



Stacy Moore Institute for Applied Ecology



## PREFACE

This protocol is the result of an agreement between the Institute for Applied Ecology (IAE) and Bureau of Land Management. IAE is a non-profit organization whose mission is conservation of native ecosystems through restoration, research and education. Our aim is to provide a service to public and private agencies and individuals by developing and communicating information on ecosystems, species, and effective management strategies and by conducting research, monitoring, and experiments.



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## **ACKNOWLEDGEMENTS**

The authors gratefully acknowledge funding from Bureau of Land Management and the support of staff and inmates from Snake River Correctional Institution and Oregon Department of Corrections. We appreciate the leadership and support from Captain Chad Naugle and the Sustainability in Prison Project staff at Evergreen State College, WA.

**Cover photograph**: Snake River Correctional Facility inmates water Wyoming big sagebrush. (Photo: Stacy Moore)

#### **Suggested Citation**

Moore, S.L. 2015. Working with Correctional Facilities to Produce Sagebrush for Greater Sage-Grouse Conservation. Prepared by Institute for Applied Ecology for Bureau of Land Management. Corvallis, Oregon. 115 pp.

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# Working with Correctional Facilities to Produce Sagebrush for Greater Sage-Grouse Conservation

## CHAPTER 1: INTRODUCTION

The greater sage-grouse (Centrocercus urophasianus; hereafter sage-grouse) is a candidate for listing by the United States Fish and Wildlife Service (USFWS) as a threatened or endangered species under the Endangered Species Act. Evidence suggests that fragmentation and destruction of semiarid shrubland habitat across much of the species' range is a primary driver of the decline of this species<sup>1</sup>. Sage-grouse are a sagebrush obligate species, depending on shrub species within the genus Artemesia for food and cover at multiple stages of their life cycle. Other plant species in the sagebrush communities provide food either directly (e.g., leaves, seeds) or indirectly, through attraction of insects. Sage-grouse populations require large, contiguous areas of sagebrush dominated habitat; however, these habitats



FIGURE 1: GREATER SAGE-GROUSE (PHOTO BY: PRAIRIEICE.BLOGSPOT.COM)

continue to be fragmented and degraded through the spread of invasive species, energy development, agricultural conversion, and other human activities<sup>2</sup>.



FIGURE 2: MANY PRISONS WELCOME THE OPPORTUNITY TO GROW AND PLANT OUT NATIVE PLANTS (PHOTO: STACY MOORE)

In light of these pressing conservation threats and the implications of listing the sage-grouse as threatened or endangered, sagebrush habitat restoration efforts are of great importance at this However, the success time. of reestablishing sagebrush is unreliable to poor using direct seeding methods. Greater success has been noted for restoration projects which employ transplanting of sagebrush seedling  $stock^{3,4,5}$ . Though more costly than direct seeding, the relatively high survival rates of transplanted sagebrush stock indicate that the method of transplanting sagebrush can be one of the tools for restoration projects that aim to reoccupy degraded sage-grouse habitat with native shrubs.

Production of sagebrush plants for greater sage-grouse habitat restoration within state prison systems represents an opportunity to provide urgently needed plant materials for sage-grouse conservation projects. Many state prison facilities currently have, or can develop, the capacity to produce large numbers of plant

materials for restoration projects. This model of plant material production is mutually beneficial. Horticultural programs help provide much-needed job opportunities within state prison facilities. Horticultural therapy has been shown to have great value in improving inmate mental health, decreasing substance abuse, and reducing recidivism<sup>6,7,8,9</sup>. Environmental service projects have the potential to improve inmate self-esteem, emotional health, cognitive health, ability to empathize, and sense of altruism through caring for living organisms and contributing to the broader social community.

This protocol covers all aspects of launching and maintaining a plant production partnership for sagebrush systems with a correctional facility. It identifies the geographic scope (overlap between correctional facilities and the distribution of greater sage-grouse), state Departments of Correction (DOC) with active sustainability programs, specific prisons that are strategically located to assist with sage-grouse plant production and that have (or are willing to acquire) appropriate facilities for sagebrush plant production, and and contact information for each DOC and prison. The protocol also identifies plant species (in addition to sagebrush) in greatest need of production and describes the propagation methods appropriate for each. Linking likely prison facilities with land management partners will be crucial to these projects. This protocol focuses on public land managers, especially those within the Bureau of Land Management, but also other federal and state agencies. The purpose of this project is to improve habitat for greater sage-grouse by engaging state prison systems in production of sagebrush and other important plants for habitat restoration.

## CHAPTER 2: STARTING YOUR SAGEBRUSH PROGRAM

## 2.1 Securing Partnerships

Identifying partners to collaborate on the sagebrush program essential when is establishing new propagation projects. Each partner will bring necessary skills and expertise to the program and collaboration is crucial to ensure smooth implementation and operation. Consider contacting the Sustainability in Prisons Project Washington and/or the Sustainability in Prisons Project Network to see if they have



FIGURE 3: IDENTIFYING PARTNERS IS ESSENTIAL WHEN ESTABLISHING NEW PROJECTS (PHOTO: SHAUNA BITTLE)

connections with prisons and natural resource partners in your area before you start initiating contacts yourself.

Partners may include state or federal agencies which hold necessary permits or have land management responsibilities. Non-profit or community organizations may be excellent partners for acquiring grant funding and providing overall management of the propagation program. Consider contacting an academic organization that can potentially provide graduate student support, staff and faculty leadership, or grant funding. The correctional facility will provide inmate labor and staff support for day to day duties related to sagebrush maintenance.

#### 2.2 Contacting a Prison Facility

If you do not already have a contact at your local prison then the best place to start will be with the prison's Public Information Officer (PIO), Communications Manager, or Superintendent. Additionally you can inquire if the prison has an established sustainability program and a designated sustainability manager or coordinator.

Explain your proposal to the corrections contact and inquire if there may be a general interest from the prison in this type of program. If there is interest and support from the prison administration, ask for an initial meeting with all DOC staff that may be involved

or impacted by the program. This may include the Superintendent, Assistant Superintendent, Sustainability Manager, Security Manager, Physical Plant Manager, Superintendent of Correctional Rehabilitation, union representative, and any other staff that may be impacted by or asked to contribute to the program. Having support and understanding of the staff regarding the project will be crucial to the success of the project.

### 2.2.1 Setting up the Initial Meeting



FIGURE 4: INVITE PARTNERS TO AN INITIAL SCOPING MEETING (PHOTO: DANIELLE WINDER)

Identify potential partners in the project and invite them to an initial scoping meeting. Plan to have your meeting corrections at the institution where you can look at sites on the possible facility premises for the propagation. Work with your primary DOC contact to set up the meeting and brief your non-DOC partners on the protocol for entering the prison such as appropriate clothing, government issued identification and what is allowed and not allowed within the prison BEFORE they arrive.

The DOC facility will need the name of each person attending the meeting beforehand. Give yourself and the prison plenty of time to obtain any clearances or other necessary paperwork before the meeting is to commence.

Distribute a meeting agenda well before the meeting date. Each potential stakeholder may have different concerns and it is imperative that each partner feels they are equal part of the collaborative process.

During your initial meeting consider covering:

- Introductions and roles
- Overview of project
- Targets and tasks for the project
- Partner roles and responsibilities
- Timeline
- Equipment and facilities or permits needed
- Funding
- Safety or security concerns
- Tour of facility to look at possible locations for the project

#### 2.2.2 Partner Roles



Federal, state and other natural resource agencies are excellent partners for project leadership, biological advice and obtaining permits. necessary anv Agencies such as BLM can provide sagebrush species advice, plant materials such as seed, planting site locations, monitoring and research design suggestions. See Appendix B. for list of BLM and Forest Service offices near greater sage-grouse locations.

FIGURE 5: FEDERAL AGENCY PARTNERS CAN PROVIDE TECHNICAL ADVICE AND SELECTED PERMITS. CLARK FLEEGE, USFS LUCKY PEAK NURSERY, PROVIDES SAGE ADVICE TO IAE STAFF (PHOTO: STACY MOORE)



Non-profit, academic or community organization

FIGURE 6: GRADUATE RESEARCH ASSISTANT, BRI MORNINGRED ASSISTS HORTICULTURE TECHNICIANS IN THE PLANT NURSER (PHOTO: SHAUNA BITTLE) DOC staff already have a full agenda at work and may be take reluctant to on new responsibilities related to the sagebrush project. It is important for your project lead to listen to any DOC staff concerns and try to alleviate potential issues by having a well-planned support system for the project. Each should have clearly partner defined tasks so no one party feels overwhelmed.

Including non-profits, academic institutions or other community partners will provide aspects such as logistical support, grant funding and management, progress and final reports, securing equipment and supplies and educational materials. The sagebrush project lead will be the main contact with the point person at DOC and will be responsible for writing and submitting the job announcement for hiring inmates. Academic institutions are especially well equipped to provide student assistance, resources for research, data entry and monitoring, evaluation and coordination.

#### 2.2.3 Department of Corrections

DOC staff cover many different roles and it is important to have clear communication and understanding with all staff related to the project. Corrections staff at the facility play a critical role including day to day supervision of inmate technicians. facilitating visits, tours, and media events, addressing security and behavior issues, constructing and maintaining infrastructure, and recruiting and hiring inmate technicians<sup>10</sup>. In addition, DOC staff are responsible for posting your



FIGURE 7: DOC STAFF COVER MANY DIFFERENT ROLES WITHIN THE PRISON (PHOTO: FIONA EDWARDS)

sagebrush job announcement to inmates. DOC staff will conduct the hiring of inmates and assign staff to oversee the project. It is important for the project manager to work closely with the DOC facility manager and security manager when discussing greenhouse/project site location and details. They will have to consider available water, electricity, permits and security needs. Give them ample time to have all facility parts in place before the project commences.

It is recommended that the sagebrush project manager have one main contact within DOC. This will be your key contact who can liaise with all relevant DOC staff. Ideally this person will be an excellent networker who can keep in close communication with project staff both within and outside DOC. If too many people within DOC are contacted for various tasks then there is a greater chance for communication problems and failure to reach all the necessary people who make day to day decisions at the facility.

Inmate technicians can conduct daily tasks related to the sagebrush propagation program. They will be responsible for sowing seeds, daily watering, fertilizing, thinning and potentially even planting at restoration sites. In addition, they are key to recording data and providing regular feed back to you and DOC staff. See Chapter 3, for protocol on working with inmates.

#### 2.3 Training

#### 2.3.1 Non-DOC training

Each state will have its own required training and security clearance process for non-DOC program partners. All program partners who will work regularly with inmates within the prison need to receive training. Your key contact within DOC will assist you in setting up your training and clearances.



FIGURE 8: VOLUNTEER TRAINING ORIENTS VOLUNTEERS TO PRISON FACILITIES AND INMATE CULTURE (PHOTO: SHAUNA BITTLE)

- Application to DOC for background check: This background investigation will examine any previous criminal history. In most cases you will receive an approval/denial letter with instructions for setting up further training.
- **Basic Training:** Only individuals who have been cleared through the initial application and background check are allowed to attend training. Training includes aspects such as department overview, dress code, ID cards, corrections culture, inmate demographics, working with inmates, Prison Rape Elimination Act and basic security practices.
- Facility Orientation and Tour: Facility orientation and tours are typically required. Usually the Volunteer Coordinator at each facility will arrange the date and time for each orientation.
- **Final Approval Form:** Once you have completed your orientation you will need a final signature from designated DOC staff to become an approved volunteer. You should be notified by mail or email once all steps have been completed.
- Volunteer ID Card: You may be asked to have your finger prints and photo taken in order to be issued a volunteer identification card. Once you have cleared security, this card authorizes you to enter the DOC facility that is listed on the back of the card.

- **Annual Update:** You will have to submit an annual background check and possibly update training each year to stay an active volunteer with DOC. The volunteer coordinator within DOC will contact you about setting up any updates.
- **Guest Access:** Any lecture guests or others you would like to bring into the facility must gain proper clearance. At some facilities this requires first filling out a background check form. Make sure you inform any guests of facility protocol before they arrive.

See section 3.5 for additional detail about volunteering with DOC

## 2.3.2 Inmate Training:

To successfully grow sagebrush within the prison system, it is important that inmates and those working with inmate technicians have thorough training. Training should cover all aspects of the program from sowing, watering and daily care, recording data, fertilizing, thinning, weeding, and eventual planting out.



FIGURE 9: STAFFORD CREEK CORRECTIONS CENTER, CONSERVATION NURSERY COORDINATOR, DRISSIA RAS, DEMONSTRATES SEED SOWING TECHNIQUES (PHOTO: JAAL MANN)

Training is best done by showing through example. Give yourself plenty of time to show inmate technicians proper technique and then observe technicians as they try each procedure themselves. You can give suggestions at the start of each new task. Also talk with DOC staff overseeing the inmates about what the tasks entail so they can watch for any errors or questions that should arise.

Inmate technicians and DOC staff may change over the

weekends. Leave detailed instructions at the project site so any new inmates or staff to the project can follow your written protocol.

## 2.4 Job Description and Hiring Inmate Work Crew

Finding quality technicians who are committed to the program's success is a key piece of building your sagebrush program. Inmate technicians must be willing to work long hours, possess self-motivation, communicate effectively, and give meticulous attention to detail. Inmates are often unsupervised for the majority of their work day, and overall success of your program relies heavily upon their dedication. Finding and selecting the



FIGURE 10: FINDING QUALITY TECHNICIANS WHO ARE COMMITTED TO THE PROGRAM'S SUCCESS IS A KEY PIECE OF BUILDING YOUR SAGEBRUSH PROGRAM (PHOTO: JAAL MANN)

best inmates for the position involves five distinct steps: creating interest in the opportunity, accepting applications, selecting candidates for interview, and selecting the inmates<sup>10</sup>.

Participation in native plant grow-out projects is a voluntary program for inmates who are interested in the project. DOC will

announce the job position(s) and inmates will fill out an application and turn it in to the Inmate Work Program Coordinator or other designated staff person. Once the position closes, interviews are set-up and the candidates are evaluated based on their experience, motivation, ability to work in teams, work history, and other factors. DOC staff will select the crew that will take part in the sagebrush propagation project(s).

In many cases inmates involved in these programs are classified as minimum custody. Corrections staff will help determine the eligibility standards for inmate participants. Inmates interested in working for outside or off-site work crews are carefully screened and can be available to help with off-site planting. Programs established in minimum security areas typically involve inmates that are classified as low escape risks and they are often near the end of their sentence. In addition, participation in these programs depends on inmates sentencing status, skills and behavior within the prison.

## 2.4.1 Creating Interest

Inmates must first learn about the sagebrush program before they will be able or willing to apply for a position. Avenues to garner interest include offering lectures to a wide audience and providing an article or story for any staff or inmate newsletters.

Consider inviting professionals from the natural science or conservation fields to give sagebrush-related lectures. A BLM biologist might present a sagebrush steppe lecture, or a Fish and Wildlife biologist may offer a talk on the greater sage-grouse, for example. A local native plant nursery could come into the prison to talk about horticulture techniques and career opportunities.



FIGURE 11: LECTURES CAN REACH A LARGE NUMBER OF INMATES AND CREATE INTEREST IN YOUR PROJECT (PHOTO: CONNIE GROSS)

Provide your key DOC contact with a description of the lecture about a month or more in advance to give DOC staff time to arrange the room and time of lecture, announce the lecture, obtain applications from inmates, and resolve any clearance issues. Get clearance for your guest lecturer well in advance by having them fill out a background check form or other required paperwork which you can obtain from your key DOC contact. Review all DOC protocols with any guests well in advance of their arrival and check with your DOC contact about any equipment needed before the lecture.

#### 2.4.2 Applications

Sagebrush program job applications should stress technician requirements, job tasks and benefits to the inmates. Provide the information to your DOC lead who will write up the information and make it available to the inmates. Each facility will have their own criteria for inmates who are eligible for these types of programs; check with your DOC lead for details. Sample information on the job application might include:

## 2.4.3 Sample Job Opening in Sagebrush Propagation Project

### Position Summary

- Assist with a sagebrush propagation program to help Greater sage-grouse habitat
- Learn horticulture techniques while working in the greenhouse and hoop house
- Work with natural resource volunteers during the project
- Learn data collection and entry skills
- Obtain certification of completion upon successful conclusion of project
- Gain team building skills while working with other inmates and volunteers during project

## Position Duties

- Sowing sagebrush seed, working with soil and conetainers in the greenhouse.
- Daily watering
- Fertilizing
- Thinning plants
- Data collection

## Qualifications

- Those who can work both independently and as a team
- Self-motivated
- Must provide attention to detail
- Requires standing and lifting moderate weight
- An interest in conservation related programs
- Must communicate effectively with coworkers and staff

## **Application**

- Submit request to DOC supervisor
- Write a short essay or cover letter listing your qualifications and interest in the program
- Make sure you meet criteria for the job (check with DOC staff for inmate criteria for security and infraction criteria)
- Interviews will be conducted on X date

## Closing Date: X

## Interview Date: X

## 2.4.4 Sample Inmate Work Application Form

Section 1					
	POSITION	APPLIED FOR		POSITION LOCATION	DATE
Name (Lest First Middle)		PERSONAL INFORMAT	ION	SID #	
Name (Last, First Middle)				SID #	
Institution Assigned	Housing Unit/Bunk #	Counselor		Release Date	
	4	CONDUCT/PROGRAM HIS	STORY	4	
List all major misconduct o	r program failures by month	in the last twelve months:			
Section 2					
		EDUCATION/TRAINING HIS			
De veu heve e high eeheel	List col diploma or GED certificate?	eges, military, trade, business or of	ther schools attended.		
Name and Location of Sch		Course of Study		Did you graduate? Yes /	No
	List	LICENSE / REGISTRATION / CE any professional license, registration			
De	escription	State		Number	Expiration
		SPECIALIZED SKILLS AND KN	OWLEDGE	ł	
	List skills or knowled	ge that show your ability to perform	the job for which you a	re applying.	
Section 3					
		WORK HISTORY			
From (Month-Year)	Beginning with m To (Month-Year)	ost recent work, both pre-incarcera Business Name and Address		ositions.	
			-		
Your title and duties					
Reason for leaving				Supervisor's Name	
From (Month-Year)	To (Month-Year)	Business Name and Address	5	ł	
Your title and duties					
Reason for leaving				Supervisor's Name	
From (Month-Year)	To (Month-Year)	Business Name and Address	6	1	
Your title and duties	ļ	ļ			
Reason for leaving Supervisor's Name			Supervisor's Name		
Section 4				ļ	
The information on this app	plication is true and accurate	to the best of my knowledge.			

Signature

Date

CD # 1523 03/2010

## OREGON DEPARTMENT OF CORRECTIONS INMATE WORK APPLICATION

## 2.5 Funding your program

#### 2.5.1 Who should apply for funding?

Partners within the sagebrush project can potentially apply to a variety of funding sources. It is important to work with your team to find the best fit for particular grants or funding opportunities.

In some states, DOCs cannot apply for federal grants without legislative approval, which can be a slow process and make it difficult to meet grant proposal deadlines. One option is to work with a non-profit or academic partner to apply for these kinds of grants. In some instances, a state DOC or an individual prison may have some funding available for greenhouse construction or modification, hoses, sprinklers and other equipment, but this will vary from place to place and may change annually.

While DOC may not easily apply for federal grants, they can often supply match for partner grants. In-kind match could include inmate labor, staff time and facilities like a greenhouse, shade house, utilities, water, and equipment. DOCs often are authorized to apply to private foundations for funding, although prior authorization from state office may be required.

#### 2.5.2 Tips for writing a sagebrush project grant

- If a foundation asks for a Letter of Intent (LOI) prior to a full application, follow the guidelines for the LOI closely. Include a brief title and one or two sentence summary about your project, as well as concise detail about the conservation issue you are addressing and how you will do it. An LOI typically will be 1-3 pages long.
- Examine the list of previously funded projects to see what the grantor is looking for. Consider contacting previous grantees to get any feedback from them.
- Show how valuable and necessary your sagebrush project is. Think like a reviewer and make your application stand out.
- Be specific about your outputs and outcomes. Your outputs should be tangible such as number of sagebrush produced or number of planted acres.
- Include clear milestones in the project such as sowing of sagebrush, hardening off plants, and out planting dates.
- Include your partners with the sagebrush project emphasize your strength in numbers. Be clear about tasks, roles and responsibilities. Be clear about the duration of the project. When does it start and when does it finish?
- Include letters of support from your partners if letters are allowed in the grant process.

