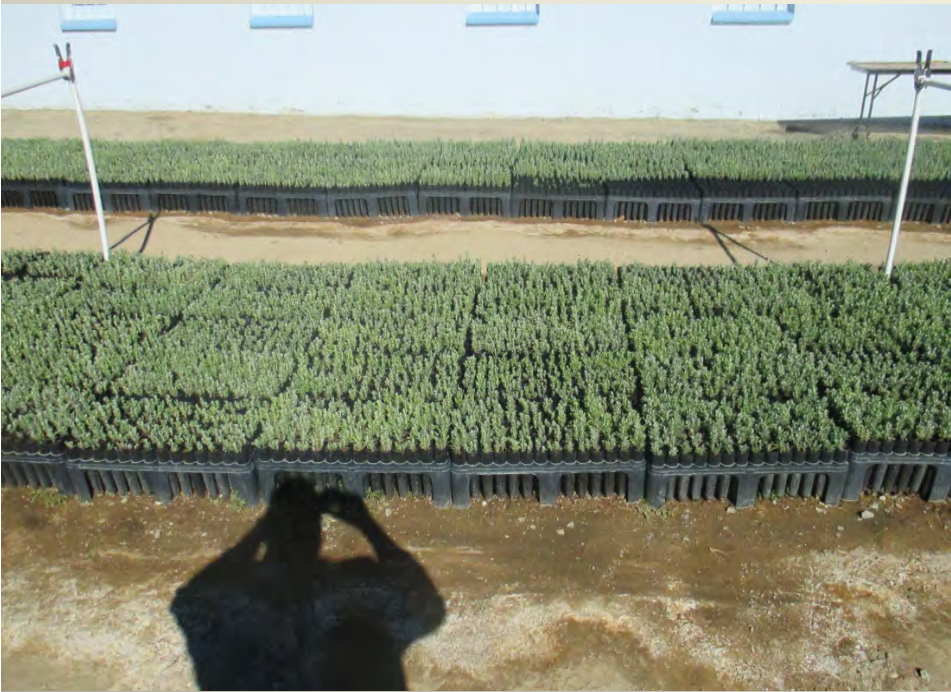
2015

- 6 prisons involved in growing and planting out
- 3 states (OR, WA, and ID)
- ~ 120,000 sagebrush plugs grown for 5 different local BLM offices



Expanded Again!

- By 2016, expanded to 11 prisons in 6 states
 - OR, WA, ID, NV, UT, MT
- Delivered ~ 319,000 sagebrush plugs



Warm Springs Correctional Center,
NV

Seed Orchard Planting near Vale, OR

Nevada

- 3 Prisons
- Each grew 35,000 sagebrush plugs
- Totaling 105,000 plugs!



