FORESTLAND POST MINE LAND USE &
WILDLIFE POST MINE LAND USE REGULATIONS

7.6. Forestland

7.6.a. The Secretary may authorize forestland as a postmining land use only if the following conditions have been met: Provided, however; this subsection only applies to AOC mining operations that propose to utilize auger, area, mountain top and contour methods of mining. Proposed underground mining, coal preparation facilities, coal refuse disposal, haulroads and their related incidental facilities are not subject to the provisions of this subsection but must comply with all other applicable sections of this rule.

7.6.b. Planting Plan

7.6.b.1. A. West Virginia registered professional forester shall develop a planting plan for the permitted area that meets the requirements of the West Virginia Surface Coal Mining and Reclamation Act. This plan shall be made a part of the mining permit application. The plan shall be in sufficient detail to demonstrate that the requirements of forestland use can be met. The minimum contents of the plan shall be as follows:

7.6.b.1.A.1. A premining native soils map and brief description of each soil mapping unit to include at a minimum: areal extent expressed in acres, total depth and volume to bedrock, soil horizons, including the O, A, E, B, and C horizon depths, soil texture, structure, color, reaction, bedrock type, and a site index for northern red oak. A site index for white oak for each soil-mapping unit should also be provided if available. A weighted, average site index for northern red oak, based on acreage per soil mapping unit, shall be provided for the permitted area.

7.6.b.1.A.2. A surface preparation plan that includes a description of the methods for replacing and grading the soil and other soil substitutes and their preparation for seeding and tree planting.

7.6.b.1.A.3. Liming and fertilizer plans.

7.6.b.1.A.4. Mulching type, rates and procedures.

7.6.b.1.A.5. Species seeding rates and procedures for application of perennial and annual herbaceous, shrub and vine plant materials for ground cover.

7.6.b.1.A.6. A site-specific tree planting prescription to establish forestland to include species, stems per acre and planting mixes.

7.6.b.1.B. Review of the Planting plan.

7.6.b.1.B.1. Before approving a forestland postmining land use, the Secretary shall assure that the planting plan is reviewed and approved by a forester employed the Department of Environmental Protection. Before approving the planting plan, the Secretary shall assure that the reviewing forester has made site-specific written findings adequately addressing each of the elements of the plans. The reviewing forester shall make these findings within 45 days of receipt of the plans.

7.6.b.1.B.2. If after reviewing the planting plan, the reviewing forester finds that the plan complies with the requirements of this section, they shall prepare written findings stating the

basis of approval. A copy of the findings shall be sent to Secretary and shall be made part of the Facts and Findings section of the permit application file. The Secretary shall ensure that the plans comply with the requirements of this rule and other provisions of the approved State surface mining program.

7.6.b.1.B.3. If the reviewing forester finds the plans to be insufficient, the forester shall either:

7.6.b.1.B.3.(a). Contact the preparing forester and the permittee and provide the permittee with an opportunity to make the changes necessary to bring the planting plan into compliance; or,

7.6.b.1.B.3.(b). Notify the Secretary that the planting plan does not meet the requirements of this rule. The Secretary may not approve the surface mining permit until finding that the planting plans satisfy all of the requirements of this rule.

7.6.c. Soil placement, Substitute material and Grading

7.6.c.1. Except for valley fill faces, soil or soil substitutes shall be redistributed in a uniform thickness of at least four feet across the mine area.

7.6.c.2. The use of topsoil substitutes may be approved by the Secretary providing the applicant demonstrates: the volume of topsoil on the permit area is insufficient to meet the depth requirements of 7.6.c.1, the substitute material consists of at least 75% sandstone, has a composite paste pH between 5.0 and 7.5, has a soluble salt level of less than 1.0 mmhos/cm. and is in accordance with 14.3.c. The Secretary may allow substitute materials with less than 75% sandstone provided the applicant demonstrates the overburden in the mine area does not contain an adequate volume of sandstone to meet the depth requirements of 7.6.c.1, or the quality of sandstone in the overburden does not meet the requirements of this rule. This information shall be made a part of the permit application.

7.6.c.3. Soil shall be placed in a loose and non-compacted manner while achieving a static safety factor of 1.3 or greater. Grading and tracking shall be minimized to reduce compaction. Final grading and tracking shall be prohibited on all areas that are equal to or less than a 30 percent slope. Organic debris such as forest litter, tree tops, roots, and root balls may be left on and in the soil.

7.6.c.4. The permittee may regrade and reseed only those rills and gullies that are unstable and/or disrupt the approved postmining land use or the establishment of vegetative cover or cause or contribute to a violation of water quality standards for the receiving stream.

7.6.d. Liming and Fertilizing

7.6.d.1. Lime shall be required where the average soil pH is less than 5.0. Lime rates will be used to achieve a uniform soil pH of 5.5. Soil pH may vary from 5.0 to a maximum of 7.5. An alternate maximum or minimum soil pH may be approved based on the optimum pH for the revegetation species.