- Match your budget with your goals and objectives and include a narrative to justify your budget numbers.
- Review your proposal thoroughly when you have finished. Ask your partners to re-read and suggest any revisions. Check that you have filled in all tasks and adhered to page limits and file types. Double check your budget for any mistakes.

## 2.5.3 Parts of grant proposals

Different funders require different pieces to their application package. Make sure you follow all instructions carefully and double check you have completed all required tasks. Examples of grant requirements may include:

- a. Cover Letter
- b. Executive Summary
- c. Need Statement
- d. Goals and Objectives
- e. Methods, Strategies or Program Design
- f. Project Evaluation
- g. Other Funding or Sustainability
- h. Organizational Information
- i. Budgets for Your Grant Proposals
- j. Additional Materials (maps, letters of support, letter proving that your organization is tax-exempt.)

## 2.5.4 Resources and Funding

## **Federal**

a. Grants.gov

Delivers a system that provides a centralized location for grant seekers to find and apply for federal funding opportunities. <u>http://www.grants.gov</u>

## b. EPA National

EPA has developed this guide of national funding resources to assist local and state governments, communities, and non-governmental organizations. <u>http://www.epa.gov/smartgrowth/national\_funding.htm</u>

## c. <u>EPA State</u>

EPA has developed this guide of regional, state, and local funding resources to assist local and state governments, communities, and non-governmental organizations who are addressing state concerns. http://www.epa.gov/smartgrowth/state\_funding.htm

### d. NFWF - Native Plant Conservation Initiative

In general, the call for proposals seeks to provide funding for projects that provide plant conservation benefits, projects with multiple partnerships, demonstrates the ability to find matching funds exceeding the minimum 1:1 federal/non-federal requirement, and use of innovative ideas such as landscape approach, shareable new technologies, and teaching by example.

http://www.nfwf.org/pti/Pages/pti2013rfp.aspx#.U78NRrHbTNE

#### e. FWS - Tribal Wildlife Grant Program

The Fish & Wildlife Service provides funds to Federally recognized Tribal governments to develop and implement programs for the benefit of wildlife and their habitat, including species of Native American cultural or traditional importance and species that are not hunted or fished. Activities may include, but are not limited to, planning for wildlife and habitat conservation, fish and wildlife conservation and management actions, fish and wildlife related laboratory and field research, natural history studies, habitat mapping, field surveys and population monitoring, habitat preservation, conservation easements, and public education that is relevant to the project.

http://www.fws.gov/nativeamerican/grants.html

#### f. <u>Conservation Innovation Grants</u>

NRCS provides funding opportunities for agriculturalists and others through various programs. Conservation Innovation Grants (CIG) is a voluntary program intended to stimulate the development and adoption of innovative conservation approaches and technologies while leveraging Federal investment environmental enhancement and protection, in conjunction with agricultural production. Under CIG, Environmental Quality Incentives Program funds are used to award competitive grants to non-Federal governmental or nongovernmental organizations, Tribes. or individuals. http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/cig/

- <u>Conservation Reserve Program (CRP)</u> <u>http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/</u>
- Environmental Quality Incentive Program (EQIP) www.nrcs.usda.gov/PROGRAMS/EQIP
- Conservation Stewardship Program (CSP) <u>http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/cs</u> <u>p/</u>
- Wildlife Habitat Incentive Program (WHIP) www.nrcs.usda.gov/Programs/whip
- Farm and Ranch Lands Protection Program (FRPP)

http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/easements/ farmranch/

- Grasslands Reserve Program
   <u>http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/easements/
  grassland/
  </u>
- Conservation of Private Grazing Lands <u>http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/technical/cpgl/</u>
- Grazing Lands Conservation Initiative
   <u>http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/people/partners/glci/</u>
- g. U.S. Fish and Wildlife(USFWS) <u>www.fws.gov</u>
  - Partners for Fish and Wildlife Program <u>www.fws.gov/partners</u>
  - North American Wetlands Conservation Act (NAWCA) http://www.fws.gov/birdhabitat/Grants/NAWCA/index.shtm
- h. U.S. Geological Survey (USGS) <u>www.usgs.gov</u>
  - SageMAP http://sagemap.wr.usgs.gov/
  - Sage Grouse Local Working Group Locator <u>Greatbasin.wr.usgs.gov/LWG</u>

## i. Bureau of Land Management (BLM)

• Great Basin Restoration Imitative <u>http://www.blm.gov/wo/st/en/info/history/sidebars/ecosystems/great\_basin\_restoration.html</u>

## j. Other Resources

- SageSTEP <u>www.sagestep.org</u>
- Great Basin Bird Observatory www.gbbo.org
- Intermountain West Joint Ventures
   <u>www.iwjv.org</u>
- Rocky Mountain Bird Observatory www.rmbo.org
- PRBO Conservation Science
   <u>www.prbo.org</u>

#### Foundations and other funding examples

#### a. **Brainerd Foundation**

The Brainerd Foundation protects the environmental quality of the Pacific Northwest and builds broad citizen support for environmental protection. Washington, Oregon, Idaho, Montana, Alaska, British Columbia, and the Yukon Territory constitute their geographic funding region.

www.brainerd.org

#### b. Doris Duke Charitable Foundation

The mission of the Doris Duke Charitable Foundation is to improve the quality of people's lives through grants supporting the performing arts, environmental conservation, medical research and the prevention of child maltreatment, and through preservation of the cultural and environmental legacy of Doris Duke's properties.

www.ddcf.org/

#### c. Lawrence Foundation

The Lawrence Foundation has grants to support environmental, education, human services and other causes. They include both program and operating grants and do not have any geographical restrictions on their grants. www.thelawrencefoundation.org

#### d. Lazar Foundation

The Lazar Foundation is dedicated to funding innovative and strategic projects that protect the environment in the Pacific Northwest: Alaska, Idaho, Oregon, and Washington.

www.lazarfoundation.org

#### e. <u>Leighty Foundation</u>

Focus is primarily in the areas of Earth Protection, Education, and the Promotion of Philanthropy and Volunteerism. They distribute grants and contributions to tax–exempt charitable organizations only. www.leightyfoundation.org

#### f. Patagonia

Patagonia funds only environmental work. They are most interested in making grants to organizations that identify and work on the root causes of problems and that approach issues with a commitment to long–term change. www.patagonia.com/web/us/patagonia

#### g. The Acorn Foundation

The Acorn Foundation supports projects dedicated to building a sustainable future for the planet and to restoring a healthy global environment. The Acorn Foundation is particularly interested in small and innovative community–based projects which: Preserve and restore habitats supporting biological diversity and wildlife.

http://www.commoncounsel.org/Acorn+Foundation

#### h. <u>Turner Foundation</u>

The Turner Foundation, Inc. is a private, independent family foundation committed to preventing damage to the natural systems – water, air, and land – on which all life depends. The Foundation makes grants in the areas of the environment and population.

www.turnerfoundation.org

#### i. <u>Wilburforce Foundation</u>

The Wilburforce Foundation is dedicated to protecting nature's richness and diversity through funding programs that help preserve our remaining wild places. The Foundation awards grants to nonprofit organizations that have programs operating in Alaska, the Yellowstone to Yukon region, British Columbia, Washington, Oregon, Nevada, Utah, Arizona or New Mexico. www.wilburforce.org

#### **Funding Opportunity Resources**

a. <u>Community Foundation Locator</u>– This site is produced by the Council on Foundations, and allows one to learn about community foundations and search for them by state. <u>http://www.cof.org/community-foundation-locator</u>

#### b. Foundation Center

One of the most widely used resources for information about foundations, with a searchable database available via an online subscription. Also contains extensive information on many grant related topics, including a free Proposal Writing Short Course. <u>www.foundationcenter.org</u>

#### c. GrantDomain

Produced by The Grantsmanship Center (<u>www.tgci.com</u>), GrantDomain is a userfriendly and continually updated funder database of foundation, corporate, and federal grantmakers. <u>http://www.tgci.com/grantdomain</u>

## d. GrantsFundraising.com

Grants Fundraising.com's purpose is to help spread the word about grants, programs, initiatives and fundraising opportunities from foundations, 501c3 non-profits organizations and private sector sources by posting those initiatives on our site. <u>www.grantsfundraising.com</u>

e. Plant Conservation Wiki.org: This is a list of funding opportunities with some very brief general information. http://www.plantconservationwiki.org/wiki/Funding\_sources

## 2.6 Timeline for Setting up Sagebrush Propagation Program

Task	Personnel Involved
Write brief project proposal	Key project manager
• Contact SPP Network to see if there are already similar programs going on and what prisons and partners might be interested	• SPP Program or Network Manager
Contact possible agency, academic, non-profit partners	• BLM, Forest Service, State and Federal Fish and Wildlife Services, Local University or Community College, Plant Materials Center Personnel, Conservation non-profits
Consider funding	• Check with partners for possible foundation or federal grants
Contact prison for possible interest in project	Communication Officer, PIO or Sustainability Manager
Set up meeting at prison facility	• DOC Superintendent, Assistant Superintendent, sustainability manager, security manager, physical plant manager, superintendent of correctional rehabilitation unit, any union representation, and any other represented staff. Natural resource agencies and partners
• Obtain clearance for all outside DOC partners before attending meeting. Review DOC protocol with all partners before meeting.	• DOC volunteer coordinator or key contact, natural resource partners
Write and distribute meeting agenda	• All interested parties attending meeting
• DOC facility meeting and tour of site	• All interested parties attending meeting
• Writing work plan, assigning tasks	Committed parties in the project

and timeline	
Finalize equipment and facilities     needed in project. Set up work site	• DOC facilities manager and other key staff
• Volunteer or other required training	All staff outside of DOC
• Set up lecture series and write article for DOC staff and inmates	• Work with your key DOC manager
Write inmate technician job application	• Submit to your key DOC manager
Inmate technician interviews	• Will be carried out by DOC staff
Order equipment and supplies. Get clearance from DOC security officer	• DOC manager and security officer
Inmate and staff sagebrush propagation training	<ul> <li>Hired inmate technicians, DOC staff, project manager</li> </ul>
Data collection	• Inmate technicians. Check with DOC manager about data entry
• Regular check-in with technicians and DOC staff	Project manager
Media Release	Work with DOC manager and Communications Manager
Sagebrush out-planting	• DOC manager, natural resource partners

## CHAPTER 3: WORKING WITH A CORRECTIONAL FACILITY

The sagebrush grow-out project will involve a number of individuals both within and outside of DOC. The responsibilities of all DOC staff are to ensure public safety and see that staff and inmates are safe. DOC staff also aim to positively impact inmates by stressing personal responsibility, education and job skills training, accountability, and reduced recidivism. The following is a list of some DOC roles and responsibilities. Staff and their roles may vary from state to state.

## 3.1 DOC staff

#### Superintendent

Superintendents are accountable for the operations of the prison as well as the safety and well-being of the staff and inmates. They are ultimately responsible for the overall management, administration and operation of the facility.

## Assistant Superintendent

The Assistant Superintendent reports to the Superintendent and performs administrative, managerial, and supervisory work required in planning, delivery, and evaluating correctional services. Supervision is exercised over supervisory, casework, technical, security, and clerical employees. They closely work with correctional, law enforcement, political, and service provider personnel.

#### Captains

Captains direct а large number of correctional personnel and perform a variety of facilitating and administrative tasks to support prison institutional operations. Work involves insuring that security activities conform to prison rules and regulations and mandates. court Contact with inmates, prison staff, education and social service professionals in the enforcement agencies, is a large part of their work.



institution, superiors and law enforcement agencies, is a how for the support of corrections staff (Photo: Benji drummond and sara Joy steele)

#### Lieutenants

Lieutenants receive direction from the Captain and they have authority over the facilities, personnel and the activities on their assigned shift. They conduct briefings at the start of each shift to inform subordinates of pertinent facts or resident incidents which may affect shift work. Lieutenants maintain set standards for security and ensure daily shift activities are completed.

#### **Physical Plant Manager**

The Physical Plant Manager oversees and directs work related to maintenance and repair of buildings and other structures as well as operational systems and equipment. They inspect equipment and facilities to determine condition and need for repairs, monitor safety, conduct preventive maintenance, and prepare reports.

#### **Correctional Officers**

Correctional officers are responsible for overseeing inmates. They maintain security and enforce rules and regulations. Correctional officers periodically inspect the facilities, checking cells and other areas of the institution for unsanitary conditions, contraband, fire hazards, and any evidence of infractions of rules. In addition, they routinely inspect locks, window bars, grilles, doors, and gates for signs of tampering. They may inspect mail and visitors for prohibited items.

#### **General Services Division**

The General Services Division supports much of the day-to-day business of DOC including supporting Facilities Services, Central Distribution, Information Services and Fiscal Services.

#### **Human Resources**

The Human Resources Division manages the personnel-related services of recruitment, affirmative action, employee development and training, employee safety and risk management, and organization and leadership development. It also provides consultation and assistance in administering the department's classification, compensation, human resources policies, and labor contracts.

#### **Information Services**

Information Services advance the department's use of information technology. Information system operations, software development and user support services are provided by the unit's staff.

#### 3.2 Working with inmate crews

#### 3.2.1 Benefits

Conducting native plant propagation projects with inmates has the potential to educate inmates about conservation issues as well as increase the social well-being of participants. Conservation programs such as native plant propagation projects can idleness reduce and behavior problems in the facility. improve the overall mood of inmates and lower re-offence rates once inmates are released from the facility. Other potential benefits include inmates feeling more



FIGURE 13: INMATE CREW WITH INSTITUTE FOR APPLIED ECOLOGY STAFF PREPARING TO SOW SAGEBRUSH SEEDS AT SNAKE RIVER CORRECTIONAL INSTITUTION (PHOTO: CONNIE GROSS)

comfortable working in teams, improved leadership skills, and increased confidence. Sagebrush propagation programs can provide horticulture training, giving inmates valuable skills that make them more qualified for employment upon release. Tasks within the project expose inmates to good work habits, responsibilities and teamwork. Sagebrush nursery programs done in partnership with DOCs, nonprofits and conservation agencies, provide a win-win situation for participants, the community, economy, and the environment.

#### 3.2.2 Work Crew Composition

<u>Inside Work Crews:</u> Inmates that are classified as higher security risk do not qualify for outside facility programs. These inmates however may still qualify for important tasks in the sagebrush propagation program such as greenhouse work (if the facility has a greenhouse within the fence or work can be done then transferred outside) or allowable data entry. Many inmates who start in the higher security category become enthusiastic about the project and can qualify for the outside work crew once their security status changes.

<u>Outside Work Crews:</u> Outside Work Crews may be eligible to work within the prison grounds or to travel within a certain radius of the institution. These inmates are typically low risk and are screened for type of offense, medical concerns, any community concerns and behavioral conduct. Usually these work crews are composed of 10 inmates and one DOC staff supervisor.



FIGURE 14: OUTSIDE WORK CREW SOWING SEEDS AT COFFEE CREEK CORRECTIONAL FACILITY (PHOTO: SHERI WHEELER)

#### 3.2.3 Useful Tips When Working With Inmate Crews

#### A Compendium of Washington State Department of Corrections (WDOC) Guidelines for Supervisors and Volunteers Working with Offender Crews<sup>10</sup>

- Do not give or offer any unauthorized item to inmates
- Do not allow inmates to use a telephone. Inmates are not allowed to place or receive calls while working on project
- Do not allow inmates to have visitors while on the job site or have interaction with individuals other than those associated with the job. Any unauthorized contact should be immediately reported
- Crew supervisors must ensure that inmates are working in their assigned areas. If an inmate cannot be immediately located, report this
- Do not do any favors for inmates (such as mail a letter, place a call, give something to inmates or share food)
- Inmates are only authorized to operate equipment for which they are trained. Do not allow an inmate to operate equipment if s/he has to been properly trained. If you have any questions regarding the use of equipment, contact DOC staff
- In case of an emergency, illness or on-the-job accident, immediately contact the DOC Crew Supervisor

- Keep your contact with inmates on a professional level. Do not discuss your personal life/issues with an inmate
- Account for all tools and materials issued to an inmate on the job site. Make sure tool protocols of the facility are strictly followed. Always defer to the protocols of the facility in every instance
- Don't make assumptions about inmates- don't assume they are unpleasant and don't assume they are innocent. You are there to offer a service and can do that in a friendly, respectful, and professional manner without making assumptions about an inmate's personality or background.
- Focus on program goals and creating a respectful and professional work environment.



#### 3.2.4 Interacting with Inmates During Sagebrush Work Programs

FIGURE 15: GUEST SPEAKER AIMEE CHRISTIE FROM THE PACIFIC SHELLFISH INSTITUTE DESCRIBING A WATER QUALITY IMPROVEMENT PROGRAM IN SOUTHERN PUGET SOUND (PHOTO: JOSLYN ROSE TRIVETT).

The bottom line when working with inmates is to treat them the same way you would like to be treated. Withhold judgment about crimes committed and treat everyone with respect.

When starting your sagebrush project, talk to participants about performance expectations. Discuss your expectations, project outcomes and what inmates are accountable for. It is

important to provide clear support, training and all resources needed to achieve the agreed upon expectations and outcomes. Listen to inmates' concerns or questions in regards to training and make adjustments as needed. It is valuable for the project lead to provide regular feedback to the inmates regarding performance and objectives of the program. Invite inmates to provide program feedback and make suggestions for improvements; they often think of innovative solutions to program challenges.

Treat all program participants equally; do not show favoritism. Try to talk with the group as a whole and avoid meetings with individual inmates. It is important that the sagebrush supervisor have adequate training to handle prison inmate relations and to interact safely and effectively with the inmate crew. DOC training of volunteers or contract staff should cover areas such as: avoiding manipulation by offenders, showing respect for inmates, and positive working relationships. If you are a non-DOC partner, talk with corrections staff anytime you encounter behavioral issues, are uncomfortable with a situation or you have questions about interacting with inmates.

#### To maximize effective inmate technician crew programs

- Understand what resources crew members need to successfully accomplish their work. Make sure you supply these resources and develop strategies for overcoming any resource deficiencies
- Understand key motivators and regularly validate inmates contributions and good work
- Practice empathetic listening; set aside judgment, show interest and check for understanding
- Ensure the working environment is safe
- Plan ahead and obtain approval from DOC staff for all tools and supplies needed for the sagebrush project. Ensure that all tools are returned at the end of the work session.

#### 3.2.5 Setting Up Inmate Tasks



FIGURE 16: MAKE SURE YOU CLEARLY EXPLAIN ALL TASKS IN YOUR PROJECT (PHOTO: BENJ DRUMMOND AND SARAH JOY STEELE).

When starting your sagebrush project make sure you arrive well ahead of time to get cleared into the facility and that the work area is ready for the crew. Check with staff about timing of crew breaks, lunch or time out for periodic inmate counts.

When initiating the sagebrush project, introduce the inmates to the various tasks by walking them through each step and showing them by example. It is important to leave written instructions in the greenhouse or work area in case you are not in the vicinity to

review the protocol. Ask inmates for any clarification and check in frequently to make sure tasks match with inmate skills. Check with each individual if there are any concerns with performance and if needed follow through with a DOC staff member.

Depending on the number of sagebrush plants in production, some tasks may require a larger crew than the everyday work crew. If you are trying to finish a task in a short amount of time you may want to consider a larger temporary crew. Examples include: mixing soil, filling conetainers with soil, and sowing seeds. The positive side of having a large crew is you get the task done quickly but the negative side is that the project is then completed and some inmates don't have further tasks to fill their time. To allow inmates to work on tasks over a longer period of time you may consider working with a smaller crew which allows them to work on a particular task over several days. Try to offer a

variety of tasks to the crew so they have choices and don't feel they are stuck with mundane or repetitive duties.

You should set up a consistent work crew to care for the sagebrush once they are sown. The plants will need regular watering and checking for weeds and pests. The project leader will need to supply the crew with any necessary data forms and discuss data entry with both the work crew and DOC staff. Computer use and data entry by inmates is limited and is strictly regulated. Consider the possibility of using an inmate work crew for out-planting the sagebrush. Costs for hiring a planting crew vary by facility but generally range between \$500 - \$600 dollars a day, which includes a corrections officer, transportation, food, protective gear and a work crew of approximately 10 inmates.

