ELKINS-RANDOLPH COUNTY REGIONAL AIRPORT

OBSTRUCTION REMOVAL (RUNWAY 5-23 APPROACHES)

- SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT -

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For submittal to:
Federal Aviation Administration

On behalf of:
Elkins-Randolph County Regional Airport

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This environmental assessment becomes a Federal document when evaluated, signed, and dated by the Responsible FAA Official.

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Responsible FAA Official Date

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PREFACE

In accordance with Federal Aviation Administration (FAA) Order 1050.1G §1.5(e)(4), this Supplemental Environmental Assessment (Supplemental EA) represents the FAA's good-faith effort to prioritize documentation of the most important considerations required by the statute within the Congressionally mandated page limits. This prioritization reflects the FAA's expert judgment. Any considerations addressed briefly or left unaddressed were, in the FAA's judgment, comparatively not of a substantive nature that meaningfully informed the consideration of environmental impacts and the resulting decision on how to proceed. This EA represents that the FAA has made a good faith effort to fulfill National Environmental Priority Act (NEPA) requirements within the Congressional timeline; that such effort is substantially complete; that, in the FAA's expert opinion, it has thoroughly considered the factors mandated by NEPA; and that, in the FAA's judgment, the analysis contained therein is adequate to inform and reasonably explain the FAA's final decision regarding the proposed Federal action.

1. INTRODUCTION

The Elkins-Randolph County Regional Airport (EKN) is a public-use airport located two miles south of Elkins, West Virginia. The airport is located at 400 Airport Road, Elkins, West Virginia, 26241. The airport is approximately located at 38° 53' 11.67" latitude and 79° 51' 25.20" longitude. The airport is owned and operated by the Elkins-Randolph County Regional Airport Authority. EKN is classified as a general aviation airport and further classified as a utility facility designed to serve propellor driven airplanes with gross weights less than 12,500 pounds. The airport has two runways, Runway 5-23 and Runway 14-32, and associated taxiways, taxilanes, an apron and other infrastructure.

The Federal Aviation Administration (FAA) approved the Short Environmental Assessment Form for Obstruction Removal (Runway 5-23 Approaches) at the Elkins-Randolph County Regional Airport on November 2, 2020, through the issuance of a Finding of No Significant Impact/Record of Decision (FONSI/ROD) included in Appendix 1. The November 2020 FONSI/ROD was based on the Short Environmental Assessment Form (2020 SEAF) submitted by the Elkins-Randolph County Regional Airport Authority (Airport Sponsor).

Following the issuance of the FONSI/ROD, in December 2023, the Airport Authority requested that the US Fish and Wildlife Service (USFWS) approve an extension for the presence/absence survey conducted during the summer of 2018 for the Indiana Bat (IB) and Northern Long-eared Bear (NLEB). The USFWS reviewed the presence/absence survey conducted during the summer of 2018 for the IB and NLEB and determined that the results were still valid. As a part of that review, USFWS also required that the Elkins-Randolph County Regional Airport generate a new species list. The species list generated in early 2024 included the endangered Rusty Patched Bumble Bee (RPBB) which had not previously been identified.

The USFWS indicated via email that the project activities proposed have the certain potential to cause adverse effects to the RPBB. Effects to this species had not been previously evaluated as a part of the 2020 SEAF. Per the USFWS, until a formal consultation was completed, the Airport Authority was liable for any take for this species under Section 9 of the Endangered Species Act. As such, a formal consultation with the USFWS was conducted and a supplemental EA was prepared pursuant to NEPA as well as DOT and FAA orders.

This Supplemental Environmental Assessment (Supplemental EA) was prepared pursuant to the requirements of the National Environmental Policy Act (NEPA), and in accordance with US DOT Order 5610.1D*, DOT'S Procedures for Considering Environmental Impacts*, and Federal Aviation Administration (FAA) Order 1050.1G*, FAA National Environmental Policy Act Implementing Procedures* and FAA Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*

2. PROPOSED ACTION

The Elkins-Randolph County Regional Airport Authority (400 Airport Road, Elkins WV 26241) is undertaking the proposed action to remove the following obstructions within their approach surfaces in an effort to achieve the following outcomes: 1) maintaining the current length of available runway and 2) increasing the level of operational safety afforded to aircraft utilizing the airport.

Runway 5 Approach Surface

- Removing approximately 55 trees within 2.82 acres;
- Trimming approximately 38 trees within 0.82 acres;
- Removal of one obstruction light structure;
- Relocation of one obstruction light structure; and
- Removal of three silos

Runway 23 Approach Surface

- Removing approximately 518 trees within 13.93 acres; and
- Trimming of approximately 481 trees 13.12 acres.

Based on additional survey conducted after issuance of the FONSI/ROD the proposed action has been revised from 2020 when the 2020 SEAF was completed. The identification of selected trees for removal or trimming was done to minimize impacts as opposed to complete clear cut or trimming of identified acreages. Previously the proposed action included the following:

Runway 5 Approach Surface

- Clearing 2.56 acres of trees;
- Trimming 1.76 acres of trees;
- Removal of two obstruction light structures; and
- Lowering the top elevation of three silos

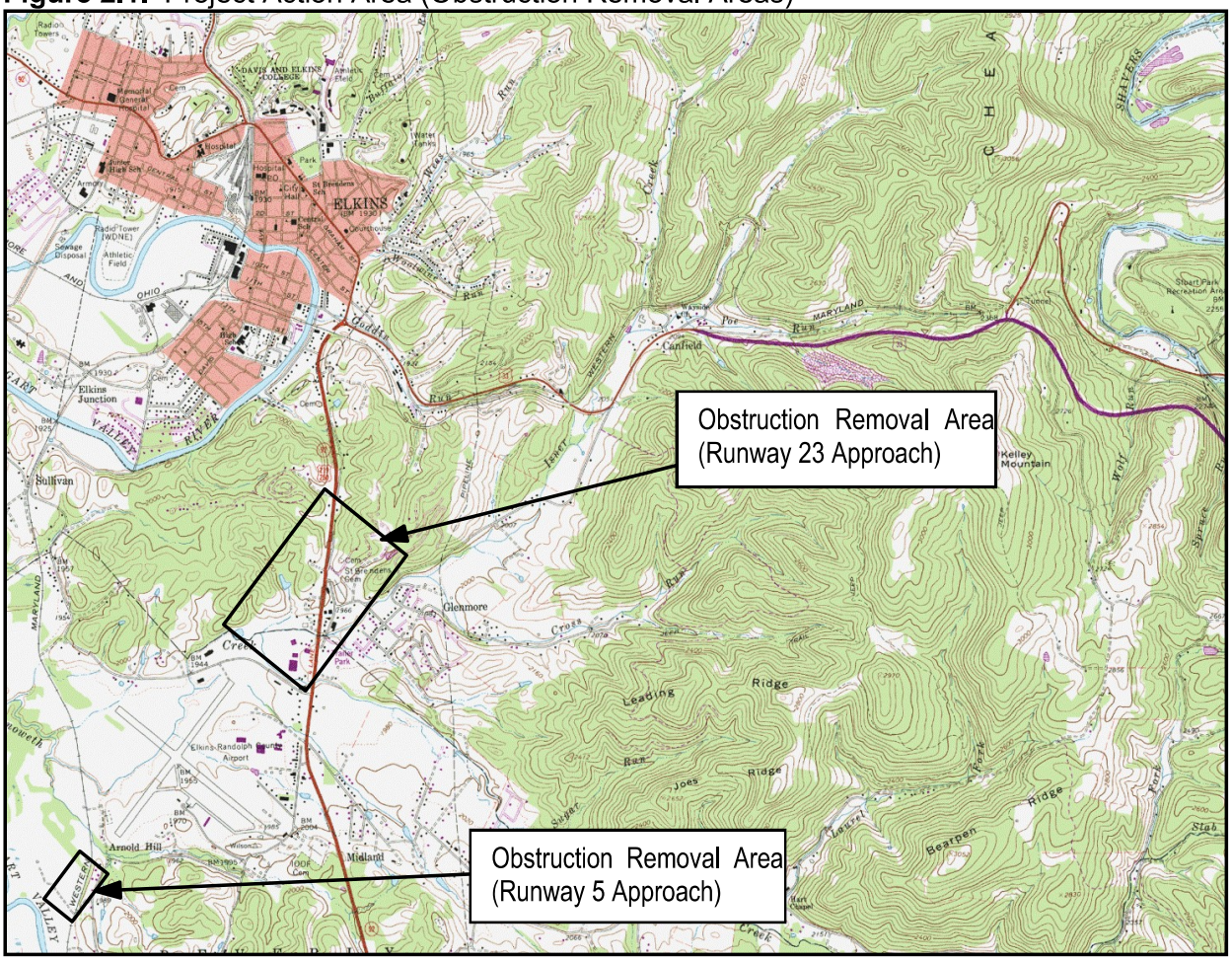
Runway 23 Approach Surface

- Clearing 13.58 acres of trees; and
- Trimming 10.61 acres of trees

The revisions were due to changes in the circumstances of the parcels included in the proposed action. The trees on these parcels continued to grow and further protrude into the approach surfaces during the time that elapsed from the completion of the original 2020 SEAF. The tree obstruction removal areas originally defined in the 2020 SEAF were determined by a Light Detection and Ranging (LIDAR) survey that was performed in 2017. LIDAR is a remote sensing system that can be used to measure vegetation height. Given the time that elapsed since that survey, a new LIDAR survey was conducted in 2023 to determine how much the trees had grown as well as to determine the extent of private tree removal that had occurred while obtaining all the necessary avigation easements to remove the tree obstructions. The areas were refined to only include those properties upon which avigation easements were previously obtained and previously included and evaluated in the 2020 SEAF. Additionally, at the time the 2020 SEAF was developed, the parcel upon which the silos was located was in active operation. Since then, the farming operations that previously occurred on that parcel have diminished and the parcel owner agreed to the complete removal for all three silos.

The proposed action will occur in the Runway 5 and Runway 23 Approach Surfaces of the Elkins-Randolph County Regional Airport. The Airport itself is located approximately 2 miles south of the City of Elkins, West Virginia. The airport is accessed via Elkins-Randolph County Airport Road (County Route 219/27) which connects to Beverly Pike (US-219) via Country Club Road (County Route 219/11) to the east of the airport. The airport is approximately located at 38° 53’ 11.67” latitude and 79° 51’ 25.20” longitude. The Project Action Area can be seen in Figure 2.1.

Figure 2.1. Project Action Area (Obstruction Removal Areas)



The proposed action has nine (9) tree clearing and/or trimming areas which are generally defined in Table 1 below. The areas are depicted in the preliminary construction site plans included in Appendix 2.

Table 2.1: Obstruction Removal Area Locations

Area No.	Acreage	Select Removal/ Select Trimming	Estimated Ground Disturbance*	Runway Approach	Latitude	Longitude
1	0.84	0.84 Acres Clearing	0.67 acres	Runway 23	38° 54' 02"	79° 50' 55"
2	11.63	5.76 Acres Clearing	9.89 acres	Runway 23	38° 54' 04"	79° 50' 48"
		5.87 Acres Trimming				
3	5.07	1.39 Acres Clearing	4.06 acres	Runway 23	38° 54' 11"	79° 50' 45"
		3.68 Acres Trimming				
4	9.45	5.98 Acres Clearing	7.56 acres	Runway 23	38° 54' 15"	79° 50' 32"
		3.47 Acres Trimming				
5	0.10	0.10 Acres Trimming	0.05 acres	Runway 23	38° 54' 25"	79° 50' 29"
6	0.82	0.82 Acres Clearing	0.62 acres	Runway 5	38° 53' 05"	79° 51' 53"
7	0.74	0.05 Acres Clearing	0.56 acres	Runway 5	38° 53' 01"	79° 51' 45"
		0.69 Acres Trimming				
8	1.91	1.91 Acres Clearing	0.57 acres	Runway 5	38° 52' 56"	79° 51' 49"
9	0.13	0.13 Acres Trimming	0.07 acres	Runway 5	38° 52' 51"	79° 51' 54"

*A feller buncher will be used for tree removal and trimming, resulting in ground disturbance. Therefore, the area of ground disturbance was visually estimated based on where trees needing to be trimmed or removed were spaced within each of the nine (9) study areas.

