
2070 Vegetation Ecology

Guidelines

After ground disturbing activities and after appropriate site assessment and/or preparation (e.g. soil testing - pH, soil amendments, raking), native and/or desired non-native, non-invasive plants should be established where natural revegetation and/or desired species are sparse or unlikely to occur, or in areas where erosion and sedimentation are a concern.

After site assessment, consider the following when selecting the composition of seed mixes:

- Native species with local genotypes.
- Native species with non-local genotypes.
- Desirable (non-invasive) non-native species.
- A non-persistent non-native cover crop may be used for initial stabilization.

Mulch materials with the least likelihood of introducing unwanted vegetation should be used. For example straw should be used instead of hay.

2080 Noxious Weeds

Guidelines

Activities that may contribute to the introduction, establishment, or spread of either noxious or invasive plant species should be designed to include measures to reduce impacts as well as treatment and/or monitoring requirements. To determine the appropriate measures, consult resources such as the "Forest Service Guide to Noxious Weed Prevention Practices."

Special use permits and contracts for activities conducted on the ANF should include appropriate clauses for the prevention and/or treatment of invasive plant species.

2350 Trails

Guidelines

Oil and gas development near trails should be consistent with the appropriate Recreation Opportunity Spectrum development level and Scenic Integrity Level.

Unless a trail is located on a road, avoid new road construction and log skidding across trails except at designated crossing sites. Where road crossings are essential, maintain and provide for continued use of the trail for foot travel by maintaining the tread integrity at roadside.

Oil and gas development near trails should not compromise National Quality Standards for trails.

North Country National Scenic Trail

Guidelines

Oil and gas development should not compromise the intended purpose of the North Country National Scenic Trail. Oil and gas development should be consistent with the "North Country Trail Comprehensive Plan for Management and Use" (USDI-NPS 1982 as amended) and "North Country National Scenic Trail - A Handbook for Trail Design, Construction, and Maintenance" (USDI-NPS 1996 as amended), and the Memorandum of Understanding between the National Park Service and the North Country Trail Association (2005 as amended).

Temporary openings resulting from oil and gas activities and other Forest activities should not exceed 300 linear feet along the North Country National Scenic Trail.

Oil and gas development facilities, other than well and access roads, should not be visible from the North Country Trail.

No slash resulting from oil and gas activities should be left within 25 feet of the center line of the North Country National Scenic Trail.

2360 Heritage

Standards

Utilize the “Programmatic Agreement among the USDA Forest Service-Allegheny National Forest, the Pennsylvania State Historic Preservation Officer, and the Advisory Council on Historic Preservation regarding the process for compliance with Section 106 of the National Historic Preservation Act for undertakings on the Allegheny National Forest of the Eastern Region of the USDA Forest Service” for information on survey, evaluation, protection, interpretation, and mitigation for the heritage resource program.

Archeological sites shall be identified in the proposed development area, and adverse effects to the identified sites shall be avoided or mitigated as required by the National Historic Preservation Act of 1964, Antiquities Act, Archeological Protection Act, and all other applicable laws and regulations.

The Forest Service will follow appropriate consultation procedures with the Seneca Nation of Indians on any activities within the vicinity of inventoried sites culturally sensitive to the Nation.

All non-private cultural materials recovered from National Forest System lands will remain the property of the Federal Government.

Human remains and any associated objects shall remain in place when they are discovered. Subsequent actions should be conducted in accordance with the Programmatic Agreement.

2380 Scenery

Guidelines

Oil and gas activities should meet or exceed the Scenic Integrity Level as described in the "Allegheny National Forest Scenery Implementation Guide" (Tables 19 and 20) and the National Forest Landscape Management Handbook (FSM 2380.61).

Scenic Integrity Levels may be adjusted on a short term basis due to site-specific circumstances. "Very Low" is the minimum level for any forest area. An area with "Unacceptably Low" Scenic Integrity may be assigned a short-term designation of rehabilitation or a lower integrity level. Achievement of Scenic Integrity Levels should be met within 3 years of project completion.

Natural vegetative screening should be provided from oil and gas development activities adjacent to Concern Levels 1 and 2 travelways, use areas, and private property.

2400 Vegetation

Guidelines

Where reasonably possible, retain hemlock and white pine, particularly in winter ranges where it provides habitat for species with viability concerns, or where it is a minor component on the landscape.

