

require, for phase II bond release on pastureland and grazingland, that no more than 10 percent litter and 10 percent desirable annual or biennial forbs can be counted as acceptable ground cover in any single sampling unit. For phase III bond release on pastureland and grazingland, subsections II.B.1.a and III.B.1.a in the Bond Release Guidelines refer the reader to the phase II standards.

As discussed above, Oklahoma does require, for phase II and III bond release on pastureland and grazingland, standards which reflect permanence, seasonality, and regeneration on pastureland and grazingland. However, Oklahoma has not revised the Bond Release Guidelines to address how it would evaluate the reclaimed area for diversity of permanent species prior to phase III bond release on pastureland and grazingland.

The Federal regulations at 30 CFR 816.116(a) and 817.116(a) require that the success of revegetation shall be judged on, among other things, the requirements of 30 CFR 816.111 and 817.111. The Federal regulations at 30 CFR 816.116(a)(1) and 817.116(a)(1) require that all success standards and sampling techniques must be included in an approved regulatory program. Therefore, success standards and sampling techniques must incorporate the various requirements at 30 CFR 816.111 and 817.111 and be approved by OSM. The Federal regulations at 30 CFR 816.111 and 817.111 require, among other things, that a permittee establish where appropriate a vegetative cover that is diverse, effective, and permanent (referred to as diversity and permanence). The Federal regulations at 30 CFR 816.111 and 817.111 also require a permittee to reestablish plant species that have the same seasonal characteristics of growth as the original vegetation and are capable of self-regeneration and plan succession (referred to as seasonality and regeneration).

Standards reflecting diversity, seasonality, permanence, and regeneration on areas with designated land uses of forestry, fish and wildlife habitat, commercial, industrial, and recreation are appropriately addressed on a permit-specific basis, as proposed by Oklahoma, because the standards will vary with the actual needs specific to the area being reclaimed. For example, there may be no need for a diversity standard for an area to be reclaimed to an industrial, commercial, or residential land use where reclamation will probably employ a single-species ground cover established for erosion control, but there may be a

need for a significant diversity/seasonality standard for an area to be reclaimed to as a wildlife habitat targeted for specific wildlife species.

Therefore, with respect to areas designated for use as forestry, wildlife habitat, recreation, industrial, commercial, or residential, the Director finds that the proposed revisions at subsections IV.A.1.a and b, and sections VII.A and B in the Bond Release Guidelines are no less effective than the Federal regulations at 30 CFR 816.116(a), 817.116(a), 816.111, and 817.111, and approves them.

With respect to areas designated for use as pastureland and grazingland, the Director finds that the Bond Release Guidelines are less effective than the Federal regulations at 30 CFR 816.116(a), 817.116(a), 816.111, and 817.111 because Oklahoma has not addressed how it will evaluate the reclaimed area for diversity of permanent species prior to phase III bond release. Therefore, the Director is revising the required amendment at 30 CFR 936.16(c) to require that Oklahoma revise sections II.B and III.B in the Bond Release Guidelines to address how it will evaluate diversity prior to phase III bond release on areas designated for use as pastureland and grazingland.

*f. Subsections V.B.2.d and V.B.2.e, Phase II bond release requirements for the use of test plots to demonstrate productivity on reclaimed prime farmland cropland.* At 30 CFR 936.16(g), OSM required that Oklahoma revise subsection V.B.2.d to either remove the allowance for the use of test plots as a means of demonstrating productivity success on prime farmlands, or submit a method for demonstrating that the test plots would be representative at a 90-percent statistical confidence level of the total reclaimed prime farmland bond release area. OSM also required Oklahoma to consult with SCS for the proposed method and to document this consultation (finding No. 6.c, 58 FR 64374, 64379, December 7, 1993).

Oklahoma, at OAC 460:20-43-46(c)(2) and 460:20-45-46(c)(2), requires that the measurement period for determining revegetation success of cropland exceed the approved standards any 2 years of the responsibility period, except the first year. Oklahoma's Bond Release Guidelines at subsection V.B.2.a and OAC 460:20-49-8(b)(3) require, for phase II bond release on reclaimed prime farmland, that the measurement period for determining the average annual crop production be a minimum of 3 crop years. OSM interprets Oklahoma's rules and Bond Release Guidelines to require, for phase II bond

release on reclaimed prime farmland, that a permittee demonstrate success of productivity with 3 years of crop production during the responsibility period, except the first year.

Subsection V.B.2.d provides for the use of test plots, as an alternative to use of the total reclaimed area, for measuring the success of productivity on prime farmlands. Oklahoma proposed to revise subsection V.B.2.d to require that selected test plots must be representative of geology, soil, and slope of the reclaimed prime farmland area, and, if the test plots are not properly managed during the liability period, they will lose eligibility as a comparison method.

Oklahoma also proposed to revise section V.B.2 by adding a new subsection V.B.2.e that sets forth criteria that must be used to establish test plots in the reclaimed bond release area. At subsections V.B.2.e (1) through (4), Oklahoma proposed to require the following criteria:

(1) A contiguous prime farmland or cropland area represents a single population, test plots are selected at random throughout the contiguous reclaimed area. Appendix C [Methods of Randomized Selection of Sampling Locations] provides methods of selecting randomized sampling locations.

(2) Each test plot represents one sample. Appendix Q [Minimum Sample Size for Row Crops in Prime Farmland (or Nonprime Farmland) Production Determination] provides the minimum sample size formulas for measuring row crops for production standards on prime farmland.

(3) The size of the test plot should be based on the sampling technique (i.e., hand sampling, machine harvest, etc.) that will be used to evaluate crop production. In addition, the plots should be large enough so that impact of any edge effect would be avoided.

(4) The methods for measuring row crop production on prime farmlands is shown in Appendix P [Methods for Measuring Row Crops in Prime Farmland (and Nonprime Farmland) Production].

Oklahoma did not submit evidence of consultation with SCS regarding the use of test plots for measuring productivity on prime farmland.

The Federal regulations at 30 CFR 816.116(a)(2) and 817.116(a)(2) require that reclaimed areas be managed in the same manner as unmined lands with the same land use in the region of the reclaimed area. The Federal regulations at 30 CFR 823.15(b)(2) require that soil productivity shall be measured on a representative sample or on all of the mined and reclaimed prime farmland area using the reference crop determined under 30 CFR 823.15(b)(6), and also require that a statistically valid sampling technique at a 90-percent or