Tree Clearing

The trees which are designated to be cleared in the project areas will be cut at or near the existing ground surface utilizing a feller buncher. Dozers and graders will not be permitted. The tree trimming and removal operations will be performed on a per tree basis. All trees will be felled on each of the individual parcels and will remain the property of the parcel owner. The felled trees may be left in place at the discretion of the individual parcel owner. Should the felled tree be marketable, and if the landowner does not want the felled tree to remain, the marketable timber may be further processed by the Contractor. Any remaining trees which are not deemed to be marketable, and which the parcel owner does not want to remain, will be removed from the site and disposed of at an off-site location. The Contractor will also remove all downed limbs. All limbs and smaller slash/waste will be disposed of by chipping. All chips generated will be placed directly into a receiving truck, removed from the site and properly disposed.

Prior to the start of the construction, the Contractor will be required to provide the Airport Authority with documentation which formally designates all disposal area locations and methods of disposal (burning, chipping, etc.). In consideration of the significant forestry industry present in the area, an off-site waste location for the debris should be readily available.

In non-maintained areas, the Contractor will leave the remaining stumps in place to reduce ground disturbance. In select areas to be maintained as lawn, the Contractor will remove the remaining stumps through a grinding process. All stumps shall be ground to a point a minimum of 4" below the existing ground surface. Upon completion of the grinding process, the stumps shall be covered with a minimum of 4" of suitable topsoil material. To minimize ground disturbance, the Contractor will not be permitted to remove the stumps through grading with dozers or graders.

Tree Trimming

Trees which are located in areas designated to be trimmed will be trimmed down to the elevations indicated on the construction plans. The trimming area limits were developed based on an assumed removal height of approximately 10 feet. All limbs and slash/waste will be disposed of by chipping. All chips generated will be placed directly into a receiving truck, removed from the site and properly disposed.

Obstruction Light Structure Removal and Relocation

One (1) light structure (an aluminum frangible air mast) identified as an obstruction will be removed. This light structure is southwest of Runway 5 and was adjacent to a house which was demolished in 2011. It will be disassembled and the individual components recycled or properly disposed of in the local waste collection system. One (1) additional light structure, also located to the southwest of Runway 5, will be relocated by the power company so as not to be a future obstruction to airport operations. The area where the light structures are located is a previously disturbed area that was cleared in 2011.

Silo Removal

The two (2) Harvestore silos (metal construction), and one (1) concrete silo will be removed. The removed silos will become property of the Contractor and will be required to be properly disposed of off-site or re-used at the Contractor's discretion.

Site Restoration

Upon completion of obstruction removal activities, all disturbed areas will be restored through the following procedures:

- All ruts and depressions created by construction activity will be filled with suitable topsoil material or otherwise smoothed;
- All slash generated from the tree removal effort will be collected, removed from the site and properly disposed of at the pre-approved off-site disposal location; and
- All disturbed areas will be seeded and mulched in order to establish adequate vegetative cover.

3. PURPOSE AND NEED

The 2020 SEAF purpose and need is consistent with the purpose and need in this Supplemental EA. The purpose and need for the Supplemental EA serves as the foundation for identifying reasonable alternatives to the proposed action and comparing the impacts of such alternatives. For a potential alternative to be considered viable and carried forward for detailed evaluation in this Supplemental EA, that alternative must address the purpose and need as provided below from the 2020 SEAF.

The primary purpose of the Proposed action is to remove obstructions which are located within the 20:1 approach surfaces of Runway 5-23 at the Elkins-Randolph County Regional Airport to improve the level of operational safety afforded to aircraft utilizing the facility. The primary need

of the Proposed action is to bring the airport into compliance with current design standards by removing obstacles which obstruct the airport's airspace while maintaining the existing length of usable runway.

4. ALTERNATIVES

Two (2) alternatives to the proposed action, as well as the No Action Alternative, were considered in the 2020 SEAF. The same alternatives are considered relevant for the proposed action today.

Alternative No. 1 – Trim Tree Obstructions and Remove Structure Obstructions

Alternative No. 1 consists of the following components:

Runway 23 Approach Surface (Refer to Appendix 2)

- Trim Area 1-5 trees to remove the portion extending above the approach surface

Runway 5 Approach Surface (Refer to Appendix 2)

- Trim Area 6-9 trees to remove the portion extending above the approach surface;
- Remove 2 obstruction light towers; and
- Lower the top elevation of 3 silos

Tree Trimming

This component will consist of trimming the trees in the proposed action areas to remove the portion of vegetation extending above the approach surface. The degree of tree removal will vary from 1-foot to approximately 75-feet.

The trimming process will be completed during the winter months to aid in the prevention of damage to the portion of tree to remain. All trimming operations will be conducted in a manner to prevent damage to the remaining portion of the tree and under the supervision of an arborist. The debris created by the trimming operations will be chipped and immediately placed into a truck for removal from the site.

Structure Modifications

The lowering of the top elevation of the silos will consist of removing sections from the structure. The top dome section will be hoisted off the structure and the appropriate number of structure sections will be removed. Once the target height has been achieved, the top dome section will be re-installed. The removed sections will become property of the Contractor and will be required to be properly disposed of off-site.

Alternative Assessment

The implementation of Alternative No. 1 would satisfy the project's primary purpose and need. However, the alternative is inherent with some factors which make it a less desirable option than the Proposed action. A significant portion of the alternative would consist of removing more than 40-feet from the trees within the obstruction removal areas. Assuming a general tree height of 75-feet, Alternative No. 1 would remove approximately half of the tree. Removing such a significant portion of the tree significantly increases the likelihood of the tree dying because of the trimming process. If the tree survives, it is unlikely the tree would branch back out to any significant degree. In the event the tree dies because of the trimming operation, the property owner would be left to deal with the removal of the dead tree.

There is also an aesthetic impact associated with trimming a significant portion of the tree. If the tree is trimmed to a point where it will no longer branch out, the property owner is left

with numerous trees across their property which are simply the tree trunk with very minimal branching. This would create a significant detriment to the visual aspect of the property.

Regarding the silos, the lowering of the silos as opposed to the complete removal of the silos, would alter the aesthetic impact minimally. The silos have not been utilized in recent years due to diminished farming activities on the Cupp Farm. The complete removal of the silos, as opposed to lowering, may provide more benefit for the property owner.

With these remaining impacts to the property owner in mind, Alternative No. 1 is discounted in favor of the proposed action due to the lasting maintenance and visual impacts to the property owner.

Alternative No. 2 - Displace Runway 5-23 Thresholds

Alternative No. 2 consists of displacing the Runway 5 threshold by an additional 140 feet and the Runway 23 threshold by 1,300 feet to maintain an obstruction free 20:1 approach surface. This alternative would consist of re-marking the runway pavement surface and re-configuring the airfield lighting system to coincide with the new threshold location. The instrument approach procedures would also need to be revised to reflect the new threshold location and declared distances would need to be published to reflect the reduced length of Landing Distance Available (LDA).

The primary impact to the airport would be a significant reduction in the length of runway distance available for landing operations on Runway 5-23. The following table illustrates a comparison of the existing landing distances available and the distances which would be available upon displacement of the threshold:

Distance Category	Runway 5		Runway 23	
	Existing Condition	Post-Displacement Condition	Existing Condition	Post-Displacement Condition
TORA*	4,501’	4,501’	4,347’	4,347’
TODA*	4,501’	4,501’	4,347’	4,347’
LDA*	4,347’	4,207’	4,347’	3,047’
ASDA*	4,501’	4,501’	4,347’	4,347’

Note:
TORA – Take Off Run Available
TODA – Take Off Distance Available
LDA – Landing Distance Available
ASDA – Accelerate Stop Distance Available

The primary need of the proposed action is to bring the airport into compliance with design standards while maintaining the maximum amount of existing runway length. The implementation of this alternative would not be consistent with this primary need because it reduces the length of runway available for landing operations on Runways 5 and 23. Based on the analysis performed in the most recent Master Plan update, the minimum amount of runway landing length needed to accommodate 75% of the fleet mix at 60% of the useful load is 4,400’. The landing distance available after displacement would be 4,207’ for Runway 5 and 3,047’ for Runway 23. The implementation of this alternative would decrease the landing distance available to below the minimum distance needed to accommodate the design aircraft for the airport.

While the displacement of runway thresholds is a viable alternative to provide a clear approach surface in accordance with FAA Advisory Circular 150/5300-13A, it is only to be used if there are no other viable alternatives. As demonstrated previously in the 2020 SEAF

and also this Supplemental EA, the impacts associated with the proposed action are able to be mitigated to levels below the applicable thresholds of significance, and, therefore, Alternative No. 2 should be discounted in favor of the proposed action.

Alternative No. 3 - No Action Alternative

In order to fully evaluate the Proposed action, an alternative which contemplates performing no action must be evaluated and considered. In this instance, no construction activity would be undertaken and the existing environment would remain un-changed. The evaluation of the no action alternative assists in the decision-making process by considering the potential effects associated with no action being taken.

In order to maintain a safe and efficient airspace system, it is the FAA's policy to address obstacles which penetrate an airport's airspace. Depending on the location of the obstacle and the degree of penetration, there are several actions which can be undertaken to address the penetration. These actions range from disqualifying approach procedures from being applicable at night to requiring a relocation of a runway's threshold to achieve compliance.

The No Action Alternative does not meet the project's stated purpose and need to improve operational safety, comply with FAA design standards, maintain the existing length of usable runway for the Airport's design aircraft, and maintain surrounding land use compatible with air traffic. The No Action Alternative is carried forward in the analysis as a baseline against which the effects of the proposed action can be compared.

5. AFFECTED ENVIRONMENT

The Affected Environment chapter succinctly describes only those environmental resources the proposed action and its reasonable alternatives, if any, are likely to affect. The amount of information on potentially affected resources is based on the extent that the expected impact has changed based on project modifications since issuance of the 2020 FONSI/ROD.

5.1 Aviation Emissions and Air Quality

The Clean Air Act (CAA) requires the Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for six pollutants termed "criteria air pollutants" that are common in outdoor air and are considered harmful to public health and the environment. The NAAQS include carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (both PM10 and PM2.5), and sulfur dioxide (SO_2). Areas that do not meet the NAAQS are referred to as non-attainment areas. Areas that exceeded the NAAQS, but now achieve the standards are referred to as maintenance areas. Areas that are in compliance with the NAAQS are considered to be in attainment. The current standards are listed in Table 5.1 below. Randolph County, West Virginia is not currently listed as a non-attainment or maintenance area in the EPA Green Book.

Table 5.1: NAAQS Table

Pollutant [links to historical tables of NAAQS reviews]		Primary/ Secondary	Averaging Time	Level	Form
Carbon Monoxide (CO)		primary	8 hours	9 ppm	Not to be exceeded more than once per year
			1 hour	35 ppm	
Lead (Pb)		primary and secondary [1]	Rolling 3 month average	0.15 µg/m^3	maximum arithmetic mean of 3 consecutive monthly means in a 3-year period
Nitrogen Dioxide (NO_2)		primary	1 hour	100 ppb	Annual 98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		primary and secondary	1 year	53 ppb [2]	Annual Mean
Ozone (O_3)		primary and secondary [3]	8 hours	0.070 ppm	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
Particle Pollution (PM)	$PM_{2.5}$	primary	1 year	9.0 µg/m^3	annual mean, averaged over 3 years
		secondary	1 year	15.0 µg/m^3	annual mean, averaged over 3 years
		primary and secondary	24 hours	35 µg/m^3	98th percentile, averaged over 3 years
	PM_{10}	primary and secondary	24 hours	150 µg/m^3	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide (SO_2)		primary [4]	1 hour	75 ppb	Annual 99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		secondary [5]	1 year	10 ppb	annual mean, averaged over 3 years

Source: www.epa.gov/criteria-air-pollutants/naaqs-table

5.2 Biological Resources

Habitat

The Elkins-Randolph County Regional Airport is located in the Potomac Highlands region of West Virginia. The airport is situated in the Tygart River valley with the surrounding terrain rising dramatically to form mountains which constitute a portion of the Allegheny Mountain Range. The topography within the vicinity of the proposed action is rolling hills with the primary obstruction removal areas being located on the hilltops. Elevations in the proposed action area range from approximately 1930 feet (588 m) to 2,150 feet (655 m). The action/project area is primarily

privately owned forest land. The forest is classified as Northern Hardwood cover type.

The areas within the general vicinity of the airport contain a mixture of residential, commercial, public use and agricultural use properties.

The three (3) silos and the two (2) light structures are all located to the southwest of the Runway 5 end. These occur in previously disturbed areas. These areas were described in the 2024 Small Whorled Pogonia Survey Report located in Appendix 3 as "Other Habitat" within highly disturbed soils that do not support native herbaceous vegetation.