Where reasonably possible, to provide thermal cover and habitat diversity, maintain a rhododendron, white pine, and mountain laurel component where they currently occur.

All healthy butternut should be retained. If a butternut tree is found, the tree will be assessed to determine whether it has been affected by the butternut canker disease. If it is determined that the tree may be resistant, oil and gas development facilities should be located to avoid impacts to the tree.

Logging debris and slash will be left on site and treated in a method approved by the Forest Service, or removed if directed by the Forest Service.

When red pine is encountered during oil and gas development operations, refer to pages 93 and 94 of the Forest Plan for red pine slash disposal methods.

Fuels

Guidelines

To reduce the risk of fuel loading, trees should be directionally felled away from well pads, pipelines, power lines, roads, private property, and recreational facilities.

Reforestation

Artificial Regeneration

Guidelines

Species planted should be those best suited to the existing forest type and site conditions. Utilize disease resistant and improved stock when available. Soil drainage and planting stock availability may influence species choice.

Shade-intolerant species (such as northern red oak, black cherry, and yellow poplar) should not be planted where the relative density of overstory trees exceeds 40 percent.

Hardwood seedlings should be at least 2-year-old stock.

2500 Watershed and Air

Soil

Standards

Equipment operation, except in emergency operations, will only occur when soils are capable of supporting equipment without incurring detrimental compaction, puddling, or rutting in excess of regional standards (Forest Service Handbook 2509.18 – Soil Management).

Roads

Guidelines

Site development (including construction of access roads, well pads, tank batteries, and other infrastructure) should be limited on soil types that include the following soil/site area conditions:

- Slopes Greater Than 40 percent – Heavy equipment use on these slopes should be avoided. When salvage harvests are needed on these slopes, full suspension yarding or winching should be used.
- Soils Susceptible to Landslides – Heavy equipment use on slopes greater than 15 percent with soils susceptible to mass movement when loaded, excavated, or wet should occur when soils are dry. During periods of freeze-thaw and for one to multiple days following significant rainfall events, these activities should involve mitigation measures to prevent landslides. If the risk of landslides during these periods of concern cannot be mitigated, then activities should be prohibited.
- Soils Commonly Wet At/Or Near The Surface During A Considerable Part Of The Year or Soils Highly Susceptible To Compaction (Group 3 Soils) – Heavy equipment use should be prohibited or mitigated when soils are saturated or during freeze-thaw cycles. Aspect may play a role in determining the ability to safely operate on these soil types.

Construction Activities

Guidelines

Top soil should be removed and stockpiled from well pads when ground disturbing construction activities begin. Stockpiled materials should have erosion control, such as mulch, applied as soon as possible after disturbance. This soil should later be spread to restore disturbed areas. Prior to use of the soil material for reclamation, soil chemistry tests should be done to assess the quality of the soil and needs for fertilization or liming.

All Water Resources

Standards

Support the most protective water use designation merited by the biological and chemical characteristics of a stream basin as defined by Pennsylvania Department of Environmental Protection 25 Pa. Code, Chapter 93, Water Quality Standards Regulations.

Guidelines

Streams and wetlands should be kept free of logging debris, sawdust, equipment, oil, and other materials or obstructions.

Riparian Corridor

Standards

During project-level planning and implementation, identify riparian corridors, defined on the basis of soils, vegetation and hydrology (surface and ground water), that will maintain the ecological functions and values associated with the riparian area. Riparian corridors will vary by water feature, and at a minimum will be defined following the fixed width distances in Table 24. For stream channels, riparian corridor widths shall be applied to both sides of the channel, measured from the top of the channel bank. For perennial water bodies, the distance is measured from the high water mark of each bank.

Table 24. Fixed-width Distances for the Identification of the Riparian Corridor

Water Features	Distance from each bank or ordinary high water mark, measured as slope distance
Allegheny River	Minimum of 300 feet
Wilderness Trout Streams, Remote Trout Streams, or Class A Trout Streams ¹	Minimum of 200 feet or 50 feet plus 4 feet for every 1 percent of slope, whichever is greater.
Perennial streams and other perennial water bodies	Minimum of 100 feet or 50 feet plus 4 feet for every 1 percent of slope, whichever is greater.
Intermittent streams– water does not need to be present on the surface at the time of inventory	Minimum of 50 feet plus 2 feet for every 1 percent of slope.

