



Year 1

ohio  
abandoned  
mine  
lands



Year 5

reforestation program



Year 17

ohio department of  
natural resources  
  
division of mineral  
resources management

## Ohio Abandoned Mine Lands Reforestation Program

*For more information contact:*  
John C. Sprouse (john.sprouse@dnr.state.oh.us)  
Ohio Department of Natural Resources  
Division of Mineral Resources Management

### Introduction

In 1972 the State of Ohio passed its strip mine and reclamation law in the form of Section 1513 of the Ohio Revised Code. This was essentially the first backfill law in Ohio that required coal operators to return strip mined land to approximate original contour. This legislation coincided with similar legislation in the early 1970s in other Appalachian states, including Pennsylvania and West Virginia. A unique part of Ohio's legislation was the creation of a severance tax on coal for restoration of orphaned strip mine land. This state program continues today alongside the Abandoned Mine Lands (AML) program created by the federal Surface Mining Reclamation and Control Act (SMCRA) of 1977. The Office of Surface Mining and Enforcement (OSM) approved Ohio's permanent AML program in September 1981.

The Ohio Department of Natural Resources (ODNR) inventoried the state by watersheds in 1972-73 to review the impacts from strip mining. The "Land Reborn" study, an inventory of the effects of mining, was a requirement of Ohio's new mining law and pre-dated SMCRA. After the SMCRA was passed, the ODNR Division of Mineral Resources Management (DMRM, formerly the Division of Reclamation) realized that it would be almost impossible to reclaim all of its abandoned mine lands. The inventory of abandoned mine land sites contained more than 600,000 acres. Many of these acres were sites that under the SMCRA system would not be funded until high-priority sites were completed. Priority level is based on danger, or potential danger, to public health and safety. Therefore DMRM developed the reforestation program. The reforestation program fosters reclamation of abandoned mine lands by using a low cost approach to provide revegetation, watershed protection and reduce the erosion from low Priority 2 and Priority 3 abandoned coal and industrial mineral mine sites.

### Site Selection

Since 1982, DMRM has planted more than 6.5 million trees on 5,000 acres at 486 AML sites. (See Table 1.) To be eligible, these sites must be in a watershed that meets the Clogged Stream Lands (CSL) or other classification

by the Abandoned Mined Land Inventory System (AMLIS). These criteria do not apply to land mined after 1981. The best and preferred sites consist of abandoned spoil banks from strip mines and abandoned coal refuse piles. A significant percentage of abandoned mine lands sites on which trees are planted are barren spoils and mine refuse or gob with a soil pH of 3.0-4.0.



*Typical tree planting sites for P.t. seedlings*



Additional plantings may occur after conventional reclamation from the AML program when it would benefit the watershed and when land use conflicts are not a problem. These sites are planted using normal planting techniques or special site species depending on the initial goal of the project. If the reclamation goal is to seal and

isolate acidic material by clay seals and reduce the formation of acid mine drainage, reforestation will not be the reclamation method.

Plantings also occur to a limited extent on sites mined between 1972 and 1981, the latter being the federal approval date of Ohio's regulatory program. These targeted sites are found in watersheds that flood frequently and are listed in AMLIS. The sites exhibit poor to good vegetative cover due to the reclamation laws under which they were reclaimed. Initially the sites were forested and mined prior to 1972 when backfilling and drainage control requirements were minimal. This increased sedimentation and flooding in most cases. Between 1972 and 1981 parts of these watersheds were re-mined. During re-mining the pit impoundments were removed by advancing the old highwall, grading and resoiling the site. The resoiling was usually done with pan scrapers that, depending on the soil type and method of resoiling, left moderate to severe compaction of the soils. This increased runoff and reduced natural succession of tree species.

The land treatment for these remined sites may include some form of ripping and subsoiling depending on the degree of soil compaction. Herbicide is often applied to assist in the survival of the tree seedlings. These sites are also more conducive to mechanical planting. Some of this land that was area-mined and converted to grasslands has been left fallow for years. Undesirable species such as autumn olive have taken over other sites, making reforestation very difficult.