Species

Through consultation with the US Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) database during preparation of the 2020 SEAF, the following threatened or endangered plants and mammals were identified as potentially occurring and may be affected by activities within the project area:

Flowering Plants
Running Buffalo Clover
Small Whorled Pogonia

Mammals
Indiana Bat
Northern Long-eared Bat
Virginia Big-eared Bat

After both a habitat plant survey of the proposed action area and a bat mist net survey were conducted, the USFWS determined that the proposed action was not likely to adversely affect any of the listed threatened or endangered plants or mammals. This determination is documented in correspondence received from the USFWS dated November 22, 2019, included in the 2020 SEAF in Appendix 1.

According to the same correspondence received from the USFWS, dated November 22, 2019, the results of the bat mist net survey would expire on May 15, 2024. The letter also noted that – *If a significant amendment is proposed to change or expand this project, or if timber will be removed after that date, a new survey may be necessary, and the Service should be contacted.*

Given that the Airport Authority was not able to remove the trees prior to the bat mist net survey expiration date, the Airport Authority, through their Consultant, contacted the USFWS and a request was made for an extension of the expiration date for the bat mist net survey. During correspondence with the USFWS regarding this matter, the USFWS stated that the Airport Authority generate a new species list.

The species list obtained for the proposed action area on February 22, 2024, included the following threatened or endangered plant, insects and mammals:

Flowering Plant
Small Whorled Pogonia – Threatened

Insects
Monarch Butterfly – Candidate
Rusty Patched Bumble Bee - Endangered

Mammals
Indiana Bat - Endangered
Northern Long-eared Bat - Endangered
Tricolored Bat – Proposed Endangered

The updated consultation with USFWS resulted in the request for another presence/probable absence survey for listed bats as well as another botanical survey for the Small Whorled Pogonia. Specific surveys for the Rusty Patched Bumble Bee (RPBB) or the Monarch Butterfly were not requested as the Airport is within a mapped High Potential Zone (HPZ), and the RPBB is assumed present in the project area. The Monarch Butterfly is also assumed present in the project area.

USFWS recommended the presence/probably absence surveys for listed bats move forward for the proposed action on July 9, 2024 based on a work plan submitted July 3, 2024. Mist netting was conducted during the period of July 28th through August 3rd, 2024, for the purpose of determining presence/probable absence for Indiana Bat (IB), Northern Long-eared Bat (NLEB), and Tricolored Bat (TCB). No IB, NLEB, or TCB were captured during the summer mist netting surveys conducted in the study area. The Bat Survey Report is included in Appendix 3. The captured bat species were limited to Big Brown Bats and Eastern Red Bats. A previous survey conducted in 2018 yielded the same results.

A botanical survey for small whorled pogonia was conducted in accordance with Procedures for Conducting Surveys for Federally Threatened or Endangered Plants in West Virginia located at https://www.fws.gov/media/west-virginia-plant-survey-guidelines based on a work plan approved by the USFWS on August 5, 2024. The botanical survey was conducted on August 19, 20 and 21, 2024 for the proposed action in designated areas surrounding the airport. The Small Whorled Pogonia Survey Report is included in Appendix 3. The federally listed Small Whorled Pogonia plant species was not observed in the study areas during the botanical survey. A previous survey conducted in 2019 yielded the same results.

5.3 Farmlands

The 2020 SEAF included a custom summary soil survey report detailing the soils contained within the proposed action area. A new summary soil survey report was obtained in October 2026, included in Appendix 5. The new summary soil survey report obtained is comparable to the original custom summary soil survey and evaluated in the 2020 SEAF. A summary of the soils within the proposed action area, past and present, is tabulated in Table 5.3.1.

Table 5.3.1: NRCS Soils

Map Unit Symbol	Map Unit Name	Farmland Classification	Acreage (2020 SEAF)	Percentage of Potential Impact Area (2020 SEAF)	Acreage (Proposed)	Percentage of Potential Impact Area (Proposed)
BkC	Berks-Weikert complex 8 to 15 percent slopes	Not prime farmland	3.79	13.3%	4.33	14.1%
BkD	Berks-Weikert complex 15 to 25 percent slopes	Not prime farmland	9.58	33.6%	12.74	41.5%
BkE	Berks-Weikert complex 25 to 35 percent slopes	Not prime farmland	9.35	32.8%	8.21	26.8%
BkF	Berks-Weikert complex 35 to 70 percent slopes	Not prime farmland	3.72	13.0%	3.37	11.0%
MoB	Monongahela silt loam, moist 3 to 8 percent slopes	Farmland of statewide importance	0.20	0.8%	0.13	0.4%
Ph	Philo loam	Farmland of statewide importance	0.10	0.3%	0.12	0.4%
Pn	Pope-Atkins complex	All areas are prime farmland	1.23	4.3%	1.23	4.0%
Py	Purdy silt loam	Not prime farmland	0.54	1.9%	0.56	1.8%
Totals			28.51	100%	30.69	100%

5.4 Hazardous Materials, Solid Waste, and Pollution Prevention

The 2020 SEAF did not identify hazardous waste in the project area and evaluated solid waste associated with vegetation removal as well as lowering silos. The proposed action will now generate additional solid waste associated with refined obstruction removal acreage and full removal of the three silos rather than lowering the top elevation of the silos.

5.5 Historic, Architectural, Archeological, and Cultural Resources

As part of the 2020 SEAF, historic and archaeological surveys were conducted resulting in no architectural properties eligible for, or included in, the National Register of Historic Properties (NRHP) within the project area and no archaeological resources with the proposed action area based on negative testing. Consultation with the West Virginia State Historic Preservation Office (SHPO) concurred that no historic properties will be affected by the proposed undertaking. SHPO also stated that the Cupp Farm, upon which the silos are located, has been altered numerous times and does not appear to represent any specific agricultural period. Other built resources over 45 years old within the viewshed appear to lack the significance and integrity to be eligible

for listing in the NRHP.

Consultation was re-initiated with SHPO regarding changes to the proposed undertaking, including removal of three silos and revised timber removal based on new LIDAR data, in July 2025. The response received concurred with previous review letters dated May 18, 2022, March 30, 2017, February 24, 2020, and January 4, 2018, that the proposed project will affect no architectural or archeological properties eligible for or included in the NRHP.

5.6 Land Use

The land uses encompassing the project area are predominantly rural undeveloped wooded areas as well as residential and agricultural uses. The 2020 SEAF addressed silage storage impacts on an active dairy farm. The 2020 SEAF states that three silos will be lowered, effectively reducing the silage storage for the dairy farm.

After subsequent easement negotiations with the Owner of the dairy farm, all in accordance with the FONSI/ROD and provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act and FAA Advisory Circular 150/5100-17, the Owner negotiated full removal and payment for the three affected silos. A copy of the Amendment and Ratification of Easement Agreement is attached as Appendix 6.

The 2020 SEAF states that the proposed action includes the acquisition of obstruction removal easements for parcels of property which are situated within the Elkins-Randolph County Regional Airport's airspace. The easements are strictly related to aviation operations associated with airspace and have been obtained for all affected parcels since the 2020 SEAF.

5.7 Socioeconomics and Children's Environmental Health and Safety Risks

The 2020 SEAF identified an active dairy farm operation within the project area as well as major roadways and access points surrounding and within the obstruction removal areas. The 2020 SEAF also noted a slightly higher percentage of children within the project area census tracts than the county average.

5.8 Visual Effects Including Light Emissions

The 2020 SEAF identified the project area as a predominantly rural undeveloped wooded areas with residential and agricultural uses. Wooded areas are scattered among open fields and the terrain consists of rolling hills with the primary obstruction removal areas being located on the hilltops. Light emissions are predominantly associated with airfield operations, vehicular traffic, and residential lighting. The 2020 SEAF evaluated visual effects with relation to the project areas specific to each parcel. The affected parcels have not been altered or amended from those previously addressed in the 2020 SEAF. Some of the property owners have changed given the passage of time.

6. ENVIRONMENTAL CONSEQUENCES

6.1 Aviation Emissions and Air Quality

The analysis in the 2020 SEAF concluded that the expected increase in construction emissions would be below *de minimis* levels and therefore would not be expected to have a significant air quality impact.

The 2020 SEAF stated that the anticipated construction timeframe for the project is approximately 200 calendar days.

Calculated emissions for the project from the 2020 SEAF include:

O_3 Precursor Nitrogen Oxides (NOX) – 4.2 ton/year
O_3 Precursor Volatile Organic Compounds (VOC) – 2.4 ton/year
CO and SO_2 – 6.6 tons/year
PM10 - 1.2 ton/year.

Established *de minimis* thresholds are:
NOX - 100 tons/year
VOC - 50 tons/year
CO and SO_2 - 100 tons/year
PM10 - 100 tons/year.

The USFWS BO included in Appendix 3, states that the proposed clearing and trimming of selected trees can only occur between May 1 and September 31. Based on this time restriction, the construction timeframe for the project is expected to be shortened to 120 days so that the proposed action can be accomplished in a single-phase project. The proposed action includes an additional 0.61 acre of tree clearing and an additional 1.57 acres of tree trimming as well as the complete removal of the three silos. Even with these elements, and based on the prior calculations, the project would still be well below the previously stated *de minimis* thresholds.

Reasonably Foreseeable Impacts

Given that Randolph County, West Virginia is still not currently listed as a non-attainment or maintenance area in the EPA Green Book, there are no reasonably foreseeable impacts as previously identified in the 2020 SEAF, and any impact is not significant.

In order to fully evaluate the proposed action, an alternative which contemplates performing no action must be evaluated and considered. The no action alternative would not result in air quality impacts; therefore, would not cause pollutant concentrations to exceed one or more of the NAAQS levels.

Threshold of Significance

The significance threshold considered for Aviation Emissions and Air Quality resources as identified by the FAA in Exhibit A-1 in FAA Order 1050.1G, FAA National Environmental Policy Act Implementing Procedures:

The action would cause pollutant concentrations to exceed one or more of the National Ambient Air Quality Standards (NAAQS), as established by the Environmental Protection Agency under the Clean Air Act, for any of the time periods analyzed, or to increase the frequency or severity of any such existing violations.

Degradation of air quality from the performance of the Proposed action is not anticipated. Emissions associated with the Proposed action are less than the *de minimis* thresholds; therefore, there are no significant impacts to air quality.

6.2 Biological Resources

After completion of mist net surveys for listed bat species and a botanical survey for the Small Whorled Pogonia, and in accordance with Section 7 of the Endangered Species Act (ESA; 16 U.S.C. 1531–1544, 87 Stat. 884), as amended, the FAA evaluated a Biological Assessment (BA) prepared by TranSystems/GFT and made effect determinations for the seven federally listed species included in the BA. The BA prepared and submitted to the USFWS requested concurrence with the FAA's "may effect, likely to adversely affect" determination for the federally endangered RPBB. Additionally, the FAA requested the Service's concurrence with "may affect, not likely to adversely affect" determinations for the federally endangered IB, NLEB, and Virginia big-eared bat (VBEB), proposed endangered TCB, as well as the threatened Small Whorled Pogonia, and proposed threatened Monarch Butterfly.

In reviewing the determinations included in the BA, the USFWS prepared a Biological Opinion (BO) and concurred with the FAA's determinations that the proposed action is not likely to adversely affect the IB, NLEB, and VBEB. Additionally, the USFWS concurred with the FAA's determination that the project is not likely to adversely affect Small Whorled Pogonia. This concurrence is based on the fact that the proposed action was evaluated by TranSystems/GFT, and all suitable habitat was surveyed for these species. No listed bat species were captured and no Small Whorled Pogonia was detected during these surveys, establishing probable absence within the Action Area. Consequently, potential impacts to these species are expected to be discountable, as its presence within the Action Area is not expected. The BO did not address the Monarch Butterfly as it has not been listed as federally threatened.

The BO prepared by the USFWS and included in Appendix 3 addresses the potential effects of the proposed action on the endangered RPBB. The Opinion is based on information from the BA dated May 13, 2026, telephone conversations, email communication, and other sources of information. The BO determined that overwintering queens are not anticipated to be directly affected (crushed) due to the FAA's commitment to conduct tree removal and tree trimming between May 1st and September 31st. Additionally, multiple overwintering queens are likely to be present elsewhere within the suitable habitat in the HPZ as well as portions of the project area outside of the limits of disturbance. Impacts to foraging RPBB are expected to be minimal given the limited extent and temporary nature of most impacts. The BO also stated that the use of heavy machinery during tree removal and trimming may result in the direct mortality of nesting queens and the destruction of colonies in suitable nesting habitats. Such impacts could lead to the loss of most or all individuals in the affected colonies. Nest destruction could also impact newly established foundress queens, reducing the number of new colonies and ultimately affecting the population's reproductive success.

