Seeds of Success for the Bureau of Land Management, Eugene District

2011 Annual Report



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Institute for Applied Ecology

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PREFACE

This report is the result of a cooperative Challenge Cost Share project between the Institute for Applied Ecology (IAE) and a federal agency. 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. IAE offers educational opportunities through 3-4 month internships.

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Cover Photo: 2011 photo of Sarah Stevens collecting Festuca roemeri at Mount Salem.

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Introduction

During 2011 the Institute for Applied Ecology (IAE) worked in collaboration with the Bureau of Land Management (BLM), Eugene District to collect seed under the Seeds of Success program. Seeds of Success (SOS) is a national native seed collection program coordinated by the BLM. The goal of SOS is to provide wild collected seed for native plant materials development and research. In 2011 the Habitat Restoration Program for IAE made 37 SOS collections on eight prairies managed by the Eugene BLM. Twenty unique species were collected in 2011. The Seeds of Success website provides the most up-to-date protocols and a wealth of other information (accessed at http://www.nps.gov/plants/sos/). We used the USDA PLANTS Database as our taxonomic standard (accessed at http://www.plants.usda.gov).



Figure 1. Photo of Calochortus tolmiei at Dorena Prairie.

Collection Sites

IAE collected seed at seven locations in 2011 (Table 1), while BLM collected at an eighth site, Round Creek. Driving directions and access notes are described in detail below.

Table 1. Collection sites, their corresponding GPS location and Township, Range and Section. We used the WGS84 GPS datum. All sites are on public land managed by the Eugene District BLM.

Site	Latitude	Longitude	T.R.S.
Camp Creek	44° 05' 06.84"	122° 53' 19.18"	T17S R2W Sec 13, 23
Dorena	43° 47' 10.75"	122° 57' 57.53"	T20S R2W Sec 32
Eagle's Rest	43° 51' 47.97"	122° 48' 02.53"	T20S R1W Sec 3
McGowan	44° 10' 35.46"	122° 59' 46.64"	T16S R3W Sec 13
Mt Salem	43° 55' 47.27"	122° 38' 47.82"	T19S R1E Sec 11
Papenfus	43° 54' 46.57"	122° 55' 31.44"	T19S R2W Sec 5
Twin Prairie Butte	43° 41' 29.75"	123° 02' 11.96"	T22S R3W Sec3

Camp Creek Ridge / Gilkey Creek

This site is slightly challenging since the main access requires you to cross private property. Dan Call lives on the property south of the BLM parcel, his phone # is 541-747-4261. In the past I have called Dan and parked in his driveway and walked ¼ mile to the BLM property. There is another property between Dan's and the BLM that is currently being developed, but there was no house there as of September 2011. I met the landowner one day and he was friendly, but since the access to the BLM property goes through his property access may change once he builds his house. I don't have contact

information for the landowner. In 2009 Ed Alverson of the Nature Conservancy wrote a site description for the BLM Eugene District in a report on the prairie, savanna, oak and pine potential ACECs. This report contains aerial photos and management suggestions. An invaluable comprehensive species list is included as a separate excel file.

To get to the site, take Highway 126 east to 42nd St. / Marcola exit. Turn left at the end of the off ramp and drive about a quarter mile to a stop sign. Turn right and drive for about half a mile and turn right onto Camp Creek Road and follow for 4.3 miles. Turn Left onto a gravel Road with a set-back red barn and three mailboxes # 37399, 37379, 37369. Drive up this gravel road for about a half mile and turn left into Dan Call's steep driveway # 37379. Drive up the long driveway and either park there after asking permission, or turn left on another steep gravel spur road just before the house and travel another 200 yards before the road deteriorates to packed dirt and rock. This site contains a number of disjunct prairies and the property boundaries are not marked. You will need aerial photos to find your way between the different prairies.

Dorena Prairie

This site is adjacent to Schwarz Park, Cottage Grove, OR.

Take I-5 South to Exit 174 Cottage Grove/Dorena Lake. Turn a left at the end of the ramp onto E Cottage Grove Con. This turns into Row River Rd. Follow for 4.0 miles and this road turns into Government Rd. / Shoreline Dr. Continue for an additional 0.5 miles and turn left into Schwarz Park (A US Army Corps of Engineers Camp ground and picnic site). The BLM parcel is the open meadow on the south side of the park, there are no signs marking the boundary. You may need to tell the camp ground host who you are and what you are doing. There is an additional prairie about 0.5 miles south of Dorena Prairie located at the intersection of Garoutte Rd. and Government Rd. No seed was collected at Garoutte Rd. in 2011, but a number of high value prairie species grow there. Row Point is another site managed by USACE with a significant stand of Roemer's fescue. In 2011 this site was used by USACE for seed collecting so IAE did not collect seed there.

