

0007

ACT/007/019

#2

**From:** Bill Bates  
**To:** NROGM(PBAKER)  
**Date:** Thursday, December 1, 1994 10:55 am  
**Subject:** Shrub Success Standards -Reply

The standards look fine to me. What is the time schedule for determining the success of the planting, i.e., how long after the planting do you have them do transects to determine the number of shrubs per acre.

Thanks for the help with the Salina wildrye.

Bill's response to E-mail about  
shrub density success standards

Bill--

DOGMA is required by a 1992 regulation to consult with and obtain approval from DWR for woody plant density standards for success for final reclamation. Because this is a fairly new regulation, we haven't done it for many of the mines. Until Lynn Kunzler left DWR, I usually consulted with him (because he was most familiar with the requirement) then talked with Ken about it. The standard is usually based on both premining conditions and the desired postmining vegetation composition.

Right now, I'm working on a mid-term review for Andalex's Centennial Project. Before mining, they measured woody plant densities in two range sites. The range sites were mountain stony loam (oak) and upland stony loam (pinyon-juniper). Woody plant densities in these were 2530 and 716 individuals per acre for the oak and pinyon-juniper areas, respectively. Dominant species were oak, bigtooth maple, and snowberry in the oak range sites and Utah juniper, pinyon, and sagebrush in the pinyon-juniper sites.

The disturbed area is about 33 acres. The reclamation plan calls for planting transplants on about 2.2 acres and shrub seeds (along with the grasses and forbs) in the rest of the area. Transplants would be planted at a rate of 1000 per acre and would include serviceberry, big sage, squawbush, elderberry, and mountain mahogany. Transplants of cottonwood, box elder, chokecherry, and Gambel oak would be planted near the main channel. The seed mixes include serviceberry, big sage, mountain mahogany, rabbitbrush, bitterbrush, snowberry, squawbush, and elderberry.

I suggest a standard of 2000 woody plants per acre for near the channel and on east-facing slopes. On west-facing slopes where the reference area is P-J, they should be able to get at least 1500 per acre since they won't be planting any P-J back.

Please let me know if you have any questions about what DOGMA needs and if you think the standards I've suggested will be adequate. I'm allowed to document our consultation in a memo, so we don't need to have a formal response from DWR.

Thanks for your help.

Paul Baker

E-Mail message sent to Bill Bates  
of Wildlife Resources, Price.