Reasonably Foreseeable Impacts

The proposed action will affect approximately 31 acres of trees. There are no anticipated impacts to endangered or migratory birds from current, on-going, or reasonably foreseeable future projects. Impacts to migratory birds are not anticipated to be adverse or significant but are anticipated to be temporary. There remains enough suitable habitat surrounding the proposed action area, that includes the preferred woodlands habitat, that these species can move to.

Habitats located on and near the airport support a limited variety of common wildlife species that have adapted to the surrounding developed airport community. No significant impacts to these species have been identified. Furthermore, no other off-airport projects have been identified as having a potentially significant impact on these resources. Therefore, the proposed action would not cause or contribute to significant adverse impacts to these species or habitats.

Under the no action alternative, no obstruction removal would occur. The existing plant, insect and mammal habitats would not be affected.

The monitoring, reporting and conservation measures included in the BO and stated below in this Supplemental EA adequately address the reasonably foreseeable impacts associated with each species, particularly for the RPBB assumed present within the proposed action area.

Threshold of Significance

The significance threshold considered for Biological resources as identified by the FAA in Exhibit A-1 in FAA Order 1050.1G, FAA National Environmental Policy Act Implementing Procedures:

The U.S. Fish and Wildlife Service or the National Marine Fisheries Service determines that the action would be likely to jeopardize the continued existence of a federally listed threatened or endangered species or would result in the destruction or adverse modification of federally designated critical habitat. The FAA has not established a significance threshold for non listed species.

The FAA also identifies additional factors to consider in Exhibit A-1 of FAA Order 1050.1G, FAA National Environmental Policy Act Implementing Procedures including:

The action would have the potential for:
• A long-term or permanent loss of unlisted plant or wildlife species, i.e., extirpation of the species from a large project area (e.g., a new commercial service airport);
• Adverse impacts to special status species (e.g., state species of concern, species proposed for listing, migratory birds, bald and golden eagles) or their habitats;
• Substantial loss, reduction, degradation, disturbance, or fragmentation of native species' habitats or their populations; or
• Adverse impacts on a species' reproductive success rates, natural mortality rates, non-natural mortality (e.g., road kills and hunting), or ability to sustain the minimum population levels required for population maintenance.

According to the BO, it is the USFWS opinion that the Obstruction Removal (Runway 5-23 Approaches) Project, as proposed, is not likely to jeopardize the continued existence of the RPBB. Under the terms of Section 7(b)(4) and Section 7(o)(2) of the ESA, taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the ESA provided that such taking is in compliance with the terms and conditions of this incidental take statement (ITS).

6.2.1 Construction Monitoring

The Elkins-Randolph County Regional Airport Authority, through the FAA shall notify the USFWS, in writing (digital format), regarding the projected and actual start dates, progress, and completion of the project and verify that all conservation measures stated below were followed. The FAA, their permitted entities, and contractors, shall implement all required measures as described in the BA and the BO.

The FAA will make site visits prior to, during, and post implementation at all project implementation sites to observe and confirm that all conservation measures are being met. The FAA shall notify the Service of any failures to meet these measures within 24 hours of observation.

The FAA shall monitor the number of acres affected by the action annually for the duration of the project. It is estimated that the project will be completed during calendar year 2027 or 2028. Each

year, the FAA shall provide the Service with a summary of the previous year's activities no later than January 15, beginning with the January following the first year of project implementation. Reports will be emailed to FW5_WVFO@fws.gov.

Any dead or injured listed rusty patched bumble bees located in the action area during implementation of the proposed action shall be immediately reported to the USFWS at fw5_wvfo@fws.gov. The FAA shall record information regarding the date, time, and location of any listed species found and the possible cause of injury or death and then will provide this information to the Service. Any dead specimens believed to be federally listed shall be transported on ice to the USFWS. Care must be taken in handling dead specimens to preserve biological material in the best possible state. If needed, staff from the USFWS will assist in species determination for any dead or moribund specimens. If a listed species is identified, the USFWS staff will contact the appropriate Service law enforcement office.

The FAA will notify the Service, in writing (digital format), regarding the projected and actual start dates, progress, and completion of the project throughout the life of the project.

Monitoring and Reporting Requirements

To monitor the impacts of incidental take, the FAA or any applicant must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement [50 CFR 402.14(i)(4)].

As stated in the BO, the removal of the three silos, one light structure, and relocation of one additional light structure are not expected to result in adverse effects because these activities occur in areas of previously disturbed habitat within highly disturbed soils that do not support native herbaceous vegetation. Although the structure removals and relocation involve ground disturbance, this activity will occur entirely within previously disturbed areas. Because these areas have already been impacted and no suitable undisturbed habitat remains, the USFWS does not expect the RPBB to be present in these areas. Therefore, the USFWS does not anticipate adverse effects from removal of the silo and light structures, and as such, no construction monitoring for the USFWS will be required for these project tasks.

6.2.2 Conservation Measures

The following conservation measures were included regarding the affected species in the BA:

IB, NLEB, TCB, and VBEB

Conservation measures to off-set the minimal impact would include:

- The use of a feller buncher to control the direction of the tree fall allowing the operator to precisely guide where the tree lands, minimizing uncontrolled falling and damage to the surrounding trees and area.
- The use of herbicides and pesticides will be prohibited on the project.

Monarch Butterfly

Conservation measures to off-set the minimal impact would include:

- Stumps remaining after tree cutting in areas to be maintained as lawn will be ground to a point minimum of 4" below the existing ground surface. Upon completion of the grinding process, the stumps shall be covered with a minimum of 4" of suitable topsoil material. The Contractor will not be permitted to remove the stumps through grading with dozers or graders.

- The use of a feller buncher to control the direction of the tree fall allowing the operator to precisely guide where the tree lands, minimizing uncontrolled falling and damage to the surrounding trees and area.
- As a component of the Proposed action, best management practices developed by the West Virginia Division of Forestry and the West Virginia Department of Environmental Protection will be adhered to, including seeding all obstruction removal areas to establish adequate vegetation cover to help stabilize the surface soils. In all areas permitted by property owners, areas will be seeded with a wildflower mix (to include milkweed) and mulched to provide nectar sources for the butterfly.
- The coordination for off-site Project mitigation is ongoing with the Elkins Parks and Recreation Commission and would consist of planting or enhancing an existing pollinator garden, within Glendale Park, or another local park within the City of Elkins (approximately 2 miles north of the Airport) . It is anticipated that the Airport and FAA will enter into an agreement with the Elkins Parks and Recreation Commission providing monetary assistance to achieve this objective if scope and price is approved by FAA.
- The use of herbicides and pesticides will be prohibited on the project.

Small Whorled Pogonia

Conservation measures to off-set the minimal impact would include:

- Stumps remaining after tree cutting in non-maintained areas will be left in place to reduce ground disturbance.
- Stumps remaining after tree cutting in areas to be maintained as lawn will be ground to a point minimum of 4” below the existing ground surface. Upon completion of the grinding process, the stumps shall be covered with a minimum of 4” of suitable topsoil material. The Contractor will not be permitted to remove the stumps through grading with dozers or graders.
- The use of a feller buncher to control the direction of the tree fall allowing the operator to precisely guide where the tree lands, minimizing uncontrolled falling and damage to the surrounding trees and area.
- The use of herbicides and pesticides will be prohibited on the project.

RPBB

Avoidance, Minimization, and Conservation Measures:

- The proposed cutting and trimming of selected trees will occur between May 1 and September 31 to avoid impacts to overwintering queens.
- Stumps remaining after tree cutting in non-maintained areas will be left in place to reduce ground disturbance.
- Stumps remaining after tree cutting in areas to be maintained as lawn will be ground to a point minimum of 4” below the existing ground surface. Upon completion of the grinding process, the stumps shall be covered with a minimum of 4” of suitable topsoil material. The Contractor will not be permitted to remove the stumps through grading with dozers or graders.
- The use of a feller buncher to control the direction of the tree fall allowing the operator to precisely guide where the tree lands, minimizing uncontrolled falling and damage to the surrounding trees and area.
- The USFWS will be given on-site access (based on pre-approval by each property owner) during the proposed tree cutting and trimming activities to allow for monitoring of the proposed action, and to provide an opportunity to gather data on potential RPBB habitat.

- As a component of the Proposed action, best management practices developed by the West Virginia Division of Forestry and the West Virginia Department of Environmental Protection will be adhered to, including seeding all obstruction removal areas to establish adequate vegetation cover to help stabilize the surface soils. In all areas permitted by property owners, areas will be seeded with a wildflower mix and mulched to provide nectar sources for the RPBB.
- The coordination for off-site Project mitigation is ongoing with the Elkins Parks and Recreation Commission and would consist of planting or enhancing an existing pollinator garden, within Glendale Park or another local park within the City of Elkins (approximately 2 miles north of the Airport). It is anticipated that the Airport and FAA will enter into an agreement with the Elkins Parks and Recreation Commission providing monetary assistance to achieve this objective if scope and price is approved by FAA.
- The use of herbicides and pesticides will be prohibited on the project.

The USFWS requested consideration and notification for implementation of any of the following additional conservation recommendations in the BO:

- Pursue opportunities to enhance RPBB habitat through enhancement of existing pollinator gardens or planting of new pollinator gardens.
- Use straw instead of hay when stabilizing and restoring project areas.
- Develop and participate in educational and outreach efforts on rusty patched bumble bees.
- Support research projects to understand better the range of plant species, including tree species on which the RPBB forages in forested areas.

As stated in the BA, the coordination for off-site Project mitigation is ongoing with the Elkins Parks and Recreation Commission and would consist of planting or enhancing an existing pollinator garden, within Glendale Park or another local park within the City of Elkins (approximately 2 miles north of the Airport). It is anticipated that the Airport and FAA will enter into an agreement with the Elkins Parks and Recreation Commission providing monetary assistance to achieve this objective if scope and price is approved by FAA.

6.3 Farmlands

The Farmland Protection Policy Act (FPPA) regulates Federal actions with the potential to convert farmland to non-agricultural uses. The proposed action does not contain any components which would irreversibly convert farmland to non-agricultural uses. The avigation easements obtained protect against future obstructions; and, as such, the overall use of the properties will not be altered because of the proposed action. Therefore, the proposed action is not subject to the requirements of the FPPA.

The Cupp farm had been used as a dairy farm for several decades. The property is no longer a working dairy farm – operations have been halted for several years. Most structures were built, operated and used for dairy farm operations, including the silos. In consultation with the property owners, and at their request, it was ultimately agreed that the silos should be removed entirely in lieu of lowering them.

Reasonably Foreseeable Impacts

Given that most of the proposed action will be occurring on either previously disturbed private land or airport property and does not preclude future farming activities, there are no reasonably foreseeable impacts and any impact is not significant.

The no action alternative would maintain all existing farmland; therefore, there would be no significant impacts associated with the no action alternative.

Threshold of Significance

The significance threshold considered for Farmland resources as identified by the FAA in Exhibit A-1 in FAA Order 1050.1G, FAA National Environmental Policy Act Implementing Procedures:

The total combined score on Form AD-1006, "Farmland Conversion Impact Rating," ranges between 200 and 260 points.

The FAA also identifies additional factors to consider in Exhibit A-1 of FAA Order 1050.1G, FAA National Environmental Policy Act Implementing Procedures including:

The action would have the potential to convert prime or unique farmlands to non-agricultural uses. Important farmlands include pastureland, cropland, and forest considered to be prime, unique, or statewide or locally important land.

The proposed action and the removal of the three silos would not change the existing circumstances and existing activities for the agricultural farmland present in the proposed action area. The proposed action will not involve the conversion of farmlands to non-agricultural use; therefore, a Farmland Conversion Impact Rating is not required.

6.4 Hazardous Materials, Solid Waste, and Pollution Prevention

The proposed action does not contain any components which would potentially create contamination from hazardous materials.

The proposed action will not generate a significant amount of solid waste. Waste will consist primarily of vegetable material which will bio-degrade and will be removed from parcels as directed by property owners.

One light structure (an aluminum frangible air mast) will be disassembled and the individual components recycled or properly disposed of in the local waste collection system. Three removed silos will become property of the Contractor and will be required to be properly disposed of off-site or re-used at the Contractor's discretion. The Contractor performing the tree removal will be required to adhere to the Best Management Practices developed by the West Virginia Division of Forestry and the West Virginia Department of Environmental Protection to address the creation and transportation of sediment. These measures include the installation of sediment control devices to provide a structural control to prevent excessive sediment creation or transportation.

