Governor Jim Justice Director Brett W. McMillion

November 19, 2024

RE: Maintenance of Open and Semi-open Lands, Roadside Corridors and Utility Rights-of-Way

To whom it may concern:

Staff from the Game, Fish and Diversity Units were provided with an opportunity to comment on the referenced action. The Game and Fish Unit employees were in approval with the proposed action, provided that all EPA label conditions were abided by. The threat of NNIS is so significant in some locations that short term impacts are orders of magnitude less impacting than the long effects of NNIS in our ecosystems and on our common species. This perspective changes however when we are talking about the Diversity program which is tasked with conserving and preserving Species of Greatest Conservation Need (SGCN). The remainder of our input addresses these species. It is important that the Forest Service understands that it is not our intent to prohibit managing NNIS, rather we want to see it done as targeted as possible to not impact these rare species. After reading this input, should you have specific treatment areas and would like more specific location information so that avoidance and minimization measures may be employed, we will provide that. Further, these comments are general in nature and as site specific areas are developed can likely become more specific to reduce impact and enhance treatment. Please reach back out to us at the Elkins Operations Center or the District 2 office as those needs arise.

In terms of real numbers, North America’s avifauna declined by approximately 30 percent between 1970 and 2019. Particularly acute declines have been observed for species breeding in grasslands and boreal forests, but nearly two-thirds of species of eastern forests have declined, with a collective population loss of nearly 20 percent (Rosenberg et al. 2019). The Appalachian Mountains region, and particularly West Virginia, remain heavily forested, and accordingly have both high species population responsibility and conservation opportunity. While habitat management on private lands has increasingly been emphasized in recent years, public lands continue to be essential in delivering habitat for at-risk species.

The near-entirety of lands in West Virginia managed by GW-Jefferson National Forest overlap Conservation Focus Areas included in the State Wildlife Action Plan (James Headwaters; Cacapon River-Patterson Creek). Conservation and management actions for birds within these focal areas should, *in aggregate*, create or enhance dynamic forest landscapes that support migratory and resident birds across their annual cycles.

Birds of early-successional forest, old field, and grassland habitats are broadly declining in West Virginia, and activities proposed for the Openland Project are most likely to affect priority SGCN that breed in these habitats, along with species that disperse to these habitats post-breeding. Species may include:



In review of the scoping letter, we note that proposed actions were not paired with time-of-year windows when they would be implemented. To avoid incidental take of birds and/or bird nests per the  Migratory Bird Treaty Act, we strongly recommend avoiding annual periods of peak breeding activity.  We advise an August 16 - April 15 window within which management activities should occur. This would allow sufficient time for early-nesting species to attempt to re-nest. Active nests and their substrates should be flagged and avoided during management activities.

Golden-winged Warbler Working Group (GWWA WG). 2013. Best Management Practices for Golden-winged Warbler Habitats in the Appalachian Region: Golden-winged Warbler Habitat on Utility Rights-of-way in the Appalachians (supplemental insert; rev. 2019). www.gwwa.org.

If work must occur within the restriction window (April 16 - August 15), we request that managers adhere to guidelines set forth in:

USFWS (U.S. Fish and Wildlife Service). 2024. Nationwide Avoidance and Minimization Measures for Birds. <https://www.fws.gov/media/nationwide-avoidance-minimization-measures-birds>.

When project activities cannot occur outside the bird nesting season, conduct surveys prior to the scheduled activity to determine if active nests are present within the area of impact and buffer any nesting locations found during surveys.