AML project officers select sites annually and submit them for review by the reforestation coordinator. In some cases the project officers have developed a three-year plan. Clustering sites is the most efficient method to reduce Right of Entry work, oversight cost and travel. This also reduces cost for the planter/contractor since remobilization of crews is kept to a minimum. Site selection criteria include:

- Programmatic eligibility (i.e., dates when mining was conducted and AMLIS inventory)
- Consideration that the site will not be re-mined
- Land use considerations or conflicts (i.e., grazing, development, oil and gas re-affectment)
- Ability to obtain Right of Entry for reforestation
- Special planting conditions (i.e., fencing and barricades for off-road-vehicle traffic)
- Soils testing and problems

Once selected, sites are reviewed and approved, tree species are selected, and location and site maps are

made. The information is placed in the database and in late fall each site is placed in a bid package. (*Refer to Reforestation Evaluation Form.*)



*P.t. Virginia pine planted on No. 9 Meigs Creek Sandstone-derived spoil, pH 3.5 (Jefferson Township, Noble County)*



*P.t. Virginia pine and P.t. red oak planted on No. 5 coal acid spoil (White Eyes Township, Coshocton County)*

### **Species Selection and Right of Entry**

Approximately 50 percent of the trees planted in Ohio have been inoculated with *Pisolithus tinctorius* that is introduced to seedling roots while still in the nursery environment. *Pisolithus tinctorius* (P.t.) is a naturally occurring, ectomycorrhizal fungus that forms a symbiotic association with the fine feeder roots of tree seedlings. This association enables the host tree to tolerate a low soil pH, drought conditions and high spoil temperatures. It also increases the tree's ability to absorb water and nutrients. This has resulted in a seedling survival rate estimated at 75 percent for all plantings to date. These species are placed only on sites that have acidic spoils.

P.t. inoculation was developed from an OSM-funded research project in 1981 between the U.S. Forest Service, Indiana and Ohio. Dr. Charles E. Cordell of Plant Health Care has assisted in the implementation and evaluation of the P.t. trees grown for Ohio. The ODNR

state nursery at Marietta, Ohio is one of only a few facilities in the eastern United States producing P.t. inoculated seedlings.

Ohio's AML reforestation program has grown from planting small-scale research plots to using reforestation as a low cost, low maintenance reclamation method. Ohio has found that it can successfully grow pine species (Virginia, white, pitch-loblolly, and red pine) and oak species (scarlet, sawtooth, northern red, chinkapin, burr and black oak) using the P.t. technique. These species along with American chestnut are excellent host species for P.t. inoculant.

In addition to the P.t. inoculated species, Ohio also plants black and bristly locust, black alder, green and white ash, sawtooth and red oak, bald cypress, sweetgum, red cedar, butternut, river birch, burr oak, tulip poplar, shumard and white oak, and several other shrub species favored by wildlife. These are planted primarily on areas that have already been reclaimed using conventional regrading and resoiling techniques. These plantings help to increase wildlife habitat and

diversity, while reducing runoff and sedimentation from reclaimed sites.

The DMRM proposed to plant, in cooperation with the American Chestnut Foundation, 7/8 pure American chestnut as part of the mix at several locations in 2005 on mined land acquired by the State of Ohio. Planting this species on public land allows better evaluation and a possible seed source for the future. Also, the goal is to plant 14/16 pure American chestnuts when they become available on state-owned abandoned mine lands in southeastern Ohio.

The AML reforestation program has progressed steadily in the last 18 years. Annually DMRM plants a minimum of 180,000 P.t.-inoculated red oak, Virginia pine, chinkapin oak and white pine on low pH soils. Approximately 50 percent of the trees planted are mast-producing trees. The program has averaged approximately 300,000 seedlings per year. To date, over 6.5 million trees have been planted on 5,400 acres. Survival rates of P.t. trees have averaged 75 percent. (See Table 1. Number of Sites, Acres and Seedlings Planted by Year.)