#### 3.3 Securing equipment and infrastructure

The control and liability of tools and equipment within a facility is of top importance and part of DOC'S security plan. Tool procedures help ensure accountability for all tools and materials that are used or stored at the prison. As a partner in the sagebrush project, it is imperative that you work closely with your DOC lead when bringing any equipment into the facility. Give DOC staff plenty of lead FIGURE 17: TOOL PROCEDURES HELP ENSURE ALL TOOLS ARE time to get equipment clearance before



ACCOUNTED FOR (PHOTO: CARL ELLIOTT).

you plan to bring it inside. Some items will not be allowed inside the facility so it is best to have some backup ideas.

Check with your main DOC contact and facility manager early on about any engineering requirements such as greenhouse, hoop house, water needs and electricity. There may be permitting requirements for these structures and you will need to leave enough time before the project to secure these items.

#### 3.3.1 Bringing equipment inside



FIGURE 18: TOOLS SUCH AS SOIL TAMPERS HELP EVENLY PACK SOIL TO THE CORRECT LEVEL IN EACH CELL (PHOTO LARKIN GUENTHER)

Contraband can be made out of anything and everything. Work closely with your main DOC lead about equipment needs. Each item is counted and checked in and out before and after use. Tools may even be inventoried twice during the day. Tools may be engraved with a number to aid staff in quickly assessing if some piece of equipment is missing. Bring any broken or missing tool to the attention of DOC staff as it will need to be investigated or inventoried and replaced.

A tool control officer will coordinate security of tools, conduct inventories and maintain tool storage.

- Sagebrush equipment such as shovels must be kept in a safe and secure area.
- Most tools will be engraved with a number or letter to facilitate quick counting.
- Whenever possible, tools will be stored on display boards to provide quick identification and accountability. Tools that cannot be kept on a display board will be kept under lock and key.

Most tools are given a hazard classification. The classification may vary by facility. A general guideline follows:

**Class A (hazardous) tools** – could possibly be used for an escape or cause serious injury to others. These tools must be kept stored in a locked, secure place and inventoried at the end of the work period by DOC staff.

- Ladders
- Jacks
- Hacksaw blades
- Pipe Wrenches
- Metal Cutting Equipment

- Wire Cutters
- Torch cutting tips
- Drills and drill bits
- Grinders
- Possibly scissors

**Class B** (less hazardous) tools: are considered less dangerous and are usually inventoried weekly. They may be stored within the secure perimeter in a locked location.

## 3.3.2 Equipment delivery

Check with DOC about delivery of equipment. The facility may already have outside contracts with local nurseries or other organizations and have a delivery system set up. Potentially hazardous chemicals such as fertilizers may need to be stored security in storehouse. а Consider mailing items to your head DOC if ordering from catalogs or shipments from stores.



FIGURE 19: TRAY COVERS HELP PREVENT SOIL FILLING SPACE IN BETWEEN CELLS. (PHOTO LARKIN GUENTHER)

#### Sample equipment needed for growing sagebrush

- Conetainers
- Conetainer trays
- Tray covers
- Soil
- Fertilizer
- Small container to sow seeds into conetainers (e.g., modified salt shaker)
- Shovels or containers to place soil into conetainers
- Hoses
- Watering wand
- Log book
- Greenhouse/hoop house

#### 3.5 Volunteering at Correctional Facilities

Each year thousands of volunteers donate their time to an array of programs at Department of Corrections. Volunteers provide important services and play a significant role in the criminal justice system. Whether through life skills programs or goal-focused curriculum, volunteers can share their own life experience and generate interest in education, thus helping inmates with lifestyle changes and successful community re-



entry. In addition, volunteer time contributes millions of dollars in fiscal contributions to DOC's and state taxpayers.

Most non-DOC staff are considered volunteers while working with inmates during the sagebrush grow-out program. A

FIGURE 20: BIOLOGIST ANNA THURSTON, SHARES A NATIVE PLANT CUTTING WITH AN INMATE AT STAFFORD CREEK CORRECTIONS CENTER DURING A SUSTAINABILITY LECTURE (PHOTO: SHANUNA BITTLE)

volunteer is defined as an approved person who donates

time, knowledge skills and effort to enhance the mission, activities and programs of the Department. A volunteer serves the Department and is not a paid employee.

#### 3.5.1 Rules and Regulations

The following rules and regulations for volunteers may vary slightly from state to state but can be used here as general guidelines.

#### **Eligibility Criteria**

- a. Eighteen years of age or older
- b. US citizen or legal authorization to be in the country
- c. Within the past two years, no adult felony convictions or incarcerations or misdemeanor drug-related convictions
- d. No outstanding warrants or pending criminal charges
- e. A volunteer may not enter or serve in a facility where a co-defendant is incarcerated

## 3.5.2 Entering a DOC facility

Each DOC facility is concerned about the volunteer's safety as well as that of staff and inmates. Knowing security and safety protocols will make your entry into the facility quicker and easier. Again, realize that each facility may have slightly different regulations but these guidelines can be followed as a general rule.



FIGURE 21: MAKE SURE YOU FOLLOW DOC STAFF WHEN ENTERING OR TOURING A FACILITY (PHOTO: SHAUNA BITTLE)

- a. Follow the volunteer dress code the main point is to NOT wear attire that is similar to inmates. Check with your DOC liaison. For example, many prison inmates wear blue denim, so in that case do not wear blue jeans or anything that looks like blue denim. No clothing with insignias, writing or pictures. No sheer or form fitting clothing or bare midriffs. Check with the facility before you arrive about any other clothing restrictions.
- b. All vehicles in the parking areas must be locked; keep your keys in your pocket or in a locker provided by the facility.
- c. The volunteer supervisor must be notified in advance of your arrival so the Control Center will have a memo authorizing your entrance into the facility.
- d. You must sign the Official Visitor Log in the Control Center at each visit.
- e. Have your ID or driver's license available.

- f. Volunteers may be required to go through a metal detector do not wear hair pins, under-wire bras, or shoes with a metal shank.
- g. Limit personal or professional items that you bring into the facility. Cell phones or pagers are not allowed. There may be a locker available at the check-in area for you to store your personal items.
- h. Do not bring in chewing gum.
- i. You must declare all medications that you have with you; do not bring in more than you need for the time period you will be at the institution. Make sure your medication is in the original container. Injectable medication requires the Warden's approval.
- j. Remain security conscious at all times. Remember, this is a correctional facility and security takes precedence over all programs. If an officer gives you an order you must comply immediately.



FIGURE 22: CARL SCHAEFER, A HORTICULTURE VOLUNTEER WITH THE OREGON ZOO, WATCHES AS COFFEE CREEK CORRECTIONAL FACILITY INMATES BRIDGETTE LEWIS AND CRYSTAL MAGANA HARVEST THE FIRST BLUE VIOLET LEAVES AT THE HOOP HOUSE (TIMES PHOTO: JAIME VALDEZ)

## 3.5.3 Do's and Don'ts when working with inmates<sup>11</sup>

1. DON'T take anything in or out of prison without approval.

2. DON'T bring a camera. Photographs are not allowed on prison grounds except by written permission from the warden under special circumstances.

4. DON'T take anything from an inmate. This means anything. Not even a letter, photo, or poem. Sometimes inmates will test you to see if you will break rules. This may be a way for them to see if you are "for real".

5. DON'T hug inmates. Do not give the officers any reason to think you may be doing anything against the rules, like accepting or delivering contraband (items not allowed in pricen). Even if hugging is

accepting or delivering contraband (items not allowed in prison.) Even if hugging is permitted in the prison, do not do it. A handshake usually is appreciated and appropriate.

6. DON'T make promises that you can't keep. Don't say you'll come back or help a person unless you know for sure that you will. DON'T say you'll do things for inmates until you know the rules and check with DOC staff. Most inmates have had many great disappointments and hurts in life. Don't be another one for them. They can accept an honest "no" much better than a "yes" or "maybe" that never happens.

7. DON'T give out your address or telephone number. If asked, you might say, "I'm sorry, but we were told it was against the rules to do that." You might explain kindly that you must obey the rules, as they must. You might say that you don't want to do anything that could prevent the success and continuation of conservation programs.

9. DON'T ask why a person is or has been in prison.

11. DON'T criticize staff, the institution, other races, countries, or religions. Try to steer conversations into something positive and helpful. Do not use the term "Guard." Rather, use "Correctional Officer" in referring to those who may be escorting you.

12. DON'T enter into any business interactions with inmates. For example, an inmate may ask you to sell his or her artwork on the outside.

13. DON'T run on prison grounds (that includes the outside of the prison). Sometimes volunteers will run to their cars because it's cold or wet outside, or they are in a hurry, or just from excitement. Running could alarm a prison officer in a prison tower.

14. DO bring a valid, current photo ID. Volunteers have been turned away from a prison because their ID was a driver's license that was invalid or had an address that was not current.

16. DO stay together as a group. Wait for instructions from the prison officer, even to go to the restrooms. Move through the prison together, without much space between people. Leave when you've been told it is time to leave. Cooperate fully with the prison officers.

17. DO be very kind and courteous to everyone. Smiles are fine, if they are genuine. You are a good-will ambassador for prison. Whenever possible, thank prison officers for their help and for allowing you to come into the prison. Thank inmates for their help, when appropriate.

18. DO check the rules if you are an ex-prisoner going into a prison. Some prisons have rules about ex-prisoners coming into a prison. If you are on probation or parole, it might be against the rules for you to associate with inmates.

19. DO be aware of con games. Be vigilant at all times. When you find that inmates are friendly and kind, and fun to be with, you will probably forget that they are inmates. That's great. But don't forget: Some of them have spent their lives either conning (deceiving) people or being conned (having others deceive them.) Therefore, don't automatically believe everything that an inmate tells you. Some may work on your sympathy or guilt feelings to get what they want. You usually won't help a person change for the better by becoming another victim. As long as a person can use you, you will have trouble gaining his or her respect.

22. DO be prepared to handle flirting or romantic advances. If you handle this issue firmly, but kindly, you will probably prevent a problem.

23. DO be a good listener. Inmates need someone who will listen to them. They need someone who sees what they think and feel. By listening, you can hear what needs they may have and what questions they may have. Remember, many inmates have never had someone care enough about them to really listen to them. Be that someone. Usually, it is best not to show shock at anything that is said. You don't have to agree with what is being said, but you can be accepting of the person.

25. DO be natural and be yourself. Don't try to talk differently or use inmates' slang. Don't worry about cultural differences or trying to relate to prison culture. If you're just yourself, you'll find acceptance. Don't pretend to understand if you don't. You don't have to understand to be understanding. If you are asked a question you don't know, give that great answer, "I don't know." Inmates are perceptive people who can usually spot a phony right away. They know if you're "for real" and if you're genuinely caring

## 3.5.4 (Sample) Department of Corrections VOLUNTEER APPLICATION<sup>12</sup>

**SAMPLE VOLUNTEER APPLICATION PERSONAL INFORMATION (Please Print or Type)** The following information is needed to conduct a criminal history check to determine whether access to DOC units, facilities, and offices should be approved. Applicants must be (18) years of age to apply. All applicants must have a clear criminal history for (18) months to be eligible. In addition, if applicable, must have been released from prison for period of (18) months.

Please be sure to provide **ALL** of the requested information, if it does not apply please indicate by responding with N/A.

1. Name: (Last, First, MI)	2. Primary Phone#: () -		
3. Mailing Address:	4. Email Address:		
5. Emergency Contact:	6. Driver's License/State ID#: ST		
7. SSN:	8. Date of Birth: / /		
9. Place of Birth: City, ST	10. Sex: Female / Male		
11. Race: White Black Hispanic Amer. Indian	11. Current Employer:		
Asian or Pacific Island Other	Title:		
12. Have you ever been employed by DOC? Yes No	If yes, give division, department, location, title and dates of employment:		
13. Are you a victim of, related to, or a friend	Name of Offender: ID#:		
of any TDCJ offender or releasee now			
supervised by DOC? Yes No	Facility: Victim/Relative/Friend		
	vicum/Relative/Friend		
14. Are you related to a victim, or a friend of a	Name of Offender:		
victim, of any offender or releasee now	ID#:		
supervised by DOC? Yes/ No	Facility: Relative/Friend		
15. List any offender that you are visiting in unit	Name of Offender:		
visitation <b>OR</b> knew prior to their	ID#:		
incarceration. Not applicable.	Relationship:		
	Facility:		

## Please use this section to indicate the program area(s) you are interested in serving. All programs are subject to approval.

			5		
Chaplaincy	Please	provide	your	Faith	Substance Abuse Treatment Program
Identification/Rel Worship:	ligious	Preference:	Place	e of	Sobriety Date: / / Type of meeting (Please check): AA NA CA WIN Other
Practicum St Date://	udent	Start date:	So	briety	TTC/Halfway House Sex Offender Treatment Program Parole Division Reentry TCOOMMI
Student Intern	Start d	ate: / / Progra	m Area	) <i>:</i>	

Victim Services - NOTE: Volunteers who	Other: *Other may include non-traditional programs,
have a criminal history or who have selected or currently volunteer for offender programs may be prohibited from volunteering with the Victim Services	administrative/clerical assistance, or areas not indicated on this form.
Division.	

#### 3.5.5 Frequently Asked Questions for volunteering at prisons: <sup>13</sup>

What if I have a record of a criminal offense? Having a record for criminal offense does not necessarily prevent a person from becoming a volunteer. Check with the state and institutional regulations to see how your record affects your volunteer application and status.

What if I am related to an offender? If you are related to someone currently under supervision either at a facility or probation and parole office, you will be required to agree to and sign a conflict of interest agreement that specifies how you may volunteer and avoid a conflict of interest.

**Can I volunteer if I am currently on probation?** A person who is under supervision is not allowed to volunteer until they have been off supervision for one year. A person may request consideration for waiving the one year waiting period, which is looked at on a case specific basis.

**Is there a minimum time commitment?** There is generally no minimum time commitment for volunteers. However, there may be a minimum time commitment for certain volunteer jobs.

**Can I volunteer at more than one facility?** Yes. Contact the DOC volunteer coordinator or the facility volunteer coordinator for more details.

**Can I have personal contact with an offender and/or his/her family on the outside without losing my volunteer status with the DOC?** If an offender is being released completely from DOC jurisdiction, either off of parole or from incarceration, then contact is appropriate. If an offender is being released into the community either on parole or probation, a volunteer may have contact with an offender under certain circumstances. Please contact the DOC Volunteer Coordinator to discuss those conditions.

#### 3.5.6 Abbreviations, acronyms and commonly used terms

There are a variety of abbreviations, acronyms and commonly used terms that Department of Corrections staff use every day. An understanding of these terms may aid the volunteer in working with both staff and inmates.

ACA	American Corrections Association
A&D	Alcohol and Drug Treatment
ABE	Adult Basic Education
AIP	Alternative Incarceration Program
CC	Community Corrections
Chit	Identification Used to check out keys
CIS	Corrections Information System
CO	Corrections Officer
DOC	Department of Corrections
DOJ	Department of Justice
EP	Emergency Preparedness
ERP	Emergency Response Plan
ESL	English as a Second Language
FTO	Field Training Officer
GP	General Population
IITP	Inmate Incarceration & Transition Program
I/M	Inmate
IMP	Inmate Management Plan
IWP	Inmate Work Program
KITE	Inmate Communication
LEDS	Law Enforcement Data System
LOP	Loss of Privileges
MH	Mental Health
MR	Misconduct Report
NCIC	National Crime Intelligence Center
NIC	National Institute of Corrections
PC	Protective Custody
PD	Position Description
PIO	Public Information Officer
РО	Parole Officer
PREA	Prison Rape Elimination Act
SEG	Segregation
SID	State Identification Number
SSN	Social Security Number
STEPS	Success Through Education and Planning
TL	Transitional Leave
TX	Treatment
UC	Unit Clarification
UIR	Unusual Incident Report
VIMS	Volunteer Information Management System
VT	Vocational Training
WBE	Work Based Education

## **Commonly Used Acronyms and Abbreviations**

## **Commonly Used Terms**<sup>14</sup>

**APS** – Assessment and Program Summary of important information about inmates.

**Custody Level** – indicates the privileges, prison and services available to an individual inmate.

**Community-Based** – Resource, volunteer or service that is functioning in the local community.

**Criminogenic Need** – One of seven factors/needs that contribute to the commission of crime.

**Criminogenic Risk** – the potential that an offender will re-offend through new criminal activity.

**Community Chaplain** – an ODOC trained religious services volunteer serving HGO in local community.

**Community Coordinator** – an ODOC trained volunteer providing HGO services in local community.

**Continuum of Faith** – Connecting inmates participating in religious programming with the faith community on release.

**Faith-Based** – related to a faith tradition or a faith community.

In-take Center –Initial housing location for inmates coming into the

DOC where assessment and evaluations are conducted. The stay is usually several weeks or more.

**Institutional Chaplain** – an ODOC employee in charge of religious services and chapel activities.

**Local** – referring to a county, community or city area.

**Pro-social** – behavior and attitudes that foster healthy relationships with others and respect for laws.

**Parole or Probation or Post-Prison Supervision** – period of time under state supervision following incarceration.

**Regional Community Chaplain** – an ODOC trained religious services volunteer serving HGO in a region of the state.

**Responsivity** – the measure and type of positive reaction to a corrective opportunity.

**Re-entry Liaison** – an ODOC volunteer assisting institutional chaplains in coordinating HGO re-entry services.

**Release Plan** – coordinated preparation for release from prison including housing, employment, treatment and services.

**Security Threat Group (STG)** – street or prison gangs.

**Transitional Services Manager** – a DOC employee overseeing programming in ODOC prisons.

Volunteer Position Description – Form used to define the duties of a volunteer

## **Inmate Vocabulary**

Inmates have developed prison vocabulary that they use with each other. Volunteers are discouraged from using these words and instead are encourage to use normal language to promote pro-social behavior.

promote pro social benavior.	
A & O	An inmate either new to prison or new to Corrections
Beef	An inmate's criminal charges
Bibler	A cigarette rolled in bible pages
Big House	Prison as opposed to County Jail
Books, My	An inmate's trust account
Call Outs	A printed list showing inmate appointments
Chill, chillin'	Take it easy, rest, relax.
Chocolate Heart	A soft-hearted staff member
Chow	Any standard institutional meal
Christian Crank	Any caffeinated beverage
Cops	Correctional Officers
Dead Eyes	A person with no conscience
Denny Smith, A	An inmate sentenced to a mandatory minimum
	sentence for gun offenses
Drive By	An assault that occurs while inmates are passing each
	other
Face Sheet	ODOC paperwork detailing an inmate's criminal charges
Fell	The date an inmate was arrested. "I fell on January 1st."
Flick	A picture
Freak	A sexual offender
Gate, the	The physical exit of the institution
Grip	A lot of whatever is being discussed (i.e. "I'm doing
	a grip of time.")
Guard	Any correctional officer
Hole, the	Disciplinary segregation
House	An inmate's cell
Installment Plan	Repeated incarcerations. "He's doing life on the
	installment plan".
Jack the Lock	Inserting an object (pencil lead, etc.) into a door lock or
	mechanism in order to make the door inoperable
Jonesing	Inserting an object (pencil lead, etc.) into a door lock or
	mechanism in order to make the door inoperable
Juice	Power, authority, ability to control or make things
	happen
Keester	The act of inserting contraband inside one's own
	body in order to smuggle the item past staff
Kicks	A pair of shoes.
Laundry List	A list of items that one inmate is forcing another
	inmate to purchase or else damaging information will
	be given out
Line Movement	A set time at which inmates may move from one
	location to another

Lopes Medication Line, Med Line	Standard mailing envelopes A set time at which inmates report to medical to
	receive controlled medications
Mole	An inmate digging a tunnel
Movements	A printed list showing inmate job/school assignments
My baby's mommy/daddy	A person with whom an inmate has a child and whom
	he/she no longer has any formal relationship
Out Date	The date on which an inmate expects to be released
Pat down	A staff member searching the physical person of an
DC	inmate
PC	Protective custody
Pinner	A small home rolled cigarette
Plant, A	A person inserted into a situation by Investigations
Plug	or the police in order to gather evidence on others A small package of contraband ready for an inmate to insert inside of themselves for smuggling purposes
Pool	An sporting event betting circle
Pruno	Homemade alcohol
Pump Iron	To lift weights in the weight area
Punk	A person unworthy of any consideration. Can be
	used as a term for someone sexually "bought" or
	sold or someone cowardly who will not defend
	themselves. Can also be used as a term for
	someone who trades sex for protection
Pusher	An orderly assigned as an aide to a disabled individual
R & D	Receiving and Discharge
Rabbit ("Rabbit out of here")	To escape
Rack	An inmate's bed
Radar, Under the	The act of serving a sentence while attempting not be
	noticed
Rig	A needle and possibly accessories used to inject illegal
	drugs
Shakedown Shawbarbin	A staff member's search of an inmate's cell
Shank, shiv	A knife-like item
Shoot, (Shoot you canteen) Short Timer	The act of giving something to another inmate An inmate who has a short time left on their criminal
	sentence
Shot Caller	The person in charge of a gang of inmates
Slinger	One who steals food from the prison kitchen and sells it to other inmates
Snipe	A small stub of a cigarette
Snipe Hunter	A smoker who searches the floors, window sills a
_	and other areas for the cigarette stubs
	(snipes) left by others.
Snitch	An inmate who informs on another inmate
Sparking	Lighting a cigarette, usually with batteries and wire
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Spread	A combination of different foods (usually resembling nachos) where several inmates chip with ingredients for group consumption.
Stash	A store of tobacco (or other contraband) hidden away
Tailor, A	A standard store bought cigarette
Tat Tat Gun	A tattoo
Toad	A homemade tattoo gun Derogatory term for an African American
Torpedo	An inmate paid or coerced into assaulting the enemy of another inmate
Train, on the	Multiple transfers between institutions on a frequent
Train, on the	basis. Usually thought of by
	inmates as being done for punitive reasons.
Truck	A person who must be carried or is heavy and
Truch	difficult to move. Not used for physical type
	movement. A non-performing card partner, a public
	defender that is difficult to get them to make any
	movement on issues
Vest, Close to the	The act of keeping information secret
Wood (Pecker Wood)	An inmate who adheres to the convict code (the code
	is not based on pro-social behaviors and values
	rather on thinking errors and criminal behavior)
Work Line	A set time at which an inmate reports for work
Yard	The prison recreation yard.
Yard Line	A set time at which inmates may move to and
	from the recreation yard
You the Man	A person with authority or the person in charge.
Zu Zu's and Wham Whams	Any edible item from the inmate commissary but
	usually candy, cake or pastries

# CHAPTER 4. COLLABORATING WITH CONSERVATION ORGANIZATIONS AND AGENCIES

## 4.1 Greater Sage-Grouse Decline

Greater sage-grouse (*Centrocercus urophasianus*) once occupied parts of 12 states within the western United States and 3 Canadian provinces. The sagebrush (*Artemisia* spp.) habitats on which sage-grouse depend have experienced extensive alteration and loss.



