

Vernal Pool Information Network
Site Visit to the TNC Agate Desert Preserve and Medford Water Commission's
Vernal Pool Conservation Bank
October 18, 2017
Summary

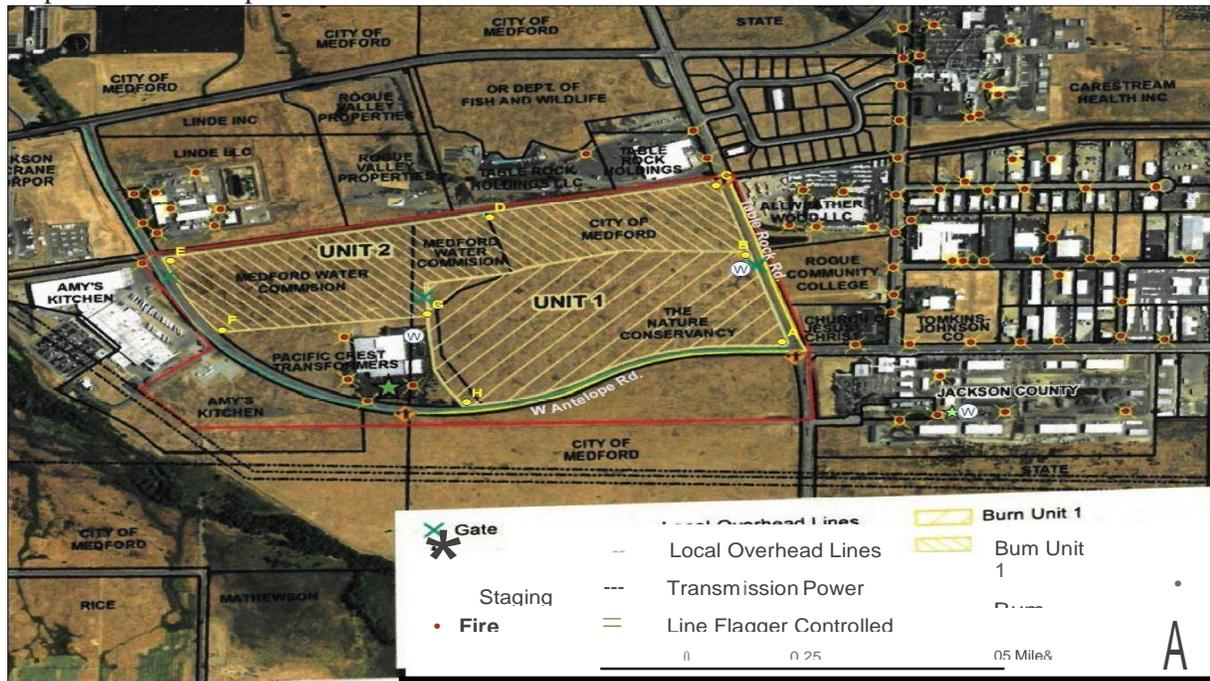
Attendees: Sam Friedman, U. S. Fish and Wildlife Service (Service); Bryan Wender, Bureau of Land Management-Medford Office (BLM); Craig Tuss, Rogue Valley Council of Governments (RVCOG); Keith Perchemlides, The Nature Conservancy (TNC); Molly Morrison, TNC; Vanessa Robertson-Rojas, TNC; Craig Harper, Medford Water Commission; Kora Mousseaux, Jackson Soil and Water Conservation District (JSWCD); Jenna Sanford, JSWCD; Kathleen Donham, Southern Oregon University, Mathew Vargas, Oregon Department of Fish and Wildlife, Melody Rudenko, Oregon Department of State Lands.

Objective of meeting and visit: The objective of the visit is to get an update from TNC and MWC staff regarding the June 2017 prescribed burn activities and post-burn actions.

Background:

A prescribed burn was executed across property boundaries of three different ownerships including The Nature Conservancy, the Medford Water Commission, and the City of Medford. The 105-acre burn unit is located northwest of the intersection of W. Antelope and Table Rock Roads right outside of White City, Oregon (Map 1).