¹ For the current listing of streams classified as Class A Trout Streams, reference the Pennsylvania Fish and Boat Commission website.

In addition to standards and guidelines for water resources, activities within riparian corridors in the “13 Percent Area” shall comply with direction under the 2600 Wildlife, Fish, and Sensitive Plant Habitat section for northern riffleshell and clubshell.

The withdrawal of water from a stream or a well shall be done in a manner that maintains existing uses of surface water and groundwater such as fish and aquatic life, including threatened and endangered species and their habitat. Intake pipes used to siphon water from streams and impoundments shall be screened in order to protect aquatic species.

Guidelines

Construction of roads and the surface occupancy of oil and gas developments should not occur within the riparian corridor (see Table 24). Where new permanent or temporary roads, pipelines, or utility lines cross through the riparian corridor they should be limited to essential crossings.

Control erosion and effectively manage water flow on and adjacent to roads by providing frequent roadside and outlet ditches, ditch checks, and cross-drainage as determined by soils, road grade, length of slope draining to road, and impacts of other upslope roads.

Roads and oil and gas facilities should be designed and constructed so that surface runoff is directed into effective filtering areas and not into streams.

Where new or existing permanent roads are within 300 feet of perennial and intermittent streams, a high quality, durable surfacing material, binding material, or other suitable material should be used to control sediment delivery.

Energy dissipaters should be used where needed to prevent gully formation on discharge slopes.

When permanent or temporary crossings of perennial or intermittent streams are needed, bridges, bottomless arches, or culverts should be utilized to maintain fish and aquatic passage, stream channel structure, erosion control, bank stability, and stream gradient.

Permanent stream crossing structures should be designed and constructed to withstand a minimum of a 50-year storm event and should not narrow the channel width.

Temporary stream crossings should be constructed to accommodate at least the bank full flow.

Pit run sandstone is only appropriate for stream crossings as a subgrade material.

Solid surfaces should be used in the construction or reconstruction of bridge decks on unpaved roads.

On streams containing reproducing wild trout, the construction or replacement of stream crossings should be accomplished between January 1 and September 30 to avoid impacts to spawning trout.

All oil storage tanks should be centrally located in batteries whenever practical and kept at least 100 feet from drainages or streams. Batteries will be constructed to meet all federal and state requirements for spill containment.

Wilderness Trout Streams (Pennsylvania classification)

Standards

The following streams, listed in Table 25, shall be managed to conform to Wilderness Trout Stream criteria according to Pennsylvania Fish and Boat Commission Policy No. 400-17-69.

Table 25. Wilderness Trout Streams

Wilderness Trout Stream	Location
Arnot Run	Warren County
Crane Run	McKean and Elk Counties
East Hickory Creek	above its confluence with Middle Hickory Creek, Warren County
Four Mile Run	Forest County
Wildcat Run	Warren County
South Branch Kinzua Creek	from its headwaters downstream to the confluence with Hubert Run, McKean County

For these Wilderness Trout Streams, the following apply:

- No more than one stream crossing every two stream miles on open roads shall be permitted
- No open roads shall parallel the stream within one-quarter of a mile
- Gates should be used to restrict access where roads are within one-quarter of a mile
- All-terrain vehicle/off-highway motorcycle (motorized) trails shall not occur within the area that drains into any designated stream.

Remote Trout Streams (ANF classification)

Guidelines

Stream crossings on these four Remote Trout Streams, listed in Table 26, should not occur, nor should open roads or all-terrain vehicle/off-highway motorcycle (motorized) trails parallel the streams within one-quarter of a mile. Gates should be used to restrict access where roads are within one quarter mile.

Table 26. Remote Trout Streams

Remote Trout Stream	Location
East Fork Run	Forest, Warren, and McKean Counties

Morrison Run	McKean County
Pell Run	Warren County
Tracy Run	Warren and McKean Counties

Wetlands, Springs, Seeps and Vernal Pools

Standard

A **Wetland Management Zone** will be established around wetlands, seeps, springs and vernal pools that may be affected by a project. In this zone, limited activities will occur as defined in the guidelines for the protection of wetlands and plants and animals that utilize them. The zone for wetlands, seeps, and springs is **100 feet** and the zone for vernal pools is **200 feet**. The distance is measured from the high water mark of the wetland perimeter.