FIGURE 23: GREATER SAGE GROUSE ( PHOTO DREWBARNES.CA)

Approximately 70% of sagebrush habitat is managed by federal or state agencies; the remaining 30% is owned privately. Of the federal agencies, the U.S. Bureau of Land Management has responsibility for 50% of the sagebrush habitat in the United States<sup>2</sup>.

#### **Sagebrush Steppe Declines**

Sagebrush steppes have changed dramatically since European settlement. Introduction of invasive weeds such as cheatgrass has resulted in large stands of fuel and an increase in fire return intervals to less than 10 years in some areas. These frequent fires can eliminate sagebrush, native forbs and perennial grasses; opening up space for additional cheatgrass. Juniper and pinyon pine encroachment has also changed the landscape and fire regimes. The increase in these species can reduce the native plant understory of the sagebrush steppe ecosystem. In addition, inappropriate livestock management can adversely impact sagebrush habitat through trampling and reduction in perennial grasses and forbs.



Other habitat influences include fragmentation due to agriculture, urbanization and energy exploration and extraction. Climate change may potentially alter the amount and timing of precipitation resulting in drier summer conditions and further stresses on the plants and animals that depend on the sage steppe community.

FIGURE 24: SAGEBRUSH-STEPPE AND RIMROCK ALONG THE COLUMBIA RIVER (PHOTO WDFW.WA.GOV)

## 4.2 Items to discuss with BLM office include:

- Is there sage-grouse habitat in the area that is currently degraded and in need of plant input?
- Are there sage-grouse leks or brooding grounds in the area?
- Access to sagebrush seed. Seed should be eco-sourced from the general area where the plants will be out-planted
- Grazing regime. Is it possible to reduce or eliminate grazing for a few years while new plants get established?
- Site preparation and follow-up such as weed control
- Necessary permits such as cultural resource survey
- Location of planting site in relation to the location of the prison. Consider travel time and amount of time work crews have each day to out-plant sagebrush
- Road access/condition during spring or fall out-planting
- Clarify funding or costs for various tasks such as who pays for the work crew?
- Clarify roles, tasks and timeline

## 4.3 Building Partnerships

Building thriving partnerships is essential when setting up your sagebrush grow-out program and developing mutually agreed upon goals and objectives. Each partnership is unique and may include joint ventures within an organization such as DOC superintendents, facility and maintenance staff, HR, and inmates. External affiliations may be wide reaching and include relationships with government agencies, nonprofit organizations, universities, suppliers or experts in the field. When forming partnerships it is important that all parties receive benefits and feel they are a respected part of the

collaborative team. Keep the following in mind when starting to build your team: **Trust**, **Shared Vision and Values**, and **Open Communication**.

#### 4.3.1 Trust

Trust is the keystone for any successful partnership. This means all parties feel they have the full commitment from the partnership and that they each are able to give and receive. The Webster's Dictionary defines Trust as: *a*: <u>assured</u> reliance on the character, ability, strength, or truth of someone or something *b*: one in which confidence is placed. Building Sustainability in Prisons Projects partnerships involves risk and it takes time to build trust with participating parties. Creating a clear and mutually agreed upon structure assists in creating well-defined procedures for building this trust. The following steps will help establish trust between parties involved in your sagebrush program.

#### **Building Trust in Partnering Relationships**<sup>15</sup>

1. *Alignment of Objectives and Interests* - In this critical first step, the objectives of the relationship and partnership are agreed upon between the senior leadership of the two parties.



FIGURE 25: PARTNERS REVIEW GOALS AT A POTENTIAL WORK SITE. (PHOTO FIONA EDWARDS)

2. *Identification of Issues and Challenges* - Once the objectives are aligned, the two parties identify all of the challenges, issues and risks that they think or imagine will arise within the relationship. These issues are prioritized, assigned owners by the parties and solved accordingly. The key here is that everyone's issues are heard and addressed with clear communication between senior leaders and others impacted before an issue arises. This approach may help avoid issues coming up in the heat of

a deadline on a loading dock or construction site between employees without sufficient information, resources or decision making authority.

- 3. *Issue Resolution and Decision Making* Next, ground rules, or working principles on how the group will interact are agreed upon. This includes how decisions or problems will be escalated. By defining and agreeing on a clear process for escalating and resolving difficult issues, trust grows in the partnership's ability to work effectively together. This allows the partnering process to sustain trust and build a strong, long-term relationship.
- 4. **Regular Review of the Relationship** As a final step in the partnering process, the parties establish a regular schedule to come back together to review the relationship, to recalibrate objectives and resources, to publically celebrate successes, and to ensure that trust is continually and consciously strengthened and sustained.

#### 4.3.2 Shared Vision and Values

Each partner brings different shared interest and expertise to the sagebrush project. Creating a shared vision statement should express the values and purpose of the collaboration between all involved. Developing a mutually agreed upon vision statement will guide the partnership and help focus the team and shape future directions. The team should frequently revisit the vision statement and reassess and modify the statement if needs change or problems arise.



FIGURE 26: INSTITUTE FOR APPLIED ECOLOGY STAFF, LARKIN GUENTHER, LEADS BY EXAMPLE WHEN EXPLAINING PLANTING PROTOCOL TO OAK CREEK YOUTH AUTHORITY PARTICIPANTS (PHOTO: STACY MOORE)

- 1. Identify potential partners during a scoping meeting. Let individuals know that participation in the visioning session does not obligate participation in the project.
- 2. Brainstorm vision statements and ideas. This can be done in small groups followed by recording all ideas with the entire group.

3. Together formulate one vision statement that communicates the shared themes that the group is striving for. The purpose of the vision statement is to provide focus and help define roles for the each party of the team. A well thought out vision statement can direct discussions and provide a basis for future planning.

#### 4.3.3 Open communication

Effective communication within internal and external parties is required if the partnership is to succeed at its greatest capacity. Members of the team must communicate their understanding of their roles and responsibilities as well as the division of labor within the partnership. Allowing open communication and trust creates an opportunity for all members to feel valued and the ability to speak out when questions or concerns arise. Consider a project work plan to assist all partners in clear communication and mutual understanding of goals and tasks.

Team Members:			Correctio	nal Facility:		
Main lon	Main long term goal: Project funding:					
Create ti	Media outreach: Create timeline: Short term goals- listed as tasks below:					
Task	Responsible party	Deliverable	Due Date	Partners to assist	Partners to be recruited	Possible Challenges

#### Sample Sagebrush Propagation Project Workplan

## 4.4 Barriers to Successful Partnerships<sup>16</sup>

- Limited vision/failure to inspire
- One partner manipulates or dominates, or partners compete for the lead
- Lack of clear purpose and inconsistent level of understanding purpose

- Lack of understanding roles/responsibilities
- Lack of support from partner organizations with ultimate decision-making power
- Differences of philosophies and manners of working
- Lack of commitment; unwilling participants
- Unequal and/or unacceptable balance of power and control
- Key interests and/or people missing from the partnership
- Hidden agendas
- Failure to communicate
- Lack of evaluation or monitoring systems
- Failure to learn
- Financial and/or time commitments outweigh potential benefits
- Too little time for effective consultation

## 4.5 Step One: Defining the Need for a Partnership

Forming partnerships helps eliminate duplication of work, increases capacity to accomplish common goals, leverages financial and human resources for partner organizations and brings added knowledge and skills to common projects. Partnerships strive to achieve more with less effort by bringing strengths of each party together and working towards a common goal. There are many benefits from building a partnership, such as increasing visibility and gaining shared networks between participants. In addition some projects may require expertise or resources that might not be available within a single organization. When considering the need for forming a partnership each party should ask themselves what benefits your specific organization can receive, alignment with your mission and the vision of the project, and what benefits you may offer other partner organizations.

## 4.6 Step Two: Start the process

Successful partnerships bring together the strengths of all concerned individuals or groups. Clear communication is key at every stage of the partnership, especially at the onset. Participants need to feel they can connect to each other as well as feel open to expressing opinions and expectations. Partners may want to consider starting with small projects to learn how each associate cooperates with the group and to learn about each other's key skills and communication styles. Clearly delineating roles and responsibilities will help create a smooth start and lessen misunderstandings along the way.



## 4.7 Step Three: Setting Up and Maintaining the Partnership

FIGURE 27: OREGON STATE CORRECTIONAL INSTITUTION INMATES SOWING NATIVE PLANTS WITH INSTITUTE FOR APPLIEDECOLOGY STAFF

Maintaining partnerships involves reviewing the collaborative purpose, goals and objectives. It may be beneficial to form a Memorandum of Understanding to clearly define roles and responsibilities that include timelines for completing tasks and reviews.

As part of setting up and maintaining the partnership, it is important to provide opportunities for staff and inmates to make suggestions and initiate projects. This provides opportunities for by-in and feelings of pride in the work being done. In additional there may be opportunities for university students to conduct thesis or project work that is mutually beneficial for the student and the prison.

#### CHECKLIST FOR SETTING UP AND MAINTAINING THE PARTNERSHIP<sup>16</sup>

• Is there a genuine shared vision and set of goals across the partnership?

A common understanding of, and agreement to, the vision and objectives needs to be reflected in any project brief, business plan, terms of reference and/or work program.

Document the vision and agreed goals:

- Are there clearly identified aims that all partners can articulate and agree to? The partnership's aims and goals need to be reflected in its actions and practices. Document accepted aims:
- Is the purpose of the partnership clear? Are the members clear on what their role

and responsibilities are? Are members clear on the "added value" of the partnership?

Members need to agree and understand what their role and responsibilities are within the context of the purpose and outcomes of the partnership. Members need to understand their role in collective decision-making, delivering activities, and representing the partnership.

Document roles and responsibilities of members:

• What skills and competencies do we need to manage and support the partnership? Has a full assessment been made of the skill and competencies required to support/manage the partnership?

The partnership needs to understand what skills and competencies it will need to achieve the agreed goals, as well as to ensure processes are effective. Consideration will need to be given to making training resources available.

Document skills and competencies:

• To whom will the partnership report? Is there a process to report on progress?

Document the lines of accountability/reporting processes:

• Is there an accepted process for decision-making? Who is the accountable individual for the partnership?

The decision-making process needs to be understood by all members of the partnership. Decisions should be made through recognized processes with partners having equal power. Processes for decision-making need to define a quorum, how decisions will be recorded, and arbitration processes.

Document processes for decision-making:

• Is there an accepted commitment to joint investments/resources to support the partnership by all the organizations/individuals?

Resources include more than just money; they are also time, knowledge, energy and personnel.

Document the accepted commitment to joint investment/resources:

• Is there a robust communication strategy in place? Do partners know about each other's organizations and what the pressures and imperatives are? Do partners talk to each other about their organizations agendas and priorities?

It is important to have an effective communication system in place at all levels within the partnership and within partner organizations, sharing knowledge and information.

Document the communication strategy:

• Are there accepted ground rules for partnership work that include the reconciliation of different organizational cultures and ways of working?

Being open and honest. Communicating, and exchanging information in open networks will also help to build trust within the partnership.

Document accepted ground rules:

## CHAPTER 5. SAGEBRUSH PROPAGATION

## 5.1 Project Timeline

From initiation through completion, the production of sagebrush seedlings takes over a year. The time from seed collection in the fall until seedlings are out-planted at the restoration site is approximately one year. However, a successful propagation program begins many months before seed collection and includes identifying restoration sites, identifying the quantity and species desired, forming partnerships with a correctional facility and others, and, if necessary, applying for grants to fund the project.

Below is a general timeline of actions required to implement a sagebrush propagation project within a correctional facility. Keep in mind that this timeline is intended for big sagebrush (*Artemisia tridentata*) and will be altered for each species.

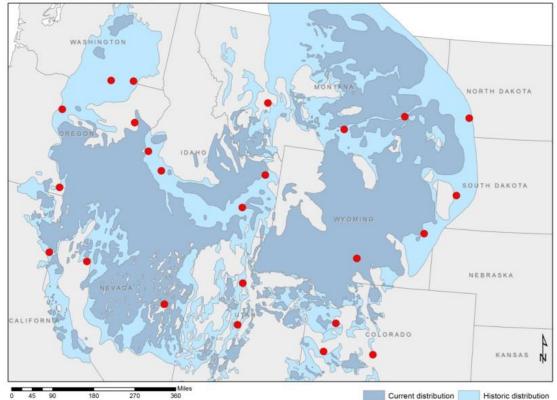
Dates	Year	Action		
Summer	1	Identify restoration site & need for plant materials		
Summer	1	Initiate contact with correctional facility		
Summer/	1	Form a partnership with correctional		
Fall		facility		
Summer	1	Identify infrastructural needs for plant propagation		
Summer	1	If needed, submit grant proposal(s) for required infrastructure and personnel		
Late Fall	1	Collect seed or locate seed source		
Late Fall	1	Clean and store seed		
Winter -	1-2	Optional: lectures at facilities to bolster		
Spring		interest and participation		
Winter -	1-2	Continued contact and interaction with		
Spring		staff and inmates to prepare infrastructure & crew		
Spring	2	Purchase equipment needed for propagation		
May	2	Sow sagebrush seeds		
May-June	2	Thinning		
May-	2	Fertilizing, continued maintenence		
August				
June	2	Move to shadier location		
Mid- Fall	2	Harden off		
Late Fall -	2-3	Dormancy		
Winter				
Late Fall	2	Fall out-planting		
Winter-	2-3	Optional: Preparing for an inmate planting		
Spring		crew		

Dates	Year	Action
March-	3	Spring out-planting
April		

#### **5.2 Sagebrush Propagation Methods**

This propagation protocol outlines the methods for growing big sagebrush (*Artemisia tridentata*), which includes Wyoming big sagebrush (*Artemisia tridentata* ssp. *wyomingensis*), mountain big sagebrush (*Artemisia tridentata* spp. *vaseyana*), and basin big sagebrush (*Artemisia tridentata* ssp. *tridentata*).

#### 5.2.1 Identifying a Restoration site



Sustainability in Prisons Project: Overlay of Sagegrouse habitat and prison facilities

FIGURE 28: A SAMPLE OF CORRECTIONAL FACILITIES WITHIN THE CURRENT OND/OR HISTORIC RANGE OF THE GREATER SAGE-GROUSE

Because the restoration site determines the goals and parameters of the project, propagation begins with the identification of the restoration site. Knowledge of the historic and surrounding vegetation will indicate which species should be grown. Seed should be sourced from geographically local and similar sites in order to increase chances of survival and support local adaptations.



FIGURE 29: SUAN FRITTS (BLM, VALE )R) AND IAE STAFF, EXAMINE A POTENTIAL SAGEBRUSH PLANTING SITE (PHOTO: STACY MOORE)

Work with agency partners to identify potential sites with a need for sagebrush revegetation materials. Agency partners will likely have a site in mind that is in need of revegetation. Consider areas burned by wildfires and areas with vegetation degraded through agricultural, recreational, industrial or other uses.

Weigh the costs and benefits of direct seeding versus transplanting at various sites. Because transplant survivorship tends to surpass direct seeding success in harsh sites with poor soils and severe climates, it may be prudent to use more costly seedlings for drier sites, while using direct seeding methods where precipitation is higher and more predictable. These tradeoffs should be discussed with all partners before deciding on a site in order to maximize the benefit of growing costly transplanting stock.

Out-planting locations which can be excluded from grazing for at least three years after planting will have more successful establishment rates. Even when livestock don't feed directly upon plant materials, they are often trampled and browsed, decreasing survivorship.

Early spring access can be difficult for many remote planting locations. The ideal time to out-plant sagebrush is in fall (Oct.-Nov) or early spring (March-April), but depending on the location, snow and mud may make access impossible at a specific time. This does not exclude these sites from consideration for out-planting, but rather requires adaptive management and flexible planning.

If you plan on working with an inmate crew to out-plant at the restoration site, consider the distance between their base correctional facility and the restoration site. Costs will vary based on transportation needs and the potential of overnight trips. Work with your correctional facility partners to understand their regulations and abilities regarding remote work crews (see Chapter 3).

#### 5.2.2 Collecting Seed

There are various methods for obtaining sagebrush seed. Seed can be purchased from a commercial vendor, can be self-collected, or may be available in storage through an agency partner.

For self-collections, regulations regarding seed collection vary depending upon the ownership of the collection site and the intent of the collector. Written landowner permission must always be granted before collecting seed whether on private or public land. Permits and additional information about collecting on public land should be obtained from an agency field office responsible for the seed collection site.

#### Determining a Seed Source

Whatever the method, the seed source must be near the intended restoration out-planting site. Wyoming big sagebrush is an incredibly widespread species and populations are adapted to a wide range of precipitation regimes, soil types, and elevations. Populations therefore vary greatly from location to location. The more local the seed source, the better the chances of successful establishment. It is suggested that the collection site have similar elevation, slope, aspect, soil type, and moisture levels to those of the intended revegetation site.



FIGURE 30: SAGEBRUSH SEED EXAMPLE (PHOTO: LARKIN GUENTHER)

## eed is collected

**Collecting Seed** 

Seed is collected from Wyoming big sage soon after seeds ripen in late fall, generally from late October through early December, depending on site location and conditions<sup>17,18</sup>. Careful timing is required so that collection occurs once the seeds have fully ripened to avoid collecting non-viable seed. Scouting trips are recommended beginning in early to mid-October in order to gauge the

timing of seed ripening.

Sagebrush seeds are collected by beating or stripping the inflorescences into bags. This should be done when the plants are dry. Placing a plastic bag over the inflorescences and beating them with a tennis racket to loosen the seeds is an effective method.