1. Generally, the surveys should be conducted no more than five days prior to the scheduled activity.
2. Timing and dimensions of the area to be surveyed vary and will depend on the nature of the project, location, and expected level of vegetation disturbance.
3. If active nests or breeding behavior (*e.g.*, courtship, nest building, territorial defense, etc.) are detected during these surveys, no vegetation removal activities should be conducted until nestlings have fledged, the nest fails, or breeding behaviors are no longer observed. If the activity must occur, establish a buffer zone around the nest and prohibit all activities within the buffer zone until nestlings have fledged and left the nest area. The dimension of the buffer zone will depend on the proposed activity, habitat type, and species present and should be coordinated with the local or regional FWS office.
4. When establishing a buffer zone, create a visible boundary (*e.g.*, flagging tape, pin flags, and/or ropes/string) and signage to protect the area. If the boundary and/or signage is knocked down or destroyed, suspend work wholly, or in part, until the boundary is satisfactorily repaired.
5. When establishing a buffer zone, a qualified biologist should be present onsite to serve as a biological monitor during vegetation clearing and grading activities to ensure no take of migratory birds occurs. Prior to vegetation clearing, the monitor should ensure that the limits of construction have been properly staked and are readily identifiable. Any associated project activities that are inconsistent with the applicable avoidance and minimization measures, and activities that may result in the take of migratory birds will be immediately halted and reported to the appropriate FWS office within 24 hours.
6. If establishing a buffer zone is not feasible, contact the FWS for guidance to minimize impacts to migratory birds associated with the proposed project or removal of an active nest. To remove an active nest, the person removing the nest must have a migratory bird permit authorizing this action. The FWS recommends contacting a federally permitted migratory bird rehabilitator prior to removing active nests for recommendations on disposition of nest contents.
7. When encountering a bird that is exhausted, ill, injured, or orphaned, immediately contact a federally permitted migratory bird rehabilitator and follow the rehabilitator’s instructions. In Northern West Virginia contact the Avian Conservation Center of Appalachia ([www.accawv.org](http://www.accawv.org); (304) 906-5438); in southern West Virginia contact Three Rivers Avian Conservancy ([www.tracwv.org](http://www.tracwv.org); (304) 466-4683). You may transport eggs or nestling to a federally permitted migratory bird rehabilitator, if the rehabilitator recommends that you do so.

Since many bird species return to the same or nearby locations to breed year after year, and to avoid local extirpations, we advise where feasible that management activities in utility corridors and wildlife openings be temporally staggered such that a continuous supply of habitat remains available at local scale. Within areas targeted for management in any given year, emphasis should be placed on the minimum amount of mechanical disturbance and/or herbicide application necessary to achieve the desired condition. Where possible, native grasses, herbaceous plants, and shrubs should be retained, prioritizing spatial heterogeneity as highlighted in GWWA WG 2013.

All targeted wildlife openings in West Virginia are in areas of historical occurrence for Golden-winged Warbler, a priority SGCN currently under consideration for ESA status. Openings above 2,000ft elevation should be evaluated for potential current suitability for the species. Where conditions are currently suitable, USFS should consider forgoing actions that would render habitat unsuitable. This is particularly important in areas with recent documented occurrence, including the vicinity of Wilson Cove Wildlife Management Area (WMA), Hardy County; Wardensville WMA near Basore, Hardy County; Shenandoah WMA near Reddish Knob in the Brushy Fork and Stoney Run watersheds, Pendleton County; and in Potts Creek WMA in the vicinity of Waitesville, Monroe County. We recommend the below document be used to assess habitat suitability:

Golden-winged Warbler Working Group. 2013. Best Management Practices for Golden-winged Warbler Habitats in the Appalachian Region. [www.gwwa.org](http://www.gwwa.org). <https://gwwa.org/wp-content/uploads/2022/08/GWWA-APPLRegionalGuide_190711.pdf>

For grassland habitats >10 acres, mowing and/or burning should be rotational, which would maintain public recreation values while retaining avian SGCN nesting microhabitat for, *e.g.*, American woodcock. Scattered clumps of, *e.g. Rubus*, should be retained as additional nesting microhabitat for, *e.g.*, field sparrow. Rotation strategy should include partitioning the field into strips and mowing a third of the field annually, in sequence. However, see recommendations pertaining to pollinators below, which may be more appropriate for patches <10 acres.

For activities targeted to road corridors, canopy closure over roads should be maintained or encouraged, particularly near adjacent open landscapes (*e.g.*, farmland). Daylighting of roads encourages penetration into forest landscapes by the Brown-headed Cowbird, a brood parasite that reduces forest songbird productivity.

***Pollinator Conservation***

Early successional and open-lands habitats such as shrublands, old fields, pastures, hayfields, road corridors, and rights-of-way have the potential to provide excellent habitat for pollinators with a diversity of grasses, forbs, shrubs, and trees that provide both food (pollen and nectar) and cover, in addition to important resources like patches of bare soil used by ground-nesting bees and pithy or hollow-stemmed plants (such as elderberry (*Sambucus* spp.), brambles (*Rubus* spp.), and sumac (*Rhus* spp.)) which are used as hibernacula and nesting habitat for solitary bees.

Per the West Virginia Pollinator Handbook: “When developing disturbance strategies with pollinators in mind, it is important to consider the timing, amount and intensity of the disturbance. A general rule is that only 25% to 33% of pollinator habitat should be disturbed by mowing, grazing, or haying at any one time in order to protect overwintering pollinators, foraging larvae and adults, as well as other wildlife. The area disturbed should not totally eliminate a resource critical to pollinator habitat such as the only area providing pollen nectar resources during a given period. This will allow for recolonization of the disturbed area from nearby undisturbed refugia, an important factor in the recovery of pollinator populations after disturbance. In order to maximize foraging and egg-laying opportunities, maintenance activities should be avoided while plants are in flower. Ideally, mowing in areas where pollinator habitat is important should be done only in the late fall or early winter.”

