



Forest Landowners and Natural Gas Development: Timber Resources

Pennsylvania's forests are an important renewable natural resource and include some of the nation's most commercially valuable hardwood species. However, they are more than just an economic resource. Pennsylvania's forests provide, among many things, recreational opportunities, wildlife habitat, quality water, and clean air. Forests cover approximately 17 million acres, or nearly 60 percent of the state. Most of this is in hardwood species, including oak, cherry, maple, birch, ash, hickory, and poplar.

The largest share of Pennsylvania's forests are in private ownership, with more than 700,000 owners accounting for almost 70 percent of the forested acreage (12.5 million acres). Private forest landowners provide the bulk of the wood and other raw material needed for the state's forest products industries, which have a presence in every county. This industry leads the nation in the production of high-quality hardwood lumber used in furniture, cabinets, interior furnishings, and flooring.

Taking into consideration the values and benefits of the timber resource is important when negotiating a natural gas development lease. This is especially important if the landowner wishes to maintain some control over surface activities. Road construction, compensation for timber removal, and site restora-

tion are all factors to address before signing a lease.

Natural gas development will require constructing or widening roads, developing openings for well pads, and clearing for pipeline rights-of-way. On forested land these activities will involve tree removal. Ensuring fair compensation for timber is an important consideration to address in the lease before any development occurs. If it is not in the lease, landowners will have little to say in how the developer treats their timber resource.

Compensation for Timber Removals

How does a landowner ensure fair compensation for trees removed during normal natural gas development clearing operations?

Timber is a landowner asset. Tree removal is necessary to allow drilling equipment access and placement. Trees removed for road, well site, and pipeline construction should yield the owner fair compensation.

To protect the landowner's interests, all roads, pipelines, and drilling locations should require landowner approval prior to beginning construction. Ensuring this through the lease allows the landowner to protect important areas. Landowners should work with the gas companies to establish locations that meet both parties' goals. A consulting forester working for



the landowner can assist in making these decisions.

The lease should stipulate that the landowner receive adequate advance notice before the developer removes any timber. This allows the landowner time to review proposed locations and negotiate adjustments if needed. Require that all areas designated for timber removal be clearly marked and designated on the ground. When individual trees are designated for removal they should be marked with paint at eye level and with a mark near the ground that will remain on the stump following harvest. This includes all trees to be removed during road construction, well site, and pipeline right-of-way clearing. Doing this ensures that only timber that is absolutely unavoidable for gas development operations are taken.

After agreeing on and marking trees for removal, it is time to determine their value. Their value is best determined by an experienced third party, such as a consulting forester, using fair market value based on current standing timber prices. Timber values vary by species, size, quality, current markets, and location. There are two options at this point. The owner may choose to submit this estimate to the lessee for payment before cutting, or market the timber through competitive bidding.

Upon payment to the landowner, the trees are the lessee's property. The harvest agreement should specify that the timber be cut and

removed within a set time frame, or ownership reverts back to the landowner. Generally, one year is sufficient for the lessee to remove trees. If the trees are not removed within that time period, the landowner will have the option of marketing the trees to other potential buyers.

The second option is to sell these trees using a competitive bidding process where multiple buyers compete. This approach may yield a higher return since an outside buyer, other than the lessee, is purchasing the timber. In this case, sufficient time for the buyer to cut and remove the trees is absolutely necessary. It is not uncommon for the bidding and harvesting process to involve a one- or two-year contract. It is essential to work with the developer to define required clearing needs well in advance of any clearing operations.

Damaged Timber

How does a landowner address timber damaged beyond designated areas?

Careless removal of designated timber may cause excessive damage to trees outside the agreed-on removal areas. Damage includes bark damage and top breakage to standing trees as well as taking trees not designated for removal. Severe root damage due to pipeline and road construction activities is also likely and may be included. The lease should specifically explain damage assessment and compensation rates.

A minimal amount of damage to trees standing outside the designated areas is to be expected during gas exploration and timber harvesting operations. However, careless or negligent operations can cause excessive damage or destroy residual trees. Determining the extent of damage and the value of trees outside designated areas will generally require a professional forester and may involve arbitration. A common approach is to require double- or triple-value payment for trees excessively damaged outside the designated removal areas. For merchantable and nonmerchantable trees valued at less than \$5.00, a minimum charge of \$5.00 is commonly applied.

Trees removed from outside agreed-on areas pose another situation. In these cases, timber trespass rules may apply. Pennsylvania's timber trespass law provides guidelines in these situations. The timber trespass law provides for single-, double-, or triple-value payments depending on the intent of the person who removed the trees.

During pipeline and road construction top soil is often disturbed, compacted, or removed. Tree root damage is common with these operations and should be considered in the lease. Root damage is not always immediately apparent. The landowner should consider negotiating payment for trees with severe root damage and clearly specifying this in the lease. One approach is to negotiate payment for and removal of every tree lying within a specified distance of the designated rights-of-way. This will increase the size of the clearing but minimize the amount of root damage to trees standing along edges. Generally, few trees will be affected by increasing the rights-of-way width.