7.6.d.2. The Secretary shall require the permittee to fertilize based upon the needs of trees and establishment of ground cover to control surface soil erosion. Between 200 and 300 lbs./acre of 10-20-10 fertilizer shall be applied with the ground cover seeding. Other fertilizer materials and rates may be used only if the Secretary finds that the substitutions are appropriate based on soil testing performed by State certified laboratories.

7.6.e. Revegetation

7.6.e.1. Temporary erosion control vegetative cover shall be established as contemporaneously as practical with backfilling and grading until a permanent tree cover can be established. This cover shall consist of a combination of native and domesticated noncompetitive and non-invasive cool and warm species grasses and other herbaceous vine or shrub species including legume species and shrubs. All species shall be slow growing and compatible with tree establishment and growth. The ground vegetation shall be capable of stabilizing the soil from excessive erosion, but the species should be slow growing and non-invasive to allow the establishment and growth of native herbaceous plants and trees. Seeding rates and composition must be in the planting plan. The following ground cover mix and seeding rates (lb./acre) are strongly recommended: winter wheat or oats (10 lbs./acre), fall seeding, foxtail millet (5 lbs./acre), summer seeding, weeping lovegrass (3 lbs./acre or redtop at 5 lbs./acre), kobe lespedeza (5 lbs./acre), birdsfoot trefoil (10lbs.,/acre), perennial rye grass (10 lbs.,/acre) and white clover (3 lbs./acres). Kentucky 31 fescue, serecia lespedeza, all vetches, clovers (except ladino and white clover) and other aggressive or invasive species shall not be used. Alternate seeding rates and composition will be considered on a case by case basis by the Secretary and may be approved if site specific conditions necessitate a deviation from the above. All mixes shall be compatible with the plant and animal species of the region and forestland use.

7.6.e.2. The selection of trees and shrubs species shall be based each species' site requirements (soil type, degree of compaction, ground cover, competition, topographic position and aspect) and in accordance with the approved planting plan prepared by a registered professional forester. The stocking density of woody plants shall be at least 500 plants per acre.

7.6.e.2.A. The stocking density for trees shall be at least 350 plants per acre. There shall be a minimum of five species of trees, to include at least three higher value hardwood species (white oak, northern red oak, black oak, chestnut oak, white ash, sugar maple, black cherry and yellow poplar) and at least two lower value hardwoods or softwoods species (all hickories, red maple, basswood, cucumber magnolia, sycamore, white pine, Virginia pine and pitch x loblolly hybrid pine). There shall be at least 210 high value hardwoods plants per acre and 140 lower value hardwood or softwood plants per acre (70 plants per acre for each species selected).

7.6.e.2.B. The stocking density of shrubs and other woody plants shall not exceed 150 plants per acre. There shall be a minimum of three species of shrubs or other woody plants (black locust, bristly locust, dogwood, Eastern redbud, black alder, bigtooth aspen and bicolor lespedeza, (50 plants per acre for each species selected).

7.6.f. Standards for Success

7.6.f.1. The success of vegetation shall be determined on the basis of tree and shrub survival and ground cover.

7.6.f.2. Minimum success standard shall be tree survival (including volunteer tree species) and/or planted shrubs per acre equal to or greater than four hundred and fifty (450) trees per acre and a seventy percent (70%) ground cover where ground cover includes tree canopy, shrub and herbaceous cover, and organic litter during the growing season of the last year of the responsibility period; and

7.6.f.3. At the time of final bond release, at least eighty (80) percent of all trees and shrubs used to determine such success must have been in place for at least sixty (60) percent of the applicable minimum period of responsibility. Trees and shrubs counted in determining such success shall be healthy and shall have been in place for not less than two (2) growing seasons.

7.7. Wildlife

7.7.a. The Secretary may authorize wildlife as a postmining land use only if the following conditions have been met. This subsection applies to all AOC mining operations that propose a postmining land use of wildlife. The Secretary shall ensure that the plans comply with the requirements of this rule and other provisions of the approved State surface mining program.

7.7.b. Planting Plan

7.7.b.1. A wildlife biologist employed by the West Virginia Division of Natural Resources shall develop a planting plan for the permitted area that meets the requirements of the West Virginia Surface Coal Mining and Reclamation Act. This plan shall be made a part of the mining permit application. The plans shall be in sufficient detail to demonstrate that the requirements of wildlife use can be met. The minimum contents of the plan shall be as follows:

7.7.b.1.A.1. Surface preparation plan that includes a description of the methods for replacing and grading the soil and other soil substitutes and their preparation for seeding and planting.

7.7.b.1.A.2. Liming and fertilizer plans.

7.7.b.1.A.3. Mulching type, rates and procedures.

7.7.b.1.A.4. Species seeding rates and procedures for application of perennial and annual herbaceous, shrub and vine plant materials for ground cover.

7.7.b.1.A.5. A site specific tree/shrub planting prescription to establish wildlife to include species, stems per acre and planting mixes.

7.7.c. Soil placement, Substitute material and Grading

7.7.c.1. Except for valley fill faces, soil or soil substitutes shall be redistributed in a uniform thickness of at least four feet across the mine area.