There is no simple method for knowing how much seed you have collected. When pure, sagebrush seed yields about 1.7- 2.5 million seeds/lb.<sup>19</sup>. Keep in mind, however, that when using the above method, by far most of your weight will be from chaff and non-seed plant materials. Consider that you will need between three and five seeds for every finished plant you intend to produce.

All of the collected seed and material must be air dried. The plant materials should be spread evenly in cardboard trays or on newspapers or tarps for 3-5 days in a low humidity location until dry. Poor air circulation can result in mold.

Collection ethics: Whenever you are collecting seeds from a wild source, a certain code of ethics must be followed. Many agencies or landowners require that no more than 5% of the seed from a population may be collected. Never collect seed from more than 10% of the reproductive plants in a population.

In order to obtain higher genetic diversity, it is advisable to collect some seed from many individuals rather than all of the seed from a few individuals.

We recommend that all seed collectors familiarize themselves with the Seeds of Success technical protocol before making wildland seed collections (see citation or access online <a href="http://www.blm.gov/wo/st/en/prog/more/fish\_wildlife\_and/plants/seeds\_of\_success/prot\_ocol.html">http://www.blm.gov/wo/st/en/prog/more/fish\_wildlife\_and/plants/seeds\_of\_success/prot\_ocol.html</a>).



Cleaning Seed

After being removed from the wildland plants, the seeds will be mixed with a variety of chaff and non-seed materials, which must be removed before storage through a process called seed cleaning. We recommend sending your collected plant materials to a professional seed cleaner to process your seed. Professionally cleaned seed will be of much higher purity.

FIGURE 31: CLEANING SEED (PHOTO: CARL ELLIOTT)

The following facilities are recommended for professional seed cleaning:

- USFS Bend Seed Extractory
- Meeker Plant Materials Center

- Bridger Plant Materials Center
- Lucky Peak USFS Nursery

If you are cleaning only a small amount of seed, or are not concerned about achieving high purity seed, you can clean the seed yourself. The plant material should be sifted through two sets of sieves to separate seeds: first, one to two passes through a 5mm diameter sieve; then one pass through a 2mm diameter (standard no. 10 soil sieve) to remove finer materials<sup>20</sup>. Hand rubbing through the mesh sieves must be very gentle and minimal so as to not damage seed coat.

#### Seed Storage

Once cleaned, sagebrush seeds can be stored in paper bags. Professionally cleaned seeds will likely be sealed in plastic bags when you receive them, and can remain sealed until use. Store the seeds in cool, dry conditions  $(2-5^{\circ} \text{ C})$   $(35-41^{\circ}\text{F})$ . Seeds must be completely dry to prevent molding. If stored under dry, cool conditions, seeds may remain viable for 2-3 years, though best germination occurs in the first spring following collection.

#### Germination Tests

Though not necessary, a germination test can help you ascertain the quality of your seed. This will help you determine how much seed will be required to produce the number of plants intended for your project. You can do this yourself, by counting out seeds and placing them on a moist paper towel or germination paper. This should be placed inside a clear plastic container and exposed to sunlight or greenhouse lights in a warm location. Keep the paper moist and give the seeds a few weeks to germinate. Most of the seeds should germinate within 10-14 days. Be sure to carefully count and record both the total number of seeds tested and the number that germinate. You can also send a sample of your seed to a lab for a germination test (See Appendix C).

#### Seed Treatment

Seed treatments are not generally necessary for the germination of big sagebrush, though some growers have reported that certain high elevation ecotypes respond positively to cold-moist stratification<sup>5</sup>. For those growing high elevation or high latitude ecotypes of big sagebrush, particularly of the subspecies mountain big sagebrush (*Artemisia tridentata ssp. vaseyana*), we recommend germination trials that test germination rates on groups of seeds varying from two weeks to 16 weeks of cold-moist stratification, and a control group with no stratification.

Cold-moist stratification: Stratification refers to a period of cold required by some seeds before they will break dormancy. Seeds can be stratified through various methods. When stratifying a few seeds for germination tests, the seeds can be placed on moist paper towels, sealed in a plastic bag, and placed in a refrigerator. For larger numbers of seeds, sow your seeds containers, water them, and place them in a cool place. This may simply be an outdoor location, or, if available, a large walk-in cooler. Seeds sown and stratified outdoors will germinate less uniformly as they respond to fluctuating temperatures. If using this method, sow your seeds during the winter and let them germinate at their own pace in the spring. Waiting until May to sow will not work for outdoor stratification. Large amounts of seed can also be mixed in sealable plastic bags with equal parts moist vermiculite, and then placed in a refrigerator until the sowing date in May.

#### 5.2.3 Sowing Seeds

#### Timing

Sagebrush seed sowing is generally scheduled to occur early May<sup>17</sup>. The local climate determines whether this can be done outside or whether a greenhouse or hoop house is necessary for successful germination. Outside sowings should be successful once the danger of frost is minimal and daytime temperatures are above 22° C (72°F). Indoor growing facilities can provide consistently warm temperatures during the germination phase of growth, but care should be taken to not let the



FIGURE 32: SEEDS USUALLY GERMINATE 5-10 DAYS AFTER BEING SOWN (PHOTO: LARKIN GUENTHER)

growing environment become too hot. Frequent communication is important at this point, as spring temperatures can often fluctuate rapidly. Partners will need to be flexible to make sure growing conditions don't become too hot or too cold for the plants.

#### **Containers**

All containers should be sterilized prior to being filled. If not using new containers, this can be done through steam sterilization or by washing the containers in a diluted bleach solution. Containers should be at least six inches deep to promote deep root growth. Suggested containers are Beaver Styroblock <sup>R</sup> 45/450 or Ray Leach "Cone-tainer"<sup>TM</sup> SC10 Super. If using Ray Leach Conetainers<sup>TM</sup>, corresponding trays will need to be purchased as well, and each cell must be loaded into the trays. These containers produce plugs the ideal size for out-planting finished seedlings using a dibble. The Styroblock <sup>R</sup> containers provide the benefit of extra insulation around the plant roots.

#### Growing Medium

The growing medium should be a peat - vermiculite mix in a 70:30 ratio<sup>17</sup>.

We suggest mixing 1 part native soil to 20 parts commercial growing medium at the time of sowing. This will act as a mycorrhiza inoculant for vesicular-arbuscular mycorrhizae (VAM). VAM inoculants are also available commercially. Evidence suggests that VAM

improve the ability of the host plant to take up water and nutrients which contributes to success of sagebrush seedlings in restoration efforts<sup>21</sup>.

Be sure to mix the growing medium very thoroughly. If mixing the vermiculite into the growing medium onsite, use a particle mask for protection. Many commercial outlets will mix the peat and vermiculite themselves, and may even be able to mix in the native soil component upon request. Before sowing, mix in enough water so that the growing medium feels slightly damp and can be formed into loose, crumbling balls in your

and moistened thoroughly, load the



hand. Once the medium is mixed FIGURE 33: MIX YOUR SOIL MEDIUM THOROUGHTLY BEFORE SOWING SEEDS (PHOTO: STACY MOORE)

planting medium into the containers. Use shovels or old plastic containers to scoop the medium into the containers, periodically knocking the bottom of the tray against the table or bench to help compress soil into the containers. It is important that no large air pockets be left in the containers. Once the containers are filled to the rim, the soil should be tamped down gently until the soil surface is between 1.0 and 0.5 cm below the container rim. We suggest constructing soil tampers to help compress soil evenly. If using Ray Leach Conetainers<sup>TM</sup>, it is highly recommended that a tray cover (which can be purchased from the same manufacturer) be used to prevent the growing medium from filling the spaces between each cell.

Sowing seeds



Seeds should be sown 3-7 per cell, though this range may be adjusted based on the results of germination tests. Large quantities of seeds are easily sown using modified spice shakers. Fill spice shakers with seed, and cover enough holes so that only a few seeds pass through the top with each shake.

#### FIGURE 34: EXAMPLE OF A SEED SHAKER (PHOTO: LARKIN GUENTHER)

Like many other members of the Aster family, sagebrush seeds require ample light in order to germinate. Seeds should either be surface sown

or covered with only very thin layer of vermiculite to allow for sufficient light to trigger germination.

After sowing seeds, all containers should be watered thoroughly. The planting medium should be kept moist (but not soggy) throughout the germination period. Germination typically begins 10 - 14 days after sowing and is generally complete within 30 days.

#### 5.2.4 Active Growth period

#### Watering

Watering should be timed in morning to prevent wet foliage at night. Once true leaves emerge, the growing medium should be allowed to dry down between waterings. This requires that plants be checked daily, but watered only when deemed necessary<sup>18,24</sup>. "Dry down" does not mean completely dry; some moisture should remain in the soil without the soil becoming waterlogged.

If you have difficulty determining when to water, it can be helpful to weigh a random sample of trays and water once the weight has decreased by 30%. Choose a random sample of trays – about 10% of your total number of trays. Weigh these trays after watering thoroughly. Weigh these same trays each day. Once  $\frac{1}{2}$  of your sampled trays reach 70% of their original weight, all of the trays should be watered. (If no suitable scale is available to hold the plant trays, simply hold a tray while standing on a bathroom scale. Then weigh yourself without the tray, and subtract this weight from the original).



Do not rely solely upon weighing the trays to determine when to water. If the growing medium seems too dry and/or the plants are wilting, disregard the weight and water according to your discretion. Look for signs of overwatering as well, including green algal growth over the soil surface.

FIGURE 35: KEEP SOIL MOIST AND WATER EVENLY AFTER SOWING SEEDS (PHOTO: STACY MOORE)

Be sure to water evenly. Plants on the edges of trays and benches often dry out when those in the middle are still moist. Each day, check for trays that were missed or dried out quickly on the edges. Adjust watering accordingly.

In hot, windy weather, watering may need to occur twice or more a day. Plants placed under partial shade, such as shade cloth, will dry out less quickly.

Watering should always be done with a soft, shower-like spray. Use an attachable nozzle on the "shower" or "rain" setting in order to not blast soil and seeds from the trays, and to prevent damaging fragile young foliage.

## **Fertilization**

Weekly fertilization should be initiated two to three weeks after germination has finished. Use a fertilizer solution with moderate nitrogen levels. Sagebrush are adapted to low nitrogen environments and respond best when nitrogen levels are not excessive. A 4-25-35 NPK fertilizer is suggested. A 20-20-20 NPK all purpose fertilizer is acceptable. Plant foliage must be rinsed lightly after liquid fertilization to prevent foliar burning<sup>18,22</sup>.



#### Heat management

FERTILIZER TO WATERING

CONTAINERS (PHOTO: STACY MOORE)

Plants started in a greenhouse or hoop house should be

moved from the greenhouse to a shade cloth-covered hoop-house or outdoor benches once germination is complete. However, if the local climate is cool and frost is still likely, wait until conditions are milder. Young seedlings should generally be safe from cool nights in mid-late June. Trays can be placed on benches, or on pallets on the ground. Weeds and vegetation should be managed around the plants to avoid shading out the seedlings and to decrease pest activity. Raised benches help prevent this from being an issue.



FIGURE 37: EXAMPLE OF A SHADE HOUSE USED AT SNAKE RIVER CORRECTIONAL FACILITY (PHOTO: STACY MOORE) Erecting a frame to support shade cloth above outdoor plants will help them survive hot, dry summers.

## 5.3 Hardening Off and Winter Dormancy

Beginning in September, irrigation should be gradually reduced to prepare for winter dormancy. The plants should receive their last fertilization in September<sup>22</sup>. If you are not planting out in fall then the plants can be moved to an unheated, plastic-covered hoop house for winter storage, where they will receive no water. Plants should be kept cool and dry<sup>17</sup>. Alternatively, the trays can be placed on the ground and wrapped thoroughly and gently with crop protection fabric for insulation. Be sure to weigh down the fabric so it doesn't blow loose in winter winds. It is recommended that in this case, straw bales be placed in a perimeter around the trays to discourage herbivory (eating vegetation)<sup>17</sup>.

## **5.4 Data Collection**

Data should be collected throughout the propagation process. Data collection is useful for a number of reasons: regular FIGURE 38: THIN PLANTS TO JUST ONE PER CELL (PHOTO: data recording keeps the propagation crew STACY MOORE) gauge their success and provides useful information to help improve future projects.



Example activity logs and data sheets are included in Appendix D. These can be modified for each project.



FIGURE 39: INMATE CREWS PREPARE TO PLANT SAGEBRUSH ON **BLM SITE (PHOTO: STACY MOORE)** 

#### 5.5 **Propagating Additional Species for Sagebrush Habitat**

While big sagebrush is a dominant species in sage-grouse habitat and highly important in all stages of the birds' life cycle, there are many other plant species which are important components of these habitats. Appendix F provides general propagation information for selected additional species native to sagebrush steppe habitats. These species were

selected based on the following criteria: beneficial to sage-grouse, whether directly or indirectly; widespread in sage-grouse range; seed sources available or in progress; better establishment through transplanting of plant materials than through direct seeding.

All of the propagation methods outlined in Appendix F are general in nature. Additional research is suggested before implementing a program growing these species. Work with agency partners to decide which species are ideal for use at your site and to locate seed sources for these species.

## 5.6 Outplanting

Preparation for out-planting events should begin several months ahead of time. It can be efficient to use a contractor for out-planting, or to use an agency crew. These crews should be scheduled in advance to ensure availability. Using a prison work crew is also possible and can be highly rewarding, but additional planning will be required. Please see Chapter 3 for working with an inmate planting crew.

Out planting occurs in fall or early spring, and accessing the site may difficult be due to weather and road conditions: this should be considered at the beginning of the propagation process, in advance of choosing a restoration site. Be sure that you are able to transport a crew, tools, and a port-a-potty to the



FIGURE 40: CLARK FLEEGE, USFS, LUCKY PEAK NURSERY, IDAHO, OBSERVES GOOD SAGEBRUSH ROOT DEVELOPMENT (PHOTO: STACY MOORE)

site. Vehicles with four-wheel drive can be rented if need be. Take care to ensure that vehicle use does not cause disturbance. Vehicle use should always be restricted to existing roadways.

## Scheduling

Moisture conditions are best in late fall or early spring, though the exact timing will vary based on your geographic location and the specific site conditions. Research climate data for the restoration site in order to make informed decisions about scheduling. Try to time your out-planting such that the following conditions are met, as recommended by Richard Stephens<sup>23</sup>

• Soil moisture should be high. When applicable, time out plantings to occur soon after snow melt. If possible, bring supplemental water.

- Chances of precipitation should be high. Plan to plant at a time of year when precipitation is likely based on past data and experiences. If there is flexibility in your out-planting schedule (which may not be the case), keep track of current weather predictions and schedule out plantings to occur a few days before predicted precipitation events.
- Temperatures should be relatively low. Hot temperatures stress transplants and can prevent roots from establishing.
- If out-planting in the spring make sure it is late enough that frost-heaving has ceased, and danger of deep freezing and heavy frost is minimal.

#### Tools

Many different tools can be used for out-planting containerized plant materials. Various styles of dibble bars are available. Be sure to use a style that is compatible with the size of the containers used. If the dibble bar is too long, the bar should be inserted only partway into the soil to prevent planting the plugs too deeply. Do not use a tool that is too short; plugs which are planted too shallowly will dry out quickly and will not survive. Stuewe and Sons, Inc. offers a planting dibble under the product identification number DIB10 which corresponds exactly to the **Ray Leach "Cone-tainer"<sup>TM</sup> SC10 Super containers.** A gas-powered auger can be highly useful and increase the efficiency of planting.



FIGURE 41: INMATES USE A PLANTING BAR TO PLANT SAGEBRUSH (PHOTO: STACY MOORE)

Tree planting bags can be purchased from forestry supply companies. These greatly increase efficiency by allowing planters to carry more seedlings with them without damaging the plant materials. These can be purchased with a shoulder harness for better weight distribution.

Using a scalping tool can be a beneficial practice in areas with thick competing vegetation. However, keep in mind that this method bares soil, leaving it

vulnerable to higher temperatures and increased evaporation, and can also disturb soil biota. Work with your agency partner to decide if this method could be beneficial at your restoration site. See "Additional Treatments" section below for additional information.

## Planting Design

Unless the restoration area is very small, planting the entire area is generally not possible. A common practice is to plant shrubs in "islands" or "mother colonies," with the expectation that seed produced from these islands will spread to non-vegetated areas and facilitate further revegetation<sup>24,25</sup>. Keep records about how many seedlings are planted in each island and the distance between islands. Research is still being done to understand successful guidelines for these variables. As a general guideline, planting islands should be spaced closely enough to be within easy visual distance of one another.



Use visual assessments, topography, soil maps, aerial

photos, and other available resources to determine the **METER APART (PHOTO: STACY MOORE)** location for planting islands. Planting islands should be located where the microclimate presents the best chance of survival; for example, where soil moisture will be retained for

To account for seedling mortality, plants should be planted on 1 meter centers<sup>25</sup>.

Design your planting efforts to allow for efficient monitoring in subsequent years. Space plants as evenly as possible, while allowing for variation for rocks, stumps, or other existing vegetation. Record GPS information for each planting plot or island. Record the number of plants per row, the number of rows, and the compass bearing for the rows. It can be helpful to mark plots and/or islands with a piece of rebar with a plastic cap, though this must be cleared first with the land owner and/or manager.

#### Site Preparation

At any site which has already been occupied by competing vegetation, preparing the planting site through vegetation removal is recommended to increase survivorship<sup>25</sup>. For additional information on site preparation and vegetation removal in rangeland restoration, see the USDA Rocky Mountain Research Station's *Restoring Western Ranges and Wildlands*.

## Transporting Plant Materials

longer periods in the spring  $^{25}$ .

Plant materials should be kept moist and cool during transport. This should not be problematic if planting is scheduled early in the spring or late fall.



#### FIGURE 43: DELIVERY TRUCKS CAN BE USED TO MOVE PLANTS TO PLANTING LOCATION (PHOTO: BRI MORNINGRED)

To lessen the stress on the plants, it is best to transport the seedlings in their containers; however, this method can be inefficient due to the space required. To increase space efficiency, the plants can be carefully removed from their containers (if root development is strong enough to maintain the plug

shape after removal), stored together in plastic bags, and misted with water. Dipping the roots in a hydrogel solution prior to bagging can also help keep the roots in optimal condition. Removal of the plant materials from containers should be done as close to the departure time as possible, and regularly checked to ensure that the roots stay moist.

#### Planting Techniques

Care must be taken to ensure that the seedlings are planted correctly to ensure better survival rates. Take time at the beginning of a planting event to thoroughly describe and demonstrate proper planting techniques. Take time to explain some common errors. Once planting has begun, one or two people should be focused on quality control for at least the first part of the event.

Insert the dibble into the soil to just slightly over the depth of the plug. Wiggle the dibble back and forth slightly to widen the hole. After making a hole using a dibble, the plug should be inserted into the hole. Check to ensure that the hole is deep enough. The plug must not stick up above the surrounding soil surface. The top of the plug should be approximately



FIGURE 44: SAGEBRUSH PLANTED AT CORRECT LEVEL WITH SURROUNDING GROUND (PHOTO: STACY MOORE)

1 cm below the surrounding soil surface. Native soil surrounding the plug should then be firmly pressed around and over the plug. The plug's growing medium should not be visible after planting. Firmly pressing, with a hand or with a boot, around the plug after planting helps ensure that large air pockets are not left in the planting hole.

#### Additional Treatments

Additional treatments can sometimes increase survival of transplants. Studies have shown that including hydrogel during planting and placing slash on the southern side of the transplants can increase survival rates <sup>26,27</sup>. The hydrogel solution should be mixed to a consistency which will adhere to the roots. Slash is often available at the site. Place wood debris on the south side of the seedlings to increase moisture retention.

Scalping to clear grasses and other competing vegetation from the area immediately surrounding the seedlings can be beneficial to decrease competition for light, nutrients, and moisture. However, keep in mind that bare soil heats more quickly and loses moisture more quickly than soil shaded by vegetation. If scalping is used, consider mulching the scalped area to lessen evaporation and to prevent competing vegetation from resprouting or germinating in the scalped area. Scalping can also disturb soil biota. Work with your agency partner to decide if this method would be beneficial at your restoration site. A scalper can be used to clear at least a square foot of space around the planting spot. It can work well to assign one person to scalp planting spots for each seedling first, with planters coming behind with dibbles or augers and the plant materials.