**Table 1. Number of Sites, Acres and Seedlings Planted by Year**

Planting Year	Number of Seedlings	Number of Sites	Acres Planted
1982	59,000	8	33.5
1983	120,000	10	72.4
1984	125,095	9	69.5
1985	149,250	15	166.3
1986	327,400	14	245.0
1987	311,400	19	223.1
1988	305,750	12	195.5
1989	342,250	19	235.0
1990	295,600	21	181.5
1991	324,500	18	190.5
1992	268,700	22	164.0
1993	334,000	26	222.7
1994	287,000	25	196.1
1995	291,500	22	205.7
1996	357,844	30	298.0
1997	327,000	52	290.0
1998	339,375	34	242.0
1999	315,225	33	225.0
2000	550,000	22	550.0
2001	450,000	21	400.0
2002	295,000	17	241.0
2003	200,000	14	148.0
2004	200,000	14	135.0
<b>Total</b>	<b>6,575,889</b>	<b>486</b>	<b>5,416</b>

Species selected for grassland areas and reclaimed abandoned mine land projects include white ash, green ash, sweetgum, black locust, white pine, tulip poplar, silver maple, red maple and other pioneer species. Sawtooth oak, red oak, white oak, burr oak, butternut, black oak and shumard oak are also planted. White and green ash species have the highest survival rates at 93 percent as measured by the U.S. Forest Service. Species for wet areas and along stream banks include river birch, box elder, bald cypress, and black alder. This mix is often interspersed with American plum, indigobush, paw paw, persimmon and other wildlife-favored tree or shrub species. Grassland planting costs are lower when a mechanical planter can be used (depending on slope considerations and whether subsoil ripping is necessary to reduce compaction).

For private landowners who desire species that are not suited for a particular site, DMRM project staff determines a mixture best able to survive, readily available from the nursery, and meets the site characteristics.

Under the terms of the Right of Entry (ROE), the landowner agrees not to use the land within the tree planting area in a manner detrimental to the growth of the trees for a seven-year period. The agreement expires within two years if the trees are not planted. In addition, the ROE describes the time in which the mining was conducted as part of the programmatic condition for funding of the reforestation effort. (*See Reforestation Consent for Right of Entry.*) The most difficult and

time-consuming part of obtaining Right of Entry is dealing with absentee landowners of both private and corporate property.

### Bidding Costs and Challenges

Since much of the planting the DMRM bids out is on very rough ground and involves hand planting, maintaining a diverse number of contract planters is difficult. Approximately 50 percent of plantings are P.t. trees in which the conditions for planting are steep spoil banks and some moderate benches. The number of planters has dropped off in recent years due to the inability to keep workers.

Sites are grouped by geographical area as much as possible, reducing down time and remobilization for planters and maximizing the actual planting effort. This also reduces travel for both the planter and DMRM oversight staff evaluating the work.

It is in DMRM's best interest to develop both large- and small-scale plantings to broaden the list of competitive bidders. Large-scale plantings attract the large-scale planter who can reduce the time needed to complete the work and minimize administrative time; yet small sites are also available for the small-scale planter who is only interested in planting 10,000 to 12,000 trees or less. Therefore the assembly of bids is arranged in this manner to maintain a good mix. There are many small sites on abandoned mine land compared to large sites.

**Table 2. Average Bid Cost Range for Selected Five Year Period**

Year	Average cost per thousand seedlings hand planted	Cost range bid per acre on herbicide application	Cost per acre ripping with tilth winged subsoiler	Cost per acre on general agricultural ripping	Average cost per 1000 trees
1998	\$120/1000	N/A	N/A	N/A	\$293
1999	\$128/1000	N/A	N/A	N/A	\$296
2000	\$138/1000	\$27 - \$29/acre	N/A	N/A	\$298
2001	\$140/1000	\$29 - \$55/acre	\$85/acre	\$36/acre	\$298
2002*	\$192/1000	\$30 - \$45/acre	N/A	N/A	\$608*

\* Price increase from nursery of 40% on P.t. seedlings, 50% for other species

Table 2 provides a representative example of reforestation costs over the last five years. Maintenance plantings cost more because the work is more time consuming than planting a new site. The table does not list transportation, cold storage, planting evaluation costs, P.t. seedling evaluation costs, flagging and root dip that add to the total costs.