Guidelines

Construction of new roads and surface occupancy of oil and gas developments should occur outside of the wetland management zone. When construction must occur within the wetland management zone, wetlands, seeps, springs, and vernal pools will be delineated prior to project approval, and at a minimum should follow these guidelines to minimize impacts to wetland ecology:

- The edge of disturbance from new roads and oil and gas developments should be kept at least 50 feet from wetlands, seeps, spring heads, and vernal pools.
- Roads and well pads should be designed and constructed to avoid directing surface runoff into wetlands, seeps, springs, and vernal pools.
- Crossings through the Wetland Management Zone should avoid wetland impacts first, and if they cannot be avoided then they will be located at the narrowest point of the wetland. Culverts should not constrict flow or cause channelization of wetlands.
- Roads should be constructed 100 feet upslope or down slope of the head of seeps or springs. When roads must pass below heads of springs or seeps, they should pass at a point where the flow goes below ground or where a defined channel permits the least impact.
- All fills in wetlands, seeps, and springs should be constructed of free draining granular material.
- Where new or existing permanent roads are likely to cause or are causing sedimentation of wetlands, seeps, springs or vernal pools, a high quality, durable surfacing material, binding material, or other suitable material should be used to control sediment delivery.

Trees should be felled away from wetlands. Logs should not be skidded through no-cut buffers.

Municipal Watersheds

Guidelines

Oil and gas activities that have the potential to affect a municipal water supply should be coordinated with the water district or municipality served.

Air

Guidelines

Management activities, including permitted activities, which would degrade air quality below National and Pennsylvania Ambient Air Quality Standards, should be prohibited.

2600 Wildlife, Fish and Sensitive Plant Habitat

Habitat and Species Diversity

Guidelines

New roads and facilities should be located to avoid key deer and turkey winter ranges and brood rearing habitat as shown on district maps.

Species with Viability Concerns

Guidelines

To conserve key habitat components, new roads and facilities should be located to avoid occupied habitat of species with viability concerns including rock ledges and outcroppings, large boulder areas, bat hibernacula, and known and historic rattlesnake dens.

Existing roads should be managed to mitigate impacts to species with viability concerns. Where impacts cannot be avoided, an evaluation will be completed to assess impacts and determine if management changes are necessary.

Grasslands and Managed Openings

Guidelines

To maintain habitat integrity for Henslow's sparrow and other grassland birds, surface occupancy should be minimized on existing grasslands greater than 75 acres. Where this cannot be avoided, maintain oil and gas developments in a manner consistent with the habitat needs of the species of interest.

Surface occupancy should be minimized in existing "old field" habitat, managed wildlife openings, known woodcock singing grounds/breeding areas/migration stopover sites, and upland shrub/forb communities to meet the needs of the golden-winged warbler, woodcock, and other declining shrub and ground nesting species. Where this cannot be avoided, maintain oil and gas developments in a manner consistent with the habitat needs of the species of interest.

Federal Threatened and Endangered Species

Indiana Bat

Standards

All known roost trees on the ANF will be protected until such time as they no longer serve as a roost (e.g. loss of exfoliating bark or cavities, blown down, or decay). In the event that it becomes absolutely necessary to remove a known Indiana bat roost tree, such a removal will be conducted through consultation with the USFWS, during the time period when the bats are likely to be in hibernation (October 15 to March 31). Known roost trees identified as immediate threats to public safety may, however, be removed at any time following consultation with the USFWS.

Guidelines

If occupied Indiana bat maternity roost trees are discovered, protect them from physical disturbance until they naturally fall to the ground. Designate an area of use based on site conditions, radio-tracking or other survey information, and best available information regarding maternity habitat needs. Minimize human disturbance in the foraging and roosting areas of the maternity colony until the colony has left the maternity area for hibernation. The character of the site should be maintained or enhanced year-round by: 1) maintaining an adequate number of snags, including known roost trees; 2) maintaining large live trees to provide future roosting opportunities; and 3)

maintaining optimal roosting and small canopy gaps to provide a continual source of foraging habitat (USDI FWS 2005).