#### Monitoring

Monitoring is an important part of any restoration project. Your planting design (see above) should be set up to make monitoring efficient and accurate. Before planting, make note of which variables you are interested in tracking so that baseline data can be recorded either before planting or on the planting day. Clear records of the numbers of plants planted and where they were planted are crucial for obtaining accurate survival information. Monitoring should be completed for as many subsequent years as funding allows. Try to time monitoring events for the same time each year.

Monitoring is an extremely important aspect of any restoration project and should not be undervalued, as it allows us to learn from and improve upon our restoration efforts.



FIGURE 45: INMATES KEEP PLANTS MOIST IN CONETAINERS UNTIL READY TO PLANT IN THE GROUND (PHOTO: STACY MOORE)

#### CHAPTER 6. WORKING WITH THE MEDIA

Media provides a powerful tool for educating the public about sage-grouse/sagebrush conservation issues, sharing good news items about inmates giving back to the community, as well as promoting your organization and partnerships.

#### 6.1 Coordinating media stories with prisons

The media may have heard about your sagebrush project and may contact you or the prison directly requesting an interview. Always work with the prison Public Information Officer (PIO) and your partners before replying to interview requests.

If you are trying to initiate a media story, contact the PIO to start the process. The PIO will most likely not have details about your project so it is important to provide them with a short news release or pitch that they can then look over and pass on to their media contacts in the local area. Additionally, each of your partner organizations may have their own media opportunities with newspapers, journals, TV, radio or through their newsletters, websites and Facebook.

Journalists are often interested in seeing the project directly and interviewing the inmates. Inmates are usually passionate about the sagebrush project and can be the best spokespeople for the project and conservation messages. Check that inmates have all the background information about the project that they may need in order to answer questions the journalist might have. Let inmates know in advance about the media being present and let them and the journalist know that participation is voluntary. Remind inmates that they are not required to answer questions about their criminal history. The PIO will make arrangements for willing inmates to sign a media and photo release form for those who would like to be interviewed and photographed. Make sure you let the journalist know which inmates do not want to be interviewed or photographed. The PIO or Communication Specialist may request to view the journalist's photos for security reasons before they leave the facility



FIGURE 46: INVOLVING THE MEDIA CAN PROVIDE GOOD NEWS STORIES ABOUT INMATES TO THE PUBLIC (PHOTO: STACY MOORE)

If possible, allow two weeks or more to set up the media event with the PIO and journalists. This gives the PIO time to review your press materials, contact local media and set up clearances for any on-site visits as well as contact potential spokespeople within DOC to attend the media event.

Invite experts from each partnership to the media event so they can speak directly about the project. Develop a joint communication plan to let them know what the focus of the story is and what media outlet is writing the article, who the media would like to talk to, day, time and place to meet. Clearly define which staff and partners will be there to meet the media and who will cover what aspects of the story. You do not have control over what the journalist will print in the final article, but try to provide him/her with as accurate information as possible.

Mention SPP when referring to your sagebrush project to the media. When the SPP name is included in the resulting media piece, the public can navigate to the website and blog for more information. The SPP name provides a single, cohesive, and professional face to the collaborate project. It is equally important to emphasize the collaborative nature of SPP. Each person interviewed should be prepared to speak to the fact that they represent one facet of a collaborative partnership, and that the work of SPP would not be possible without the many partnerships that hold it together. Because these partnerships are based on providing mutual benefit, the SPP partners should carefully assess which portion of the partnership and which angle of the project would most benefit from positive media coverage.<sup>10</sup>

## 6.3 Developing a Pitch

Your pitch serves one purpose – to grab the interest of a journalist or editor enough to get them to cover your story. Pitching a sagebrush story to show the benefits to the local community may be of great interest to a local newspaper for example. Inviting the media to your project site to interview inmates and partners in the project could also be compelling. News departments all have strict timelines and are interested in timely and geographically relevant stories. Most media are looking for stories that can include appealing photos or video opportunities. Consider opportunities for radio or TV to interview partners and inmates in the project to share your compelling story with even a larger audience.

#### Create your subject line

Your subject line is the first thing your media contact will see so it has to catch their attention and entice them to read the rest of your material

#### Create your opening sentence

Your opening sentence is crucial. It must be attention grabbing and noteworthy so that the media contact will read further.

#### Create the main body

You want your main body of your pitch to answer, Who, What, When, Where and Why. Grab their attention at the beginning of your pitch while keeping your main body as succinct and to the point as you can. Writing your pitch with an unusual angle or relating it to the local community and keeping it personal will increase the chances of your story being accepted. Make your story stand out from the ordinary and let the media know why your sagebrush project is significant. Always leave your contact information in the last paragraph.

#### Allow partners to edit

Your collaboration with your partners is critical to the success of your project. Allow each partner the chance to look over your story so they can offer ideas for the best media interactions as well as their insights into the pitch.

# CHAPTER 7. EDUCATION OPPORTUNITIES WITH THE SAGEBRUSH PROJECT

#### 7.1 Lecture Series



FIGURE 47: SPP STAFF MEMBER, TIFFANY WEBBTALKS WITH AN INMATE BEFORE A LECTURE (PHOTO: JOHN DOMINOSKI)

There are many benefits to inmates and project partners when offering sagebrushother related lectures and educational opportunities at prisons. Topics might include sagebrush steppe, natural history of greater sage-grouse, horticulture techniques, or climate change and desert ecology. Lectures can be given as a PowerPoint talk or a program with handouts and hands-on materials. Lectures

generally feature scientists, communit members, professors, or other professionals with experience in the realms of science or sustainability, broadly speaking. The lecture series presents a great opportunity for project staff to network with other organizations doing science and sustainability work while providing inmates with educational stimulation. Many presenters will be delighted at the chance to engage with non-traditional audience and enjoy the challenge and rewards of sharing their expertise with an underserved population<sup>10</sup>.

#### 7.2 Setting up lecture series

- a. Work with your partners to discuss sagebrush-related topics that you would like to have presented to the inmates. Discuss experts in these areas who you can contact as potential speakers.
- b. Plan one to two months before the lecture to give DOC time to secure the room, schedule a time, run an announcement, conduct background checks for visitors, and recruit inmate participants.

- c. Secure a guest lecturer on your selected topic. Ask your guest speaker for a short write up about their lecture.
- d. Ask your lecturer for possible questions for your lecture survey to be given to inmates (see section 7.4.3 for sample of pre and post lecture survey)
- e. Give your DOC contact a short write-up about the lecture. DOC will write up an announcement in which to recruit eligible inmates. They will then set up the date, time and room of the lecture.
- f. Have your guest fill out the LED form or other required security clearance information. Give your DOC contact the LED form or other clearance information, list of all materials, samples of pre and post surveys and make sure DOC has inmates bring pencils for the surveys. Check with DOC about lap top and data projector set up before the start of the lecture.
- g. Go over prison protocol and information about what to expect when lecturing at a prison to your guest (see section 3.5).
- h. Discuss transportation and any honorarium or payment information with lecturer.
- i. Follow-up with a thank you letter and save copies of any lecture handouts and questionnaires.

## 7.3 Sample "What to expect when lecturing at a prison"<sup>10</sup>

Following are some tips for creating an effective presentation for the prison audience and guidelines for what to expect and how to behave when you enter the prison.



FIGURE 48: SUPERINTENDENT DOUGLAS COLE, DISCUSSES THE MERITS OF ROOTS OF SUCCESS WITH THE GRADUATING CLASS ( PHOTO: JOSLYN ROSE TRIVETT)

## Tips for guest lecturer<sup>10</sup>

- Plan to deliver a 1 hour 30 minute presentation including Q & A with the audience.
- The drive to the facility will take approximately X minutes from your office.
- The lecture will take place in the X building in a classroom seating about X people. The facility provides a screen, lap-top and data projector. If you are using a PowerPoint presentation, bring a CD and a back-up thumb drive (for security reasons DOC prefers not to use thumb drives, but having one as a back-up is ok). There is no wireless internet access.
- Plan to arrive 30 minutes before the presentation. Remember to bring photo ID. (You will exchange your ID for a visitor's badge)

## Creating a presentation that is appropriate for a prison audience<sup>10</sup>:

- Frame your lecture with a personal story and use humor in your talk.
- Make your lecture a storytelling piece with the factual information imbedded, rather than a traditional lecture you would deliver to college students.
- Define any complex concepts, as offenders will have varying levels of knowledge on your topic. Do not feel you have to avoid complexity.
- As a general rule, more photos and less text make the most effective presentation.
- If appropriate, use props that the inmates can touch and pass around (let your coordinator know at least a week beforehand if you want to bring any props, as we need to get prior approval for the prison facility).
- Handouts are also appreciated by the audience. If you would like to distribute handouts, please send a soft copy at least a week beforehand to your coordinator. They will take care of clearing the material with the prison and making copies.
- It is likely you'll be asked about opportunities for ex-convicts in your field. You may want to be prepared to answer questions about possible employment or volunteer opportunities for felons.
- Let us know if you would like us to review your presentation before the date of your lecture; we would be happy to do so.

## 7.4 Evaluation of lectures and planting program

Evaluation is an important part of a sagebrush propagation project, as it allows you to pinpoint what aspects of the project went well and which aspects need improvement. This enables the partnership to make changes from year to year in order to improve the efficacy of the project. Surveys can be given to inmate participants to assess effectiveness in learning from any lectures presented, the success of native planting and to gather information to guide program changes or modifications. Baseline data can be used to compare participant knowledge and attitudes before and after participation as well as skills learned during the native planting program training.

For the scope of the sagebrush planting protocol, we recommend a "general" program (lecture or plant propagation) evaluation. A general program evaluation that does not ask personal questions about individual inmates must be cleared from the Human Subjects Review (HSR) board. Any evaluations that involve human subjects are required to be evaluated by HSR.

Check with your DOC liaison before conducting any program evaluation. They will have the HSR review the evaluation and clear it before its use.

Sharing results of the evaluation should be part of any project plan. Evaluations can be shared with the prison Sustainability or Green Team, the SPP network and all stakeholders. Updates can be presented monthly via website, social media, SPP network list serve or other media.

### 7.4.1 Evaluating Lecture Series

Participation of any survey must be voluntary for all inmates. To clear the human resource office, no questions about personal topics such as family or crimes are included. Pre and post surveys are numbered to maintain anonymity of the participant and to aid in the ease of distributing surveys to the same participant following the lecture. Surveys are administered prior to the lecture and immediately following the lecture and question period. Check with the officer in charge to make sure pencils are provided to the inmates before the lecture begins.

An example survey might contain simple true/false questions relating to the lecture subject matter in addition to attitude questions about the environment or subject material. Ask the guest lecturer if they can provide the questions for the survey and make sure the questions are answered during the talk. Post surveys might request feedback from the lecture such as what the participant learned from attending the lecture, suggested improvements, future topics as well as any changes in personal actions because of attending the lecture. Excel data sheets are an excellent way to compile survey answers and to compare annual results.



FIGURE 49 EVALUATIONS COORDINATOR, BRITTANY GALLAGHER RECEIVES SURVEYS FROM SUSTAINABILITY LECUTRE SERIES ATTENDEES (PHOTO: SHAUNA BITTLE)

### 7.4.2 Evaluating Planting Programs

As with the lecture series, participation of planting program questionnaires should be voluntary and should not ask personal questions. Surveys might include questions relating to planting protocol, species life history, as well as conservation attitudes. It is hoped that data from other SPP Networks can be combined and compared across the country to paint a stronger picture of lessons learned and potential impacts of these conservation programs.

### 7.4.3 Sample Evaluations: 10

Institute for Applied Ecology and Oregon State Department of Corrections

### SUSTAINABILITY IN PRISONS PROJECT

### SAMPLE LECTURE SURVEY – Sagebrush Steppe PRE-Survey Coffee Creek Correctional Facility, April 23, 2014

Survey # \_\_\_\_

\* Participation is voluntary. Your responses are used to evaluate the effectiveness of SPP's lecture program. Please hand in this survey BEFORE THE LECTURE BEGINS.

### A. True or false. Please answer the questions below by circling the best answer.

1. There are several types of sagebrush.

1. There are be term types o	1 Bugeon usin.	
TRUE	FALSE	UNSURE
2. Greater sage-grouse, red-	-tailed hawks and meadowlarks are	e three common birds found
in sagebrush habitat.		
TRUE	EALSE	LINSUPE

	r IJy al	y y	
TRUE	FALSE	UNSURE	
3. Invasive plants are espec	cially good for providing habitat for birds.		
TRUE	FALSE	UNSURE	

IAI	JSL		UNSUI	AL
Very unlikely	Unlikely	Neutral	Likely	Very Likely
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
	1 Unlikely	1     2       1     2       1     2	AAA123123123	NormalNormalNormal12343123441234

Institute for Applied Ecology and Oregon State Department of Corrections

### SUSTAINABILITY IN PRISONS PROJECT

### SAMPLE LECTURE SURVEY – Sagebrush steppe POST-Survey Coffee Creek Correctional Facility, April 23, 2014

#### Survey # \_\_\_\_\_

\* Participation is voluntary. Your responses are used to evaluate the effectiveness of SPP's lecture program. Please hand in this survey AFTER THE LECTURE BEGINS.

A. True or false. Please answer the questions below by circling the best answer.

1. There are several types of sagebrush. TRUE FALSE

UNSURE

2. Greater sage-grouse, red-tailed hawks and meadowlarks are three common birds found in sagebrush habitat..

TRUE	FALSE	UNSURE					
3. Invasive plants are especially good for providing habitat for birds.							
TRUE	FALSE	UNSURE					

B. How likely are you to	Very unlikely	Unlikely	Neutral	Likely	Very Likely
Seek information on the environment?	1	2	3	4	5
Seek information on birds and bird habitat?	1	2	3	4	5
Talk to another inmate about issues related to the environment?	1	2	3	4	5
Talk to another inmate about birds and bird habitat?	1	2	3	4	5

### C. Please provide us with some feedback about today's lecture.

- 1. What (if anything) did you learn from attending this lecture?
- 2. How would you improve this lecture?
- 3. What topics would you like to see covered in future lectures?

### **D.** Please circle all that apply:

## Because of my participation in this science lecture I will be more likely to...

plant a garden
recycle
volunteer in my community
vote for environmentally friendly
policies
compost
study science on my own
keep bees
enroll in college classes

purchase/eat organic food other: seek information about environmental issues walk, bike or ride the bus instead of driving grow and/or use native plants conserve energy

E. Any other comments?

## Institute for Applied Ecology and Oregon State Department of Corrections

SUSTAINABILITY IN PRISONS PROJECT

SAMPLE PLANTING SURVEY- SAGEBRUSH PLANTING PRE-SURVEY<sup>10</sup> Snake River Correctional Institute, April 29, 2014 Survey # \_\_\_\_\_

\* *Participation is voluntary. Your responses are used to evaluate the effectiveness of SPP's planting program.* Please hand in this survey BEFORE THE ACTIVITY BEGINS.

1. Describe reasons why Greater Sage-Grouse populations are declining.

2. What types of habitats/plant species are needed for sage-grouse breeding, nesting, and raising young?

3. What are four requirements that plants need for growing?

### 4. Why is thinning plants in containers important?

B. How likely are you to	Very unlikely	Unlikely	Neutral	Likely	Very Likely
Seek information on the environment?	1	2	3	4	5
Seek information on sage-grouse and why they are declining?	1	2	3	4	5
Talk to another inmate about issues related to the environment?	1	2	3	4	5
Talk to another inmate about sagebrush and desert habitats?	1	2	3	4	5



## 7.4 Certificates for Inmate Participation

FIGURE 50: CERTIFICATES OF ACHIEVEMENT CAN GIVE INMATES DOCUMENTATION TO SHARE WITH POTENTIAL EMPLOYEES (PHOTO: CONNIE GROSS)

Some inmates do not have a high school diploma GED. or Offering them educational and vocational programs can help prepare them for their transition from incarceration to life after prison.

Inmates are frequently interested in educational

or vocational programs when they believe these programs can help them attain a job upon release. Offering inmates the opportunity to participate in the sagebrush propagation program reduces prison idleness and aids inmates' reentry into the community by providing them with specific work skills. Providing them with a certification outlining skills mastered upon completion of the program can improve their chances of obtaining employment. A sagebrush program "Certificate of Achievement," might include aspects such as horticulture and habitat restoration skills, problem solving, data collection and teamwork.

		T1T / T11 / T11 //T1
CERTIFICATE	LOF ACHI	EVEMENT
THIS CERT	IFICATE IS AWARDED	то
	< >	
	`´	
IN F	RECOGNITION OF	
Completion and outstanding effort in		
This certificate demonstrates that the recipient restoration skills. The recipient has contrib		
Greater sage-grouse through dedicated	d effort, problem-solving, data	collection and teamwork.
	<enter title=""></enter>	<enter date=""></enter>

FIGURE 51: EXAMPLE OF A CERTIFICATE OF ACHIEVEMENT

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APPENDIX A. SAMPLE OF CONTACT AND LOCATION INFORMATION FOR CORRECTIONAL FACILITIES WITHIN THE CURRENT AND/OR HISTORIC RANGE OF THE GREATER SAGE-GROUSE.

Correctional Facility	Location	Location	Mailing Address 741-925 Access Road A-25 Herlong, CA 96113	
Federal Correctional Institution- Herlong	CA - Doyle	741-925 Access Road A-25 Herlong, CA 96113 Phone: 530-827-8000		
Buena VistaCO- Buena VistaCorrectionalComplex		15125 Highway 24 & 285 Buena Vista, CO, 81211 Phone:719-395-2404	P. O. Box 2017 Buena Vista, CO, 81211	
Delta Correctional CO- Delta Center		4102 E10 Rd Delta, CO, 81416 Phone:970-874-7614	11363 Lockhart Road Delta, CO, 81416	
Rifle Correctional Center	CO- Rifle	0200 County Road 219 Rifle, CO, 81650 Phone:970-625-7578		
Idaho State Correctional Institution	ID- Kuna	13500 S. Pleasant Valley Rd Kuna, ID 83634 Phone: 208-336-0740	PO Box 14 Boise, ID 83707	
Pocatello Correctional Center	ID- Pocatello	1451 Fore Road Pocatello, ID 83204 Phone: 208-236-6360	1451 Fore Road Pocatello, ID 83204	
St. Anthony Work Camp	ID- St. Anthony	125 N. 8th West St. Anthony, ID 83445	125 N. 8th West St. Anthony, ID 83445	
Montana Women's Prison	MT- Billings	701 S. 27th St. Billings, MT 59101 Phone: 406-247-5100	701 S. 27th St. Billings, MT 59101	
Pine Hills Youth MT- Miles City Correctional Facility		4 North Haynes Avenue Miles City, MT 59301 Phone: 406-232-1377	4 North Haynes Avenue Miles City, MT 59301	

Correctional Facility	Location	Location	Mailing AddressP.O. BOX 88 Boulder, MT59632-0088	
Riverside Youth Correctional Facility	MT- Boulder	2 Riverside Road Boulder, MT 59632-0088 Business Office: 406-225- 4500		
Ely State Prison NV- Ely 4569 North State Rt. Ely, Nevada 89301 PHONE: (775) 289-8800		P.O. Box 1989 Ely, Nevada 89301		
Lovelock Correctional Center	NV- Lovelock	1200 Prison Rd. Lovelock, Nevada 89419 PHONE: (775) 688-1777	1200 Prison Rd. Lovelock, Nevada 89419	
Dakota Women's Correctional and Rehabilitation Center	ND- New England	440 McKenzie Street, New England, ND 58647 Phone:(701) 579-5100	440 McKenzie Street, New England, ND 58647	
Deer Ridge Correctional Institution	OR- Madras	3920 East Ashwood Road Phone:(541) 325-5999 Madras, Oregon 97741	3920 East Ashwood Road Madras, Oregon 97741	
Powder River Correctional Facility	OR- Baker City	3600 - 13th Street Baker City, Oregon 97814- 1346 Phone: (541) 523-6680	3600 - 13th Street Baker City, Oregon 97814- 1346	
Snake River Correctional Institution	OR - Ontario	777 Stanton Blvd Ontario, Oregon 97914-8335 Phone: (541) 881-5000	777 Stanton Blvd Ontario, Oregon 97914-8335	
Warner Creek Correctional Facility	OR- Lakeview	Warner Creek Correctional Facility PO Box 1500 Lakeview, OR 97630-5000 Phone: (541) 947-8200	Warner Creek Correctional Facility PO Box 1500 Lakeview, OR 97630-5000	
Two Rivers Correctional Facility	OR - Umatilla	82911 Beach Access Rd, Umatilla, OR 97882 Phone: (541) 922-2001	82911 Beach Access Rd, Umatilla, OR 97882	
Unit R		2725 Creek Drive Rapid City, SD 57703 Phone: (605) 394-5294	2725 Creek Drive Rapid City, SD 57703	
Central Utah Correctional Facility	UT- Gunnison	255 E. 300 North Gunnison, UT 84634	P.O. Box 550 Gunnison, UT 84634	