Eagle's Rest Sisyrinchium Site

There are two BLM prairie sites named Eagle's Rest. This site is known as the Eagle's Rest Sisyrinchium Site. Take Hwy 58 east and pass partway through the town of Dexter (just past milepost 11). Near the eastern edge of town turn right onto Lost Creek Rd (library sign). Follow this road for 3.8 miles and turn left on a sharp bend in the road onto Eagle's Rest Rd (19-1-33.1). Follow this paved road for 0.7 miles to a small parking area on the left (spur 19-1-3.1). From there use aerial photos or GPS coordinates to locate the small meadow which is about 300 meters south of the parking area. There is a flagged trail through the forest about 75 feet uphill of the parking area. The western edge of the meadow abuts private property which is marked by a decrepit fence. No locked gates or dirt roads were encountered in 2011.

McGowan Meadow

This site is located in the southwest section of the Coburg Hills. From I-5 head east on OR-126 towards Springfield and take the 42nd St / Marcola exit. At the end of the off-ramp turn left and drive to the first stop sign. Turn right onto Marcola Rd. and continue for 7.8 miles. Turn left onto Donna Rd. and set your odometer to zero (all mileage is referenced from this intersection). After 1 mile turn right onto

McGowan Rd. At mile 3.5 bear right onto paved BLM Rd # 16-2-27. At mile 5.1 stay left on Rd. # 16-2-27. The meadow appears mostly on the right-hand side at mile 6.4. The road is paved the entire way and no locked gates are present. An alternative turn-off from Marcola Rd. is Hill Rd and turn right at the general store.

Mount Salem

You will need an aerial photo and a compass to find this remote prairie.

Take Highway 58 East towards the town of Lowell. Turn Left on Pioneer Rd and cross Dexter Reservoir. Travel for about half a mile and turn left onto N Shore Dr. Continue for about 0.1 mile and turn Right onto S Moss St. Follow for about 0.8 miles and this road turns into Jasper Lowell Rd. Continue going straight for another 1.0 mile and turn right on Big Fall Creek Rd. Follow for 0.4 miles and turn right on Winberry Creek Rd. Follow this road for 4.4 miles and turn right to stay on Winberry Creek Rd. After 0.1 miles turn left on Horn Butte Rd (BLM Rd. # 19-1E-16). Make sure you don't take the road that goes back around the reservoir. Follow Horn Butte Rd (an obscure paved forest road) for 2.7 miles and look for a suitable parking spot. In order to reach the prairies from the road you will need to bush-whack uphill for about 45 minutes. If you climb too far to the left (north) you will get stuck in dense brush and dog-hair timber. Stay to the south and climb through the mature timber with dense salal and sword fern. It is possible to approach the prairie from the top if you get a private forest gate key from the BLM and travel on rough forest roads. In 2009 Ed Alverson of the Nature Conservancy wrote a site description for the BLM Eugene District in a report on the prairie, savanna, oak and pine potential ACECs. This report contains aerial photos and management suggestions. A comprehensive species list is included as a separate excel file.

Papenfus Prairie (Cloverdale)

A Weyerhaeuser key is required to access this site. Take Hwy 58 east for 5.2 miles and pass through the town of Pleasant Hill. As you leave the town of Pleasant Hill look for Enterprise Rd which is right before the High School on Hwy 58. Turn right onto Enterprise Rd and continue for about 1.7 miles and bear left onto Papenfus Rd. Follow this road for 1.1 miles until the pavement ends. Drive 0.1 mile up a steep gravel road, stay left at the fork and pass a small house. Pass through a locked yellow gate (Weyerhaeuser key) and drive along a brushy road for 0.6 miles. Take the right fork and drive for another 0.8 miles, stay to the right and follow for another 0.3 miles. The meadow is to the south (left) and is visible from the road. In 2009 Ed Alverson of the Nature Conservancy wrote a site description for the BLM Eugene District in a report on the prairie, savanna, oak and pine potential ACECs. This report contains aerial photos and management suggestions for Papenfus Prairie. A comprehensive species list is included as a separate excel file.

Twin Prairie Butte

You will need a <u>BLM key</u>, aerial photo, and compass to find this site. Take I-5 to Cottage Grove and EXIT 172, "Cottage Grove Lake". Turn Left at the off-ramp traffic light and go approximately 6.5 miles to the south end of Cottage Grove Reservoir. Take a left onto Cottage Grove Reservoir Rd and go approximately 1.5 miles. Turn right on Wilson Creek road (county road 2719, the small # on the sign). Drive about a mile to the locked gate at the end of the pavement, use your BLM key to go through the gate. Just past the gate, stay on the main gravel road (do not take the right hand fork/turn).

