

Reseeding projects to improve greater sage-grouse habitat in Montana

Kelsey Molloy

Feb. 8, 2017

Native Prairie Restoration and Reclamation Workshop

Sage Grouse Initiative (SGI)

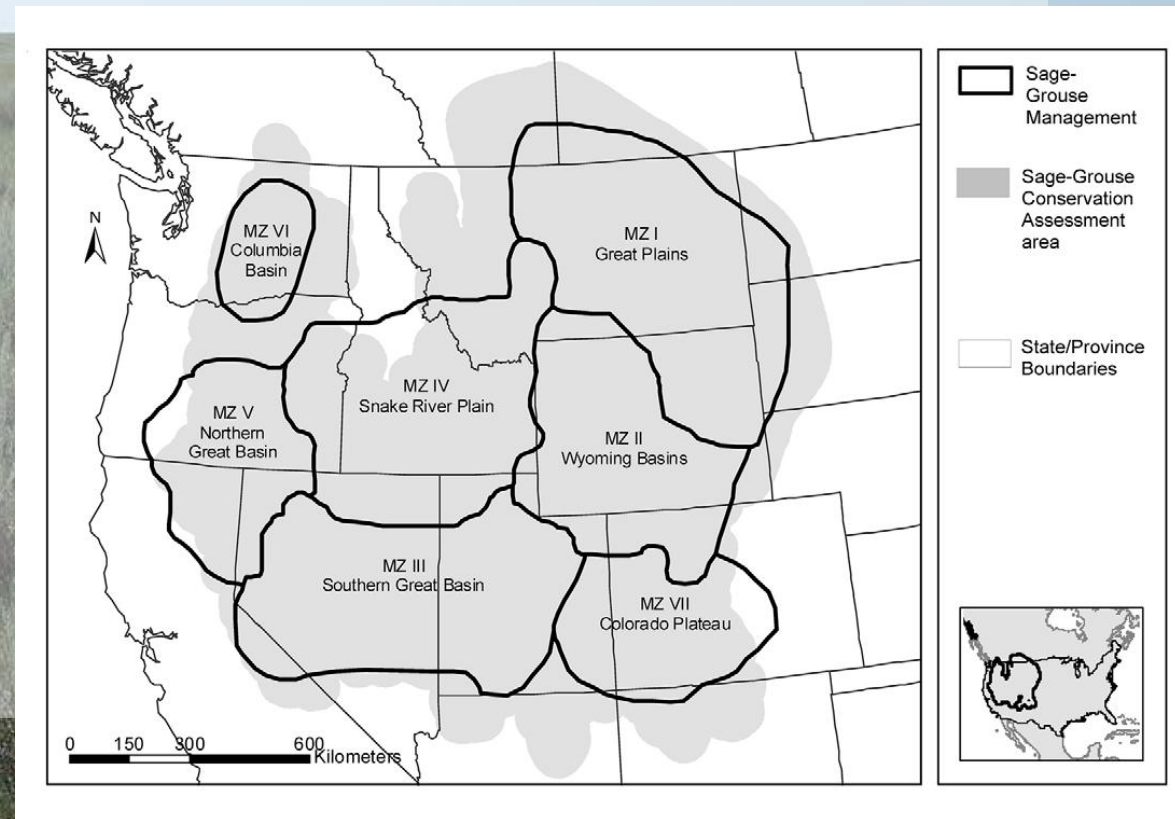
- Program through the US Department of Agriculture- Natural Resources Conservation Service (NRCS)
- 24 partner biologists
- Farm Bill funding
- Work with private landowners to address threats to greater sage-

