



Suzanne Steab &lt;suzannesteab@utah.gov&gt;

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## Fwd: Cottonwood Seed Mix

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**Lisa Reinhart** <lreinhart@utah.gov>  
To: Suzanne Steab <suzannesteab@utah.gov>

Fri, Jun 26, 2015 at 10:48 AM

Suzanne,

Will you please post this consultation with USFS in regards to Cottonwood Mine Final Reclamation Seedmix to the greenbar for record keeping.

Thanks,  
Lisa Reinhart  
Environmental Scientist  
Utah Coal Program  
Division of Oil, Gas, and Mining  
(801) 538-5437, (801) 359-3940 (Fax)

Web site: <http://ogm.utah.gov>

----- Forwarded message -----

From: **Beagley, Kyle -FS** <kbeagley@fs.fed.us>  
Date: Fri, Jun 26, 2015 at 10:37 AM  
Subject: RE: Cottonwood Seed Mix  
To: Lisa Reinhart <lreinhart@utah.gov>, Dennis Oakley <Dennis.Oakley@pacificorp.com>

Thank you Lisa. This list looks great. I think that we are at a much better place with this mix than the original.



**Kyle Beagley**  
**Minerals Specialist**

**Forest Service**

**Manti-La Sal National Forest**

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## Caring for the land and serving people

**From:** Lisa Reinhart [mailto:[lreinhart@utah.gov](mailto:lreinhart@utah.gov)]

**Sent:** Thursday, June 25, 2015 8:51 AM

**To:** Beagley, Kyle -FS; Dennis Oakley

**Subject:** Re: Cottonwood Seed Mix

Great. Thanks for discussing it with the forest botanist. I will work with Dennis to see if we can adjust the seedmix accordingly. Here is a revised list I propose. Let me know if you have any other concerns.

## Cottonwood/Wilberg Mine Final Reclamation Seedmix

Species/Variety	Percent of mix (%)	Seeding Rate (PLS lbs/ac)
Wheatgrass, western	10%	2
Wildrye, basin	10%	2
Wheatgrass, bluebunch	15%	3
Wheatgrass, thickspike	5%	3
Needle and thread	5%	1
Ricegrass, Indian	15%	2
Flax, Lewis	5%	1
Penstemon, Palmer's	5%	0.5
Aster, blueleaf	5%	0.5
Burnet, small	5%	2
Shadscale Saltbush	5%	0.5
Sagebrush, Wyoming big	5%	0.5
Saltbush, Fourwing	5%	2
Serviceberry, Utah	5%	2
<b>Total</b>	<b>100%</b>	<b>22</b>

Lisa Reinhart

Environmental Scientist

Utah Coal Program

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On Wed, Jun 24, 2015 at 3:20 PM, Beagley, Kyle -FS <[kbeagley@fs.fed.us](mailto:kbeagley@fs.fed.us)> wrote:

Lisa,

I just heard back from our forest botanist. He agrees that it would be appropriate to scratch Colorado blue spruce and Douglas Fir from the list. His thoughts:

Grasses – He thought that grasses looked okay. Given the list has 6 grass species it would be okay to cut out intermediate wheatgrass; or replace it with basin wildrye if it's added.

Forbs – He agrees with taking yellow sweetclover out. Scarlet Globemallow could be replaced with palmer penstomen. His main concern with forbs is that there is a sensitive Sweetvetch in the area and **Utah Sweetvetch needs to be taken out** of the seed mix.

Shrubs – He agrees that we could take out rabbit brush and Green Mormon tea. Adding shadscale is a good idea.

I hope that this helps.



**Kyle Beagley**  
**Minerals Specialist**

**Forest Service**

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**Caring for the land and serving people**

**From:** Lisa Reinhart [mailto:[lreinhart@utah.gov](mailto:lreinhart@utah.gov)]  
**Sent:** Wednesday, June 24, 2015 12:32 PM  
**To:** Beagley, Kyle -FS  
**Cc:** Dennis Oakley  
**Subject:** Re: Cottonwood Seed Mix

Kyle,

I had a chance to review some monitoring on some test plots and some other sites under interim reclamation. It looks like shadscale (*Atriplex confertifolia*), palmer penstemon (*Penstemon palmeri*), and basin wildrye (*Elymus cinereus*) were successful at establishing on most sites. I would like to consider adding those species to the list.

Your thoughts?

## *Atriplex confertifolia*

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Lisa Reinhart  
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On Wed, Jun 24, 2015 at 9:18 AM, Lisa Reinhart <[lreinhart@utah.gov](mailto:lreinhart@utah.gov)> wrote:

Hi Kyle,

Per our phone conversation this morning, I have attached two documents. One document is the originally approved reclamation plan for the Cottonwood/Wilberg Mine. The seed mix is on page 23. The seeds that I thought should be removed are Yellow sweetclover, Green Mormon Tea, and Big white rabbitbrush. Note the discussion on pages 21-22 in regards to the Forest Service recommendation for the seed mix. This reclamation plan is currently being revised so I wouldn't bother spending much time reading the rest of it. I haven't seen any monitoring information in regards to the test plot so I am requesting that information from Dennis Oakley. If you

think we the Yellow sweetclover should remain in the mix... just let me know. I have seen it be very aggressive and that was my hesitation but you have more local experience with it than I do.

The second document is a revised seed mix that I recommend. It is basically the same with the removal of those seeds I mentioned above. This seed mix was calculated using the NRCS seed mix calculator.

Although I have not specifically discussed it with Dennis Oakley, I suspect he is going to request a modification to the seeding type of the shrubs and trees. In the approved plan (page 24-25), containerized stock of shrubs and trees should be randomly planted. It is my experience that without supplemental irrigation to get those shrubs and trees established, it's a lost cause. I would recommend they seed just as they did for the Des Bee Dov mine with the attached proposed seed mix.

What are your thoughts?

Lisa Reinhart

Environmental Scientist

Utah Coal Program

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