Map 1. Location of prescribed burn area.



Prescribed burn:

This burn was driven by ecological objectives to restore and maintain a very good condition example of the Rogue Valley Mounded Prairie ecosystem. This 105-acre site has been invaded by non-native grasses and forbs that outcompete the native vegetation for resources and growing space. The invasive annual grasses, primarily medusahead (*Taeniatherum caput-medusae*), build up a dense layer of dead material over years of consecutive growth that creates a continuous bed of thatch, impeding the germination and

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growth of native plants. Burning the site reduces the thatch cover by consuming those fuels. Spring burning is preferred to burn the medusahead seed in the “milk stage” of phenology, before the seed ripens and drops.

The burn area sits in the Wildland Urban Interface and is surrounded by busy roads, active railroad tracks, powerlines, and industrial buildings. A primary concern was dense smoke consuming Table Rock Rd. and impeding the traffic flow along the busy road and producing unsafe driving conditions.

The Prescribed Fire Objectives were:

- Consume 80-100% of thatch and litter across the entire unit area,
- Consume 70-100% of standing vegetation across the entire unit area, and;
- Avoid contaminating pools with unburned torch fuel (restriction or limitation).

The prescribed burn was conducted from approximately 1 pm to 6:30 pm.

Activities since the burn:

TNC staff and MWC staff and contractors have visited the burn area several times to conduct monitoring and post fire restoration work. Activities have included:

- Site preparation (shallow harrowing of small select pool margin areas) for seeding with native plants (Appendix A), including *Lomatium* and *Limnanthes*.
- Seed was from commercial sources and from the Herbert J. Stone Nursery.
- Monitoring response to the prescribed fire, and
- Mapping of planting locations (Appendix B).

Observations made since the burn include:

- On August 25 MWC staff visited the area and saw Narrow leaf milkweed with a monarch caterpillar. See photo.
- Bunch grasses appear to be responding well.
- The burn removed thatch from the mounds as anticipated, while leaving the pool vegetation.
- The burn was of low intensity in most locations. It appears that the cryptobiotic crust layer, like the bunch grass clumps received low intensity and short duration burning.

The area had received some precipitation in late September and early October, but not enough to initiate sprouting of new vegetation. The weather was dry and mild the day of the tour. During the site tour, participants got an opportunity to walk through the burn area, see some of the seeding locations, discuss the fire preparations, and post burn monitoring results. The tour participants finished by spreading some *lomatium* and *Limnanthes* seeds.



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Future VPIN Site Visits

In August 2016, the Service provided funding (\$7,200) to RVCOG to convene several more VPIN site visits. RVCOG also received funding (\$2,500) from the Jackson Soil and Water Conservation District to augment the Service funding for the VPIN site visits. This funding, along with in-kind staff time from RVCOG (\$500) and TNC (\$600) will allow the VPIN to continue site visits and landowner outreach into 2018.

- Table Rocks (BLM): Late winter 2018
- Agate Desert Preserve: Spring 2017

Photos from tour

The photos were provided by Kora Mousseaux and Molly Morisson, for the October 18, 2017 tour.



Burn area on October 18, 2017 showing some a vernal pool swale area.



Burn area on October 18, 2017.

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Bunch grass clump in the burn area on October 18, 2017.



Bunch grass clump in the burn area on October 18, 2017.



Vernal pool area during the tour on October 18, 2017.

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Portion of tour group walking through access gate at corner of TNC and MWC areas.



Seed, scattered on October 11, waiting for germination.

Vernal pool during the tour. Due to lack of precipitation, sprouting of seed has been slow.