Reasonably Foreseeable Impacts

Given that all waste material will be properly disposed of and the local facilities can handle the volume of waste generated and in consideration of the significant forestry industry present in the area, an off-site waste location for the debris should be readily available. All reasonably foreseeable impacts associated with the proposed action have been adequately considered and any impact is not significant.

The no action alternative would not generate any solid waste nor create any contamination from hazardous materials.

Threshold of Significance

The significance threshold considered for Hazardous Materials, Solid Wate, and Pollution Prevention resources as identified by the FAA in Exhibit A-1 in FAA Order 1050.1G, FAA National Environmental Policy Act Implementing Procedures:

The FAA has not established a significance threshold for Hazardous Materials, Solid Waste, and Pollution Prevention.

The FAA also identifies additional factors to consider in Exhibit A-1 of FAA Order 1050.1G, FAA National Environmental Policy Act Implementing Procedures including:

The action would have the potential to:
• Violate applicable Federal, state, tribal, or local laws or regulations regarding hazardous materials and/or solid waste management;
• Involve a contaminated site (including but not limited to a site listed on the National Priorities List). Contaminated sites may encompass relatively large areas. However, not all of the grounds within the boundaries of a contaminated site are contaminated, which leaves space for siting a facility on non contaminated land within the boundaries of a contaminated site. Further, construction that does not impact existing caps or ongoing monitoring within contaminated areas may not also result in releases of contaminated material. An EIS may not be required in these instances. See the Desk Reference for mitigating impacts below significant levels (e.g., modifying an action to site it on non-contaminated grounds within a contaminated site). Therefore, if appropriately mitigated, actions within the boundaries of a contaminated site would not have significant impacts;
• Produce appreciably larger quantities or increased or more types of hazardous waste;
• Generate appreciably larger quantities or types of solid waste;
• Use a different method of waste collection, treatment, storage, or disposal that, as an action, would adversely impact the site, surroundings, or affected community, and/or would exceed extant state, Tribal, or local capacity; or
• Adversely affect human health and the environment (through activities described in the action and their fidelity with federal, state, Tribal, or local laws or regulations regarding hazardous materials and/or solid waste management).

While hazardous materials are not anticipated given that the three silos were previously utilized for the storage of silage, the Contractor will be required to conduct a survey of the structures (two metal and one concrete) to be demolished to identify any hazardous material that would require mitigation prior to demolition activities. The Contractor will be required to obtain samples and perform testing of suspected materials to determine if there are hazardous materials that will require mitigation. The Contractor will also be required to identify the required protocol for the proper mitigation and disposal of any hazardous materials encountered in accordance with local, state and federal regulations.

6.5 Historic, Architectural, Archeological, and Cultural Resources

Based on the current consultation with SHPO, there are still no properties listed in or eligible for inclusion into the NRHP within or immediately adjacent to the proposed project sites nor are there any documented archaeological resources in the proposed action area.

Reasonably Foreseeable Impacts

There are no reasonably foreseeable impacts as previously identified in the 2020 SEAF, and any impact is not significant.

The no action alternative would not affect any properties listed or eligible to be listed for the inclusion in the NRHP.

Threshold of Significance

The significance threshold considered for Historic, Architectural, Archeological, and Cultural Resources as identified by the FAA in Exhibit A-1 in FAA Order 1050.1G, FAA National Environmental Policy Act Implementing Procedures:

The FAA has not established a significance threshold for Historical, Architectural, Archeological, and Cultural Resources.

The FAA also identifies additional factors to consider in Exhibit A-1 of FAA Order 1050.1G, FAA National Environmental Policy Act Implementing Procedures including:

The action would result in a finding of Adverse Effect through the Section 106 process. However, an adverse effect finding does not automatically trigger preparation of an EIS (i.e. a significant impact).

Consistent with the 2020 SEAF, historic properties will not be affected by the proposed undertaking.

6.6 Land Use

The proposed action will not result in significant land use impacts and will not alter the land use of either the project area or any areas within the immediate vicinity. Avigation easements previously obtained will help to ensure that land use within the proposed action area will strictly conform to aviation-related operations.

Reasonably Foreseeable Impacts

There are no reasonably foreseeable impacts as previously identified in the 2020 SEAF, and any impact is not significant.

The no action alternative would not impact the land use in the project area vicinity.

Threshold of Significance

The significance threshold considered for Land Use resources as identified by the FAA in Exhibit A-1 in FAA Order 1050.1G, FAA National Environmental Policy Act Implementing Procedures:

The FAA has not established a significance threshold for Land Use.

The FAA also identifies additional factors to consider in Exhibit A-1 of FAA Order 1050.1G, FAA National Environmental Policy Act Implementing Procedures including:

There are no specific independent factors to consider for Land Use. The determination that significant impacts exist in the Land Use impact category is normally dependent on the significance of other impacts.

The proposed action would result in no land use impacts.

6.7 Socioeconomics and Children's Environmental Health and Safety Risks

The proposed action does not contain any components which would permanently alter surface traffic patterns or create a noticeable increase in surface traffic congestion in the vicinity of the proposed action. As stated on the 2020 SEAF, the roadways to be used to access the project site are sufficient to accommodate the increase in traffic without a significant decrease in the level of service. In order to minimize the disruption to local traffic, the Contractor will be required to limit project activity to a Monday through Friday work schedule with all work commencing after 8:00 AM and concluding by 5:00 PM. The Contractor will only be allowed to transport equipment or materials into or out of the project areas during this time period. Upon completion of the proposed action, the existing conditions, as they relate to surface traffic patterns, will remain unchanged.

After easement negotiations with the Owner of the dairy farm, all in accordance with the provisions of the FONSI/ROD and the Uniform Relocation Assistance and Real Property Acquisition Policies Act and FAA Advisory Circular 150/5100-17, the Owner negotiated full removal and payment for the three affected silos.

The proposed action will also not have the potential to lead to a disproportionate environmental health or safety risk to children. There are no significant impacts to resource areas that could impact children (e.g. hazardous waste, air quality).

Reasonably Foreseeable Impacts

There are no reasonably foreseeable impacts as previously identified in the 2020 SEAF, and any impact is not significant.

Under the no action alternative, no obstructions would be removed. Impacts would not be incurred to the Cupp Farm. The airport would be required to displace both of the runway thresholds, shortening the available runway length; thereby, limiting aircraft that are able to utilize the airport.

Threshold of Significance

The significance threshold considered for Socioeconomics and for Children's Environmental Health and Safety Risks resources as identified by the FAA in Exhibit A-1 in FAA Order 1050.1G, FAA National Environmental Policy Act Implementing Procedures:

The FAA has not established a significance threshold for Socioeconomics or for Children's Environmental Health and Safety Risks.

The FAA also identifies additional factors to consider in Exhibit A-1 of FAA Order 1050.1G, FAA National Environmental Policy Act Implementing Procedures including:

The action would have the potential to:
- *Disrupt or divide the physical arrangement of an established community;*
- *Cause extensive relocation when sufficient replacement housing is unavailable;*
- *Cause extensive relocation of community businesses that would cause severe economic hardship for affected communities;*
- *Disrupt local traffic patterns and substantially reduce the levels of service of roads serving an airport and its surrounding communities;*
- *Produce a substantial change in the community tax base; or*
- *Lead to a disproportionate health or safety risk to children.*

The proposed action would not result in any significant adverse impacts, socioeconomic impacts or impacts to children's environmental health and safety risks.

6.8 Visual Effects Including Light Emissions

The proposed action does not include any elements which would introduce a new source of light emissions; therefore, the project is not inherent with the potential to create annoyances or interfere with normal activities due to light emissions.

While not having the potential to affect the visual characteristics of the areas through the introduction of a new light emission source, the proposed action does have the potential to affect the visual characteristics of the project areas through alterations to existing lines of sight. The proposed action consists of removing trees and structures which would alter the viewsheds by potentially introducing new lines of sight into previously obscured areas.

The full impact and effects were evaluated in detail in the 2020 SEAF. Given the small changes that have occurred to the project areas since the initial evaluation, the evaluations included in the 2020 SEAF are still considered to be valid. The original proposed action included 16.14 acres of clearing and 12.37 acres of trimming, the removal of the two obstruction light structures and lowering the top elevation of three silos. The current proposed action includes 16.75 acres of clearing and 13.94 acres of trimming, the removal of one obstruction light structure, the relocation of one obstruction light structure and the removal of three silos. The impacts associated with the proposed action are limited to the same parcels that were initially evaluated in the 2020 SEAF. The 2020 SEAF did not include any mitigation measures for viewshed impacts. To the extent possible, viewshed impacts are mitigated through tree trimming versus tree clearing based on previous conversations with individual parcel owners as well as varying degrees of remaining wooded buffers between structures and obstruction removal areas. The individual parcel owners may, at their discretion, re-plant trees and/or shrubs in the affected project areas. However, the trees and/or shrubs will have a height restriction associated with the applicable Runway 5 or Runway 23 approach.

It should be noted that the following parcels have changed hands since the time of the 2020 SEAF:

Barger Residence – 0.75 Acre of 1 Acre conveyed to Carol Bryant
Bennett Residence – Conveyed to Foxy Rentals
Bosworth Residence – Conveyed to Linda Little
Reckart Residence – Conveyed to Brian & Beverly Romero

Reasonably Foreseeable Impacts

There are no reasonably foreseeable impacts as previously identified in the 2020 SEAF, and any impact is not significant.

Under the no action alternative, the existing visual characteristics and existing lines of sight of the project areas would be maintained.

Threshold of Significance

The significance threshold considered for Visual Effects resources as identified by the FAA in Exhibit A-1 in FAA Order 1050.1G, FAA National Environmental Policy Act Implementing Procedures:

The FAA has not established a significance threshold for Light Emissions or Visual Resources/Visual Character.

The FAA also identifies additional factors to consider in Exhibit A-1 of FAA Order 1050.1G, FAA National Environmental Policy Act Implementing Procedures including:

The degree to which the action would have the potential to:
• Create annoyance or interfere with normal activities from light emissions; and
• Affect the visual character of the area due to the light emissions, including the importance, uniqueness, and aesthetic value of the affected visual resources.
The extent the action would have the potential to:
• Affect the nature of the visual character of the area, including the importance, uniqueness, and aesthetic value of the affected visual resources;
• Contrast with the visual resources and/or visual character in the study area; and
• Block or obstruct the views of visual resources, including whether these resources would still be viewable from other locations.

The proposed action would have no significant impact on visual effects; therefore no avoidance and/or minimization measures are proposed.

7. PUBLIC INVOLVEMENT

Airport development projects have the potential to spark public interest, especially for projects which are considered to be environmentally sensitive. An important part of the environmental assessment effort is providing the general public an opportunity to review the proposed project and its associated impacts. The public involvement process affords the public an opportunity and a forum to voice concerns about the project's overall impact on the environment. This process also affords the FAA the opportunity to provide the disclosure of project information as required by various environmental laws and regulations.

The proposed public involvement plan for the Proposed action contains two major components. The first component consists of coordinating the project directly with the property owners whose property will be directly impacted by the action. The Airport Authority, through its consultants on the project, has had ongoing direct contact with these property owners to discuss the project and allow the property owners to express concerns relating to the action, including project scoping changes from tree clearing to tree trimming, to the extent possible, evaluated in conjunction with LIDAR surveys that have occurred in the project areas. Any written concerns of the property owners will be addressed and incorporated into the Proposed action and Supplemental EA as applicable.

The second component consists of affording the general public an opportunity to review the project and to provide comment. To that end, the Airport Authority will publish a Notice of Availability (NOA) in the local newspaper, The Inter-Mountain, which has general circulation in Randolph County, West Virginia to notify the general public and to provide the opportunity to review and comment on the Proposed action. The NOA will detail, at a minimum, the following information:

- An updated statement of the Airport Authority's intent to undertake the proposed action;
- A concise description of the proposed action;
- The locations and times where the draft Supplemental EA will be made available for public review;
- A statement identifying the closing date (30 calendar days after publication) for receipt of comments; and

- A statement identifying the procedures to be used for submitting comments.

The NOA is included in Appendix 7.

