

APPENDIX B

MCCLURE PENSTOCK REPAIR PROJECT REVEGETATION PLAN

**MCCLURE PENSTOCK PROJECT
REVEGETATION PLAN**

**MARCH 2009
REVISION 0**

SCOPE AND EXTENT OF WORK

Areas that are disturbed as a result of construction activities shall be revegetated so to prevent erosion and sedimentation and to restore a natural and aesthetic appearance supportive of indigenous wildlife. Once disturbed areas are revegetated, the vegetation in areas contained within the 33 kV power line right-of-way, and in areas along the McClure Penstock right-of-way that are necessary to provide access, perform maintenance, and provide security for the power line and penstock, will be managed, mowed, or otherwise maintained to remain open. Areas outside of the maintained right-of-way will be allowed to fully return to a natural state.

Vegetation shall be installed on this project using a variety of methods in different locations as specified. Methods are:

- A. Dormant seeding and mulching.
- B. Growing season seeding and mulching.

Locations are:

- 1. Seeding in all areas disturbed by construction that were not former or new aggregate roads.

SUBMITTALS

- A. Contractor shall provide planting schedule (start and completion dates).
- B. The Contractor shall furnish a copy of any tickets, tags, or manifests for purchased and/or harvested plant materials.

MATERIALS

A. Vegetation

Vegetation shall be the size, genus, species and variety as shown in Attachment 1.

The Contractor may use other plant species than those listed upon approval by the Owner. Any plant species substitutions shall be native and shall still be installed per the plans and specifications unless otherwise authorized by the Owner.

B. Straw Mulch

Long straw or hay to be used as mulching material on all vegetation areas shall consist of dry straw or hay. Straw mulch shall be reasonably bright in color and shall not be musty, moldy, caked, decayed, or dusty.

C. Soil Amendments

- (1) Compost – Compost as required shall be compost and/or topsoil as specified below .

- a. Compost:

- i. Compost shall be composed of 100 percent, organic material.
- ii. Compost shall be of a sufficient age to limit introduction of invasive or non-native plants.

- b. Topsoil - The topsoil shall be a uniform mix, free of stones, stumps, roots or other similar objects larger than two inches. Topsoil shall be free of noxious weeds.
 - i. Should the pH fall out of the acceptable range, it may be modified (higher) with lime or (lower) with iron sulfate plus sulfur.

MATERIALS SOURCES

Local (Michigan Upper Peninsula or northern Wisconsin) suppliers are preferred.

HANDLING

All plant material including seed shall be handled with care. Damaged seed shall not be used.

ENVIRONMENTAL REQUIREMENTS

A. Planting Schedule

Seed shall be planted during their individual dormant seasons or growing seasons or as advised by a commercial seed supplier.

B. Installation

All seed shall be installed per the recommendations shown on the individual labels and/or suppliers' tags, as directed in the plans, or as advised by a commercial supplier.

C. Straw mulching

Straw mulch shall be installed on all seed installation as specified.

PERFORMANCE REQUIREMENTS

All vegetation shall be in a satisfactory and acceptable condition when the Contractor applies for payment.

The Contractor shall be responsible for the replacement of non-living vegetation if the survivability rates are not met at the end of the 1 year warranty period. Vegetation replaced within construction warranty period shall be under warranty for an additional year.

MAINTENANCE DURING CONSTRUCTION

Maintenance shall begin immediately after each vegetation method is completed and continue throughout construction. Upon completion of the construction the 1 year warranty period shall begin unless otherwise specified.

Any vegetation repairs shall be performed to the same specifications as the original installation.

DORMANT AND GROWING SEASON SEEDING

SCOPE AND EXTENT OF WORK

Work shall include the procurement, delivery, storage, handling, installation, and maintenance of dormant seeding. This shall also include the seeding of a cover crop of annual oats, annual rye or similar grain.

DEFINITIONS

Dormant Season: Time of year when plants are not actively growing. For dormant seeding this is between October 20 and November 15 or as long as the site is accessible but not past April 15.

Growing Season: As soon as the site is accessible in the spring until October 19.

INSTALLATION

The Contractor shall not sow seed or apply straw mulch in windy conditions that may affect application rates or surface coverage.

Seed shall be installed at the rate shown in the plans or as advised by a commercial plant supplier. If plugs are used as an alternate to seeding on this project the spacing of plugs shall be per the supplier's recommendation.

For areas with erosion control fabric, the fabric shall be placed last, on top of the completed seeding operation. Seed shall not be sown on top of installed fabric.

UPLAND SEEDING

The seeding operation shall occur in the following sequence:

- A. The contractor shall harrow, disc, rototill, or use other mechanical methods to mix or decompact the top 6" of soil.
- B. The Contractor shall broadcast the seed at the rates shown in the plans or per the supplier's recommendations.
- C. Straw mulch shall be broadcast at a rate sufficient to provide 70%-80% cover of the surface of the seeding area.

PERFORMANCE REQUIREMENTS

Seeding shall provide 70 percent coverage with no bare spots larger than 1 foot by 1 foot. Using annual grain and the seed mix described in Attachment 1

WETLAND SEEDING

Annual grain in wetlands should be used to allow the natural seedbank to re-establish itself. No mulch should be used.

MONITORING

All areas disturbed as part of the construction will be monitored for revegetation success annually beginning after one full growing season until 70% coverage is obtained for seeding. The complete performance requirements for seeding and planting are further outlined above.

Attachment 1
Upland Seed Mix Specification

MDOT HIGHWAY ROADSIDE MIXTURE

LOT # L152-08-156

DATE TESTED: 2/08

CONTAINS	PURE SEED	GERM	ORIGIN
PERENNIAL RYEGRASS*	49.10%	90.00%	OREGON
CREEPING RED FESCUE*	34.35%	85.00%	CAN/VA
KENTUCKY BLUEGRASS*	13.68%	76.00%	OR/WA
OTHER CROP SEEDS:	0.20%		
INERT MATTER:	2.52%		
WEED SEEDS:	0.15%		

NOXIOUS WEED SEEDS: NONE FOUND
*VARIETY NOT STATED

NET WT. 50 LBS.
AMS: 722

CSI/Geoturf, Inc.
1500 Alloy Parkway
Highland, MI 48356

Seller makes no warranty, either expressed or implied, as to merchantability or fitness for a particular purpose. Seller's sole warranty is that seed sold conforms to label on the container, within recognized tolerances.