

Module 23: Revegetation

[§77.456(5)]

23.1 Soil Test Plan

Provide a soil test plan for determining plant nutrients and soil amendments required to establish vegetation and achieve the approved postmining land use.

12.2021 Soil tests will be performed on the site in order to determine the proper nutrients necessary for the post-mining land uses of unmanaged natural habitat, pastureland and/or land occasionally cut for hay, and forestland. When the first cut of topsoil is removed, it will be sampled and analyzed; this will indicate the preliminary soil amendments that will be needed.

23.2 Temporary Cover. Provide the following information for each seed mixture to be used for temporary cover:

a)

<u>Seed Mixture No.</u>	<u>Seed Mixture (Species)</u>	<u>Rate of Appl. 100% PLS* (lbs./acre)</u>	<u>Seeding Dates (Months)</u>
1	Perennial Ryegrass	20	Mar-Sep
	Annual Ryegrass	10	Mar-Sep
	Spring Oats	64	Spring or
	Winter Rye	56	Fall

* PLS means pure live seed. PLS is the product of the percentage of pure seed times percentage germination divided by 100.

12.2021

Use.

b)

Seed Mixture #1 will be used for areas that need temporary erosion control and will be re-disturbed or sprayed with herbicide. (soil piles, ditches, etc.).

c)

Method(s) of seeding.

Conventional and/or hydroseeding methods will be used in the application of the seed mixture.

d)

How seedbed will be prepared for planting.

The seedbed will be graded and/or scarified prior to planting. The soils will be loosened by spiking and/or by the use of farm equipment, this will allow for proper seed germination.

e)

Type(s) of mulch to be used and rate(s) of application.

Hay, straw mulch, or equivalent material at a rate of 2.5 to 3 tons per acre, will be used in areas not seeded immediately following final grading.

23.3 Permanent Cover. [Insert standard seed mixture option(s)] Provide the following information for each seed mixture to be used for permanent cover: (Note: Key to Exhibit 18)

12.2021	a)	Seed Mixture No.	Seed Mixture (Species)	Rate of Appl. 100% PLS* (lbs./acre)	Seeding Dates (Months)
		2	Partridge Pea	10	Mar-Sep
		Unmanaged	Timothy	5	Mar-Sep
		Natural	Deer Tongue	5	Mar-Sep
		Habitat	Ladino or White Clover	3	Mar-Sep
		3	Red Clover	10	Mar-Sep
		Pastureland and/or	Timothy	10	Mar-Sep
		Land Occasionally	Alfalfa	15	Mar-Sep
		Cut for Hay	Spring Oats	64	Spring or
		& Cropland	Winter Rye	56	Fall
		4	Partridge Pea	10	Mar-Sep
		Forestland	Timothy	5	Mar-Sep
			Deer Tongue	5	Mar-Sep
			Ladino or White Clover	3	Mar-Sep

* PLS means pure live seed. PLS is the product of the percentage of pure seed times percentage germination divided by 100.

b) **Use.**
The permanent mixture will be used on the areas that are disturbed and reclaimed within the permit boundaries (See Exhibit 18 Map).

12.2021 **c) Method(s) of seeding.**
Conventional agricultural farm drill and/or hydroseeding methods will be used in the application of the seed mixtures.

d) **How seedbed will be prepared for planting.**
The seedbed will be graded and/or scarified following topsoil replacement by means of farm equipment. The soils will be loosened sufficiently so that germination and revegetation is enhanced. Compaction of the soils prior to seeding will be avoided; this inhibits germination. Proper loosening by spiking and/or use of farm equipment will be done prior to reseeded.

12.2021 **e) Type(s) of mulch to be used and rate(s) of application.**
Hay, straw mulch, or equivalent material, at a rate of 2.5 to 3 tons per acre to control erosion, promote germination of seeds and increase the moisture retention of the soil. Mulch will not be used in areas seeded using a conventional agricultural farm drill or areas seeded immediately following final grading resulting in a quick vegetative cover.

12.2021

23.4 Woody Plants. *[Insert standard stocking species option(s)]* For areas that will also be planted with woody plants, provide the following: (Note: Key to Exhibit 18)

a) <u>Woody Plant Mixture</u>	<u>Woody Plant Species</u>	<u>No./ac.</u>
5 Forestland	Red Maple Black Cherry Sawtooth Oak Yellow Poplar	170 170 170 170

b) **Method of planting.**

12.2021

For the areas to be reclaimed as forestland, tree seedlings will be hand planted during the following growing season after the grasses are established. A minimum of 680 trees per acre will be planted on 8'x8' centers. Portions of post-mining areas designated as forestland within the 100' stream barriers will be replaced post-mining to maintain the integrity of the riparian zone of the stream.

c) **If the area is to be planted for wildlife habitat, identify the grouping and distribution of the plants.**

N/A – no areas to be planted as wildlife habitat.