APPENDIX 1

2020 SHORT ENVIRONMENTAL ASSESSMENT FORM (2020 SEAF)

REFER TO SEPARATELY

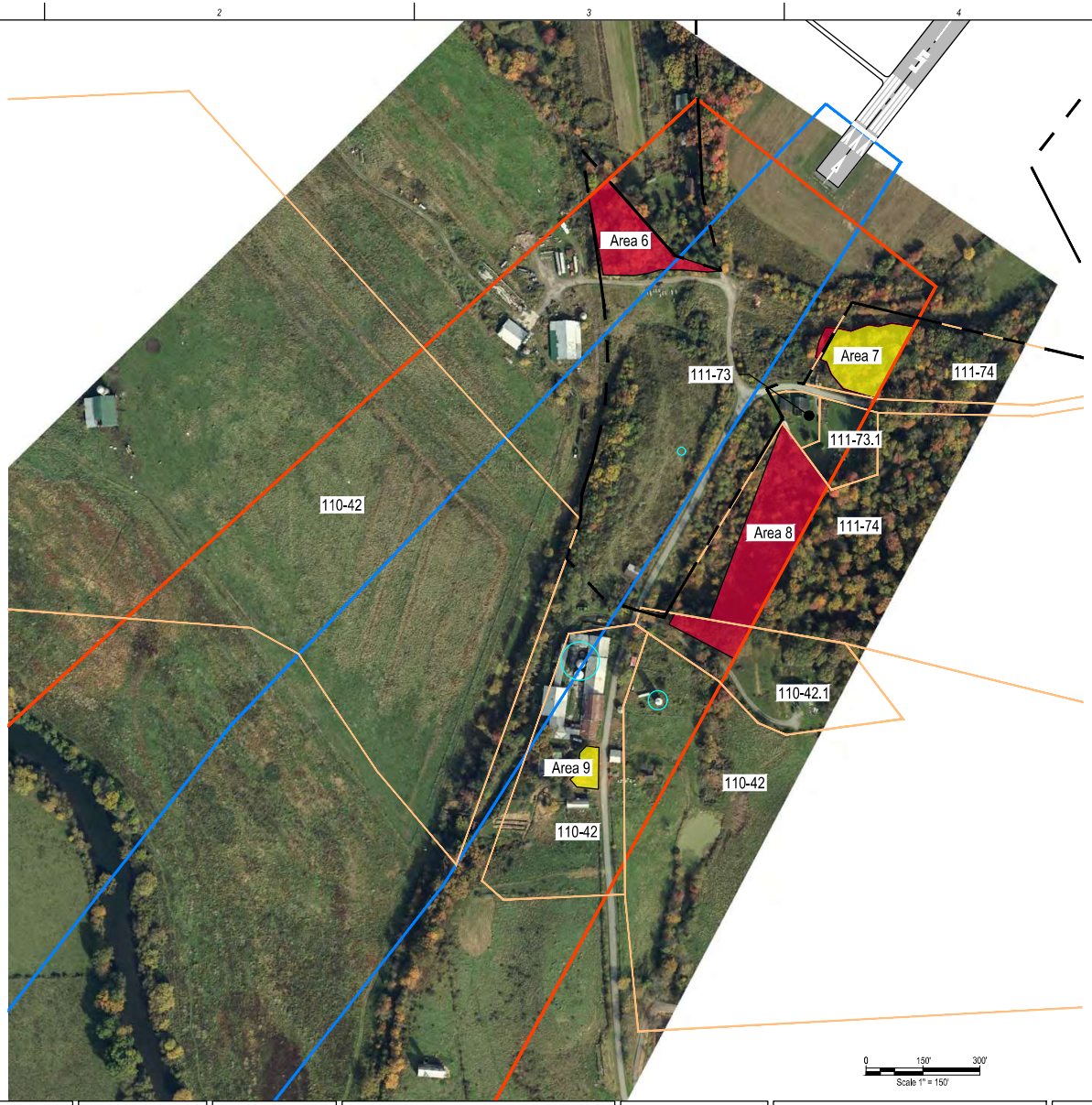
SHORT ENVIRONMENTAL ASSESSMENT FORM SEPTEMBER 2020 – FINAL (INCLUDING APPENDIX 1-13)

&

SHORT ENVIRONMENTAL ASSESSMENT FORM SEPTEMBER 2020 – FINAL (APPENDIX 14)

APPENDIX 2

PRELIMINARY CONSTRUCTION SITE PLANS



LEGEND		
ITEM	EXISTING	PROPOSED
TREE OBSTRUCTION REMOVAL	N/A	
TREE TRIMMING	N/A	
ADJACENT PROPERTY LINE		N/A
TAX PARCEL NUMBER	110-42	N/A
PART 77 NON-PRECISION INSTRUMENT APPROACH SURFACE (20:1 SLOPE)		N/A
THRESHOLD SITING VISUAL APPROACH SURFACE (20:1 SLOPE)		N/A

TRANSYSTEMS
615 West Highland Ave.
Ebensburg, PA 15931
Phone: 814.472.7700
Email: madelbaugh@transystems.com
Website: www.transystems.com

DESIGNED	MAD	01/24 DATE
DRAWN	RAK	01/24 DATE
CHECKED	CRM	01/24 DATE
APPROVED	MAD	01/24 DATE

REVISION		
DATE	BY	DESCRIPTION

ELKINS-RANDOLPH COUNTY REGIONAL AIRPORT AUTHORITY
400 Airport Road
Elkins, WV 26241

ELKINS-RANDOLPH COUNTY REGIONAL AIRPORT (EKN)

ELKINS WEST VIRGINIA

TREE OBSTRUCTION REMOVAL, PHASE 5

RUNWAY 5 END SITE PLAN (BASE BID)

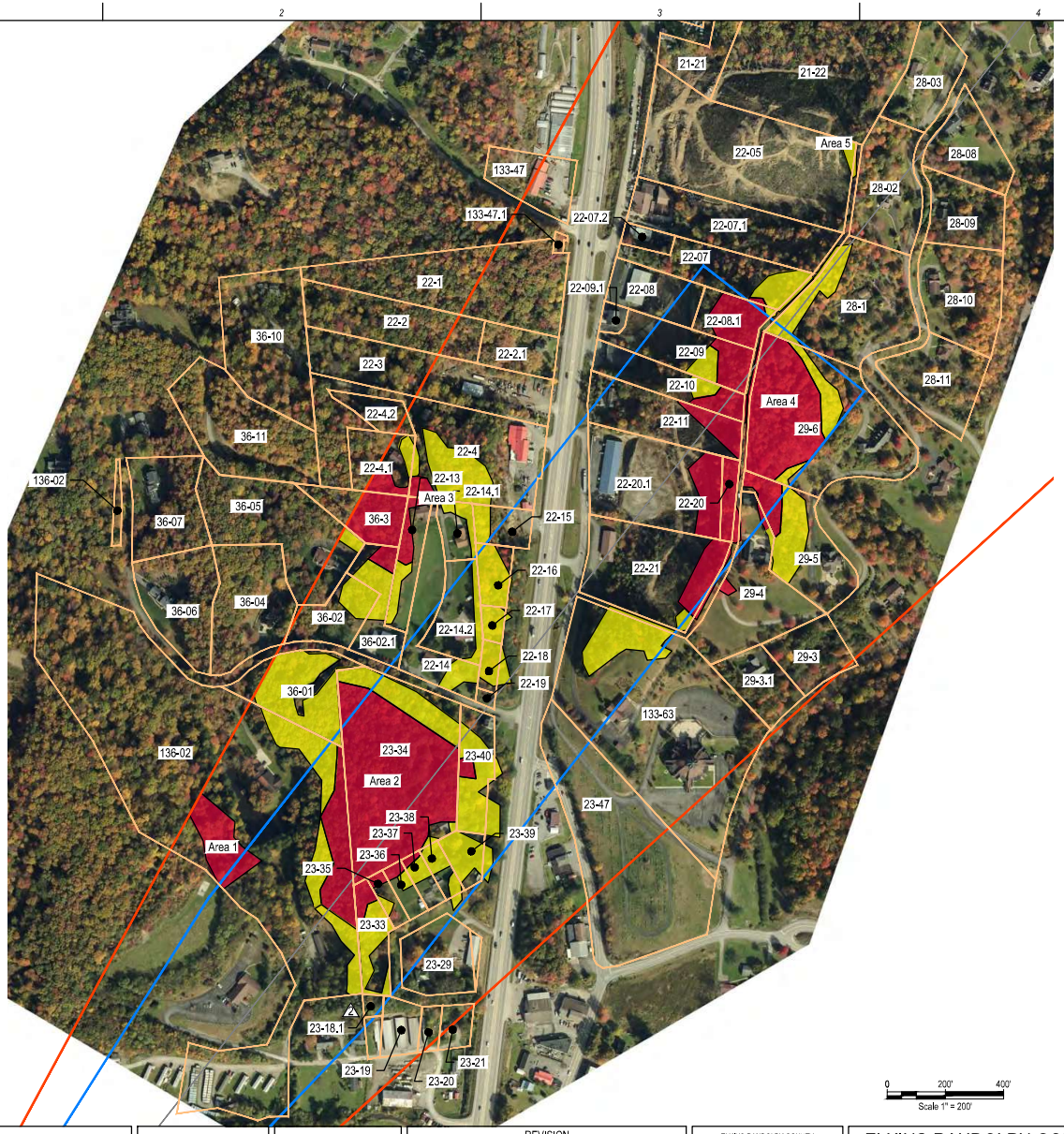
AP-04

PROJECT NO P707230229

DATE JANUARY 2024

G:\Projects_2023\EB707\707230229\Aviation\9000 DELIVERABLES\9300 CADD\PLAN SET\P-EKN-SITE-5 END-P707230229

IF THIS DRAWING IS LESS THAN 22" X 34" IT IS A REDUCED SIZE DRAWING



0 200' 400'
Scale 1" = 200'

LEGEND		
ITEM	EXISTING	PROPOSED
TREE OBSTRUCTION REMOVAL	N/A	
TREE TRIMMING	N/A	
ADJACENT PROPERTY LINE		N/A
TAX PARCEL NUMBER	110-42	N/A
PART 77 NON-PRECISION INSTRUMENT APPROACH SURFACE (20:1 SLOPE)		N/A
THRESHOLD SITING VISUAL APPROACH SURFACE (20:1 SLOPE)		N/A

TRANSYSTEMS
615 West Highland Ave.
Ebensburg, PA 15931
Phone: 814.472.7700
Email: madelbaugh@transystems.com
Website: www.transystems.com

DESIGNED	MAD	01/24 DATE
DRAWN	RAK	01/24 DATE
CHECKED	CRM	01/24 DATE
APPROVED	MAD	01/24 DATE

REVISION		
DATE	BY	DESCRIPTION

ELKINS-RANDOLPH COUNTY REGIONAL AIRPORT AUTHORITY
400 Airport Road
Elkins, WV 26241

ELKINS-RANDOLPH COUNTY REGIONAL AIRPORT (EKN)

ELKINS WEST VIRGINIA

TREE OBSTRUCTION REMOVAL, PHASE 5

RUNWAY 23 END SITE PLAN (ADD ALTERNATE BIDS)

AP-05

PROJECT NO P707230229 DATE JANUARY 2024

G:\Projects_2023\EB707\707230229\Aviation\9000 DELIVERABLES\9300 CADD\PLAN SET\P-EKN-SITE-23 END-P707230229

IF THIS DRAWING IS LESS THAN 22" X 34" IT IS A REDUCED SIZE DRAWING

APPENDIX 3

BIOLOGICAL ASSESSMENT (BA) & BIOLOGICAL OPINION (BO)

U.S. Department of Transportation
Federal Aviation Administration

Beckley Airports Field Office
176 Airport Circle, Room 101
Beaver, West Virginia 25813
Telephone: (609) 916-5790

May 13, 2026

Susan Stafford
Beckley Airports Field Office
176 Airport Circle, Rm 101
Beaver, WV 25813

Dear Mr. Hodges:

The Federal Aviation Administration (FAA) requests concurrence and initiation of formal consultation from the U.S. Fish and Wildlife Service on our determination that the proposed Elkins-Randolph County Regional Airport (EKN) Obstruction Removal (Runway 5-23 Approaches) Project (IPaC Project Code: 2024-0053235). The proposed project is located in Randolph County, WV.

The proposed project involves removal of obstructions to the Runway 5-23 approaches through the removal of selected trees within 16.75 acres, the trimming of selected trees within 13.94 acres, and removing four (4) structures (one light structure and three silos) located within nine (9) non-contiguous designated obstruction removal areas. The proposed project is necessary to bring the airport into compliance with current design standards by removing obstacles which obstruct the airport's airspace while maintaining the existing length of usable runway. The Proposed Action will remove obstructions which are located within the 20:1 approach surfaces of Runway 5-23 in order to improve the level of operational safety afforded to aircraft utilizing the facility. The Project also involves easement acquisition to facilitate the removal of the obstructions as well as to increase the Airport Authority's future control over the approaches to Runways 5 and 23.