Correctional Facility	Location	Location	Mailing Address
		Phone: 435-528-6000	
Utah State Prison	UT- Draper	14425 S. Bitterbrush Lane Draper, UT 84020 Phone: 801-576-7000	P.O. Box 250 Draper, UT 84020
Coyote Ridge Corrections Center	WA- Connell	1301 N Ephrata Ave Connell, WA 99326 Phone: 509-543-5800	P.O. Box 769 Connelle, WA 99326
Washington State Penitentiary	WA – Walla Walla	1313 N 13 <sup>th</sup> Ave Walla Walla, WA 99362 Phone: 509-526-3610	1313 N 13 <sup>th</sup> Ave Walla Walla, WA 99362
Wyoming State Penitentiary	WY- Rawlins	2900 S. Higley Road, Rawlins, WY 82301-0400 Phone: 307.328.1441	P.O. Box 400 Rawlins, WY 82301-0400
Wyoming Women's Center	WY- Lusk	1000 West Griffith, Lusk, WY 82225-0020 Phone: 307.334.3693	PO Box 300, Lusk, WY 82225-0020

## APPENDIX B. EXAMPLES OF FOREST SERVICE AND BLM OFFICES LOCATED NEAR GREATER SAGE-GROUSE HABITAT

AGENCY	STATE	PHONE	LOCATION
CA FOREST SERVICE			
Modoc National Forest	СА	(530)233-5811	225 West 8th Street Alturas, CA 96101
Klamath National Forest	CA	(530)842-6131	1711 South Main Street Yreka, CA 96097
CA BLM			
Alturas Field Office	CA	(530)233-4666	708 W. 12th St.Alturas, CA 96101
Surprise Field Office	СА	(530)279-6101	602 Cressler Street Cedarville, CA 96104
Eagle Lake Field Office	CA	(530)257-0456	2950 Riverside Drive Susanville, CA 96130
CO Forest Service			
Arapaho and Roosevelt National Forests and Pawnee National Grassland	СО	970-295-6600	2150 Centre Avenue, Building E Ft Collins, CO 80526
Boulder Ranger District	СО	303-541-2500	2140 Yarmouth Avenue Boulder, CO 80301
Clear Creek Ranger District	СО	303-567-3000	101 Highway 103PO Box 3307 ID Springs, CO 80452
Pawnee National Grassland	СО	970-346-5000	660 "0" Street Greeley, CO 80631
Sulphur Ranger District	СО	970-887-4100	9 Ten Mile Drive PO Box 10 Granby, CO 80446
Pike and San Isabel National Forests Cimarron and Comanche National Grasslands	СО	719-553-1400	2840 Kachina Drive Pueblo, CO 81008

AGENCY	STATE	PHONE	LOCATION
Grand Mesa, Uncompahgre and Gunnison National Forest	СО	(970)874-6600	2250 Highway 50 Delta, CO 84146
Rio Grande National Forest	СО	719-852-5941	1803 W. Highway 160 Monte Vista, CO 81144
San Juan National Forest	СО	(970)247-4874	15 Burnett Court Durango, CO 81301
White River National Forest	СО	970-319-2670	Midland Ave, Suite 140, Glenwood Springs CO 81601
COBLM			
Front Range District Office	СО	719-269-8500	3028 East Main Street Canon City, CO 81212
Royal Gorge Field Office	СО	719-269-8500	3028 East Main Street Canon City, CO 81212
Arkansas Headwaters Recreation Area	СО	719-539-7289	307 West Sackett Salida, CO 81201
San Luis Valley Field Office	СО	719-655-2547	46525 State Highway 114 Saguache, Colorado 81149
Northwest District Office	СО	970-244-3000	2815 H Road Grand Junction, CO 81506
Colorado River Valley Field Office	СО	970-876-9000	2300 River Frontage Road Silt CO 81652
Grand Junction Field Office	СО	970-244-3000	2815 H Road Grand Junction, CO 81506
Kremmling Field Office	СО	970-724-3000	2103 E. Park Avenue PO Box 68 Kremmling, CO 80459
Little Snake Field Office	СО	970-826-5000	455 Emerson Street Craig, CO 81625
McInnis Canyons National Conservation Area	СО	970-244-3000	2815 H Road Grand Junction, CO 81506

AGENCY	STATE	PHONE	LOCATION
White River Field Office	СО	970-878-3800	220 East Market St. Meeker, Colorado 81641
Southwest District Office	СО	970-240-5300	2465 South Townsend Avenue Montrose, CO 81401
Anasazi Heritage Center / Canyons of the Ancients National Monument	СО	970-882-5600	27501 Highway 184 Dolores, CO 81323
Gunnison Gorge National Conservation Area	СО	970-240-5300	2465 South Townsend Montrose, CO 811401
Gunnison Field Office	СО	970-642-4940	210 West Spencer Avenue Gunnison, CO 81230
Tres Rios Field Office	СО	970-882-7296	29211 Hwy. 184 Dolores, Colorado 81323
Uncompahgre Field Office	СО	970-240-5300	2465 South Townsend Avenue Montrose, CO 81401
ID FOREST SERVICE			
Clearwater National Forest	ID	(208)476-4541	12730 Hwy 12, Orofino, ID 83544
Lochsa	ID	(208)926-4275	502 Lowry St, Kooskia ID 83539
North Fork	ID	(208)476-4541	12730 B, Hwy 12 Orofino, ID 83544
Palouse	ID		1700 Hwy 6, Potlatch, ID 83855
Pierce	ID	(208)935-2513	Route 2, PO Box 191 Kamiah, ID 83563
ID Panhandle National Forest	ID	(208)765-7223	3815 Schreiber Way Coeur d'Alene, ID 83815
Avery	ID	(208)245-4517	HC Box 1 Avery ID 83802

AGENCY	STATE	PHONE	LOCATION
Bonners Ferry	ID	(208)267-5561	Route 4, Box 4860 Bonners Ferry, ID 83805
Coeur d'Alene, Fernan Office	ID	(208)769-3000	2502 East Sherman Ave. Coeur d'Alene, ID 83814
Priest Lake	ID	(208)443-2512	32203 Hwy 57 Priest River ID 83856
Sandpoint	ID	(208)263-5111	1602 Ontario St Sandpoint, ID 83864
St. Joe	ID	(208)245-2531	222 South 7th St, Suite 1 St. Maries, ID 83861
CDA River, Silver Valley Office	ID	(208)783-2363	173 Commerce Dr. Smelterville, ID 83868
Forest Nez Perce National Forest	ID	(208)983-1950	104 Airport Road Grangeville, ID 83530
Clearwater	ID	(208)983-1963	104 Airport Road Grangeville, ID 83530
Fenn / Moose Creek	ID	(208)926-4258	HCR75, Box 91 Kooskia, ID 83539
Red River / Elk City	ID	(208)842-2255	HC 01, Box 23, Elk City, ID 83525
Salmon	ID	(208)839-2211	304 Slate Creek White Bird, ID 83554
Boise National Forest	ID	(208)373-4100	1249 S. Vinnell Way, #200 Boise, ID 83709
Cascade	ID	(208)382-740	PO Box 696 Cascade, ID 83611
Emmett	ID	(208)365-7000	1805 Hwy 16, Room 5, Emmett, ID 83617
ID City	ID	(208)392-6681	PO Box 129 ID City, ID 83631
Lowman	ID	(208)259-3361	7359 Hwy 21, Lowman ID 83637
Mountain Home	ID	(208)587-7961	2180 American Legion Blvd. Mountain Home, ID 83647
Caribou/Targhee National Forest	ID	(208)524-7500	1405 Hollipark Drive ID Falls, ID 83401

AGENCY	STATE	PHONE	LOCATION
Ashton	ID	(208)652-7442	PO Box 858 Ashton, ID 83420
Dubois	ID	(208)374-5422	PO Box 46, Dubois, ID, 83423
Island Park	ID	(208)558-7301	3726 Hwy 20 Island Park, ID 83429
Malad	ID	(208)000-0000	75 South 140 East, PO Box 146 Malad, ID 83254
Montpelier	ID	(208)847-0375	431 Clay Montpelier, ID, 83254
Palisades	ID	(208)523-1412	3659 East Ririe Hwy, ID Falls, ID 83401
Soda Springs	ID	(208)547-4356	410 E Hooper Ave Soda Springs, ID 83276
Teton Basin	ID	(208)354-2431	PO Box 777 Driggs, ID 83422
West Side	ID	(208)236-7500	4350 Cliffs Drive Pacatello, ID 83204
Payette National Forest	ID	(208)634-0700	800 W Lakeside Ave McCall, ID 83638
Council	ID	(208)253-0100	PO Box 567 Council, ID 83612
Krassel	ID	(208)634-0644	800 W Lakeside Ave McCall, ID 83638
McCall	ID	(208)634-0400	801 W Lakeside Ave McCall, ID 83638
New Meadows	ID	(208)347-0300	3674 Hwy 95 New Meadows, ID 83654
Weiser	ID	(208)549-4200	851 East 9th Weiser, ID 83672
Salmon/Challis National Forest	ID	(208)756-2215	50 Hwy 93 South Salmon, ID 83467
Challis	ID	(208)879-4100	HC 63, Box 1669 Challis, ID 83226
Leadore	ID	(208)768-2371	PO Box 180 Leadore, ID 83464

AGENCY	STATE	PHONE	LOCATION
Lost River	ID	(208)588-3400	PO Box 507 Mackay, ID 83251
Middle Fork	ID	(208)879-4101	Hwy 93, Box 750 Challis, ID 83226
North Fork	ID	(208)865-2700	PO Box 180 North Fork, ID 83466
Salmon / Cobalt	ID	(208)756-5100	Rural Rt. 2, Box 600 Salmon, ID 83467
Yankee Fork	ID	(208)838-3300	Hwy 75, HC 67, Box 650 Clayton, ID 83227
Sawtooth National Forest	ID	(208)737-3200	2647 Kimerly Road East Twin Fallis, ID 83301
Burley	ID	(208)678-0430	2306 Hiland Ave. Burley, ID 83318
Fairfield	ID	(208)764-3202	PO Box 189 Fairfield, ID 83327
Ketchum	ID	(208)622-5371	PO Box 2356 Ketchum, ID 83340
Twin Falls	ID	(208)737-3200	2647 Kimberly Rd East Twin Falls, ID 83301
Stanley	ID	(208)774-3000	HC 65 Box 9900 Stanley, ID 83278
ID BLM			
ID State Office	ID	PublicDesk:208- 373-4000	1387 S. Vinnell Way Boise, ID 83709
Boise District	ID	208-384-3300	3948 Development Ave Boise, ID 83705
Bruneau Field Office	ID	208-384-3300	3948 Development Ave Boise, ID 83705
Four Rivers Field Office	ID	208-384-3300	3948 Development Ave Boise, ID 83705
Morely Nelson Snake River Birds of Prey National Conservation Area	ID	208-384-3300	3948 Development Ave Boise, ID 83705

AGENCY	STATE	PHONE	LOCATION
Owyhee Field Office	ID	208-896-5912	20 First Avenue West Marsing, ID 83639
Coeur d'Alene District	ID	208-769-5000	3815 Schreiber Way Coeur d'Alene, ID 83815
Cottonwood Field Office	ID	208-962-3245	1 Butte Drive Cottonwood, ID 83522
ID Falls District	ID	208-524-7500	1405 Hollipark Drive ID Falls, ID 83401
Challis Field Office	ID	208-879-6200	1151 Blue Mountain Road Challis, ID 83226
Pocatello Field Office	ID	208-478-6340	4350 Cliffs Drive Pocatello, ID 83204
Salmon Field Office	ID	208-756-5400	1206 South Challis Street Salmon, ID 83467
Upper Snake Field Office	ID	208-524-7500	1405 Hollipark Drive ID Falls, ID 83401
Twin Falls District	ID	208-735-2060	2536 Kimberly Road Twin Falls, ID 83301
Burley Field Office	ID	208-677-6600	15 East 200 South Burley, ID 83318
Jarbidge Field Office	ID	208-735-2060	2536 Kimberly Road Twin Falls, ID 83301
Shoshone Field Office	ID	208-732-7200	400 West "F" Street Shosone, ID 83352
Craters of the Moon	ID	208-732-7200	400 West "F" Street Shosone, ID 83352
MT FOREST SERVICE			
Beaverhead-Deerlodge National Forest	MT	(406)683-3900	420 Barrett St. Dillon, MT 59725
Custer National Forest	MT	406-255-1400	1310 Main Street, Billings, MT 59105
Ranger Districts	МТ		
Ashland Ranger District	MT	406-784-2344	P.O. Box 168/ 2378 Hwy 212

AGENCY	STATE	PHONE	LOCATION
			Ashland, MT 59003
Beartooth Ranger District	MT	406-446-2103	6811 Hwy 212 Red Lodge, MT 59068
Helena National Forest	MT	406.449.5201	2880 Skyway Drive Helena, MT 59602
Powell District	MT	(208)942-3113	Powell Ranger Station Lolo, MT 59847
Sioux Ranger District	SD	605-797-4432	P.O. Box 37 / 101 SE First Street Camp Crook, SD 57724
Ranger Districts MT			
Augusta Information Station	MT	(406)562-3247	405 Manix Street Augusta, MT 59410
Belt Creek Ranger District	MT	(406)236-5100	4234 US Highway 89 North Neihart, MT 59465
Helena Ranger District	MT	406.449.5490	2880 Skyway Drive Helena, MT 59602
Judith Ranger District	MT	(406)566-2292	109 Central Ave Stanford, MT 59479
Lewis and Clark National Forest	MT	(406)791-7700	1101 15th ST No. Great Falls, MT 59401
Lincoln Ranger District	MT	406.362.7000	1569 Hwy 200 Lincoln, MT 59639
Musselshell Ranger District	MT	(406)632-4391	809 2nd Street NW Harlowtown, MT 59036
Rocky Mountain Ranger District	MT	(406)466-5341	1102 main Ave NW Choteau, MT 59422
Townsend Ranger District	MT	406.266.3425	415 S. Front Townsend, MT 59644
White Sulphur Springs Ranger District	MT	(406)547-3361	204 W. Folsom White Sulphur Springs, MT 559645
MT BLM			
BLM State Office	MT	406-896-5012	5001 Southgate Drive, Billings, MT 59101

AGENCY	STATE	PHONE	LOCATION
Billings Field Office	MT	406-896-5013	Billings, MT 59101
Butte Field Office	MT	406-533-7600	106 N. Parkmont Butte, MT 59702
Dillon Field Office	MT	406-683-8000	1005 Selway Drive Dillon, MT 59725-9431
Glasgow Field Office	МТ	406-228-3750	5 Lasar Drive Glasgow, MT 59230
Great Falls Oil and Gas Field Office	MT	406-791-7700	1101 15 Street North Great Falls, MT 59401
Havre Field Office	MT	406-262-2820	3990 Highway 2 West Havre, MT 59501
Lewistown Field Office	MT	406-538-1900	920 NE Main Street Lewistown, MT 59457
Miles City Field Office	МТ	406-233-2800	111 Garryowen Road Miles City, MT 59301-0940
Missoula Field Office	МТ	406-329-3914	3255 Fort Missoula Road Missoula, MT 59804-7293
NV Forest Service			
Humboldt-Toiyabe National Forest	NV	(775)331-6444	1200 Franklin Way Sparks, NV 89431
NV BLM			5100 East Winnemucca Blvd.
Black Rock Field Office	NV	775-623-1500	Winnemucca, NV 89445
BLM Battle Mountain District Office	NV	775-635-4000	50 Bastian Road Battle Mountain NV 89820
BLM Carson City District Office	NV	775-885-6000	5665 Morgan Mill Road Carson City NV 89701
BLM Ely District Office	NV	775-289-1800	702 N. Industrial Way HC 33 Box 33500 Ely NV 89301

AGENCY	STATE	PHONE	LOCATION
Caliente Field Office	NV	775-726-8100	US Hwy 93 Bldg #1, P.O. Box 237 Caliente, NV 89008
Egan Field Office	NV	775-289-1800	702 North Industrial Way, HC 33 Box 33500 Ely, NV 89301
Elko District Office	NV	775-753-0200	3900 E. ID StreetElko, NV 89801
Humboldt River Field Office	NV	775-623-1500	5100 East Winnemucca Blvd. Winnemucca, NV 89445
Las Vegas Field Office	NV	702-515-5000	4701 North Torrey Pines Drive Las Vegas, NV 98130
Mount Lewis Field Office	NV	775-635-4000	50 Bastian Road Battle Mountain, NV 89820
Pahrump Field Office	NV	702-515-5000	4701 North Torrey Pines Drive Las Vegas, NV 98130
Red Rock/Sloan Field Office	NV	702-515-5350	4701 North Torrey Pines Drive Las Vegas, NV 98130
Schell Field Office	NV	775-289-1800	702 North Industrial Way, HC 33 Box 33500 Elly, NV 89301
Sierra Front Field Office	NV	775-885-6000	5665 Morgan Mill Road Carson City, NV 89701
Southern NV District Office	NV	702-515-5000	4701 North Torrey Pines Drive Las Vegas, NV 98130
Stillwater Field Office	NV	775-885-6000	5665 Morgan Mill Road Carson City, NV 89701
Tonopah Field Office	NV	775-482-7800	1553 South Main Street PO BOX 911 Tonopah, NV 89049
Tuscarora Field Office	NV	775-753-0200	3900 E. ID Street Elko, NV 89801

AGENCY	STATE	PHONE	LOCATION
Wells Field Office	NV	775-753-0200	3900 E. ID Street Elko, NV 89801
Winnemucca District Office	NV	775-623-1500	5100 East Winnemucca Blvd. Winnemucca, NV 89445
Medora Ranger District	ND	701-227-7800	99 23rd Ave. W. Suite B Dickinson, ND 58601
McKenzie Ranger District	ND	701-842-2393	1901 S. Main Street Watford City, ND 58854
ND BLM			
ND Field Office	ND	701-227-7700	99 23rd Avenue West, Suite A Dickinson, ND 58601
OR Forest Service			
Deschutes National Forest	OR	(541)383-5300	63095 Deschutes Market Rd, Bend, OR 97701
Bend/Fort Rock District	OR	(541)383-4000	63095 Deschutes Market Rd., Bend, OR 97701
Crescent District	OR	(541)433-3200	136471 Hwy 97 North, Crescent, OR 97733
Sisters District	OR	(541)549-7700	Pine St & Hwy 20, PO Box 249 Sisters, OR 97759
Fremont-Winema National Forest	OR	(541)947-2151	1301 South G Street, Lakeview, OR 97630
Bly District	OR	(541)353-2427	61100 Hwy 140 E, Bly, OR 97622
Chemult District	OR	(541)365-7001	P.O. Box 150, Chemult, OR 97731
Chiloquin District	OR	(541)783-4001	38500 Hwy 97 N, Chiloquin, OR 97624
Klamath Falls District	OR	(541)883-6714	2819 Dahlia Street, Klamath Falls, OR 97601