Jim Grant, NV Appeal



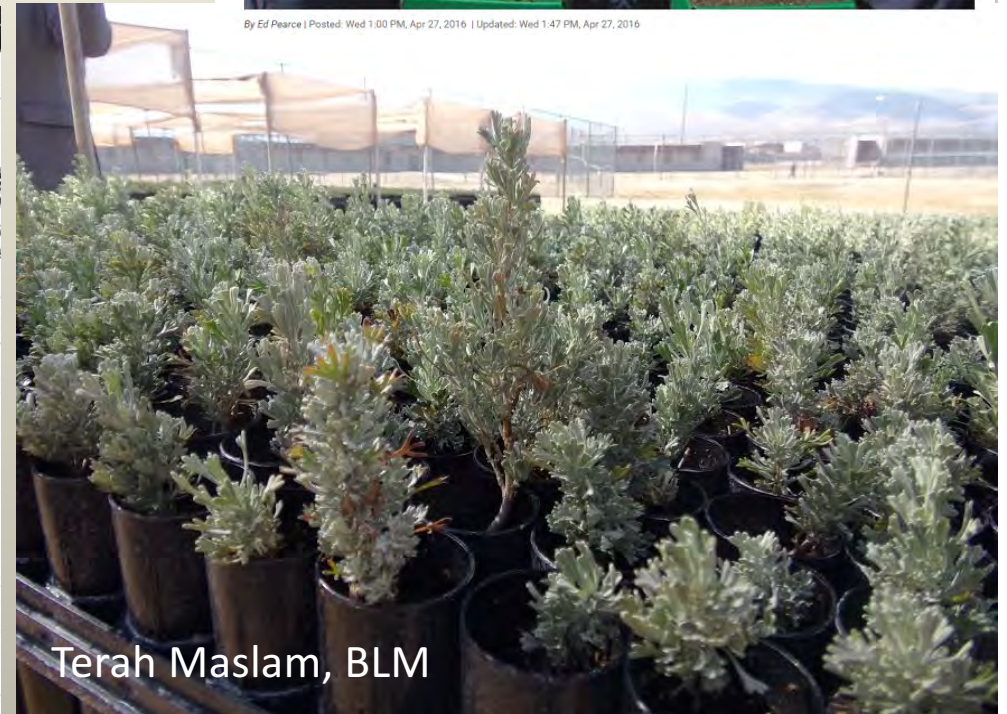
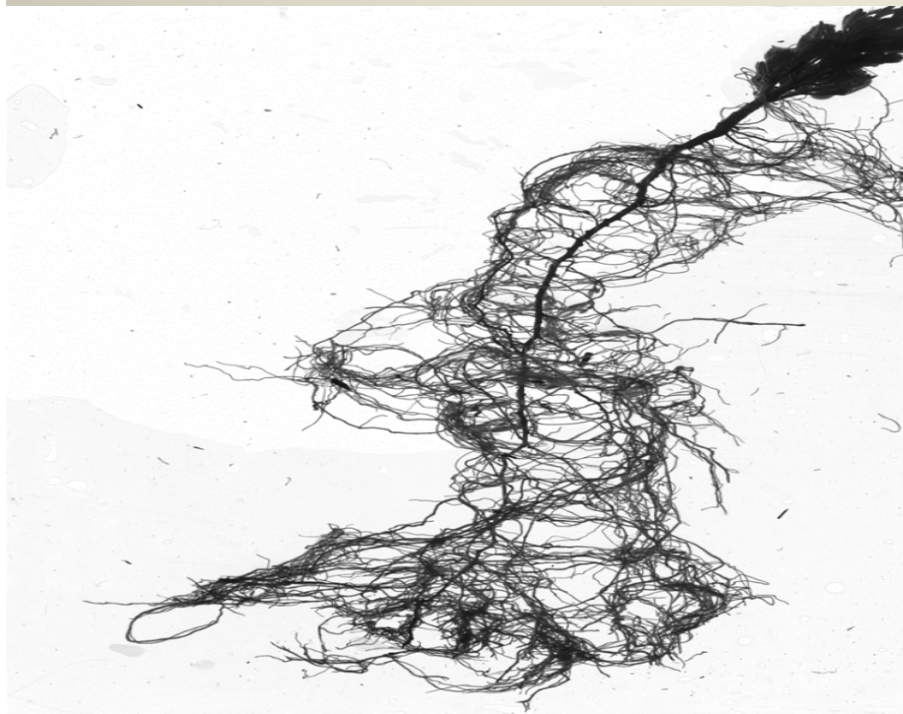
Debra Reid, News4Nevada

Northern Nevada Correctional Center (NNCC)

- Mental Health Unit
 - Elko BLM Office
 - Media Day
 - Soil experiment



By Ed Pearce | Posted: Wed 1:00 PM, Apr 27, 2016 | Updated: Wed 1:47 PM, Apr 27, 2016



Terah Maslam, BLM

Warm Springs Correctional Center (WSCC)

- Veterans Program
 - 20k for Winnemucca BLM
 - 15k for Susanville BLM
 - Transplants