Go past the quarry, and make the first left onto BLM Road #22-3-3.2 on the map but it is signed 22-3-3.1 on the road. Go up this road approximately .75 miles and make a left onto 22-3-2. Drive to the end of the road and park. Walk south through the woods, down the hill into the meadows. In 2009 Ed Alverson of the Nature Conservancy wrote a site description for the BLM Eugene District in a report on the prairie, savanna, oak and pine potential ACECs. This report contains aerial photos and management suggestions for Twin Prairie Butte. A comprehensive species list is included as a separate excel file.

Sampling Strategy and Seed Collection Techniques

We used the Seeds of Success Protocol (BLM 2010) to guide our seed collection efforts. Our goal was to capture as much genetic diversity from a population as possible. Seed was only collected from a species if there were a minimum of fifty plants in the population. Typically we visited a site at least three times in the growing season. The first visit was used to map and mark plants for future collection, as well as gauge plant phenology. For species with a long seed maturation period, we visited the site multiple times to collect seed from individuals that were early, normal, or late to mature seed. Collection dates in Table 2 represent peak periods of seed production, but these dates will fluctuate year-to-year based on annual variations in temperature and precipitation.

Seed Storage and Cleaning

Seed was collected in paper sacks and allowed to dry in screened wooden boxes ensure adequate air circulation. Extremely small seed such as Mimulus guttatus was dried in cardboard boxes without screens. Most seed was cleaned by hand by IAE employees using mesh screens. The NRCS Plant Materials Center cleaned two challenging species; Solidago Canadensis and Symphyotrichum chilense. After the seed was cleaned it was either distributed (see below) or it was stored in paper sacks which were placed inside a rubber tote and kept in an IAE fridge. We are waiting for guidance from BLM to decide what to do with the seed being stored at IAE.



Figure 2. Photo of Geoff Gardner cleaning seed of Wyethia angustifolia.

Seeds of Success for the Bureau of Land Management, Eugene District, 2011 Report

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Seed Distribution

Seed that was collected in 2011 had four destinations: the Bend Seed Extractory, grow-out fields, plug production, and cold storage.

Bend Seed Extractory

Seed from three species was mailed to the Bend Seed Extractory in 2011. The seed we submitted was as follows: *Castilleja tenuis* and *Eriophyllum lanatum* from Mt Salem and *Wyethia angustifolia* from McGowan Meadow. These collections contained more than 10,000 seeds per species.

Grow-out Fields

Under direction of the BLM, IAE collected seed from three grass species at four different sites. IAE subcontracted Pacific Northwest Natives in Albany, Oregon to plant increase fields for these three species starting in 2012. The species included in this growout were: *Danthonia californica, Festuca californica,* and *Festuca roemeri*. Seed originated from Papenfus Prairie, McGowan Meadow, Camp Creek, and Twin Prairie Butte. The first year of growout typically does not produce seed, so the first harvest is expected to occur in 2013. Seed from this production field will be available for BLM to use on restoration sites at midelevations (1,000 to 4,000 feet). Seed for these species is already commercially available for sites at low elevations on the Willamette Valley floor.



Figure 3. Photo of a Roemer's fescue grow-out field from 2007.

Plug Production

IAE subcontracted with Sevenoaks Native Nursery to grow plugs of the following species: *Potentilla gracilis* (1,000 plugs) and *Rudbeckia occidentalis* (500 plugs) from McGowan Meadow, *Sidalcea virgata* (1,000 plugs) from Mt Salem, and *Danthonia californica* (500 plugs) from a mixed valley floor collection to be used at Dorena Prairie. Plugs will be ready for outplanting in November 2012. We plan to grow plugs for at least seven other species in 2013 with Sevenoaks Native Nursery.

Cold Storage

All of the remaining seed that was not used for grow-out or long term storage at Bend, is kept at IAE in cold storage for later use in production or direct seeding.

Direct Seeding

None of the seed that was collected in 2011 was direct seeded on restoration sites. In order for direct seeding to be effective, ground preparation must occur. BLM has allocated money to IAE in FY2012 to actively restore a number of sites. Seed collected in 2011 will therefore be used on those restoration sites in 2012.

Collection Reports

The 37 collection reports are appended to this document. Note that Accession OR090B-62 does not exist, that number was mistakenly skipped.

Table 2. List of seed collected and attributes.