### **Logistics and Transportation**

Seedlings are normally available from the Marietta State Nursery by March 1, depending on the weather and completion of seedling pulling. Marietta's seedlings, which include all the pine and P.t.-treated seedlings, usually are available early due to the sandy nature of the soil.

Since 1998, the DMRM has placed all its trees in cold storage in a central location to assist with the distribution of the seedlings. Rental of a large walk-in cooler near the junction of Interstates 70 and 77 has been very efficient and provides good access to planting sites. Once seedlings are available at the nursery, most of the trees are hauled to the cooler and distributed on a site-by-site basis by the planter and/or DMRM staff. For larger sites requiring a large number of seedlings, rental of semi refrigerators becomes necessary.

Planting usually occurs in Ohio from March 1 to April 20 to optimize seedling survival prior to budding. Seedling distribution must be timely to keep pace with the planters and help minimize downtime spent picking up seedlings.

One problem affecting storage as well as transportation is oversized seedlings, which occurs in some species. Should it occur generally across the range of tree mix, transportation costs and storage are pushed to the limit. Packaging in bags takes up extra space and creates more of a disposal problem. Placement of seedlings in bundles, or jelly rolls, optimizes storage in the cooler, during transportation and hauling to the planting site by four wheelers and pick up trucks. The trees also stay fresher and have less tendency to dry out.

### **Planting and Site Challenges, and Site Preparation**

One issue with Ohio strip mine sites is the difficult planting of out slopes versus bench slopes. Many of the out slopes on abandoned strip mines can be as steep as 1.5 to 1. A mix of terrain types to even out the site planting plan helps the planter as well as the ultimate bid cost. In addition, many of the P.t.-inoculated trees do not grow well on poorly drained soil. Pre-planting meetings held with the contractor to review planting methods and

the planting plan helps prevent locating species in the wrong site conditions.

Deer browse is a problem at many sites and is expected. Heavy stocking is planned for the initial planting to compensate for the expected loss of seedlings. The goal of the reforestation program is to create as much crown cover as possible. This reduces erosion in the watershed and runoff by changing the hydrologic curve number. It is not uncommon to place as many as 1,250 trees per acre to achieve this result. Another source for the loss of trees is off-road vehicles such as four wheelers. Planted strip mine sites are often remote and attractive for this kind of activity. Placement of barriers or fencing to obstruct entrances adds to costs.



*Herbicide equipment on John Deere tractor*

Vegetation can be quite thick on grasslands that were strip mined in the 1970s and early 1980s. These sites are treated with herbicide to optimize seedling survival. This usually involves spraying a two-foot row spaced eight feet apart with Oust in the fall or spring. The application rate per acre is  $\frac{3}{4}$  oz for the spring application; the fall application rate is  $\frac{1}{4}$  oz of Oust per acre. This was based somewhat on the manufacturer's recommendation and the American Electric Power Company's success with extensive tree seedling plantings in Ohio. If done in the spring, a required dye marker placed with the herbicide helps delineate the row. The herbicide equipment also leaves a mark on the ground for the sprayed row. Planting in the spring is usually done prior to actual greening up of these areas therefore it may be difficult for the planter to distinguish the sprayed area unless he can follow the dye mark and/or equipment marking. The costs for the herbicide spring applications have been bid separately or in conjunction with the planting. As shown in Table 2, this has averaged close to \$30 per acre for this application. Herbicide applications by American Electric Power Company on their lands have averaged \$26-27 per acre due to the larger number of acres involved.