If occupied Indiana bat male roost trees are discovered during the summer season, protect them from physical disturbance by designating a 75-foot radius buffer zone around the tree(s). Within the buffer zone, no ground disturbing activity, prescribed fire, or timber harvest should occur. The buffer zone should remain in place until the roost tree naturally falls to the ground.

Protect known male roost trees from physical disturbance until they naturally fall to the ground.

Remove hazard trees between October 15 and April 1 whenever possible.

Demolition or removal of buildings or other manmade structures that harbor bats should not occur between April 15 and August 15. During this period, pups, juveniles, and pregnant or lactating females are present. Building demolition and removal will occur while bats are not present on the ANF and likely hibernating. Prior to demolishing a building that bats have used, install a bat box (or boxes) nearby to provide an alternate roost when they return. If public safety is threatened and the building must be removed while bats are present, a bat expert should examine the building to determine if Indiana bats are present. A bat box should be installed nearby before buildings that harbor bats are removed. If Indiana bats are present, the Forest Service will consult with the Fish and Wildlife Service.

Retain trees with characteristics of suitable roosts (dead or dying trees with flaking or exfoliating bark) whenever possible.

Northern Riffleshell and Clubshell

Standards

Proposed management activities shall be planned, evaluated, and implemented consistent with measures developed to protect the clubshell and northern riffleshell including those recognized to maintain, improve, or enhance their habitat. These measures include, but are not limited to, implementing standards and guidelines found in the ANF Land and Resource Management Plan.

Any roads constructed or reconstructed within 300 feet of a perennial or intermittent stream (within the 13% Area) shall use a high quality surfacing material to minimize sediment delivery. In the event that this cannot be achieved, notify U.S. Fish and Wildlife Service.

Small Whorled Pogonia and Northeastern Bulrush

If plants or populations are found, temporarily halt any activities that may cause impact within 300 feet of the area of influence surrounding plants and/or populations. The area of influence includes suitable occupied habitat as well as the area appropriate to conserve populations and their habitat. Consideration of site characteristics, such as aspect; landform; overstory, midstory and understory shading; site topography; forest cover; and hydrological features will be used to determine this area of influence. Consult with the U.S. Fish and Wildlife Service to determine and implement appropriate site-specific conservation measures before resuming activities.

Guidelines

Prior to ground-disturbing activities, sites should be evaluated or surveyed for habitat for small whorled pogonia or northeastern bulrush to determine habitat suitability and/or occupancy.

Species with Viability Concerns

Northern Flying Squirrel

Guidelines

Where the northern flying squirrel is documented, maintain greater than 50 percent of the individual riparian conifer ecological land type polygon in mature hardwoods and conifer and retain all conifer greater than 18 inches DBH.

*Bald Eagle*Standards

Year-round ground-disturbing activities that may disturb eagles or alter habitat such as land clearing, oil and gas development, and road construction and maintenance shall be prohibited within a zone extending at least 660 feet from an eagle nest. In some cases a larger buffer zone may be necessary and the final buffer will be determined on a case-by-case basis by the Forest Service.

From January 15 to July 31 of each year, restrict management activities that result in disturbance to nesting eagles within approximately 1,320 feet of each active nest location. Examples of management activities that should be restricted include road construction, and oil and gas development. A 660 foot buffer will remain in-place for 5 years after the nest has been declared abandoned.

Powerlines will be installed in a manner consistent with the U.S. Fish and Wildlife Service Avian Protection Plan Guidelines including submission of a site-specific plan that identifies and reduces hazards to the bald eagle.

Guidelines

On the side slopes surrounding the Allegheny Reservoir, Allegheny River, Tionesta Creek, Clarion River, Kinzua Creek and Salmon Creek, scattered white pine and other trees with potential for use as nesting or roosting trees should be maintained. Consider not only trees that are super canopy trees but also trees that may provide nesting and roosting sites in the future, such that a sustainable supply will be available. In an effort to maintain suitable unoccupied habitat, activities that may result in the degradation of roosting and nesting habitat should be avoided within 300 feet of the Allegheny Reservoir, Allegheny River, Clarion River, and Tionesta Creek.

*Northern Goshawk*Standards

A minimum of 70 percent of a goshawk territory shall be maintained as mid- to late-structural habitat.

No new permanent openings greater than 4 acres in size shall be created in a goshawk territory.

Minimize use of oil and gas roads for access within 1,320 feet of an active goshawk nest during the nesting season (April 1 through July 31).