Accession #	Species	Site	Elevation	Date	Distribution
OR090B - 26	Camasia quamash	Eagle's Rest	944	7/11/2011	IAE fridge
OR090B - 27	Calochortus tolmiei	Dorena	757	7/15/2011	IAE fridge
OR090B - 28	Geranium oreganum	Dorena	757	7/15/2011	IAE fridge
OR090B - 29	Festuca californica	Camp Creek	990	7/20/2011	Field growout
OR090B - 30	Festuca roemeri	Camp Creek	990	7/20/2011	Field growout
OR090B - 31	Calochortus tolmiei	Papenfus	1314	7/22/2011	IAE fridge
OR090B - 32	Danthonia californica	Papenfus	1314	7/22/2011	Field growout
OR090B - 33	Festuca californica	Papenfus	1314	7/22/2011	Field growout
OR090B - 34	Danthonia californica	Twin Pr. Butte	1767	8/1/2011	Field growout
OR090B - 35	Festuca californica	Twin Pr. Butte	1767	8/1/2011	Field growout
OR090B - 36	Festuca roemeri	Twin Pr. Butte	1767	8/1/2011	Field growout
OR090B - 37	Danthonia californica	McGowan	1966	8/2/2011	Field growout
OR090B - 38	Bromus carinatus	Mt Salem	2600	8/3/2011	IAE fridge
OR090B - 39	Danthonia californica	Mt Salem	2600	8/3/2011	Field growout
OR090B - 40	Eriophyllum lanatum	Mt Salem	2600	8/3/2011	Bend Seed Extractory
OR090B - 41	Festuca roemeri	Mt Salem	2600	8/3/2011	Field growout
OR090B - 42	Camasia quamash	Dorena	757	8/5/2011	IAE fridge
OR090B - 43	Potentilla gracilis	Dorena	757	8/5/2011	IAE fridge
OR090B - 44	Sidalcea virgata	Dorena	757	8/5/2011	Plug growout w/ #54
OR090B - 45	Camasia quamash	McGowan	1966	8/8/2011	IAE fridge
OR090B - 46	Festuca californica	McGowan	1966	8/8/2011	Field growout
OR090B - 47	Festuca roemeri	McGowan	1966	8/8/2011	Field growout
OR090B - 48	Iris tenax	McGowan	1966	8/8/2011	IAE fridge
OR090B - 49	Danthonia californica	Camp Creek	990	8/12/2011	Field growout
OR090B - 50	Mimulus guttatus	Camp Creek	990	8/12/2011	IAE fridge
OR090B - 51	Aquilegia formosa	Dorena	757	8/15/2011	IAE fridge
OR090B - 52	Castilleja tenuis	Mt Salem	2600	8/18/2011	Bend Seed Extractory
OR090B - 53	Festuca californica	Mt Salem	2600	8/18/2011	Field growout
OR090B - 54	Sidalcea virgata	Mt Salem	2600	8/18/2011	Plug growout
OR090B - 55	Grindelia integrifolia	Eagles Rest	944	9/6/2011	IAE fridge
OR090B - 56	Wyethia angustifolia	Eagles Rest	944	9/6/2011	IAE fridge
OR090B - 57	Fritillaria affinis	Round Creek	N/A	9/7/2011	IAE fridge
OR090B - 58	Potentilla gracilis	McGowan	1966	9/20/2011	Plug growout
OR090B - 59	Rudbeckia occidentalis	McGowan	1966	9/20/2011	Plug growout
OR090B - 60	Solidago canadensis Symphyotrichum	McGowan	1966	10/27/2011	IAE fridge
OR090B - 61	chilense	McGowan	1966	10/27/2011	IAE fridge
OR090B - 63	Wyethia angustifolia	McGowan	1966	9/20/2011	Bend Seed Extractory

Literature Cited

All IAE reports can be downloaded from the IAE website http://appliedeco.org/reports

Bureau of Land Management. 2010. Technical protocol for the collection, study, and conservation of seeds from native plant species for Seeds of Success.