We carefully reviewed the list of species and critical habitat that may be present within the project area based on a query of your Information for Planning and Consultation website on numerous occasions with the most recent occurring on December 11, 2025. That list is enclosed in Appendix B of the enclosed biological assessment.

The FAA has made a may affect, likely to adversely affect determination for the Rusty Patched Bumble Bee *(Bombus affinis)*.

The FAA made a may affect, not likely to adversely affect determination for the Indiana Bat *(Myotis sodalis),* Northern Long-eared Bat *(Myotis septentrionalis),* Tricolored Bat *(Perimyotis subflavus),* Virginia Big-eared Bat *(Corynorhinus (=Plecotus) townsendii virginianus),* Small Whorled Pogonia

(Isotria medeoloides), and Monarch Butterfly *(Danaus Plexippus)*. While suitable habitat is present in the project area for the listed bat species, USFWS approved mist net surveys, conducted in August 2018 and again in August 2024, did not capture listed species. Species captured were limited to Big Brown Bats (*Eptesicus fuscus*) and Eastern Red Bats (*Lasiurus borealis*). Based on the project's potential to affect plant species, USFWS approved plant surveys conducted in July and September 2019 and again in August 2024, did not observe the Small Whorled Pogonia. During the 2019 and 2024 plant surveys, milkweed was also not identified within the project area. Due to minimal impact anticipated to flowering herbaceous plants and absence of milkweed, there is very low potential for the Monarch Butterfly to be affected by the project. For these reasons, we conclude that the proposed project is not likely to adversely affect the Indiana Bat, Northern Long-eared Bat, Tricolored Bat, Virginia Big-eared Bat, Small Whorled Pogonia, and Monarch Butterfly. We request your concurrence with this determination.

We have attached a biological assessment that includes the requirements of 50 CFR 402.14(c)(1) to initiate formal consultation. Appendices to the biological assessment include project mapping, the IPaC official species list, determination keys, additional project correspondence, the 2024 Bat Survey Report, and the 2024 Small Whorled Pogonia Survey Report.

If you have any questions or need additional information, please contact me at susan.stafford@faa.gov or 609-916-5793.

Sincerely,



Susan Stafford
Environmental Protection Specialist
Beckley Airports Field Office

Enclosure: Elkins-Randolph County Regional Airport Obstruction Removal (Runway 5-23 Approaches) Project Biological Assessment (USFWS Project # 2024-0053235)

ELKINS-RANDOLPH COUNTY REGIONAL AIRPORT

OBSTRUCTION REMOVAL (RUNWAY 5-23 APPROACHES) PROJECT

- DRAFT BIOLOGICAL ASSESSMENT -

USFWS PROJECT # 2024-0053235



Prepared by:

TRANSYSTEMS

For submittal to:

United States Fish and Wildlife Service

On behalf of:

Elkins-Randolph County Regional Airport

DATE: MAY 2026

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ACRONYMS USED

Adaptive Capacity Units (ACU's)

Airport Improvement Program (AIP)

Biological Assessment (BA)

Best Management Practices (BMPs)

Celsius (°C)

Fahrenheit (°F)

Federal Aviation Administration (FAA)

High Potential Zone (HPZ)

National Plan of Integrated Airport Systems (NPIAS)

Northern Long-eared Bat (NLEB)

Pseudogymnoascus destructans (Pd)

Rare, Threatened, and Endangered (RTE)

Rusty Patched Bumble Bee (RPBB)

Species Status Assessment (SSA)

Tricolored Bat (TCB)

U.S. Fish and Wildlife Service (USFWS)

West Virginia (WV)

White-nose Syndrome (WNS)

EXECUTIVE SUMMARY

This Biological Assessment (BA) addresses the federally endangered Indiana bat (*Myotis sodalis*), the federally endangered northern long-eared bat (NLEB) (*Myotis septentrionalis*), the federally proposed endangered tricolored bat (TCB) (*Perimyotis sublavus*), the federally endangered Virginia big-eared bat (VBEB) (Corynorhinus (=Plecotus) townsendii virginianus), the federally proposed threatened monarch butterfly (*Danaus plexippus*), the federally endangered rusty patched bumble bee (RPBB) (*Bombus affinis*), and the federally threatened small whorled pogonia (*Isotria medeoloides*) in areas adjacent to the Elkins-Randolph County Regional Airport (Airport) where obstruction removal for the Runway 5-23 approaches is proposed (Randolph County, West Virginia). The Elkins-Randolph County Regional Airport is a county owned and operated facility that is part of the National Plan of Integrated Airport Systems (NPIAS). As part of the NPIAS, the Airport is required to meet 39 Federal Aviation Administration (FAA) grant assurances any time they accept federal funding for projects under the Airport Improvement Program (AIP). Failure to address the removal of obstructions to air navigation would result in the Airport violating three of these grant assurances.

Grant Assurance 19 (Operations and Maintenance): The airport and all facilities which are necessary to serve the aeronautical users of the airport, other than facilities owned or controlled by the United States, shall be operated at all times in a safe and serviceable condition and in accordance with the minimum standards as may be required or prescribed by applicable Federal, state and local agencies for maintenance and operation.

Grant Assurance 20 (Hazard Removal and Mitigation): Take appropriate action to assure that such terminal airspace as is required to protect instrument and visual operations to the airport (including established minimum flight altitudes) will be adequately cleared and protected by removing, lowering, relocating, marking, or lighting or otherwise mitigating existing airport hazards and by preventing the establishment or creation of future airport hazards.

Grant Assurance 21 (Compatible Land Use): Take appropriate action, to the extent reasonable, including the adoption of zoning laws, to restrict the use of land adjacent to, or in the immediate vicinity of, the airport to activities and purposes compatible with normal airport operations, including land and takeoff of aircraft.

It is critical for the airport to meet these assurances/obligations to ensure safe and efficient airport operations at all times, and to protect the airport's terminal airspace. A clear departure surface allows for standard takeoff minima and climb gradient from rotation through climb out. The airport must mitigate existing airport hazards and prevent new hazards to the maximum extent. Not doing so may affect the usable length of the runway.

The Proposed Action will remove obstructions to Runway 5-23 approaches in nine (9) separate areas totaling 30.69 acres. These areas include five (5) separate areas (Area 1 through Area 5) to the northeast of the Airport (Runway 23 end), and four (4) separate areas (Area 6 through Area 9) to the southwest of the Airport (Runway 5 end) that can be seen on **Figures 1 and 2 within Appendix A – Mapping** and are detailed in Table B.1 below**.** These nine (9) obstruction removal areas are on differing private properties, and the obstruction removal in these areas will consist of the removal of selected trees within 16.75 acres and the trimming of selected trees within 13.94 acres (calculated from the areas identified within the nine (9) individual areas noted for the

project). The identification of selected trees for removal or trimming was done to minimize impacts as opposed to complete clear cut or trimming of identified acreages. The trees identified for removal or trimming can be seen as "X's" on the Preliminary Construction Plans in **Appendix C**. These include 573 trees to be removed and 519 trees to be trimmed in total.

Table B.1: Obstruction Removal Area Locations

Area No.	Acreage	Select Removal/ Select Trimming	Estimated Ground Disturbance*	Runway Approach	Latitude	Longitude
1	0.84	0.84 Acres Removal	0.67 acres	Runway 23	38° 54' 02"	79° 50' 55"
2	11.63	5.76 Acres Removal 5.87 Acres Trimming	9.89 acres	Runway 23	38° 54' 04"	79° 50' 48"
3	5.07	1.39 Acres Removal 3.68 Acres Trimming	4.06 acres	Runway 23	38° 54' 11"	79° 50' 45"
4	9.45	5.98 Acres Removal 3.47 Acres Trimming	7.56 acres	Runway 23	38° 54' 15"	79° 50' 32"
5	0.10	0.10 Acres Trimming	0.05 acres	Runway 23	38° 54' 25"	79° 50' 29"
6	0.82	0.82 Acres Removal	0.62 acres	Runway 5	38° 53' 05"	79° 51' 53"
7	0.74	0.05 Acres Removal 0.69 Acres Trimming	0.56 acres	Runway 5	38° 53' 01"	79° 51' 45"
8	1.91	1.91 Acres Removal	0.57 acres	Runway 5	38° 52' 56"	79° 51' 49"
9	0.13	0.13 Acres Trimming	0.07 acres	Runway 5	38° 52' 51"	79° 51' 54"

*A feller buncher will be used for tree removal and trimming, resulting in ground disturbance. Therefore, the area of ground disturbance was visually estimated based on where trees needing to be trimmed or removed were spaced within each of the nine (9) study areas.

There will also be four (4) structures (one light structure and three silos) removed to the southwest of the Runway 5 end. One (1) additional light structure, also located to the southwest of Runway 5, will be relocated by the power company so as not to be a future obstruction to airport operations. As noted, all nine (9) of these areas, the silos and light structures are located on private property outside of Airport owned property, but within the approach surfaces of Runway 5-23.

Consultation with USFWS resulted in the request for a presence/probable absence survey for listed bats as well as a botanical survey for the small whorled pogonia. Specific surveys for the rusty-patched bumblebee or the monarch butterfly were not requested. A specific survey for the rusty patched bumblebee was not requested as the Airport is within a mapped High Potential Zone (HPZ), and the species is assumed present in the Project area. The monarch butterfly is also assumed present in the Project area.

A work plan was submitted on July 3, 2024, for the bat survey (See **Appendix D**). USFWS recommended the presence/probably absence surveys for listed bats move forward for the Project

on July 9, 2024. Mist netting was conducted during the period of July 28th through August 3rd, 2024, for the purpose of determining presence/probable absence for Indiana, NLEB, TCB, and VBEB in the area. No Indiana bats, NLEB, TCB, or VBEB were captured during the summer mist netting surveys conducted in the study area. A previous survey conducted in 2018 yielded the same results.

A botanical survey for small whorled pogonia was conducted in accordance with Procedures for Conducting Surveys for Federally Threatened or Endangered Plants in West Virginia located at https://www.fws.gov/media/west-virginia-plant-survey-guidelines. A work plan was prepared and approved by the USFWS via email dated August 5, 2024. The botanical survey for small whorled pogonia was conducted on August 19, 20 and 21, 2024 for the Project in designated areas surrounding the Airport. The Small Whorled Pogonia Survey Report and USFWS approved work plan can be found in **Appendix E**. The federally listed small whorled pogonia plant species was not observed in the Study Area in the course of the botanical survey. A previous survey conducted in 2019 yielded the same results.

A determination of effect was conducted for each species analyzing the potential impacts to habitat in conjunction with conservation measures. The proposed project is located on private property beyond the runway ends of the Elkins-Randolph County Regional Airport. The airport has obtained easements with 29 property owners for the associated obstruction removal throughout the entirety of the approach surfaces. The Project is necessary as a result of safety and operational needs of the Airport. The final approach and departure surfaces protect aircraft flight paths during critical phases of flight. The presence of obstacles may hamper an aircraft's flight path on landing or takeoff. Mitigation measures are being coordinated off site due to the need to avoid the attractant of wildlife hazards to the Airport operation areas. Wildlife-aircraft strikes have resulted in the loss of life worldwide, as well as billions of dollars in aircraft damage. The FAA maintains a comprehensive program to address wildlife hazards. FAA Advisory Circular 150/5200-33C states: "Airport operators should maintain an appropriate environment for the safe and efficient operation of aircraft, which entails mitigating wildlife strike hazards by fencing, modifying the landscape in order to deter wildlife or by hazing or removing wildlife hazardous to aircraft from congregating on airports." The coordination for off-site Project mitigation is ongoing with the Elkins Parks and Recreation Commission (see **Appendix B**) and would consist of planting or enhancing an existing pollinator garden, within Glendale Park or another local park within the City of Elkins (approximately 2 miles north of the Airport). It is anticipated that the Airport and FAA will enter into an agreement with the Elkins Parks and Recreation Commission providing monetary assistance to achieve this objective if scope and price is approved by FAA.