No well development, new road construction, or timber harvest shall be authorized within 1,320 feet of an active goshawk nest.

No well development, road construction, or timber harvest shall be authorized between 1,320 and 2,640 feet of an active goshawk nest from April 1 through July 31.

Guidelines

Consider using gates to seasonally restrict roads during the nesting season to minimize human disturbance.

*Red-shouldered Hawk*Standards

No well development, road construction or timber harvest shall be permitted within 660 feet of an active red-shouldered hawk nest.

No well development, road construction, or timber harvest shall occur between 660 feet and 1,320 feet from an active red-shouldered hawk nest during the nesting season. Stand structure and composition of the area should be maintained over time and 70 percent of the area shall be maintained as mid- to late-structural habitat.

Great Blue Heron

Guidelines

No well development, road construction, or timber harvest should be permitted within 660 feet of an active great blue heron nest.

During the nesting season (April 1 to August 15), well development, road construction, or timber harvest should not occur between 660 feet and 1,320 feet from an active great blue heron nest.

Osprey

Guidelines

During the nesting season (April 1 to May 15), well development, road construction, or timber harvest should not occur within 660 feet of an active osprey nest.

Yellow-bellied Flycatcher

Guidelines

Habitat integrity of areas of at least one and one-half acres containing all of the following conditions should be maintained: presence of water or saturated soils, a substantial conifer component, dense undergrowth, and especially sphagnum moss. The integrity of the habitat is maintained when these habitat components are intact and ecological processes are functioning.

Eastern Box Turtle

Guidelines

Where box turtles or nests are documented, restrict new road construction within 10 acres of their home range.

Wood Turtle

Guidelines

Where wood turtles or nests are documented, restrict new road construction within 15 acres of their home range.

Timber Rattlesnake

Guidelines

Known den sites and basking areas should be protected with a 450 foot buffer zone. Within this zone, new roads and oil and gas developments should be prohibited. Protect the integrity of the den site by not moving rocks larger than 2 feet in diameter and by not creating excessive soil compaction.

*Jefferson Salamander, Four-toed Salamander, Coal Skink*Guidelines

Surface disturbing activities should be prohibited within 100 feet of documented occurrences of Jefferson salamander or four-toed salamander.

In habitat where coal skinks are documented, habitat integrity should be maintained by avoiding disturbance to rubble or boulder fields.

Plants

*Species with Viability Concerns*Guidelines

Prior to ground disturbing activities, sites should be evaluated or surveyed for habitat for plants with viability concerns (see Appendix D for species list) to determine habitat suitability and/or occupancy.

Oil and gas activities should avoid plant species with viability concerns and appropriate conservation measures should be determined on a site specific basis.

2800 Minerals and Geology

Oil and Gas Development

Standards

The location of all surface disturbing activities, improvements, facilities, and equipment locations shall be planned to:

- 1) minimize disruption and occupancy of surface resources
- 2) minimize disruption of existing uses, and
- 3) promote successful reclamation.

Where a threatened or endangered species, or a species proposed for listing as threatened or endangered, is discovered within the vicinity of an active oil and gas development or a development under construction, the developer shall immediately notify the Forest Service and immediately cease all operations and activities.

Subject to Forest Service discretionary approval, all-terrain vehicles or off-highway motorcycles may only be used on authorized Forest Service identified roads, trails, or adequate pipeline clearings within the boundaries of a developer's estate for the sole purpose of tending operational facilities.

Disturbed areas must be stabilized within 30 days following construction and successfully revegetated within 60 days following construction, or within 60 days of the beginning of the first growing season following construction that occurs in late fall or winter. Revegetation is achieved when there is 70 percent coverage of perennial vegetation.

Storage of equipment beyond the reasonably necessary time required for immediate use in construction, operation, or maintenance activities is prohibited without special use authorization. Specific timelines for storage shall be identified in the oil and gas developer's operating plan.

All development related equipment and improvements shall be removed from National Forest System lands or disposed of as soon as possible, but no later than 1 year of the date on which a well stops producing.

Pipelines and electric lines (transmitting less than 34.5 kV) shall be buried at a minimum depth of 3 feet and marked for easy identification, with two exceptions:

- 1) pipelines may be run over the surface for short distances where burial is not reasonably possible; and
- 2) electric lines may be suspended at least 10 feet above the ground, and at least 16 feet above road crossings, where burial is not reasonably possible with the expressed prohibition that electric lines shall never be strung or otherwise connected to trees or other vegetation.