Use BLOCK CAPITALS Complete all fields. Circle relevant descriptions shown in <i>italics</i> . Date(s) Collected (DD/MM/YY): 11/07/11 SOS Seed C								External Collection Number: NRCS PLANTS Code: CAQU2 Cleaning Facility: Collection Ref. Number: OR090B-26					
Collector(s):	-	-		NCTITITE			D ECOLOGY						
Country:	USA		on (T O R):	3 - Willamette	a	State:	OR	Count	y: Lan	e			
Location 1	Details:	EAGLE	Z'S REST, EU	Valley GENE BLM									
Lat.	(dg/min/	/sec) (ex: 4	0° 34' 19.5" N):	43° 51' 4	43° 51' 47.97" N GPS Used?: <i>Yes X</i> If no, plea					ase	see other side.		
Long. (dg	g/min/se	c) (ex: 107°	36' 51.54" W):	122° 48' 02	2.53" W	GPS	Datum:	WGS84					
Elevation	ı (feet):	944		Landowne	er Details	(Permi	ssion?):	BLM					
HABITAT DA													
Habitat, Ass Species & Eco Site Desc	ological	PHOEN	RAIRIE OPEN IIX, LEUCAN TILLA GRAC	THEMUM V	/ULGAF	RE, HOI	LCUS LA						
Modifying l	Factors:	NONE											
Land	d Form:	LOWE	R SLOPE				Slope°: 3						
La	nd Use:	WILDL	IFE HABITA	Γ				Aspect:		,	SW		
G	eology:	UNKNO	OWN										
Soil 7	Γexture:	Clay S	ilt Sand Oth	er:			Soi	l Color:					
COLLECTIO	N DAT	A - If pla	nt has been id	entified by a	special	ist, plea	se see ot	her side.					
I	Family:	LILIAC	EAE				No	o. of Plants	Sampled	d (min. 50):	150	
	Genus:	CAMAS	SIA				No	o. of Plants	Found ((approx.):	1500	
S	Species:	QUAM.	ASH					Area	Sample	ed (acres):	1.0	
Subspecies/	Variety:												
Seeds Collec	ted Fro	m: Plan	ets X										
Plant Habit:			Fori	b				Pl	ant Heig	ght (feet)	: 1	1.5	
Native developme this access	nt and r		SEED WILL PROJECTS (ROWOUT I	FOR FU	TURE R	EST	TORATION	
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Common Na	ame(s) o	f Plants:	SMALL CAN	MAS									

Photograph Ta	aken:	Digital		Reference LANTS Code_Coll. Number_Pic. No.):		Where Image will be Filed:						
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_		-	olete all field						<u></u>	ATO		
			relevant de	scriptions s					ning Facility:	_		
Date(s) Colle	ected (DI	D/MM/YY):	15/07/11		SO)S Seed	Collectio	on Ref. Num	ber: OR090B-2	7		
Collector(s):	MATT	BLAKEI	LEY-SMITH	•		PPLIED	ECOLO	GY				
Country:	USA	Ecoregio	on (T,O,B):	3 - Willar Valley	nette	State:	OR	County: Lane				
Location 1	Details:	DOREN	NA PRAIRII	E, Eugene B	BLM							
Lat. (dg/min/sec) (ex: 40° 34' 19.5" N): 43° 47' 10.75" N GPS Used?: Yes X If no, please												
Long. (da	g/min/se	c) (ex: 107°	36' 51.54" W)): 122° 5′	7' 57.53" V	V GPS	Datum:	WGS84				
Elevation	n (feet):	757		Lando	wner Detai	ls (Permi	ssion?):	BLM				
HABITAT DA	ATA											
Habitat, Ass Species & Eco Site Desc	ological	PASTU	MIXTURE OF WET AND UPLAND PRAIRIE WITH HIGH PERCENTAGE OF INTRODUCED PASTURE GRASSES. ANTHOXANTHUM ODORATUM, LEUCANTHEMUM VULGARE, DAUCI CAROTA, FESTUCA RUBRA.									
Modifying 1	Factors:	VERY L	IGHT RECI	REATIONA	L TRAMPL	ING						
Lan	d Form:	BOTTC	M LAND					Slope°:	0			
La	and Use:		RAL AREA ICNIC ARE		NDING CA	MP		Aspect:	FLA	ΔT		
G	eology:	UNKNO	OWN									
Soil 7	Гexture:	Clay S	ilt Sand C	other:			Soi	il Color:				
COLLECTIO	ON DAT	A - If pla	nt has been	identified	by a specia	llist, plea	se see ot	her side.				
]	Family:	LILIAC	EAE				No	o. of Plants S	ampled (min. 50):	200		
	Genus:	CALOC	CHORTUS				No	o. of Plants l	Found (approx.):	700		
S	Species:	TOLMI	EI					Area	Sampled (acres):	.1		
Subspecies/	Variety:											
Seeds Collec	cted Fro	m: Plan	ets X				_		_			
Plant Habit:			FC	ORB				Pla	ant Height (feet):	0.5		
Native developme this access	ent and i		SEED WII PROJECTS					ROWOUT F	OR FUTURE RES	STORATION		
Notes to assi of presse flower color of closely	d specin , odor, p	nen (e.g. presence										
Common Na	ame(s) c	of Plants:	TOLMIE S	TAR-TUL	IP		_					