Agate Desert Preserve 2017 Seeding Applications

Species	Common Name	Type	Lbs.	Acreage
Upland Mound Species				
Achnatherum lemmonii	Lemmon's needlegrass	Grass	173	26.3
Festuca roemerii	Roemer's fescue	Grass	105	26.3
Koeleria macrantha	Prairie junegrass	Grass	105	26.3
Pseudoroegneria spicata	Bluebunch wheatgrass	Grass	71.75	26.3
Achillea millefolium	Yarrow	Forb	1	26.3
Agoseris grandiflora	Large-flowered agoseris	Forb	25oz.	26.3
Clarkia purpurea	Farewell to spring	Forb	29	26.3
Eriophyllum lanatum	Oregon sunshine	Forb	21	26.3
Helianthus bolanderi	Bolander's sunflower	Forb	.5	<50m ²
Madia elegans ssp. densifolia	Showy tarweed	Forb	25.5	26.3
Penstemon laetus	Gay penstemon	Forb	4oz.	10m ²
Plectritis congesta	Short spur seablush	Forb	3	26.3
Wyethia angustefolia	Narrow-leaf mule's ear	Forb	6oz.	26.3
Transitional Flank Species				
Achyrachaena mollis	Blow-wives	Forb	15	18.6
Danthonia californica	California oatgrass	Grass	50	18.6
Limnanthes pumila ssp. grandiflora	Large-flowered woolly meadowfoam	Forb	4	18.6
Lomatium cookii	Cook's desert parsley	Forb	10	18.6
Poa secunda	Sandberg's bluegrass	Grass	12*	18.6
		Total:	628	44.9

Notes: All species hand seeded; see additional maps for more details. All data sourced from The Nature Conservancy

*Distributed 60lbs of extra Poa secunda that was donated by Stone Nursery, may have been expired

Agate Desert Preserve 2017 Seeding Costs

Species	Common Name	Lbs.	TNC estimated cost	Avg. cost per lb.	Cost per acre **
<i>Upland Mound Species</i>					
Achnatherum lemmonii	Lemmon's needlegrass	173	\$1680	\$10.5	\$157.5/acre
Festuca roemerii	Roemer's fescue	105	\$1,220	\$11	\$165/acre
Koeleria macrantha	Prairie junegrass	105	\$1,200	\$11	\$165/acre
Pseudoroegneria spicata	Bluebunch wheatgrass	71.75	\$500 (50lbs)	\$10	\$150/acre
Achillea millefolium	Yarrow	1	\$20	\$20	\$4/acre
Agoseris grandiflora	Large-flowered agoseris	3.6	\$144	\$40	\$116/acre
Clarkia purpurea	Farewell to spring	29	\$580	\$20	\$58/acre
Eriophyllum lanatum	Oregon sunshine	21	\$495	\$22.5	\$65.25/acre
Helianthus bolanderi	Bolander's sunflower	.5	\$225	\$450	UNK
Madia elegans ssp. densifolia	Showy tarweed	25.5	\$940	\$30	\$87-\$450***
Penstemon laetus	Gay penstemon	4oz.	\$23	\$368	\$18.4 (.2lbs/acre)
Plectritis congesta	Short spur seablush	3	\$77.50	\$25	\$72.5/acre
Wyethia angustefolia	Narrow-leaf mule's ear	6oz.	\$0	UNK	UNK
<i>Transitional Flank Species</i>					
Achyrachaena mollis	Blow-wives	15	\$355	\$22.5	\$103/acre
Danthonia californica	California oatgrass	50	\$450 (45lbs)	\$10	\$103/acre
Limnanthes pumila ssp. grandiflora	Large-flowered woolly meadowfoam	4	\$600	\$150	UNK
Lomatium cookii	Cook's desert parsley	10	\$1500	\$150	UNK
Poa secunda	Sandberg's bluegrass	12	\$108	\$9	\$41.4/acre
16 Species Total	N/A	628	\$9892.5 (for 599.1lbs)*	\$36.1 avg.	N/A

Notes: All species hand seeded; see additional maps for more details. All data sourced from The Nature Conservancy
 *599.1 lbs. of total 628 lbs. distributed were purchased, other 28.9lbs found in TNC office inventory.

**Cost/acre was calculated by multiplying lbs/acre seeding rates by cost/lb.

***CLPU and MAELD had a range of cost per acre when used in different seeding rates ranging from 2.9lbs./acre to 15lbs./acre

Agate Desert Preserve

Listed Species Locations

Vanessa Robertson-Rojas
The Nature Conservancy
2017