Type 3 vertical object markers shall be installed and maintained on posts delineating the safe passing side of any in-road obstruction.

Equipment must be stored, serviced, and fueled in upland areas away from transport pathways and all aquatic habitats.

Cuttings and other drilling byproducts shall be disposed of in accordance with a Forest Service approved method; but in no event shall cuttings be dispersed on the forest surface.

Interim reclamation measures shall be implemented by oil and gas developers to ensure the stability and attainable resource productivity of disturbed sites.

Final reclamation measures shall be implemented by oil and gas developers to restore disturbed resources as close as possible to the pre-disturbance condition, or to a condition that meets specific Management Area goals.

Where reasonably possible, reclamation measures shall restore the disturbed area to the identified Scenic Integrity Level, and correspond to the surrounding landscape character, including revegetation and grading to match the natural landform/contour.

Joint use snowmobile trails shall be maintained in adequate condition for snowmobile use. To snowplow mixed use designated snowmobile roads, the snowplow shall be equipped with adequate shoes to protect the road surface and to leave a snow mat of 3 or more inches. Once the road is frozen, a snow mat should be maintained by the operator as long as weather permits. Notify Forest Service when plowing creates unsuitable conditions (less than 3 inches).

Guidelines

Oil and gas developments should be located, whenever possible, on already disturbed areas.

Oil and gas developments that require surface occupancy should be designed, constructed, and maintained in a safe and environmentally responsible manner that accommodates the intended use.

New powerlines and new pipelines should be located adjacent to and outside the template of roads unless Forest Service approval is granted for other routes.

Oil and gas developers should install, sign, and maintain gates on private oil and gas road roads where required to meet Forest Service standards.

Pipeline right-of-ways should be barricaded to prevent unauthorized use by motorized vehicles, including all-terrain vehicles.

The ANF may request a suspension of construction activities during the spring thaw or during exceptionally wet weather.

During icy conditions sanding may be used on mixed use roads. Where possible, the snowplow operator should leave an unsanded corridor for snowmobiles on the treated road segment.

Marcellus Shale

All standards and guidelines in this amendment apply to the development of Marcellus shale. In addition, these specific standards apply:

Standards

Site-specific measures to reduce noise impacts to wildlife will be considered at the project level and could result in application of buffers, installation of sound barriers, or seasonal operating restrictions.

Site-specific measures to reduce noise impacts on recreation areas will be considered at the project level and could result in limits on hours of operation.

When access to Marcellus developments utilizes roads that also serve the Allegheny Snowmobile Loop, and development is scheduled to occur through the winter, a site-specific analysis at the project level will be considered to determine if the trail should be rerouted or temporarily closed.

The need for higher standard roads (double lane, increase surfacing, increased maintenance, etc.) will be evaluated during project level analysis.

Once a site has been put in full production and no additional wells are anticipated to be drilled, areas not needed for long term maintenance and management of producing wells shall be restored to a vegetated condition.

4000 Research

Guidelines

Any proposed oil and gas development within 300 feet of the boundary of the Tionesta Research Natural Area should be evaluated to ensure that potential impacts to ecological values and long term research studies are not compromised.

7700 Transportation System

Resource Coordination

Standards

Construction of oil and gas roads shall only be approved where private holdings cannot be reasonably and economically accessed by existing National Forest System roads, existing non-National Forest System roads on National Forest System lands, or existing roads across privately held surface lands.

All gates on National Forest System and non-National Forest System roads opened for the purpose of accessing an oil and gas development shall be immediately closed upon either vehicle passage or passage of the final vehicle in a convoy.

Guidelines

Minimize the number of access roads entering Concern Level 1 and 2 roads.

Road reconstruction should follow existing corridor alignments.

Road design should meet the minimum standards appropriate to the purpose of the road and to fit the land characteristics.

Roads should be relocated to enhance resource management or improve user safety, utility, and resource protection. Decommission and restore old roadbeds as soon as possible after road relocation has been completed.

Construction

Standards

Oil and gas roads shall be planned, constructed, and maintained to maximize road system efficiency, minimize surface disturbance, minimize adverse resource impacts, and maximize interim and final reclamation potential.