7.7.c.2. The use of topsoil substitutes may be approved by the Secretary providing the applicant demonstrates: the volume of topsoil on the permit area is insufficient to meet the depth requirements of 7.6.c.1, the substitute material consists of at least 75% sandstone, has a composite paste pH between 5.0 and 7.5, has a soluble salt level of less than 1.0 mmhos/cm. and is in accordance with 14.3.c. The Secretary may allow substitute materials with less than 75% sandstone provided the applicant demonstrates the overburden in the mine area does not contain an adequate volume of sandstone to meet the depth requirements of 7.6.c.1, or the quality of sandstone in the overburden does not meet the requirements of this rule. Such information shall be made a part of the permit application.

7.7.c.3. Soil shall be placed in a loose and non-compacted manner while achieving a static safety factor of 1.3 or greater. Grading and tracking shall be minimized to reduce compaction. Final grading and tracking shall be prohibited on all areas that are equal to or less than a 30 percent

slope. Organic debris such as forest litter, tree tops, roots, and root balls may be left on and in the soil.
7.7.c.4. The permittee may regrade and reseed only those rills and gullies that are unstable and/or disrupt the approved postmining land use or the establishment of vegetative cover or cause or contribute to a violation of water quality standards for the receiving stream.

7.7.d. Liming and Fertilizing

7.7.d.1. Lime shall be required where the average soil pH is less than 5.0. Lime rates will be used to achieve a uniform soil pH of 5.5. Soil pH may vary from 5.0 to a maximum of 7.5. An alternate maximum or minimum soil pH may be approved based on the optimum pH for the revegetation species.

7.7.d.2. The Secretary shall require the permittee to fertilize based upon the needs of trees and establishment of ground cover to control surface soil erosion. A minimum of 300 lbs./acre of 10-20-10 fertilizer shall be applied with the ground cover seeding. Other fertilizer materials and rates may be used only if the Secretary finds that the substitutions are appropriate based on soil testing performed by State certified laboratories.

7.7.e. Revegetation

7.7.e.1. Temporary erosion control vegetative cover shall be established as contemporaneously as practical with backfilling and grading until a permanent tree cover can be established. This cover shall consist of a combination of native and domesticated noncompetitive and non-invasive cool and warm species grasses and other herbaceous vine or shrub species including legume species and shrubs. All species shall be slow growing and compatible with tree establishment and growth. The ground vegetation shall be capable of stabilizing the soil from excessive erosion, but the species should be slow growing and non-invasive to allow the establishment and growth of native herbaceous plants and trees. Seeding rates and composition must be in the planting plan. The following ground cover mix and seeding rates (lb./acre) are strongly recommended: winter wheat (20 lbs./acre), fall seeding, foxtail millet (10 lbs./acre), summer seeding, weeping lovegrass (3 lbs./acre or redtop at 5 lbs./acre), kobe lespedeza (5 lbs./acre), birdsfoot trefoil (15 lbs.,/acre), perennial rye grass (10 lbs.,/acre) and white clover (4 lbs./acre). Kentucky 31 fescue, serecia lespedeza, all vetches, clovers (except ladino and white clover) and other aggressive or invasive species shall not be used. Alternate seeding rates and composition will be considered on a case by case basis by the Secretary and may be approved if site specific conditions necessitate a deviation from the above. Areas designated, as openings shall contain only grasses in accordance with the approved planting plan specified under subsection 7.7.b. of this rule.

7.7.e.2. The selection of trees and shrubs species shall be based each species' site requirements (soil type, degree of compaction, ground cover, competition, topographic position and aspect) and in accordance with the approved planting plan specified in under subsection 7.7.b. of this rule. The stocking density of woody plants shall be at least 500 plants per acre. Provided, that where a wildlife planting plan has been approved by a professional wildlife biologist and proposes a stocking rate of less than four hundred fifty (450) trees or shrubs per acre the standard for grasses and legumes shall meet those standards contained in subdivision 9.3.f of this rule. In all instances, there shall be a minimum of four species of tree or shrub, to include at least two hard mast producing species.

7.7.f. Standards for Success

7.7.f.1. The success of vegetation shall be determined on the basis of tree and shrub survival and ground cover.

7.7.f.2. Minimum success standard shall be tree survival (including volunteer tree species) and/or planted shrubs per acre equal to or greater than four hundred and fifty (450) trees per acre and a seventy percent (70%) ground cover where ground cover includes tree canopy, shrub and herbaceous cover, and organic litter during the growing season of the last year of the responsibility period; Provided, that where a wildlife planting plan has been approved by a professional wildlife biologist and proposes a stocking rate of less than four hundred fifty (450) trees or shrubs per acre the standard for grasses and legumes shall meet those standards contained in subdivision 9.3.f of this rule.

7.7.f.3. At the time of final bond release, at least eighty (80) percent of all trees and shrubs used to determine such success must have been in place for at least sixty (60) percent of the applicable minimum period of responsibility. Trees and shrubs counted in determining such success shall be healthy and shall have been in place for not less than two (2) growing seasons.