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D 4 () C II	. 1		relevant de	scriptions s			C 11 4		Ī		2
Date(s) Colle			15/07/11					n Ref. Num	iber:	OR090B-28	8
Collector(s):	MATT	BLAKEL	EY-SMITH	I, INSTITU	JTE FOR A	PPLIED	DECOLOGY				
Country:	USA		on (T,O,B):	3 - Willar Valley		State:	OR	County	y: La	nne	
Location I	Details:	DOREN	IA PRAIRIE	E, Eugene F	BLM						
Lat. (dg/min/sec) (ex: 40° 34' 19.5" N): 43° 47' 10.75" N GPS Used?: Yes X If no, please see											e see other side.
Long. (dg	g/min/se	c) (ex: 107°	36' 51.54" W)	: 122° 5	7' 57.53" V	V GPS	Datum:	WGS84			
Elevation	(feet):	757		Lando	wner Detai	ls (Permi	ission?):	BLM			
HABITAT DA	ATA										
Habitat, Associated Species & Ecological Site Descriptor: MIXTURE OF WET AND UPLAND PRAIRIE WITH HIGH PERCENTAGE OF INTRODUCED PASTURE GRASSES. ANTHOXANTHUM ODORATUM, LEUCANTHEMUM VULGARE, DAUCUS CAROTA, FESTUCA RUBRA.											
Modifying I	Modifying Factors: VERY LIGHT RECREATIONAL TRAMPLING										
Land	d Form:	ВОТТО	M LAND					Slope°:	0		
La	nd Use:		AL AREA CNIC ARE		NDING CA	MP		Aspect:		FLA	ΛT
G	eology:	UNKNO	OWN								
Soil T	Texture:	Clay St	ilt Sand C	ther:			Soi	il Color:			
COLLECTIO	N DAT	A - If plar	nt has been	identified	by a specia	list, plea	se see ot	her side.			
I	Family:	GERAN	IIACEAE				No	o. of Plants	Sample	ed (min. 50):	50
	Genus:	GERAN	IIUM				N	o. of Plants	Found	l (approx.):	100
S	pecies:	OREGA	NUM					Area	Samp	led (acres):	.25
Subspecies/	Variety:										
Seeds Collec	ted Fro	m: Plan	ts X				_				
Plant Habit:			FC	ORB				Pl	ant He	eight (feet):	2.0
developme	plant materials ent and research sion will be used for: SEED WILL BE USED FOR INCREASE AND GROWOUT FOR FUTURE RESTOR PROJECTS ON EUGENE BLM PRAIRIES.									STORATION	
Notes to assist identification of pressed specimen (e.g. flower color, odor, presence of closely related species):											
Common Na	ame(s) c	of Plants:	OREGON	GERANIU	M						

Photograph Taken: Digital 35mm Reference (PLANTS Code, Coll. Number, Pic. No.): Use BLOCK CAPITALS									Where Image will be Filed: External Collection Number: NRCS PLANTS Code: FECA Cleaning Facility: Collection Ref. Number: OR090B-29					
Collector(s):	MATT	BLAKEI	EY-SMITH	I, INSTITU	TE FOR	R AP	PLIED	ECOLO	GY					
Country:	USA	Ecoregio	on (T,O,B):	3 - Willar Valley	nette		State:	OR	Count	y: La	ne			
Location 1	Details:	CAMP	CREEK RII	OGE, Eugei	ne BLM									
Lat.	(dg/min	/sec) (ex: 4	0° 34' 19.5" N	Used?:	Yes		If no, pleas	e see other side.						
Long. (da	c) (ex: 107°	36' 51.54" W	Datum:	WGS84										
Elevation	n (feet):	990		Lando	wner De	etails	(Permi	ssion?):	BLM					
HABITAT DA	ATA	L												
Habitat, Ass Species & Eco Site Desc	ological		AVANNA A LIS, AND S		UM DOUG	LASII,	IRIS TENA	AX, MADIA						
Modifying 1	Factors:	NONE												
Lan	d Form:	UPPER	-SLOPE, UI	PLAND PR	AIRIE				Slope°:	10				
La	and Use:	WILDL	IFE HABIT	AT, OPEN	SPACE)			Aspect:		SOU	TH		
G	eology:	UNKNO	OWN											
Soil	Texture:	Clay S	ilt Sand C	Other:				Soi	il Color:					
COLLECTIO)N DAT	A - If pla	nt has been	identified	by a spe	eciali	st, plea	se see ot	her side.					
]	Family:	POACE	AE					No	o. of Plants	Sample	ed (min. 50):	100		
	Genus:	FESTU	CA					No	o. of Plants	Found	(approx.):	350		
S	Species:	CALIFO	DRNICA						Area	Samp	led (acres):	4		
Subspecies/	Variety:													
Seeds Collec	cted Fro	m: Plan	ts X											
Plant Habit:			Grass/0	Grasslike	-				P	ant He	ight (feet):	5.0		
Native developme this access	ent and r		SEED WII PROJECTS						ROWOUT I	FOR FU	UTURE RE	STORATION		
Notes to assi of presse flower color of closely	nen (e.g. oresence													
Common N	ame(s) o	f Plants:	CALIFOR	NIA FESC	UE									