AGENCY	STATE	PHONE	LOCATION
Lakeview District	OR	(541)947-3334	18049 Highway 395, Lakeview, OR 97630
Paisley District	OR	(541)943-3114	314 Hwy 31, Paisley, OR 97636
Silver Lake District	OR	(541)576-210	P.O. Box 129, Silver Lake, OR 97638
Malheur National Forest	OR	(541)575-3000	431 Patterson Bridge Rd., John Day, OR 97845
Blue Mountain District	OR	(541)575-3000	431 Patterson Bridge Rd., John Day, OR 97845
Emigrant Creek District	OR	(541)573-4300	265 Hwy 20 South, Hines, OR 97738
Ochoco National Forest	OR	(541)416-6500	3160 N.E. 3rd St., Prineville, OR 97754
Lookout Mountain District	OR	(541)416-6500	3160 NE Third Street, Prineville, OR 97754
Paulina District	OR	(541)477-6900	7803 Beaver Creek Rd., Paulina, OR 97751
Crooked River National Grassland	OR	(541)475-9272	813 S.W. Hwy. 97, Madras, OR 97741
Redmond Air Center	OR	(541)504-7200	1740 SE Ochoco Way, Redmond, OR 97756
Rogue River - Siskiyou National Forest	OR	(541)618-2200	3040 Biddle Road, Medford, OR 97504
Ranger Districts			
Prospect Office	OR	(541)560-3400	47201 Hwy 62, Prospect, OR 97536
Butte Falls Office	OR	(541)865-2700	730 Laurel St., Butte Falls, OR 97522
Umatilla National Forest	OR	(541)278-3716	72510 Coyote Rd., Pendleton, OR 97801
Ranger Districts			
North Fork John Day District	OR	(541)427-3231	P.O. Box 158, Ukiah, OR 97880

AGENCY	STATE	PHONE	LOCATION
Wallowa-Whitman National Forest	OR	(541)523-6391	1550 Dewey Ave, Baker City, OR 97814
Whitman District, (Baker District)	OR	(541)523-4476	3285 11th Street, Baker City, OR 97814
Eagle Cap District	OR	(541)426-5546	201 East Second St. Joseph, OR 97846
LaGrande District	OR	(541)963-7186	3502 Hwy 30, LaGrande, OR 97850
Pine District	OR	(541)742-7511	38470 Pine Town Lane, Halfway, OR 97834
OR BLM			
Burns District	OR	541-573-4400	28910 Hwy 20 West Hines, OR 97738
Lakeview District Office	OR	541-947-2177	1301 South G St Lakeview, OR 97630
Klamath Falls Resource Area	OR	541-883-6916	2795 Anderson Avenue, Bldg. #25 Klamath Falls, OR 97603
Prineville District Office	OR	541-416-6700	3050 N.E. 3rd Street Prineville, OR 97754
Vale District Office	OR	541-473-3144	100 OR Street Vale, OR 97918
SOUTH DAKOTA BLM			
South Dakota Field Office	South Dakota	605-892-7000	310 Roundup Street Belle Fourche, SD 57717-1698
Black Hills National Forest	South Dakota	605-673-9200	1019 N. 5th Street Custer, SD 57730
Buffalo Gap National Grassland	Nebraska	308-432-0300	125 North Main Street Chadron, NE 69337

AGENCY	STATE	PHONE	LOCATION
Grand River Ranger District	South Dakota	605-374-3592	1005 5th Ave W. Lemmon, SD 57638
UT FOREST SERVICE			
Ashley National Forest	UT	435-789-1181	355 North Vernal Avenue Vernal, UT 84078
Escalante Ranger District	UT	(435)826-5499	755 W Center Escalante, UT 84726
Fishlake National Forest	UT	(435)896-9233	115 East 900 NorthRichfield, UT 84701
Manti-La Sal National Forest	UT	435-637-2817	599 West Price River Drive Price, UT 84501
Uinta-Wasatch-Cache National Forest	UT	(801)999-2103	857 West South Jordan Parkway South Jordan, UT 84095
Uinta-Wasatch-Cache National Forest	UT	(801)466-6411	3285 East 3300 South, Salt Lake City, UT 84109
UTAH BLM			
Canyon Country District	UT	(435)259-2100	82 East Dogwood Moab, UT 84532
Moab Field Office	UT	(435)259-2100	82 East Dogwood Moab, UT 84532
Monticello Field Office	UT	(435)587-1500	365 North Main Monticello, UT 84535
Henry Mountains Field Station	UT	(435)542-3461	(Hanksville Office) 380 South 100 West Hanksville, UT 84734
Kanab Field Office	UT	(435)644-1200	669 South Highway 89A Kanab, UT 84741
Richfield Field Office	UT	(435)896-1500	150 East 900 North Richfield, UT 84701

AGENCY	STATE	PHONE	LOCATION
Green River District	UT	(435)781-4400	170 South 500 East Vernal, UT 84078
Price Field Office	UT	(435)636-3600	125 South 600 West Price, UT 84501
Vernal Field Office	UT	(435)781-4400	170 South 500 East Vernal, UT 84078
West Desert District	UT	(801)977-4300	2370 S. Decker Lake Blvd West Valley City, UT 84119
Fillmore Field Office	UT	(435)743-3100	95 East 500 North Fillmore, UT 84631
Salt Lake Field Office	UT	(801)977-4300	2370 S. Decker Lake Blvd. West Valley City, UT 84119
Grand Staircase-Escalante National Monument	UT	435)644-1200	669 South Highway 89A Kanab, UT 84741
Escalante Field Station	UT	(435)826-5600	755 West Main Street Escalante, UT 84726
Anasazi State Park	UT	(435)335-7382	P.O. Box 1429, UT 84716
WA FOREST SERVICE			
Okanogan-Wenatchee National Forest	WA	(509)664-9200	215 Melody Lane Wenatchee, WA 98801
Chelan Ranger District	WA	(509)682-4900	428 W. Woodin Avenue Chelan, WA 98816
Cle Elum Ranger District	WA	(509)852-1100	803 W. 2nd Street Cle Elum, WA 98922
Entiat Ranger District	ntiat Ranger Lustrict I WA I (509)/84-4/00 I		2108 Entiat Way Entiat, WA 98822
Methow Valley Ranger District	WA	(509)996-4003	24 West Chewuch Road Winthrop, WA 98862
Naches Ranger District	WA	(509)653-1401	10237 Highway 12 Naches, WA 98937

AGENCY	STATE	PHONE	LOCATION
Walla Walla District	WA	(509)522-6290	1415 West Rose Street, Walla Walla, WA 99362
WA BLM			
Spokane District Office	WA	509-536-1200	1103 N. Fancher Road Spokane, WA 99212
Wenatchee Resource Area	WA	509-665-2100	915 N. Walla Walla Wenatchee, WA 98801
WY FOREST SERVICE			
USDA Forest Service Bighoron National Forest	WY	307-674-2600	2013 Eastside 2nd Street Sheridan, WY 82801
Medicine Wheel / Paintrock Ranger District	WY	307-548-6541	604 East Main Lovell, WY 82431
Powder River Ranger District	WY	307-684-7806	1415 Fort Street Buffalo, WY 82834
Tongue Ranger District	WY	307-674-2600	2013 Eastside 2nd Street Sheridan, WY 82801
Bridger-Teton National Forest	WY	307-739-5500	P.O. Box 1888 Jackson, WY 83001
Medicine Bow-Routt National Forest	WY	307-745-2300	2468 Jackson Street Laramie, WY 82070
Shoshone National Forest	WY	307-527-6241	808 Meadow Lane Avenue Cody, WY 82414
WY BLM			
Buffalo Field Office	WY	307-684-1100	1425 Fort Street Buffalo, WY 82834
Casper Field Office	WY	307-261-7600	2987 Prospector Drive Casper, WY 82604

AGENCY	STATE	PHONE	LOCATION
Cody Field Office	WY	307-578-5900	1002 Blackburn Street Cody, WY 82414
Kemmerer Field Office	WY	307-828-4500	312 Highway 189 North Kemmerer, WY 83101
Lander Field Office	WY	307-332-8400	1335 Main Street Lander, WY 82520
Newcastle Field Office	WY	307-746-6600	1101 WA Boulevard Newcastle, WY 82701-2968
Pinedale Field Office	WY	307-367-5300	1625 West Pine StreetPO Box768 Pinedale, WY 82941
Rawlins Field Office	WY	307-328-4200	1300 N. Third PO Box 2407 Rawlins, WY 82301
Rock Springs Field Office	WY	307-352-0256	280 Highway 191 North Rock Springs, WY 82901
Worland Field Office	WY	307-347-5100	101 South 23rd Worland, WY 82401

## **APPENDIX C. SEED LAB LOCATIONS**

### CALIFORNIA

California Dept. of Food and Agriculture Plant Pest Diagnostic Center 3294 Meadowview Road Sacramento, CA 95832-1448 Telephone: (916) 262-1100 Fax: (916) 262-1190

### COLORADO

Colorado State University Department of Soil and Crop Sciences Fort Collins, CO 80523-1170 Telephone: (970) 491-6406 Fax: (970) 491-1173

#### IDAHO

Idaho State Seed Laboratory 2240 Kellogg Lane Boise, ID 83712 Telephone: (208) 332-8630 Telephone: (208) 332-8635 (Purity) Telephone: (208) 332-8633 (Germination) FAX: (208) 334-3482

### OREGON

Oregon State University Seed Laboratory Corvallis, OR 97331-3801 Telephone: (541) 737-4464 Fax: (541) 737-2126

### MONTANA

Montana State University Seed Laboratory PO Box 173145 Bozeman, MT 59717-3145 Telephone: (406) 994-3252 Fax: (406) 994-3786

### NEVADA

Nevada State Division of Agriculture P.O. Box 11100 Reno, NV 89510 Telephone: (775) 688-1182 Fax: (775) 688-1178

### NORTH DAKOTA

ND State Seed Department Contacts 18<sup>th</sup> Street North PO Box 5257 Fargo, North Dakota 58105 Phone: (701) 231-5400 Fax: (701) 231-5401

### SOUTH DAKOTA

South Dakota State University Seed Laboratory Box 2207-A, Ag Hall 244 Brookings, SD 57007 Telephone: (605) 688-4589 Fax: (605) 688-5249

#### UTAH

Utah Department of Agriculture State Seed Laboratory 350 North Redwood Road P.O. Box 14650 Salt Lake City, UT 84116 Telephone: (801) 538-7181 Fax: (801) 538-7189

### WASHINGTON

Washington Department of Agriculture 21 N 1st Avenue, #203 Yakima, WA 98902 Telephone: (509) 249-6950 Fax: (509) 454-4395

### WYOMING

Wyoming Seed Analysis Laboratory 749 Road 9 Powell, WY 82435 Phone: 307.754.4750 Fax: 307.754.4932 FEDERAL

USDA FS RMRS Shrub Sciences Labaratory Shrub Sciences Laboratory 735 N 500 East Provo, UT 84606 Telephone: (801) 356-5100 Fax: (801) 375-6968 USDA ARS National Center for Genetic Resources Preservation (NCGRP) 1111 South Mason Street Fort Collins, CO 80521-4500 Telephone: (970) 495-3200 Fax: (970) 221-1427

# APPENDIX D. SAGEBRUSH ACTIVITY LOGS

## Sagebrush Activity Log Sagebrush Activity Log

**Watering Instructions:** Every day, each member of your crew will weigh their three flagged trays. If 5 or more of these flagged trays weigh 13 pounds or less, all of the plants must be watered that day.

Date	Watered? (Y/N)	Fertilized? (Y/N)	Thinning: Which trays were thinned today (if any)?	Comments

## **APPENDIX E. SAMPLE TRAY DATA SHEET**

## Sample Tray Data Sheet

Name: \_\_\_\_\_

Fifteen sample trays have been flagged for us to study. You are responsible for recording data for 3 of these flagged trays. Each day, perform the following tasks and record your data in the table below.

- 1. Always record the tray number and the date before entering data for that tray.
- 2. Weigh each of your flagged trays. Record the weight each of your trays.
- 3. Were the plants watered today? Record "yes" or "no."
- 4. Number of containers with living plants: Record the number of containers in each of your trays that have at least one living plant. There are 98 containers in each tray, so the maximum number of living plants you can record is 98. If there is more than one plant in one container, you will still only count this as one.

Notes: record any interesting or concerning information. Always look closely at your plants.

Tray #	Date	Weight 1	Weight 2	Tray Weight (Weight 1 – Weight 2) =	Watered? (Y/N)	Number of containers with living plants	Notes

Shrubs						
Species	Sowing	Soil	Seed treatment	Active Growth	Time to Grow	Notes
Artemisia tridentata (ssp. vaseyana, wyomingensis, and tridentata) Big sagebrush	May Seeds surface- sown or very thinly covered with soil. Outdoors; or, in cold climates, sow indoors and move outside once danger of frost has passed.	75 peat: 25 vermiculite, optional mycorrhizal inoculant;	<ul> <li>A. tridentata (ssp. wyomingensis, tridentata): None</li> <li>A. tridentata ssp. vasayana: high elevation populations may benefit from 2-16 weeks of cold- moist stratification.</li> </ul>	100 to 150 ppm 20-20-20 NPK solution should be initiated two to three weeks after germination has finished	One growing season; 9-11 months	Should overwinter before out- planting in early spring. Cover to insulate and store outside through winter. Outplant in early-mid spring
Artemisia arbuscula Little sage, low sage, black sage	Late fall or early winter Seeds surface- sown or <i>very</i> thinly covered with soil. Outdoors	5 peat: 25 vermiculite, optional mycorrhizal inoculant	Cold-moist stratification, up to 20 weeks for high elevation populations. Sow outdoors in late fall-early winter to mimic natural conditions.	100 to 150 ppm 20-20-20 NPK solution should be initiated two to three weeks after germination has finished	One growing season; 9-11 months	Should overwinter before out- planting in early spring. Cover to insulate and store outside through winter. Outplant in early-mid spring
Cercocarpus ledifolius	Spring Surface sow and cover with	Sage steppe potting mix*	Cold-moist stratification, 4- 8 weeks	Weekly 14- 14-14 NPK liquid fertilizer at 100ppm	One growing season; 9-11 months	Should overwinter before out- planting in

Chrysothamnus	a thin layer of vermiculite Spring,	Sage steppe	None required,	during growing season gradually reduce and end in fall.	One growing	early spring. Cover to insulate and store outside through winter. Outplant in early-mid spring Cover to
viscidiflorus (Ericameria teretifolia) Green rabbitbrush	greenhouse OR Fall, outside Surface sow and gently press into soil with tamper	potting mix*	but some can benefit from sowing outdoors in fall for natural cold- moist stratification.	ppm 20-20-20 NPK solution should be initiated two to three weeks after germination has finished	season; 9-11 months	insulate and store outside through winter. Outplant in early-mid spring
Rhus trilobata Skunkbrush sumac	Surface sow and cover with a thin layer of vermiculite Outdoors	Sage steppe potting mix*	Scarify in sulfuric acid for 60 minutes, then thoroughly rinse and soak for 24 hours. Sow outdoors in mid-winter for 8-9 weeks of natural cold- moist stratification.	Weekly 14- 14-14 NPK liquid fertilizer at 100ppm 4 during growing season; gradually reduce and end in fall. Once germination begins, move plants to greenhouse or hoop house. Once plants	One growing season; 9-11 months	Move to cold frame for winter.

Symphoricarpos albus Common Snowberry	Mid-summer Outdoors	Sage steppe potting mix*	Warm-moist stratification for 7-12 weeks followed by 20- 25 weeks of cold-moist stratification. (Sow outdoors mid-summer	reach approx. 25 – 30 inches (8-10 weeks), move outside or to shade house. Move to cold frame for winter. Once germination begins, move plants to greenhouse. Move to hoophouse after 2 months of	One growing season; 9-11 months	Should overwinter before out- planting in early spring.
			for spring germination).	growth. Cover hoophouse with shade cloth during hot months.		insulate and store outside through winter. Outplant in early-mid spring
Forbs & Grasses						
Species	Sowing Date	Soil	Seed treatment	Active Growth	Time to Grow	Notes
Allium acuminatum Tapertip Onion	November	Sunshine #4, lightly cover seeds with layer of sand	Cold-moist stratification: 8 weeks or more	20-20-20 NPK solution weekly; taper and end fertilization in July	3 years; insulate during overwintering; harvest and outplant bulbs after 3 <sup>rd</sup> growing season.	Growing conditions should be cool. Dry bulbs can be stored briefly prior to out-planting.
Balsamorhiza hookeri Hooker's Balsamroot	November Surface sown and covered lightly with pea gravel	Sagebrush Steppe Potting Mix Mix with Osmocote 14-	Sow outdoors in November for natural cold- moist stratification	Roots are rot- prone if soil is not allowed to dry down between waterings.	One growing season.	Plants shouldn't be kept for more than one growing season to avoid crowding the

		14-14				taproot. Taproot is extremely fragile and must be handled with
						care during out-planting.
Balsamorhiza sagittata Arrowleaf Balsamroot	November Surface sown and covered lightly with pea gravel	Sagebrush Steppe Potting Mix Osmocote 14- 14-14	Sow outdoors in November for natural cold- moist stratification	Plants remain outside for the duration of the growth period Roots are rot- prone if soil is not allowed to dry down between waterings	One growing season.	Plants shouldn't be kept for more than one growing season to avoid crowding the taproot. Taproot is extremely fragile and must be handled with care during out-planting.
Crepis spp.	Sow outdoors in late October or early November for natural cold- moist stratification Seeds should be covered only very lightly with growing medium Can benefit from a light covering of sand over seeds	Sage steppe potting mix* Osmocote		Weekly 13- 13-13 NPK liquid fertilizer at 100ppm during growing season Allow soil to dry down between waterings Gradually decrease water and fertilizer in preparation for winter dormancy Grow outdoors	One growing season.	Cover to insulate and store outside through winter. Outplant in early-mid spring

						[]
				One growing season to out- planting		
Dalea candida	Sow seeds <sup>1</sup> / <sub>4</sub> inch deep Can benefit from a light covering of sand over soil	Sage steppe potting mix* Osmocote	Scarify with sandpaper	Allow soil to dry down between waterings Remove flowering stalks before flowering can occur One growing season to out-	One growing season.	Cover to insulate and store outside through winter. Outplant in early-mid spring
Dalea searlsiae	Sow seeds <sup>1</sup> / <sub>4</sub> inch deep	Sage steppe potting mix*	Scarify with sandpaper	planting Allow soil to dry down	One growing season.	Cover to insulate and
	Can benefit from a light covering of sand over soil	Osmocote		between waterings Remove flowering stalks before flowering can occur One growing season to out-		store outside through winter. Outplant in early-mid spring
Eriogonum umbellatum	Sow outdoors in early spring for natural cold-moist stratification. Germination begins in May. Sow ¼ inch deep Lightly cover soil with thin	Sage steppe potting mix* Osmocote	60-90 days cold-moist stratification	plantingAllow soil to dry downbetween wateringsGrow outdoors during active growth phaseOne growing season to out- planting	One growing season.	Susceptible to damping off; outdoor growing conditions and avoiding overwatering can help minimize losses
Hedysarum boreale	layer of sand Sow in greenhouse in March; move	Sage steppe potting mix*	Scarify with sandpaper	Fertlize weekly with 13-13-13	One growing season.	Cover to insulate and store outside
	outside once	Osmocote	106	NPK at		through

	4			100		•
	temperatures			100ppm		winter.
	allow					Outplant in
				Allow soil to		early-mid
	Sow 1/4 inch			dry down		spring
	deep			between		
				waterings		
				Grow		
				outdoors		
				during active		
				growth phase		
				growin pricese		
				One growing		
				season to out-		
<b>T</b> (*		<b>C</b>	Culture int	planting		C
Lomatium	Sow outside in	Sage steppe	Cold-moist	Fertilize	One growing	Cover to
triternatum	November	potting mix*	stratify	weekly with	season.	insulate and
	~		outdoors from	complete		store outside
	Cover lightly		November-	fertilizer		through
	with planting		germination in	beginning		winter.
	medium		early May	with		Outplant in
				germination		early-mid
	Cover planting			and ending as		spring
	medium with			plants senesce		
	light layer of			in mid-		
	sand or grit			summer		
	C					
				Allow soil to		
				dry down		
				between		
				waterings		
Microseris	Sow outside in	Sage steppe	Cold-moist	Fertilize	One growing	Cover to
nutans	November	potting mix*	stratify	weekly with	season	insulate and
	1.0,000000	Potting min	outdoors from	complete	Seaboli -	store outside
	Cover lightly		November-	fertilizer		through
	with planting		germination			winter.
	medium		Sermination	Allow soil to		
	mearum					-
	Course along			•		early-mid
	Cover planting			between		spring
	medium with			waterings		
	light layer of					
	sand or pea					
1	gravel					

\*Sagebrush Steppe Potting Mix: (Adapted from Scott Jensen, Rocky Mountain Research Station Shrub Sciences Lab, Provo, Utah).33% Screened Peat Moss, 33% Vermiculite, 16.5% Diatomaceous earth, 16.5% Sand, Native soil as mycorrhizal inoculant, if applicable