*Herbicide rows on reclaimed mine land*



*Trees planted in 1993 near Mt. Ephraim (Noble County)*

### **Funding and Evaluation**

The funding source for Ohio's reforestation program is the State Abandoned Mine Lands Funds created by the severance tax established by the 1972 Strip Mine Law and amendments. Additionally, approximately \$30,000 to \$75,000 annually has been funded through the federal Abandoned Mine Lands program. The Industrial Minerals Program (Section 1514 of the Ohio Revised Code) has funded the reforestation program to plant seedlings on abandoned or forfeited industrial minerals sites. The cost per year to run the program has been approximately \$250,000 for 300,000 to 320,000 seedlings but this number was reduced to 200,000 trees per year in 2003. Planting more than this number of seedlings requires additional funding and a larger commitment of staff time.

To evaluate program success, the DMRM has asked the U.S. Forest Service to set up various test plots as the result of the 1999 planting year. Previous plots were evaluated in 1981. The plots were set up on old spoil sites planted with P.t. Virginia pine and planted grassland sites using herbicide treatment. Plots should be set up every year to evaluate a sampling of the sites. These evaluations should be done in-house if possible with outside review to substantiate the program's success.

### **Benefits of Reforestation**

Reforestation is a viable reclamation method for reclamation of abandoned mine lands and for grassland-reclaimed sites. By itself, or in combination with enhanced erosion and sedimentation structures on severely eroded sites, it can extend the AML dollars and maximize funding.

- Traditional strip mine reclamation practices (partial backfill/full backfill) --- \$6,500 to \$8,000/acre
- Reforestation only --- approximately \$600/acre
- Reforestation combined with alternative drainage & sedimentation controls --- approx. \$2,000/acre

Conversion of mixed grasslands to forest land use through reforestation is an excellent land use goal. Large watersheds extensively mined since the 1970s have increased runoff significantly from pre-mined conditions. This can produce enough scouring and sedimentation to increase flooding, which impacts nearby infrastructures such as roads, culverts, bridges, homes and streams. Reforestation reduces this runoff and watershed characteristics. Many times these grasslands have not been mowed, pastured or made into hay. They are basically fallow and out of production, leaving these lands open to plant succession by undesirable species.

Planting trees diversifies the site for wildlife, recreation and provides watershed protection. Over time it will produce a timber product in the form of pulp or saw logs. The price of the conversion, even with ripping and herbicide treatment, approaches only \$680 to \$700 per acre. This can be reduced depending on the seedling source, bid arrangement and size of the project. With known tax incentives and write-offs for forestland, reforestation becomes an attractive strategy to reduce the problems from these lands.

### **Reforestation Program**

The goal of the DMRM reforestation program is to foster reclamation of abandoned mine lands by using a low cost approach to provide revegetation, watershed



*Trees planted in 1990, pH 3.0 spoil (Washington County)*

protection and reduce the erosion from Priority 2 and Priority 3 abandoned coal and abandoned industrial mineral mine sites.

It is the project officer's obligation to review the assigned area for sites that may lend themselves to this type of reclamation. The site selection process involves filling out a site evaluation form, attaching a map, taking a soil test, and obtaining a reforestation Right of Entry. These two forms can be found at the end of this document.

The three kinds of plantings and qualification standards are as follows:

1. Pre-1972 unreclaimed strip mine sites or sites that have been reclaimed under the standard abandoned mine lands program. These sites can be funded by both the state and federal Abandoned Mine Land programs.
2. Post-1972 reclaimed strip mine sites reclaimed prior to 1982 that show signs of erosion and deterioration leading to sedimentation and flooding, and are listed in the abandoned mine lands inventory as frequently flooded and/or clogged streams. This may include other areas with increased runoff and flooding problems as indicated through preliminary watershed evaluations or preliminary designs. These sites can only be funded through the federal AML program.
3. Pre-1975 (Pre-law of Section 1514 ORC) industrial minerals mining areas that are unstable, eroding and causing off-site sedimentation and drainage problems. These are funded by the state AML program or through funds from the Industrial Minerals Administrative Account.

The reforestation package must be sent to the reforestation coordinator no later than October 30 of any

calendar year to allow time for development of a bid package to contract planters and herbicide spraying contractors. This package must contain the following:

- a. Completed site evaluation form and a good quality attached map showing the site
- b. Copy of a soil test
- c. Tree species requested and number
- d. A reforestation consent for Right of Entry for each landowner
- e. Digital photos of the planting site

The sites will then be selected and the bidding process will be initiated in October or early November. Once a contract planter is selected, the project officer is required to hold a pre-planting meeting with the contractor to review the planting specifications, landowner considerations, access, and to define the timeline of the planting.