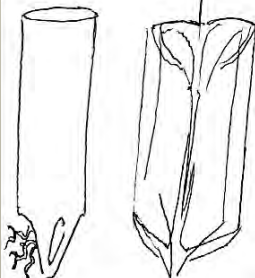


3, 19
4
76

75 trays
1 resow

64 trays
3 transplants

say, I get a new home



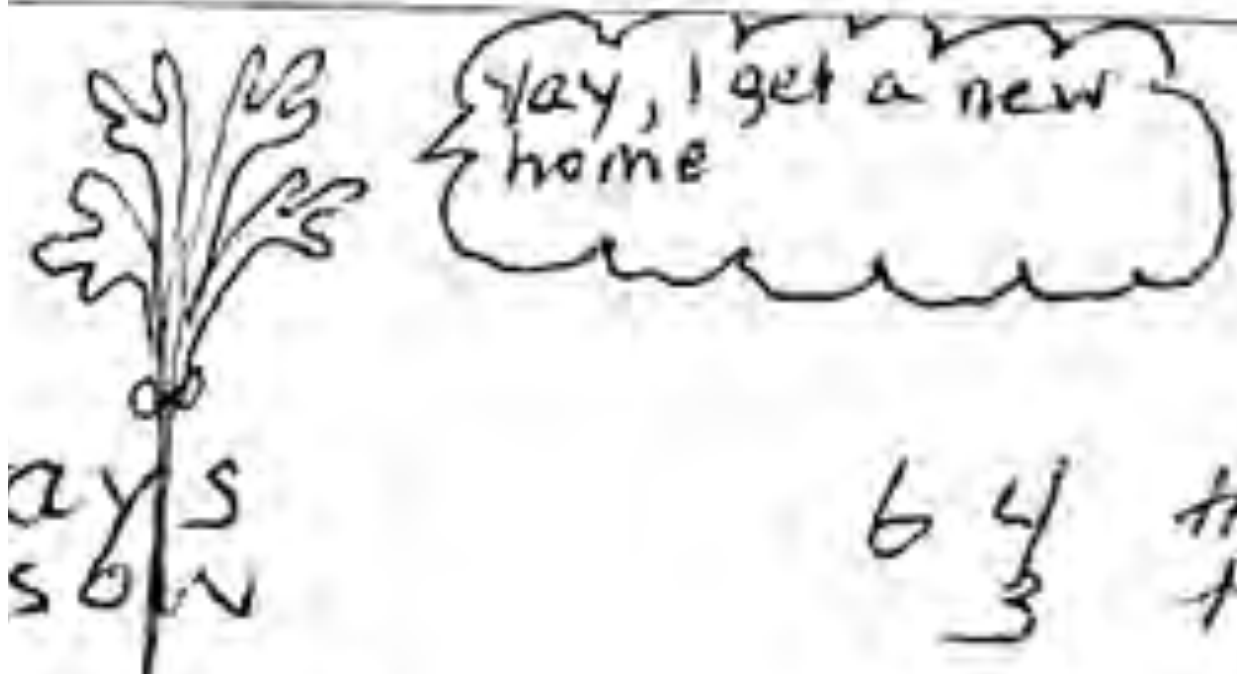
25	
64	
139	trays
1	resow
3	transplants
143	total
11	dead trays
154	

* All trays have root systems that project beyond the bottom of the cone. Because they are well developed it is necessary to rotate trays on a regular basis to ① keep root system free from becoming established in underlying soil and ② maintain as much integrity as possible of the cone root system.



Warm Springs Correctional Center (WSSCC)

- Veterans Program
 - 20k for Winnemucca BLM
 - 15k for Susanville BLM
 - Transplants



Lovelock Correctional Center (LCC)

- Horticulture Graduates
 - Winnemucca BLM
 - Competition Study
 - Internship



SAGEBRUSH

Plant Competition:

The following experiment was conducted to evaluate and observe the growing competition of the sagebrush. The tallest of the sagebrush was removed and placed in the center of the trays to possibly stimulate the smaller plants to grow and expand to compete for sunlight. This was conducted from August 1, 2016 until results could be observed and verified.

