

880-X-10D-.56 Revegetation: Standards For Success.

(1) Success of Revegetation shall be judged on the effectiveness of the vegetation for the approved post-mining landuse, the extent of cover compared to the cover occurring in natural vegetation of the area, and the general requirements of Section 880-X-10D-.52.

(a) The permittee shall have the burden of demonstrating that revegetation has succeeded in meeting the standards of this subchapter. For any application for Phase III bond release, the permittee shall submit data demonstrating that the revegetation has met the standards for success contained in this Rule. Sampling techniques used shall conform to the outline in the ASMC Technical Manual #1, "Statistical Analysis and Sampling Techniques for Determining Revegetation Success on Surface Mined Lands in Alabama". Revegetation shall be deemed successful if it is demonstrated to equal the approved success standard, using a 90% statistical confidence interval (i.e., one-sided test with a 0.10 alpha error).

(b) At a minimum, vegetation parameters identified in Paragraph (2) for grazing land, pasture land, or crop land, shall equal or exceed the required success standards during the growing seasons of any two years of the responsibility period except the first. Vegetation parameters for other landuses shall equal or exceed the applicable success standards during the growing seasons of the final year of the liability periods.

(c) Herbaceous ground cover shall not be less than that required to support the approved postmining landuse.

(d) Trees and shrubs that will be used in determining the success of stocking and the adequacy of the plant arrangement shall have utility for the approved postmining land use. Trees and shrubs counted in determining such success shall be healthy and have been in place for not less than two growing seasons. At the time of bond release, at least 80 percent of the trees and shrubs used to determine such success shall have been in place for three years. The requirements of this section apply to trees and shrubs that have been seeded or transplanted and can be met when records of woody vegetation planted show that no woody plants were planted during the last two growing seasons of the responsibility period and, if any replanting of woody

plants took place during the responsibility period, the total number planted during the last 3 years of that period is less than 20 percent of the total number of woody plants required. Any replanting must be by means of transplants to allow for adequate accounting of plant stocking. This final accounting may include volunteer trees and shrubs of approved species. Volunteer trees and shrubs of approved species shall be deemed equivalent to planted specimens two years of age or older and can be counted towards success. Suckers on shrubby vegetation can be counted as volunteer plants when it is evident the shrub community is vigorous and expanding.

(2) Standards for success are as follows:

(a) For areas reclaimed to an approved post mining landuse of grazing or pasture land, ground cover shall equal or exceed 80% of the affected soil surface area. Production shall equal or exceed 90% of the average yields on the nearby unmined lands as established by the Alabama Agricultural Experiment Station and its entities or the U. S. Department of Agriculture Soil Conservation Service in the Field Office Technical Guide for the county in which the surface mining operation is located.

(b) For areas on which the approved post-mining landuse is cropland, production shall equal or exceed 90% of the average yields for unmined lands of the same soil type as established by the Alabama Agricultural Experiment Station and its entities or the United States Department of Agriculture Soil Conservation Service in the Field Office Technical Guide for the county in which the surface mining operation is located.

(c) For areas on which the approved post-mining landuse is forest land, successful vegetation shall be determined on the basis of tree stocking and ground cover. Stocking shall equal or exceed 450 countable trees per acre. A countable tree shall be:

(i) Of the species approved in the reclamation plan; and

(ii) Be healthy;

(iii) Have utility for the approved postmining landuse, and

~~(iv) At least 80% of the trees counted shall have been in place for at least three years.~~

Ground cover shall equal or exceed 70%, except that, on a case-by-case basis, ASMC may approve a lower ground cover standard in the permit review process upon a demonstration by the applicant that 70% ground cover would cause excessive competition for the tree species used and that alternative erosion control measures will be used which give equal or better results. Firebreaks may be exempted from revegetation requirements if approved by ASMC.

(d) For areas to be developed for industrial, commercial or residential post-mining landuses less than two years after regrading is completed, vegetative ground cover shall not be less than that required to control erosion.

(e) For areas developed for post-mining landuse of recreation or wildlife habitat, vegetation success shall be judged on the basis of ground cover and stocking rates as specified in the and the terms of the approved reclamation plan ~~approved in the permit application process. To avoid competition, herbaceous ground cover on areas planted with woody vegetation or planted to food plots shall be limited to that necessary to adequately control erosion. Ground cover shall equal or exceed 80% except on areas designated as food plots; provided such~~ food plots shall not be ~~more~~ less than 1/4 acre in size nor exceed 20% of the total disturbed area and shall be located in areas which are least susceptible to erosion. Herbaceous ground cover on areas not planted with woody vegetation or as food plots shall equal or exceed 80%. The reclamation plan shall specify species, planting arrangements, stocking, locations and success standards applicable to the postmining landuse and shall be reviewed and approved by the Alabama Surface Mining Commission in consultation with the Alabama Department of Conservation and Natural Resources.

(f) For areas previously disturbed by mining that were not reclaimed to the requirements of this section and that are remined or otherwise redisturbed by surface coal mining operations, at a minimum, the vegetative ground cover shall not be less than the ground cover existing before redisturbance and shall be adequate to control erosion.

(g) For areas to be returned to a postmine ~~landuse of~~ undeveloped ~~useland~~, stocking rates of woody plants shall

be specified in the approved reclamation plan in consultation with the Alabama Forestry Commission. Success of herbaceous vegetation shall not be less than that required to control erosion and attain a ground cover that equals or exceeds 80% of the affected soil surface area except in areas where woody vegetation is stocked. In areas where woody vegetation is stocked, herbaceous groundcover should be limited to that necessary to control erosion and support the land use. Seed mixes and seeding rates shall be specified in the approved reclamation plan.

(3)(a) The period of extended responsibility for successful revegetation shall be for five (5) full years, except as provided in paragraph (3)(b) of this section, and shall begin after the last year of augmented seeding, fertilizing, irrigation or other work.

(b) Two full years for lands eligible for remaining included in permits issued before September 30, 2004, or any renewals thereof. To the extent that the success standards are established by paragraph (2)(f) of this section, the lands shall equal or exceed the standards during the growing season of the last year of the responsibility period.

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Ed. Note: On December 4, 1998, the Office of Surface Mining approved this rulemaking adopted by the commission on July 16, 1998. The effective date of this rule will be January 3, 1999.