Photograph Ta	aken:	Digital .		Reference				Where Image will be Filed:					
	_	Use B	BLOCK CAI	Number_Pic. No.): PITALS				External Collection Number:					
		Comp	lete all field	ls.					NRCS F	LANT	S Code:	EIDR2	
		Circle	relevant de	scriptions s	hown in	itali	ics.		Cle	aning l	Facility:		
Date(s) Colle	ected (DE	D/MM/YY):	20/07/11			SOS	S Seed (Collectio	n Ref. Nu	nber:	OR090B-	30	
Collector(s):	MATT	BLAKEL	LEY-SMITH	•		R AP	PLIED	ECOLO	GY				
Country:	USA	Ecoregio	on (T,O,B):	3 - Willar Valley	nette		State:	OR	Coun	ty: L	ane		
Location 1	Details:	CAMP	CREEK RII	OGE, Eugei	ne BLM								
Lat.	(dg/min	/sec) (ex: 40	0° 34' 19.5" N	GPS	Used?:	Used?: Yes If no, please see other sid							
Long. (da	Datum:	WGS84		_									
Elevation	n (feet):	990		Lando	wner De	etails	(Permi	ssion?):	BLM				
HABITAT DA	ATA												
Species & Eco	Habitat, Associated Species & Ecological Site Descriptor: UPLAND PRAIRIE ON SOUTH FACING SLOPE WITH FESTUCA CALIFORNICA, DANTHONIA CALIFORNICA, ELYMUS GLAUCUS, AND UNCOMMON FORBS SUCH AS DACUS PUSILLUS AND PERIDERIDIA OREGANA.												
Modifying 1	Factors:	NONE											
Lan	d Form:	MID-SI	LOPE, UPL	AND PRAI	RIE				Slope°:	10			
La	and Use:	WILDL	IFE HABIT	'AT, OPEN	SPACE	Ξ			Aspect:		SO	JTH	
G	eology:	UNKNO	OWN										
Soil	Γexture:	Clay Si	ilt Sand C	Other:				Soi	il Color:				
COLLECTIO	N DAT	A - If plai	nt has been	identified	by a spe	eciali	ist, plea	se see ot	her side.			-	
]	Family:	POACE	AE					No	o. of Plants	Samp	led (min. 50)	: 500	
	Genus:	FESTU	CA					No	o. of Plants	Foun	d (approx.)	: 1000	
S	Species:	IDAHO	ENSIS						Are	a Samp	pled (acres)	2	
Subspecies/	Variety:	ROEME	ERI		7								
Seeds Collec	ted Fro	m: Plant	ts X										
Plant Habit:			Grass/0	Grasslike					F	Plant H	eight (feet):	2.0	
developme	Native plant materials levelopment and research this accession will be used for: SEED WILL BE USED FOR INCREASE AND GROWOUT FOR FURTHER PROJECTS ON EUGENE BLM PRAIRIES.										FUTURE RI	STORAT	ION
Notes to assist identification of pressed specimen (e.g. flower color, odor, presence of closely related species):													
Common N	ame(s) o	f Plants:	ROEMER	S FESCUE	E								