Rick McEwan

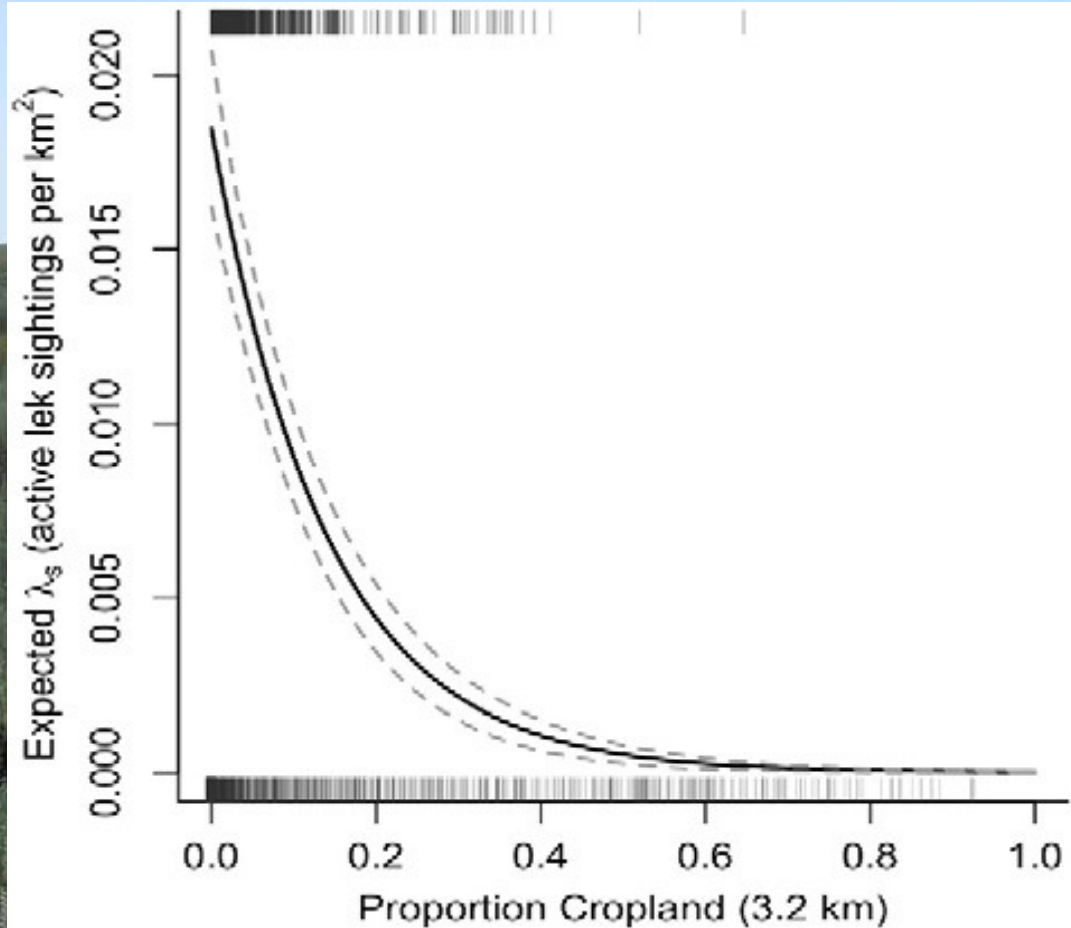


Threats to sage-grouse

- Energy development
- Wildfire
- Invasive species
- Conifer encroachment
- Conversion of land to cropland or urban development
- West Nile virus



Conversion threat



- Lek persistence decreases with landscape cropland fragmentation
- Cropland has an effect on a landscape scale