On September 9, 2016, the experiment was observed and confirmed by Shannon Swin, that the surrounding smaller plants began to grow faster and grow taller from the originating plants used in the experiment.

This observer concludes that the plants tend to grow faster and taller when a taller plant is placed in the center of the growing tray. The growth of the surrounding plants radiate outward in what forms a slope from the taller plant to the smallest.

The purpose of this experiment is to stimulate the growth of the sagebrush to expedite the growing on period before the imminent transfer to their final destination.

Sept. 26, what is noticed is the sagebrush are growing faster in the cooler weather. The leaves are broader and bush-like growth is apparent. Other observation is the plants have started to grow faster that are surrounding the taller plants that were placed into the center rows of the trays. (See below table)

1	2	3	4	5	6	7	7	6	5	4	3	2	1
2													2
3		Growth	Growth	Growth	Growth	Growth	Growth	Growth		Growth	Growth	Growth	3
4		Growth	Growth	Growth	Growth	Growth	Growth	Growth		Growth	Growth	Growth	4
5		Growth	Growth	Growth	Growth	Growth	Growth	Growth		Growth	Growth	Growth	5
6													6
7													7

2016

Great Basin Sagebrush Project Report

Working to bring science and nature education opportunities into prisons.

Labor Hour Chart

The graph below shows total man hours per inmate for the 2016 project. There are approximately 35,000 plants. The hours were broken down into three areas: Monitoring, Planting, and Meetings. There were other activities such as data collection, fertilizing, weeding, and pest control. The plants were inspected three times per day from May till October.

Staff Member	Hours
Vukobrat	206
Stuberli	212
Tapia	102
Trease	102
Anderson	132
Burr	202
Spinger	197
King	257
Cole	142
Libby	287
Stessel	288
Baker	295

	Baker	Stessel	Libby	Cole	King	Burr	Anderson	Trease	Tapia	Vukobrat	Stuberli
Total Hours	295	288	287	142	257	202	132	102	102	206	212
Weeding/Thinning/Labor	20	15	15	10	10	10	10	10	10	10	10
Washing	10	10	10	10	10	10	10	10	10	10	10
Class Work	10	10	10	10	10	10	10	10	10	10	10
Meeting Hours	10	10	10	10	10	10	10	10	10	10	10

Benefits of Propagation Program for Inmates and Prisons

- Provide high quality, detailed work experiences
- Help reduce idleness and behavior problems within prison
- Gives inmates valuable skills
- Provides good image to the public
- Restorative justice



Other Benefits of the Program

- Outreach!
- 100's of thousand of sagebrush plugs produced for sage-grouse habitat restoration
- And the 350+ other species benefiting from this habitat restoration



Plans for 2017 Season

- Projected # of plants to be grown= 485,000
- Adding new prisons in WA and UT
- Growing for more local BLM offices in more states

In Nevada

- Doubling our efforts!
- A small experiment to test germ rates of seed collected last year vs. this year



After that.....

Hopefully we get continued funding to keep this amazing program going!



“WHAT GROWING SAGEBRUSH MEANS TO ME”

By Toby Jones, inmate WCCF 11/17/16

I’ve watched for many years and one thing continually comes to my attention is that our world is tiring. Without our participation and us listening to the cry of our depleted world, then our children will not get to experience the wonders we have.

I’ve contributed very little in my adult life while battling my afflictions.

The sagebrush program has been good for my soul. This project has done more than rescue the sage grouse, it’s allowed us men to do and be something positive. Through this project, men’s’ lives begin to have worth; we see that we can be positive and benefit the world instead of bringing it down. Someone smiling and saying well done can move a man’s heart and give him back hope.

We’ve made mistakes but in a way we are all alike.

Yes, I’ve made mistakes, we all have, but the one I don’t want to make is missing the chance to give back to the world that has taken care of me.

Given the chance you will see the goodness in us all.



Questions?



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The preceding presentation was delivered at the

2017 National Native Seed Conference

Washington, D.C. February 13-16, 2017

This and additional presentations available at <http://nativeseed.info>