Photograph Taken: Digital 35mm Reference (PLANTS Code, Coll. Number, Pic. No.): Use BLOCK CAPITALS Complete all fields.										ection PLANT	Number: S Code: C	CATO		
Date(s) Colle	ected (DI		22/07/11	scriptions s				Collectio	Cl on Ref. Nu	_	Facility: OR090B-	31		
Collector(s):			LEY-SMITH	I, INSTITU							333732			
Country:	USA		on (T,O,B):	3 - Willar Valley		Sta		OR		County: Lane				
Location 1	Details:	PAPEN	FUS PRAIR		NE BLM	[
Lat.	(dg/min	/sec) (ex: 4	0° 34' 19.5" N	Used?:	Used?: $Yes X$ If no, please see other side									
Lat. (dg/min/sec) (ex: 40° 34' 19.5" N): 43° 54' 46.57" N GPS Long. (dg/min/sec) (ex: 107° 36' 51.54" W): 122° 55' 31.44" W GPS									WGS84					
Elevation	n (feet):	1314		Lando	wner Det	tails (P	ermi	ssion?):	BLM (B	EHINI	D LOCKED	GATE)		
HABITAT DA	ATA													
Habitat, Associated Species & Ecological Site Descriptor: UPLAND PRAIRIE RINGED WITH QUERCUS GARRYANA, CALOCEDRUS DECURRENS, AND FESTUCA CALIFORNICA UNDERSTORY. ANNUAL GRASSES DOMINATE PRAIRIE (CYNOSURUS ECHINATUS), WITH OCCASIONAL FORBS (CLARKIA AMOENA, ERIOPHYLLUM LANATUM).														
Modifying 1	Factors:	NONE												
Land	d Form:	UPPER	SLOPES						Slope ^o :	30				
La	and Use:	WILDL	IFE HABIT	'AT					Aspect:		SO	UTH		
G	eology:	UNKNO	OWN											
Soil 7	Γexture:	Clay S	ilt Sand C	Other:				Soi	il Color:					
COLLECTIO	ON DAT	A - If pla	nt has been	identified	by a spec	cialist,	plea	se see ot	her side.					
]	Family:	LILIAC	EAE					No	o. of Plant	s Samp	pled (min. 50)	: 150		
	Genus:	CALOC	CHORTUS					No	o. of Plan	ts Four	nd (approx.)	: 250		
S	Species:	TOLMI	EI						Arc	ea Sam	pled (acres)	: 2		
Subspecies/	Variety:													
Seeds Collec	cted Fro	m: Plan	ets X											
Plant Habit:			FC	ORB						Plant F	Height (feet):	0.5		
developme	Native plant materials evelopment and research his accession will be used for: SEED WILL BE USED FOR IN PROJECTS ON EUGENE BLM								ROWOUT	FOR	FUTURE RI	ESTORATION		
Notes to assi of presse flower color of closely	d specin , odor, p													
Common Na	ame(s) o	f Plants:	TOLMIE S	STAR-TUL	IP			·						

	Photograph Taken: Digital 35mm Reference (PLANTS Code_Coll. Number.Pic. No.): Use BLOCK CAPITALS External Collection Number: Complete all fields. NRCS PLANTS Code: DACA3 Circle relevant descriptions shown in italics. Cleaning Facility: Date(s) Collected (DD/MM/YY): 22/07/11 SOS Seed Collection Ref. Number: OR090B-32											
• •				LINICTITITI					iber: Okosob-32			
Country:	USA		on (T,O,B):	I, INSTITUT 3 - Willame Valley		State:	OR	Count	y: Lane			
Location 1	Details:	PAPEN	FUS PRAIR	IE, EUGEN	E BLM							
Lat.	(dg/min	/sec) (ex: 4	0° 34' 19.5" N)	: 43° 54	' 46.57 " N	GPS	Used?:	Yes	X If no, please	e see other side.		
	_		36' 51.54" W)	=	Datum:	WGS84	7,1					
Elevation				_	ner Detail				HIND LOCKED G	ATE)		
HABITAT DA	, ,					(=				/		
Habitat, Associated Species & Ecological Site Descriptor: UPLAND PRAIRIE RINGED WITH QUERCUS GARRYANA, CALOCEDRUS DECURRENS, AND FESTUCA CALIFORNICA UNDERSTORY. ANNUAL GRASSES DOMINATE PRAIRIE (CYNOSURUS ECHINATUS), WITH OCCASIONAL FORBS (CLARKIA AMOENA, ERIOPHYLLUM LANATUM).												
Modifying 1	Modifying Factors: NONE											
Lan	d Form:	UPPER	SLOPES					Slope°:	30			
La	nd Use:	WILDL	IFE HABIT	AT				Aspect:	SOU'	ГН		
G	leology:	UNKNO	OWN				•					
Soil 7	Γexture:	Clay S	ilt Sand O	ther:			Soi	l Color:				
COLLECTIO	N DAT	A - If pla	nt has been	identified by	y a specia	list, plea	se see ot	her side.				
]	Family:	POACE	EAE				No	of Plants	Sampled (min. 50):	250		
	Genus:	DANTI	HONIA				No	o. of Plants	Found (approx.):	500		
S	Species:	CALIFO	ORNICA					Area	Sampled (acres):	2		
Subspecies/	Variety:											
Seeds Collec	cted Fro	m: Plan	ets X									
Plant Habit:		-	Grass/C	Grasslike				P	ant Height (feet):	2.0		
Native developme this access	nt and i			L BE USED S ON EUGE			ROWOUT	FOR FUTURE RES	TORATION			
Notes to assi of presse flower color of closely	d specin , odor, į	nen (e.g. presence										
Common N	ame(s) c	of Plants:	CALIFOR	NIA OATGE	RASS							