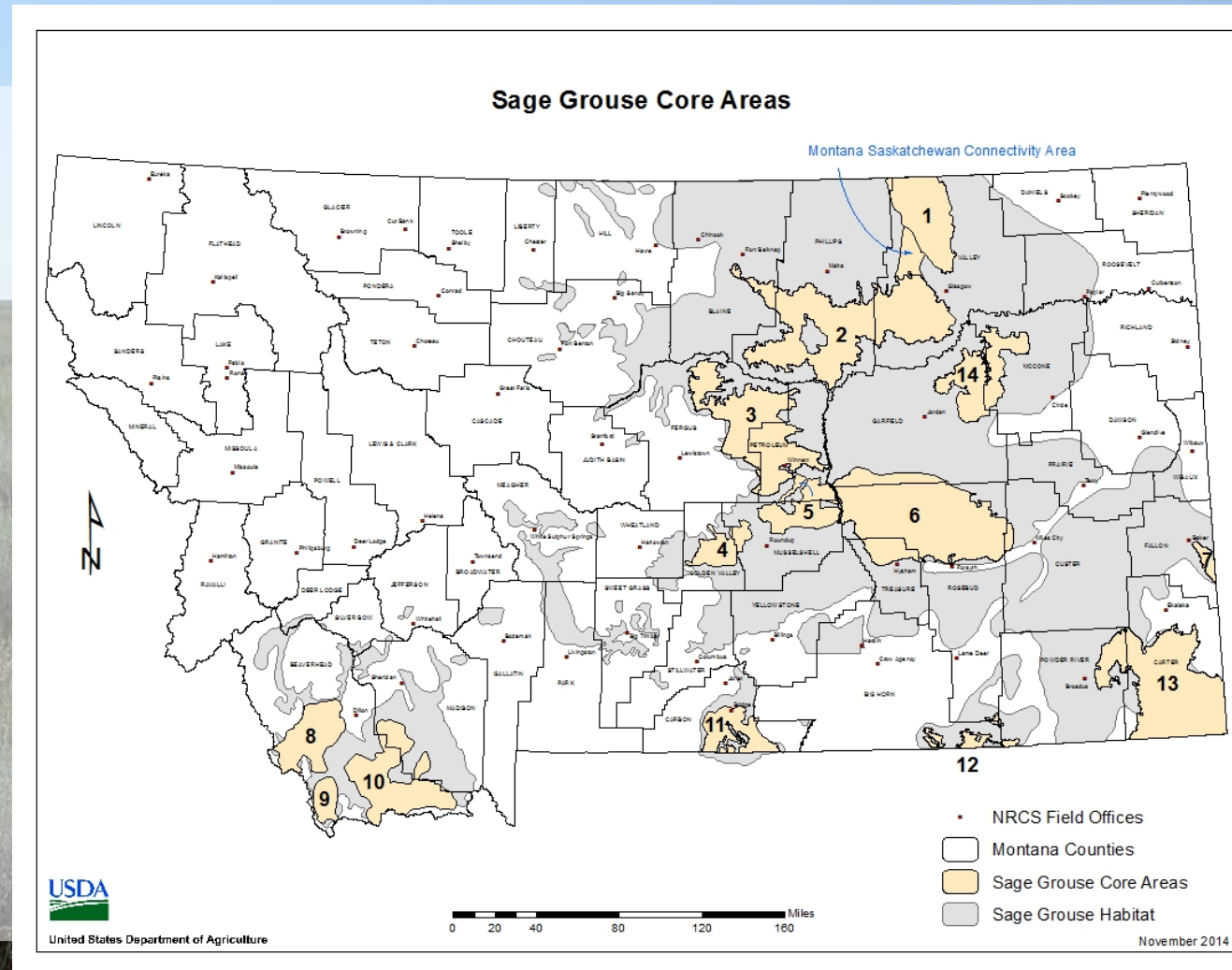
Seeding special initiative

- SGI 2.0
- 3 grass species, 2 forbs
- Native or introduced
- Sagebrush planting optional
- Cost share rates: \$54/ ac for introduced seeding
- \$124/ ac for native



Prioritization/ Ranking

- Improving connectivity
- Core areas
- Native species
- Within a mile of a lek
- Sagebrush plants



FORAGE SUITABILITY GROUP
LOAMY, 10-14" ppt >90 Freeze Free Days

FSG No.: GR52XG017MT
Major Land Resource Area: 052X - Brown Glaciated Plain

Physiographic Features

MLRA 52 is characterized by gentle to rolling glaciated plains, with steep slopes bordering the larger rivers. Elevation ranges from 1900 to 4600 feet, with an increase from east to west. The Milk River has extensive flood plains, but other streams usually have narrow, discontinuous flood plains.

Loamy FSGs occur on nearly level to strongly rolling glacial till plains.

	Minimum	Maximum
Elevation (feet):	1900	4600
Slope (percent):	0	15
Flooding:		
Frequency:	Rare	Occasional
Duration:	Extremely Brief	Brief
Ponding:		
Depth (inches):		
Frequency:	None	None

GR52XG017MT
LOAMY, 10-14" ppt >90 Freeze Free Days

Pastureland and Hayland

	ACHY	YES	NO
Indian ricegrass (N)	ACHY	YES	NO
Intermediate wheatgrass (I) 1/	THIN6	YES	YES
Meadow bromegrass (I)	BRB12	NO	YES
Orchardgrass (I)	DAGL	NO	YES
Pubescent wheatgrass (I) 1/	THIN6	YES	YES
Russian wildrye (I)	PSR13	YES	NO
Slender wheatgrass (N)	ELTR7	YES	YES
Streambank wheatgrass (N)	ELLA3	YES	NO
Tall fescue (I) 2/	LOAR10	NO	YES
Tall wheatgrass (I)	THP07	YES	YES
Thickspike wheatgrass (N)	ELLAL	YES	NO
Western wheatgrass (N)	PASM	YES	YES

Warm Season Grasses	Scientific Symbol	Dryland	Irrigated
Little bluestem (N)	SCSC	YES	NO
Prairie sandreed (N)	CALO	YES	NO
Switchgrass (N)	PAV12	YES	NO

Legumes	Scientific Symbol	Dryland	Irrigated
Alfalfa (I)	MESA	YES	YES
Alsike clover (I)	TRHY	NO	YES
Birdsfoot trefoil (I)	LOCO6	NO	YES
Cicer milkvetch (I)	ASC14	NO	YES
Red clover (I)	TRP12	YES	YES
Sainfoin (I)	ONVI	YES	YES
Small burnet (I)	SAMB3	YES	NO