Upon completion of the planting, the planter notifies the project officer who performs a completion inspection with the planter. This completion inspection must be signed by the project officer and be accompanied by the invoice from the contract planter. All specifications must be met in order to receive payment. During the course of the work the project officer should address the progress of the planting with the reforestation inspection report, making it part of the file.

The completion form as well as the final invoice for the reforestation project shall be forwarded to the reforestation coordinator for processing. For historical reference, digital photos of the planting site should accompany the final invoice.

### Reforestation Facts for 2004

- 180,000 seedlings
- 12 sites
- 140 acres planted
- Excellent survival (expected 90%)
- Eight counties - Washington, Noble, Belmont, Perry, Coshocton, Harrison, Jefferson, and Meigs
- Species - sweetgum, green ash, P.t. red oak, P.t. Virginia pine, P.t. sawtooth oak, bald cypress, river birch, white pine, P.t. white pine, sycamore, bur oak, black locust, tulip poplar
- Fall planting of 200 American chestnut

### Reforestation Sites for 2004



**Mt. Zion planting - 42,000 seedlings  
Beaver Township, Noble County**



**Seven Ranges planting - 30,000 seedlings  
Stock Township, Noble County**



**Litton Road site – 5,000 seedlings (wetland area)  
Litton Township, Coshocton County**



**Litton Road, MWCD property - 100 American chestnut seedlings in fall planting**  
Approximate 25% survival estimate - Frost heave problem  
**Chestnuts from Delaware USFS**



**Carson Productions planting – 5,000 seedlings  
Reading Township, Perry County**



**Campbells Ridge planting - 20,000 seedlings  
Wheeling Township, Belmont County**



**Glenn Castle Mine – 20,000 seedlings  
Shortcreek Township, Harrison County**



**Ridgeland planting - 36,000 seedlings (non P.t.)  
Enoch Township, Noble County**



**Deer Trail site – 5,000 seedlings  
Aurelius Township, Washington County**



**Herb Humphrey site – 4,000 seedlings  
Brush Creek Township, Jefferson County**

**(No photo)  
Moorefield site – 5,000 seedlings  
Moorefield Township, Harrison County**

10  
Ohio Department of Natural Resources  
Division of Mineral Resources Management  
**Reforestation Evaluation Form**

Project Name \_\_\_\_\_

Project Location Section \_\_\_\_\_ Township \_\_\_\_\_ County \_\_\_\_\_

7.5 Minute Topographic Quad \_\_\_\_\_  
(Please attach a top with the site outlined)

**Landowner(s)**

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_  
State, Zip \_\_\_\_\_  
Phone \_\_\_\_\_

Has the Right of Entry been obtained? \_\_\_\_\_ Yes \_\_\_\_\_ No (If so attach, If not comment)

Comment \_\_\_\_\_

Project Type: \_\_\_ Unreclaimed Strip Mine \_\_\_ Coal Refuse \_\_\_ Unreclaimed IM Site \_\_\_ Other

Comment \_\_\_\_\_

AMLIS Inventory Number \_\_\_\_\_

Total Acres \_\_\_\_\_ Plantable Acres \_\_\_\_\_

% Vegetative Cover \_\_\_\_\_ Primary Vegetation Type \_\_\_\_\_

Spoil Type (Gob, Acid spoil, Alkaline spoil, S&G) \_\_\_\_\_

Soil Compaction \_\_\_\_\_ Soil test taken? \_\_\_\_\_ Yes \_\_\_\_\_ No

Aspect or Slope Facing \_\_\_\_\_

% Outslope \_\_\_\_\_ % Bench \_\_\_\_\_ or Relatively Flat \_\_\_\_\_

Soil Sample \_\_\_\_\_ (please attach)