Planning, construction, and maintenance determinations shall be made in consideration of, but not limited to, anticipated long-term development and existing road corridors.

All new and reconstructed roads shall blend into the landscape to the extent practical.

Road construction waste materials, including but not limited to stumps and large rocks, shall be disposed of in a manner approved by the Forest Service.

Minimize clearing widths by utilizing cut, fill, and back slope grades that are the steepest permissible for the standard and use of the road, safety, soil conditions, and the height of the cut.

Final shaping and grading of shoulders, back slopes and ditch slopes shall be rough in appearance on oil and gas roads. Back slopes and fill slopes may also be covered with loose woody debris, consistent with slash reduction objectives.

Roads shall be surfaced with a durable surfacing material.

Guidelines

When road construction must cross trails with high scenic integrity levels, incorporate aesthetic modifications into the design of bridges, guardrails, major culverts, outlet ditches, and other drainage control devices.

The grade of permanent and temporary roads should normally be between 2 and 8 percent, with grades up to 15 percent acceptable for short pitches up to 200 feet when sufficient stabilization is provided.

Culverts used at stream crossings should be long enough to extend beyond the fill bank, and the fill slope should be no steeper than a 2:1 ratio.

Cut and fill slopes at stream crossings should be stabilized using appropriate interim erosion control and final stabilization measures. For example, hydroseeding, seed and mulch, placing biodegradable erosion control matting, or other appropriate methods could be used. If slopes steeper than a 2:1 ratio are used, the banks should be armored with rip rap or headwalls.

Maintenance

Standards

Apply the appropriate level of maintenance needed to protect the investment, facilitate resource management, protect other resources, and provide for user safety.

Use

Standards

Oil and gas roads are closed to public motorized use.

Guidelines

Manage motorized use by seasonal restrictions if:

- Use causes unacceptable damage to soil and water resources due to weather or seasonal conditions.
- Use causes unacceptable wildlife conflict or habitat degradation.
- Use causes unsafe conditions due to weather.
- The road or trail serves a seasonal public or administrative need.
- The area accessed has seasonal need for protection or nonuse.
- Competing uses create conflicts.

Skidding should not occur on roads open to the public.

Gravel surfacing is required for the first 100 feet of oil and gas roads when they intersect gravel or paved roads.

Decommissioning

Standards

Roads that are no longer needed shall be decommissioned.

Decommission all temporary roads upon completion of authorized use.

Guidelines

Road decommissioning should render a road inaccessible to all motorized traffic. Effectively preventing motorized vehicles from gaining access to any portion of a decommissioned road may involve obstructing access at several points along the road. Roads identified for decommissioning may receive one or more of the following levels of landscape restoration in a manner approved by the Forest Service:

- Blocking the entrance to a road to all motorized traffic, including all-terrain vehicles.
- Removing road improvements such as signs and gates from the landscape.
- Restoring vegetation and installing water bars.
- Removing culverts and the fills associated with them, removing road surfacing (if salvageable) and scattering slash on the roadbed. Removed fill will be reused or disposed of in a way that will not restrict flow or contaminate surface water.
- Reestablishing former drainage patterns, stabilizing slopes, removing unstable fills, and pulling back road shoulders.
- Completely eliminating the roadbed by restoring natural contours, wetlands, watercourses, and slopes.

Additional Guidelines for Specific Management Areas

MA	Guidelines
1.0, 2.2, 6.1, and 6.3	Special emphasis should be given to identifying and implementing measures to reduce adverse impacts on wildlife habitat objectives. Mitigation measures may include gating of roads, vegetative screening of facilities, locating tank batteries outside the boundaries of the Management Area, and/or locating facilities to minimize their effect on wildlife habitat enhancement projects.
7.1	Active wells should be fenced to ensure visitor safety
7.1, 7.2, 8.1, 8.2, and 8.3	Reconstruction, upgrading, and/or maintenance of existing utility lines, pipelines, and facilities should be designed and implemented to be compatible with Scenic Integrity Levels, recreation resource values, and desired conditions in Management Areas 7.2 and 8.2.
7.2, 8.1, 8.2, and 8.6	Tank batteries should be located outside of the Management Area boundary or near the edge whenever possible in Management Areas 7.2, 8.1, 8.2, 8.3, and 8.6.