Other Perennial Forbs	Scientific Symbol	Dryland	Irrigated
Lewis flax (N)*	LILE3	YES	NO
Maximilian sunflower (N)*	HEMA2	YES	NO
Purple/white prairieclover (N)*	DAPU5	YES	NO
Winterfat (N)*	KRLA2	YES	NO

Annual Species	Scientific Symbol	Dryland	Irrigated
----------------	-------------------	---------	-----------

Resources

Dryland Pastures
in
Montana and Wyoming

*Species and Cultivars,
Seeding Techniques and
Grazing Management*

EB 19 • Revised Fall 2003

PLANT MATERIALS TECHNICAL NOTE

Seeding Rates for Conservation Species for Montana

Mark E. Majerus, Manager-Emeritus, USDA-NRCS, Bridger Plant Materials Center
Joseph D. Scianna, Manager, USDA-NRCS, Bridger Plant Materials Center
Jim Jacobs, Plant Materials Specialist, USDA-NRCS, Bozeman, Montana

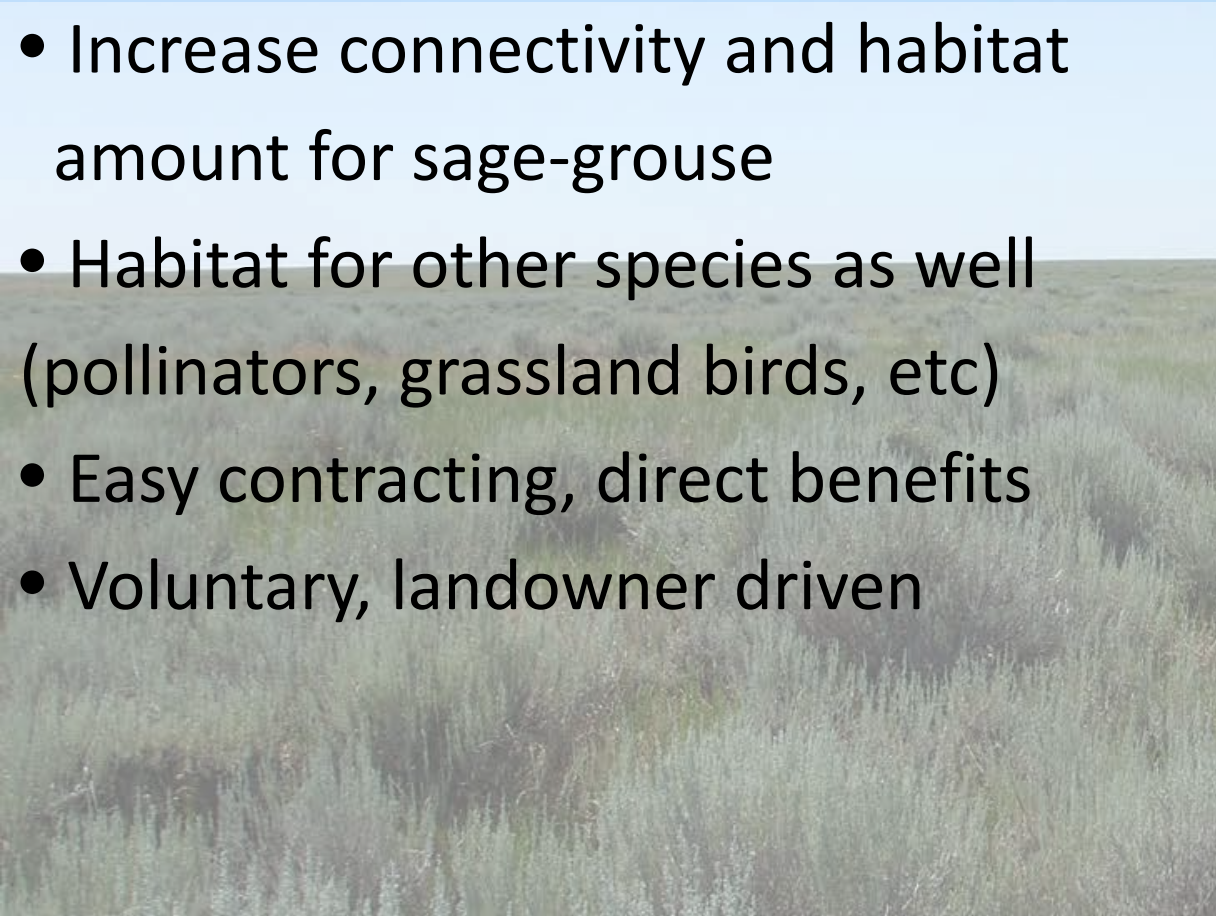


Table 2. Seeding rates for commonly used conservation plant species.