In a study conducted on Forest Service lands in the Great Lakes region, Cunningham-Minnick et. al (2024) emphasized that soil properties (e.g., sandy vs. clayey soil texture) influence the effects of management practices on bee communities  in open habitats. They provide management recommendations for native bees (“BeeMPs”) contextualized based on soil type, opening size, edge effects, and connectivity with other openings. They also emphasize the importance of select ‘keystone’ woody genera (e.g., *Salix*, *Prunus*, *Amelanchier*, *Ilex*) as important floral resources for native bee communities.

Plant Conservation

Numerous plant species and ecological communities of conservation concern in WV have been documented to occur along roads, utility ROWs, and other linear transportation corridors (e.g., rail-trails) in the George Washington & Jefferson National Forest in West Virginia. Roadsides, and similarly utility line ROWs, can host relatively high densities and high quality occurrences of rare plants.

However, roads and utility ROWS are also intrinsically vulnerable. The roads and ROWs are not built nor maintained with the intent of maintaining or managing for plants and plant communities. Road and utility ROW maintenance practices can incidentally or unintentionally destroy rare plant populations. The principal ways that managers can avoid damage to rare plant populations on roads and utility ROWs is 1) know where important populations of plants occur and 2) employ practices that do not damage those plant populations.

Areas where known populations of rare plants occur is a good starting point to guide management, but new populations of rare plants are found at a high rate on the GWJNF and suggest that surveys will often be necessary when planning changes to management regimes along roadways and ROWs.

Proposed vegetation management areas in, intersecting, or near known occurrences of rare plants and natural communities should trigger more extensive surveys (Table 1). Data sources that help locate sensitive and rare biota include the ‘Special Biological Areas’ maintained by the GWJ and the WV Natural Heritage Program’s database of tracked species and communities. Surveys should be triggered if project areas intersect natural features (wetlands, streams, cliffs, shale barrens, etc.) known to host rare plants.

Additionally, an occurrence of the globally rare Corallorhiza bentleyi, Bentley’s Coralroot, is found on the Potts Valley Rail Trail. We are unsure of whether the Rail Trail is included in the purview of the scoping for the Openlands Maintenance Project.

To avoid damage to plant populations, managers should choose vegetation control methods that are appropriate to the sensitivity of the target area. For example, areas with known populations of rare plants should be treated with highly targeted methods that are unlikely to impact non-target vegetation.

Table: Plant occurrences intersecting with roads and utility ROWs on the GWJNF in West Virginia.

|  |  |  |
| --- | --- | --- |
| Species Name | Common Name | Conservation Status Rank |
| Allium oxyphilum | Nodding Onion | G2S2 |
| Arabis serotina | Shale Barren Rockcress | G2S2 |
| Asplenium septentrionale | Northern Spleenwort | G5S2 |
| Betula papyrifera | Paper Birch | G5S2 |
| Carex straminea | Straw Sedge | G5S2 |
| Carex tonsa var. tonsa | Shaved Sedge | G5S1 |
| Clematis albicoma | White-hair Leatherflower | G4S3 |
| Clematis occidentalis var. occidentalis | Purple Virgin's Bower | G5T5S2 |
| Coeloglossum viride var. virescens | Long-bract Green Orchis | G5T5S1 |
| Corallorhiza bentleyi | Bentley's Coralroot | G2S1 |
| Coreopsis verticillata | Whorled Tickseed | G5S1 |
| Dichanthelium xanthophysum | Slender Panicgrass | G5SH |
| Gaylussacia brachycera | Box Huckleberry | G3S2 |
| Glyceria acutiflora | Creeping Mannagrass | G5S2 |
| Gymnocarpium appalachianum | Appalachian Oak Fern | G3S2 |
| Gymnocarpium dryopteris | Northern Oak Fern | G5S1 |
| Helianthus laevigatus | Smooth Sunflower | G4S2 |
| Heuchera alba | White Alumroot | G2S2 |
| Heuchera americana var. hispida | Rough Alumroot | G5T3S2 |
| Linum lewisii var. lewisii | Prairie Flax | G5T5S2 |
| Najas gracillima | Slender Waternymph | G5S2 |
| Oenothera argillicola | Shalebarren  Evening-primrose | G3S3 |
| Panicum flexile | Wiry Panicgrass | G5S1 |
| Paronychia virginica | Yellow Nailwort | G4S2 |
| Phaseolus polystachios var. polystachios | Wild Kidney Bean | G5T5S1 |
| Pieris floribunda | Mountain Fetterbush | G4S3 |
| Piptochaetium avenaceum | Eastern Speargrass | G5S2 |
| Saxifraga pensylvanica | Eastern Swamp Saxifrage | G5S2 |
| Solidago arguta var. harrisii | Shalebarren Goldenrod | G5T4S3 |
| Stenanthium  gramineum var. gramineum | Featherbells | G4S2 |
| Taenidia montana | Mountain-pimpernel | G3S3 |
| Trifolium virginicum | Kate's Mountain Clover | G3S3 |
| Trillium pusillum var. monticulum | Mountain Loving Least  Trillium | G4T1S1 |
| Viburnum rafinesquianum | Downy Arrow-wood | G5S2 |
| Xerophyllum asphodeloides | Eastern Turkeybeard | G4S1  |

