

North Dakota proposed to revise Chapter II, Section F, concerning reclaimed lands developed for use as woodland, to require that the number of woody plants must be equal to or greater than the stocking of live woody plants of the same life form of the approved standard with 90 percent statistical confidence. North Dakota proposed to revise Chapter II, Section G, concerning reclaimed lands developed for use as shelterbelts, to require that density and vigor must be equal to or greater than that of the approved standard. North Dakota did not revise this section to require that density be demonstrated with 90 percent statistical confidence. However, Chapter III, Section D, of North Dakota's revegetation document requires that density of woody vegetation be measured either by direct count of all vegetation or by the density quadrat sampling method. North Dakota proposed to revise Chapter III, Section D, to require that, when using the quadrat sampling method, enough samples must be taken to demonstrate that the number of woody plants established equals or exceeds the approved standard with 90 percent statistical confidence. The methods provided in Chapter III apply to all demonstrations of woody plant density, regardless of land use. Therefore, the revegetation document requires, for land reclaimed for use as shelterbelts, verification of woody plant density by direct count or by sampling with 90 percent statistical confidence.

The Federal regulations at 30 CFR 816.116(a)(2) and 817.116(a)(2) require that the sampling techniques for measuring success of revegetation shall use a 90 percent statistical confidence interval (i.e., one-sided test with a 0.10 alpha error).

The Director finds that North Dakota's revisions of Chapter II, Section F and Chapter III, Section D, concerning the requirement to demonstrate success of woody plant density with 90 percent statistical confidence, are no less effective than the Federal regulations at 30 CFR 816.116(a)(2) and 817.116(a)(2). The Director approves these proposed revisions and removes the required amendment at 30 CFR 934.16(d).

d. *Chapter II, Sections F and H, Revegetation success measurement period.* At 30 CFR 934.16(e), OSM required that North Dakota revise its revegetation document or otherwise amend its program to require that revegetation success standards for woodlands and fish and wildlife habitats be met for at least the last two consecutive years of the revegetation responsibility period (Finding No. 26.b, 57 FR 807, 822, January 9, 1992).

North Dakota proposed to revise Chapter II, Sections F and H, concerning reclaimed lands developed for use as, respectively, (1) woodland and (2) fish and wildlife habitat using annual crops, to require that revegetation success must be measured during the last two years, rather than the final year, of the responsibility period.

The Federal regulations at 30 CFR 816.116(b)(3)(ii) and 817.116(b)(3)(ii) require that trees and shrubs counted in determining success of revegetation shall have been in place for not less than two growing seasons.

The Director finds that North Dakota's revisions of Chapter II, Sections F and H, concerning the requirement to measure revegetation success during the last two years of the responsibility period, are no less effective than the Federal regulations at 30 CFR 816.116(b)(3)(ii) and 817.116(b)(3)(ii). The Director approves these proposed revisions and removes the required amendment at 30 CFR 934.16(e).

e. *Chapter II, Sections F and G, revegetation success standards for shelterbelts.* At 30 CFR 934.16(f), OSM required that North Dakota revise its revegetation document or otherwise amend its program to include tree and shrub stocking and vegetative ground cover success standards for all types of shelterbelts and clarify that trees and shrubs must meet time-in-place requirements no less than those established in 30 CFR 816.116(b)(3)(ii) (Finding No. 26.a, 57 FR 807, 821, January 9, 1992). As discussed below, the Director finds that North Dakota's proposed revisions to Chapter II, Sections F and G, concerning revegetation success standards for shelterbelts, are no less effective than the Federal regulations at 30 CFR 816.116(b)(3) and 817.116(b)(3), and removes the required amendment at 30 CFR 934.16(f).

i. *Chapter II, Sections F and G, requirements for determining revegetation success on lands developed for use as shelterbelts.* North Dakota proposed to revise Chapter II, Section F, concerning reclaimed lands developed for use as woodland, to delete all discussion of shelterbelts so that Section F is applicable only to woodland. Requirements for determination of revegetation success on lands developed for use as shelterbelts are included in Chapter II, Section G.

North Dakota proposed to revise Chapter II, Section G to define shelterbelts as a strip or belt of trees or shrubs planted by man in or adjacent to a field or next to a farmstead, feedlot, or road, and synonymous with windbreak. North Dakota proposed to add the

requirement that the stocking of trees and shrubs normally follow current standards and specifications developed by the NRCS for farmstead and field windbreaks in North Dakota, but also provided for allowance of stocking standards specified by the State Game and Fish Department or the State Forest Service.

North Dakota also proposed to revise Section G to specify that, prior to final bond release, the permittee must demonstrate in the last two years of the liability period that density and vigor are equal to or greater than that of the approved standard, erosion is adequately controlled, and that at least 80 percent of the trees and shrubs have been in place for at least 60 percent of the liability period. In addition, North Dakota requires an evaluation of the diversity, seasonality, and regenerative capacity of the shelterbelt based on the species stocked and planting arrangements. Regarding the time in place standard, North Dakota proposed to require that the permittee provide a worksheet of each shelterbelt which lists annual replantings of each species and that documentation may be made by tagging or marking with paint, by photographic records, or by preservation of sales receipts from nurseries.

The Federal regulations at 30 CFR 816.116(b)(3) (i) through (iii) and 817.116(b)(3) (i) through (iii) require, in part, that success of revegetation of shelterbelts be determined on the basis of tree and shrub stocking and vegetative ground cover and include the requirements that (1) permit specific or programwide minimum stocking and planting arrangements shall be specified by the regulatory authority on the basis of local and regional conditions and after consultation with and approval by the State agencies responsible for the administration of forestry and wildlife programs, (2) trees and shrubs counted in determining such success shall be healthy and have been in place for not less than two growing seasons, (3) at least 80 percent of the trees and shrubs used to determine such success shall have been in place for 60 percent of the applicable minimum period of responsibility, and (4) vegetative ground cover shall not be less than that required to achieve the approved postmining land use.

The Director finds that North Dakota's revisions of Chapter II, Sections F and G, concerning the requirements to determine revegetation success on reclaimed lands developed for use as shelterbelts, are no less effective than the Federal regulations at 30 CFR 816.116(b)(3) (i) through (iii) and 817.116(b)(3) (i) through (iii). The