Common Name	Scientific Name	Approximate Seeds/Pound	PLS pounds/acre for Full Stand ^{1,8}	PLS/ square foot PLS/ linear foot	C versus W ² I versus D S versus F versus NP	Proven Selections
GRASSES-NATIVE						
alkalgrass, Nuttall's	<i>Puccinellia nuttalliana</i>	2,100,000	1	48	C-I-NP	Common
alkali sacaton	<i>Sporobolus airoides</i>	1,750,000	1	40	W-D-NP	Saltak
bluegrass, big	<i>Poa secunda (P. ampla)</i>	882,000	2	40	C-D-NP	Sherman
bluegrass, Canby	<i>Poa secunda (P. canbyi)</i>	925,000	2	42	C-D-NP	Canbar
bluegrass, Nevada	<i>Poa secunda (P. nevadensis)</i>	1,029,000	2	47	C-D-NP	Opportunity
bluegrass, Sandberg	<i>Poa secunda (P. sandbergii)</i>	900,000	2	41	C-D-NP	High Plains, Reliable
bluestem, big	<i>Andropogon gerardii</i>	130,000	8	24	W-D-S	Sunnyview, Bison, Bonilla, Champ
bluestem, little	<i>Schizachyrium scoparium</i>	260,000	4	24	W-D-S	Badlands, Blaze, Camper
bluestem, sand	<i>Andropogon hallii</i>	113,000	9	23	W-D-S	Garden, Goldstrike
brome, mountain	<i>Bromus marginatus</i>	80,000	10	18	C-D-NP	Bromar, Garnet
buffalograss	<i>Bouteloua dactyloides (Buchloe)</i>	48,000	15	17	W-D-NP	Bison, Plains, Tatanka, Texoka, Cody, Bismarck (vegetative)
cordgrass, prairie	<i>Spartina pectinata</i>	183,000	6	25	W-I-NP	Red River
fescue, Idaho	<i>Festuca idahoensis</i>	450,000	2.5	26	C-D-NP	Joseph, Nezper, Winchester
fescue, rough	<i>Festuca campestris</i>	171,000	6	24	C-D-NP	Common
fescue, spike	<i>Leucopoa kingii</i>	144,000	7	23	C-D-NP	Common
grama, blue	<i>Bouteloua gracilis</i>	825,000	2	38	W-D-S	Alma, Bad River, Birdseye, Wills
grama, sideoats	<i>Bouteloua curtipendula</i>	191,000	6	26	W-D-S	Butte, Pierre, Trailways, Killdeer
hairgrass, tufted	<i>Deschampsia cespitosa</i>	2,500,000	0.75	43	C-D-NP	Penr Creek
Indiangrass	<i>Sorghastrum nutans</i>	170,000	6	23	W-D-NP	Tomahawk
Indian ricegrass	<i>Achnatherum hymenoides (Oryzopsis)</i>	235,000	5	27	C-D-NP	Rimrock, Nezpar, Paloma, White River
needle and thread	<i>Hesperostipa comata (Stipa)</i>	115,000	9	24	C-D-NP	AC Sharptail
needlegrass, green	<i>Nassella viridula (Stipa)</i>	186,000	6	26	C-D-F	Lodorm, Cucharas, AC Mallard
prairie Junegrass	<i>Koeleria macrantha (K. cristata)</i>	2,300,000	1	53	C-D-NP	Common
prairie sandreed	<i>Calamovilfa longifolia</i>	273,000	4	25	W-D-S	Goshen, Pronghorn
reed canarygrass	<i>Phalaris australis spp. americanus</i>	602,000	2	28	C-I-NP	Loreed, Vantage, Castor, Palaton

Project Benefits

- Increase connectivity and habitat amount for sage-grouse
- Habitat for other species as well (pollinators, grassland birds, etc)
- Easy contracting, direct benefits
- Voluntary, landowner driven



Post-contract concerns

- Required to maintain for 5 yrs
- Work on other projects (e.g. fencing/ water) or other programs (CRP) to make sure will stay in grass
- Choose viable seed mixes
- No initial income on seeded acres
- Value of new habitat?



QUESTIONS??

- Kelsey.molloy@mt.nacdn.net
- 406 654 1334 x 119
- Sagegrouseinitiative.com