NNIS Management

The management and control methods outlined in the scoping notice have the potential to improve wildlife habitat through the reduction in non-native invasive species cover. Minimize the further introduction or spread of NNIS during open lands management activities by following the guidelines outlined in the [Non-native Invasive Species Best Management Practices Guidance for the U.S. Forest Service Eastern Region](https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5412628.pdf).

Timing of treatment, choice of herbicide active ingredient, and choice of application method should seek to maximize target specificity/selectivity and minimize the impact to desirable native vegetation. In treatment areas with identified sensitive plant populations or animal SGCN, timing of herbicide applications and other disturbance activities (e.g., mowing) should be conducted during a dormant period or at a minimum outside the flowering/reproductive period so as to not adversely affect the growth and reproduction of plant or animal SGCN. For example, basal bark and cut-stump treatment of invasive shrubs can be conducted in late fall through early spring when many native plants are dormant. Foliar treatment of several invasive shrubs may be conducted in early spring before many other native plants have leafed out.

Choice of herbicide active ingredient should take into account existing desirable native vegetation and seek to maximize target specificity and selectivity and minimize soil activity so as to minimize any impact to desirable native vegetation present at the treatment location.

In areas with desirable native vegetation growing among non-native invasive vegetation, the choice of herbicide application method should seek to minimize the potential for drift or non-target herbicide application. Cut stem methods such as hack-and-squirt or cut stump, along with basal bark applications for woody vegetation should be preferred over broadcast foliar applications. Where foliar application is the most effective method for a given plant species, spot-spraying with hand-held or backpack systems should be preferred over broadcast spraying or aerial application. Foliar applications should make use of approved adjuvants designed to reduce drift and increase target specificity.

Per the West Virginia Pollinator Handbook: “Spray application methods and equipment settings also strongly influence the potential for drift. Since small droplets are most likely to drift the longest distances, aerial applications and mist blowers should be avoided where feasible. Standard boom sprayers should be operated at the lowest  effective pressure and with the nozzles set as low as possible. Drop nozzles should be used to deliver insecticide within the crop canopy where it is less likely to be carried by wind currents. Regardless of the chemical or type of application equipment used, sprayers should be properly calibrated to ensure that excess amounts of pesticide are not applied.

Nozzle type also has a great influence on the amount of drift a sprayer produces. Turbo jet, raindrop, and air-induction nozzles produce less drift than conventional nozzles. Standard flat fan or hollow cone nozzles are generally poor choices for reduction of drift. Select only nozzles capable of operating at low pressures (15 to 30 psi) to produce larger, heavier droplets.”

Cave and Karst Conservation

Karst topography is considerably more porous than other geologic layers and any contact of herbicide with soil, or use prior to precipitation events, can have significant impacts to aquatic cave species.

It is vital that the type of herbicide chosen is appropriate for the desired results and is used in full compliance with all application guidelines to minimize groundwater contamination and contact with non-target plants.

Mechanical vegetation control should be conducted with consideration to karst areas (sinking streams, sinkholes, caves) to minimize sediment entry into subterranean habitats.

It is our belief that consideration of these comments will help mitigate any detrimental impacts to non-target species while allowing the treatment of NNIS. Thank you for soliciting our input and should you have any additional questions or concerns, please contact me at your earliest convenience.

Sincerely,



Keith Krantz

Northern Supervisor of Game Management

738 Ward Rd.

Elkins, WV 26241

(304) 630-0328 office

(304) 546-9157 cell

WEST VIRGINIA DIVISION OF NATURAL RESOURCES | ELKINS OPERATION CENTER

PO Box 67 | 738 Ward Road | Elkins, WV 26241 | ph (304) 637-0245 | fax (304) 637-0250 | WVdnr.gov