Disposal of Woody Materials Not Sold or Utilized

How does a landowner address logging slash and other woody debris disposal resulting from normal clearing operations?

Again, natural gas development operations involve creating or widening roads, clearing well sites, and installing pipelines. These operations will produce large amounts of debris, including large rocks, stumps, tree tops, limbs, brush, and other forest growth. Landowners may want to have control over the disposal of this material. Most nonmerchantable material is simply pushed off the low side of the road or clearing and left to decompose naturally. Alternatives may include burying debris on site, chipping and scattering the material, burning, pushing debris into wind rows and brush piles for wildlife, or requiring the lessee to haul debris off site. Restrictive and costly debris disposal requirements will affect payments received under the lease agreement.



Upon expiration/termination of the timber sale agreement all woody debris not sold, utilized, or moved off site by the lessee becomes the landowner's property. This may provide the landowner an opportunity to process or sell any merchantable material left on site. Often this material is suitable for firewood or other low-value products.

Precommercial Stands

What if the timber slated for removal is not yet commercial size?

Generally, the fair compensation for precommercial-sized trees equates to their replacement value. To establish this value:

1. Determine the number of years invested in establishing and growing those trees. Understand that more years invested should yield a higher value.
2. Account for expenses in planting, herbicide treatments to control competing vegetation, or fencing to keep deer out.
3. Consider the tree species involved, as this will influence their value.
4. Find out whether incentive payments must be paid back if you received government cost-share assistance to establish or manage these areas.

Protection

If a landowner wants to protect rare or unique timber stands, how must these areas be recognized?

Landowners can often recognize rare and unique timber stands. These areas might include a stand of eastern hemlock along a stream or a patch of ridge-top white oak. In other cases, a landowner might want a natural resources management professional to evaluate a property for special places to protect. These areas might include old growth or rare combinations of species providing habitat for endangered plant and wildlife species. To protect these areas a landowner must plan ahead and identify them before negotiating a natural gas development lease. The best way to identify these areas is to have a qualified natural resources professional develop a forest management plan for the property. A good forest management plan will identify, describe, and map rare and unique timber stands as well as do a search on the Pennsylvania Natural Diversity Inventory for any threatened and endangered plant and animal species. A listing of qualified forest management plan writers is available from your Pennsylvania Bureau of Forestry county service forester.

Using your forest management plan as a guide, create an addendum to the lease agreement ensuring that these areas are left undeveloped. The landowner may also wish to define buffer areas around these rare or unique timber stands to provide them further protection. For example, the landowner might specify a 50- or 100-foot buffer where no disturbance can take place. With this information written into the lease agreement, the lessee is better able to decide on appropriate locations for natural gas development activities.

Conclusion

Landowners need to address many factors before signing a natural gas lease. A natural resources management professional or a consulting forester can provide advice on how to sell timber designated for removal, protect rare plant and animal species, and minimize disturbance to unique areas during the exploration and development process. These professionals can help limit detrimental environmental impacts on a property. Before signing any lease, see an attorney experienced in gas leases. For more information related to natural gas development, visit the Penn State Extension Natural Gas Web site at naturalgas.extension.psu.edu.

Additional Resources

Many sources of additional information about forest resources are available. Some are listed below.

Penn State Cooperative Extension

- Natural Resources Extension: rnrext.cas.psu.edu
- Natural Resources Publications: rnrext.cas.psu.edu/publications.htm
- Timber Market Report: www.sfr.cas.psu.edu/TMR/TMR.htm
- PA Forests Web Seminar Center: rnrext.cas.psu.edu/PAForestWeb
- Water Resources: water.cas.psu.edu
- Natural Gas Resource Program: naturalgas.extension.psu.edu

Pennsylvania DCNR Bureau of Forestry

- Private Forest Landowners: www.dcnr.state.pa.us/forestry/private-lands.aspx

Pennsylvania Department of Environmental Protection

- Bureau of Oil and Gas Development: www.dep.state.pa.us/dep/deputate/minres/OILGAS/oilgas.htm

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Put Our Experience to Work for Your Community

The Penn State Cooperative Extension Marcellus Education Team strives to bring you accurate, up-to-date information on natural gas exploration and drilling in Pennsylvania. Learn about your rights and choices as a landowner, a businessperson, a local official, or a concerned citizen. Discover the resources available to you.

Visit naturalgas.psu.edu.

Penn State Cooperative Extension

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The Agricultural Law Resource and Reference Center

The Agricultural Law Resource and Reference Center is a collaboration between Penn State's Dickinson School of Law and Penn State's College of Agricultural Sciences. Located at both the University Park and Carlisle facilities and funded in part by the Pennsylvania Department of Agriculture, the center is designed to provide the highest-quality educational programs, information, and materials to those involved or interested in agricultural law and policy.



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