Evidence of P.t. Fruiting Bodies (Acid Sites) \_\_\_\_\_ Yes \_\_\_\_\_ No

Special Site Preparation Recommendations \_\_\_\_\_

Special Seedling Arrangements or Spacing \_\_\_\_\_

**Species Desired and Number:**

- 
- 
- 
- 
- 

Comments \_\_\_\_\_

Prepared By \_\_\_\_\_ Date \_\_\_\_\_

**REFORESTATION CONSENT FOR RIGHT OF ENTRY**

Abandoned Mine Lands Reforestation Program  
Ohio Department of Natural Resources  
Division of Mineral Resources Management

**State:** Ohio  
**County:**  
**Project:**  
**Project Number:**

THIS CONSENT TO ENTER given to the State of Ohio, Department of Natural Resources, Division of Mineral Resources Management (the "Division"), this \_\_\_\_\_ day of \_\_\_\_\_, 2\_\_\_\_\_, by \_\_\_\_\_, hereinafter referred to as the "Landowner."

**WHEREAS**, landowner is the recorded owner of approximately \_\_\_\_\_ acres of land located in Section \_\_\_\_\_, \_\_\_\_\_ Township, \_\_\_\_\_ County, Ohio; and

**WHEREAS**, such land has been affected by mining before April 10, 1972 and has been left in an inadequately reclaimed condition; and

**WHEREAS**, the Division desires to undertake a reclamation project involving the planting of trees on the project area outlined on the map attached hereto, which project area is approximately \_\_\_\_\_ acres in size.

**NOW THEREFORE**, in consideration of the benefits which will insure to Landowner and to the general public and intending to be legally bound hereby:

1. Landowner hereby grants and conveys to the Division, its employees, agents servants, contractors and subcontractors, a Right of Entry upon all of Landowner's land within the project area outlined on the map attached hereto. The Right of Entry shall include necessary and convenient right of ingress, egress, and regress, with all necessary and convenient personnel, materials, equipment, and a right to do any and all things as may be necessary or convenient for the planting of trees on the project area and the observation and monitoring of the growth rates of the trees.

If the Division does not commence the planting of trees within the project area within two (2) years after execution of this Consent to Enter, this Consent to Enter shall expire at the end of the two years.

2. Landowner understands that the Division is not committed to perform the planting of trees and other reclamation work or otherwise compensate Landowner for this Right of Entry.

- 3. Landowner agrees not to use the land within the project area in a manner detrimental to the growth of the trees for a period of seven (7) years after completion of the planting.
- 4. Landowner releases, discharges and holds harmless the Division from any and all claims, demands or causes of actions, against the Division for any damage, loss or injury arising from or connected with the reclamation project.

**IN WITNESS WHEREOF,** \_\_\_\_\_

Landowner, has caused this Consent to Enter to be duly executed as of the above written day and year.

SIGNED, this \_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_.

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Telephone: (H) \_\_\_ / \_\_\_\_\_

Telephone: (H): \_\_\_ / \_\_\_\_\_

(W) \_\_\_ / \_\_\_\_\_

(W): \_\_\_ / \_\_\_\_\_

Witnessed By:

Witnessed By:

\_\_\_\_\_  
*Nonfamily Member*

\_\_\_\_\_

**INSTRUCTIONS FOR COMPLETING RIGHT-OF-ENTRY**

1. Read through the agreement carefully. Any questions which you may have can be directed to the person(s) whose name (s) is/are given in the letter accompanying these instructions. When calling collect, please identify yourself as an "AML Landowner".
2. Fill in your address and phone number in the spaces at the end of the agreement and sign and date the agreement. All those whose names appear in the deed to the property as Grantees must sign the agreement unless others are authorized to do so by a Power of Attorney.
3. Have someone other than a relative or member of your household witness you signing your name and have them also sign the agreement in the space provided. Notarization by a notary public is not necessary.
4. Use the enclosed self-addressed, stamped envelope to send in two copies of the signed agreement. Keep the third copy for your own records. If someone other than an owner signed the agreement, please also send a copy of the applicable Power of Attorney.