Indiana, Northern Long-eared, Tri-color, and Virginia Long-Eared Bats

The Indiana, NLEB, TCB, and VBEB's are listed as Endangered or Proposed Endangered species on the USFWS Threatened and Endangered species list. Direct and indirect take of the Indiana, NLEB, TCB, and VBEB are not likely as these species were not identified within the Project area during the 2018 and 2024 bat surveys conducted. The intent of the Project is to remove obstructions to Runway 5-23 approaches in nine (9) separate areas totaling 30.69 acres. These nine (9) obstruction removal areas are on differing private properties, and the obstruction removal in these areas will consist of the removal of selected trees within 16.75 acres and the trimming of selected trees within 13.94 acres (calculated from the areas identified within the nine (9) individual

areas noted for this project). The identification of selected trees for removal or trimming was done to minimize impacts as opposed to complete clear cut or trimming of identified acreages (573 trees to be removed and 519 trees to be trimmed). The nine (9) areas can be seen on **Figures 1 and 2 within Appendix A – Mapping** and are detailed in the Table B.1. There remains a minimal possibility direct take of the bat species could occur through removal of active roost trees. Indirect take could occur through disturbance of roosting bats in nearby trees. Potential bat habitat loss as a result of the Project includes summer roosting habitat, travelling cover, and foraging habitat. The project site is located within a large, forested area, with the Appalachian Mountains and Monongahela National Forest located immediately east of the general Project area. Within a one-mile radius of the action area, there is more than 1,000 acres of forest. Based on the amount of forested area remaining after the implementation of the Proposed Action, the loss, reduction, degradation, disturbance or fragmentation of habitat associated with the removal and trimming of selected trees within less than 31 acres is considered minimal. Additionally, the areas of tree removal and trimming are spread across nine (9) separate obstruction removal areas located both north and south of the Airport, with forested areas remaining adjacent to or near the nine (9) obstruction removal areas.

It has been determined that the proposed action warrants a **May Affect, Not Likely to Adversely Affect** for the Indiana bat, NLEB, TCB, and VBEB.

A determination of **May Affect** is warranted for the proposed action based on the following rationale:

- The presence of potentially suitable habitat within the obstruction removal areas.

A determination of **Not Likely to Adversely Affect** is warranted for the proposed action based on the following rationale:

- A Mist Net Survey Plan was submitted to the USFWS on July 3, 2024. Concurrence for Myotid Bat Study Plan – Mist Netting was issued by the USFWS on July 9, 2024 based on the submitted plan. A mist net survey was conducted for the proposed action at five (5) sites for two (2) nights each using three (3) mist net sets (30 net-nights) between July 28 and August 3, 2024 and submitted to the USFWS on August 5, 2024. A total of 39 bats were captured during mist net surveys. Captured bat species were limited to Big Brown Bats and Eastern Red Bats.
- The proposed action is not located within USFWS designated Indiana bat hibernaucla or summer use buffers.
- The proposed action is not located within a half mile of a known NLEB hibernacula or within a quarter mile of a known NLEB summer maternity roost tree.
- The proposed action is not located within a half mile of a known TCB hibernacula or winter roost or within 150 feet of any documented TCB roosts.
- The proposed action is not located within a half mile of a known VBEB hibernacula or summer roost.
- Mist net surveys were also conducted for the Indiana bat and NLEB and a report was submitted in August of 2018. The survey covered 26 acres of potential bat habitat and was conducted at 5 net sites from July 30, 2018 to August 9, 2018. A total of 11 bats were captured during mist net surveys. Captured bat species were limited to Big Brown Bats and Eastern Red Bats. The area was also surveyed for caves and abandoned mine portals and none were found in the Project area.

- No endangered or threatened bat species were captured.

Conservation measures to off-set the minimal impact would include:

- Selective tree removal/trimming within the larger identified acreage areas.
- The use of a feller buncher to control the direction of the tree fall allowing the operator to precisely guide where the tree lands, minimizing uncontrolled falling and damage to the surrounding trees and area.
- The use of herbicides and pesticides will be prohibited on the project.

Monarch Butterfly

The monarch butterfly is federally proposed threatened on the USFWS Threatened and Endangered species list. Critical habitat has not been designated for this species. Adult monarch butterflies require a diversity of blooming nectar resources during breeding and migration (spring through fall). Monarchs also need milkweed (for both oviposition and larval feeding) embedded within this diverse nectaring habitat. Direct and indirect take of the butterfly is not likely, as the monarch's host species of milkweed was not identified within the Project area during the 2019 and 2024 plant surveys conducted. Due to the adult butterfly's ability to fly when disturbed, there is very minimal potential for direct take of a traveling or feeding butterfly during the tree cutting and trimming activities. Due to absence of milkweed, there is very low potential for larvae to be in the area resulting in no direct or indirect take due to the proposed action. There is potential for impact to foraging habitat, but it is anticipated to be minimal due to the selective tree removal and trimming and limited disturbance to the herbaceous and shrub understory. Potential foraging habitat within the areas denoted as Oak, Oak Cut, Mesic and Floodplain sites may exist. The total acreage of removal from these sites is 9.69 acres (approximately 294 trees to be removed). The total acreage of trimming from these sites is 5.17 acres (approximately 174 trees to be trimmed). These sites are scattered across the study area (north and south of the airport) and are not contiguous.

It has been determined that the proposed action warrants a **May Affect, Not Likely to Adversely Affect** for the Candidate species, monarch butterfly.

A determination of **May Affect** is warranted for the proposed action based on the following rationale:

- The known presence of the butterfly and suitable foraging habitat within the obstruction removal areas, denoted as Oak (9.20 acres), Oak Cut (9.68 acres), Mesic (0.83 acres), and Floodplain (0.74 acres sites, and surrounding vicinity.

A determination of **Not Likely to Adversely Affect** is warranted for the proposed action based on the following rationale:

- Milkweed was not identified during the 2019 or 2024 botanical surveys of the action area. Monarchs need milkweed (for both oviposition and larval feeding) embedded within diverse nectaring habitat.
- The proposed action involves clearing and trimming of selected trees within smaller acreage areas, with minimal impact anticipated to flowering herbaceous plants.

Conservation measures to off-set the minimal impact would include:

- The Proposed Action will remove obstructions to Runway 5-23 approaches in nine (9) separate areas totaling 30.69 acres. These nine (9) obstruction removal areas are on differing private properties, and the obstruction removal in these areas will consist of the removal of selected trees within 16.75 acres and the trimming of selected trees within 13.94 acres (calculated from the areas identified within the nine (9) individual areas noted for this project). The identification of selected trees for removal or trimming was done to minimize impacts as opposed to complete clear cut or trimming of identified acreages (573 trees to be removed and 519 trees to be trimmed), and there would be minimal impacts anticipated to flowering herbaceous plants. The select removal and trimming of trees within the nine (9) denoted areas will provide breaks in the existing canopy cover of these areas, allowing more sun to reach the forest floor and encouraging the growth of more diverse and abundant flowers, and therefore potentially increasing foraging habitat for the monarch butterfly.
- Stumps remaining after tree cutting in areas to be maintained as lawn will be ground to a point minimum of 4" below the existing ground surface. Upon completion of the grinding process, the stumps shall be covered with a minimum of 4" of suitable topsoil material. The Contractor will not be permitted to remove the stumps through grading with dozers or graders.
- The use of a feller buncher to control the direction of the tree fall allowing the operator to precisely guide where the tree lands, minimizing uncontrolled falling and damage to the surrounding trees and area.
- As a component of the Proposed Action, best management practices developed by the West Virginia Division of Forestry and the West Virginia Department of Environmental Protection will be adhered to, including seeding all obstruction removal areas to establish adequate vegetation cover to help stabilize the surface soils. In all areas permitted by property owners, areas will be seeded with a wildflower mix (to include milkweed) and mulched to provide nectar sources for the butterfly.
- The coordination for off-site Project mitigation is ongoing with the Elkins Parks and Recreation Commission (see Appendix B) and would consist of planting or enhancing an existing pollinator garden, within Glendale Park, or another local park within the City of Elkins (approximately 2 miles north of the Airport) . It is anticipated that the Airport and FAA will enter into an agreement with the Elkins Parks and Recreation Commission providing monetary assistance to achieve this objective if scope and price is approved by FAA.
- The use of herbicides and pesticides will be prohibited on the project.

Rusty Patched Bumble Bee

The Airport and surrounding area are within a High Potential Zone (HPZ) for the RPBB. The RPBB requires areas that support sufficient food, including nectar and pollen from diverse and abundant flowers (foraging habitat), as well as undisturbed nesting sites that are in proximity to those floral resources. They also require overwintering sites for hibernating queens, which typically occur in upland forests. Potential RPBB habitat loss as a result of the Project includes overwintering sites, nesting sites and some areas of foraging habitat. The areas denoted as Oak sites contain potential overwintering, nesting and foraging habitat and is comprised of 5.34 acres for tree removal (approximately 199 trees) and 3.89 acres for tree trimming (approximately 153

trees). The potential ground disturbance in these areas is estimated to be 7.61 acres. While use of heavy machinery will be minimized for the Project, the noted ground disturbance will result from the operation of a feller buncher to remove and trim trees. The area of ground disturbance was then visually estimated based on where trees needing to be trimmed or removed were spaced within the areas of potential RPBB overwintering and nesting habitat. The areas denoted as Oak Cut, Mesic and Floodplain sites contain potential foraging habitat. The total acreage of tree removal from these sites is 4.35 acres (approximately 95 trees to be removed). The total acreage of trimming from these sites is 1.28 acres (approximately 21 trees to be trimmed). The potential ground disturbance in these areas is estimated to be 3.51 acres.

The areas of potential impact to RPBB overwintering, nesting and foraging habitat are spread across six (6) of the nine (9) separate obstruction removal areas located both north and south of the Airport, with forested areas remaining adjacent to or near the areas of disturbance.

It has been determined that the proposed action warrants a **May Affect, Likely to Adversely Affect** for the RPBB.

A determination of **May Affect, Likely to Adversely Affect** is warranted for the proposed action based on the following rationale:

- The location of the Proposed Action within a RPBB HPZ.
- The presence of potentially suitable habitat within the Project area, with the areas denoted as Oak sites (9.20 acres) containing potential overwintering, nesting and foraging habitat, and the areas denoted as Oak Cut (9.68 acres), Mesic (0.83 acres) and Floodplain (0.74 acres) sites containing potential foraging sites.
- The proposed action would result in approximately 7.61 acres of ground disturbance of RPBB assumed nesting habitat during the nesting season.
- The proposed action would result in approximately 3.51 acres of potential ground disturbance of assumed foraging habitat during the nesting season.

Avoidance, Minimization, and Conservation Measures:

- The proposed cutting and trimming of selected trees will occur between May 1 and September 31 to avoid impacts to overwintering queens.
- Stumps remaining after tree cutting in non-maintained areas will be left in place to reduce ground disturbance.
- Stumps remaining after tree cutting in areas to be maintained as lawn will be ground to a point minimum of 4” below the existing ground surface. Upon completion of the grinding process, the stumps shall be covered with a minimum of 4” of suitable topsoil material. The Contractor will not be permitted to remove the stumps through grading with dozers or graders.
- The use of a feller buncher to control the direction of the tree fall allowing the operator to precisely guide where the tree lands, minimizing uncontrolled falling and damage to the surrounding trees and area.
- The Proposed Action will remove obstructions to Runway 5-23 approaches in nine (9) separate areas totaling 30.69 acres. These nine (9) obstruction removal areas are on differing private properties, and the obstruction removal in these areas will consist of the removal of selected trees within 16.75 acres and the trimming of selected trees within 13.94 acres (calculated from the areas identified within the nine (9) individual areas noted for this project). The identification of selected trees for removal or trimming was done to

minimize impacts as opposed to complete clear cut or trimming of identified acreages (573 trees to be removed and 519 trees to be trimmed), and there would be minimal impacts anticipated to flowering herbaceous plants.

- According to the *Programmatic Biological Opinion for Identified Restoration and Recovery Management Actions of the Monongahela, George Washington, and Jefferson National Forests on the Rusty Patched Bumble Bee* (*Bombus affinis*) (Shawn Cochran and Joby Timm July 3, 2023) timber management could help increase the abundance of the RPBB by increasing the richness and abundance of floral resources. It was concluded that forest management aimed at opening forest canopies "to control pests and disease" "is also likely to benefit bumble bees because favorable conditions for flowering are often found in mature forests with canopy gaps." Also, at the landscape scale, bee abundance was "generally positively related to the amount of early-successional habitat". The forest management proposed by the Airport is for obstruction removal and not to control of pest and disease, but the resulting effects are anticipated to be similar by creating openings within closed canopy forest areas that will facilitate sunlight reaching the ground creating additional foraging and nesting habitat.
- The Proposed Action will create forest edge habitat in Obstruction Areas 1, 2, 3, 7, and 8, which are adjacent to larger forested tracts. This edge habitat, where forest meets open canopy habitats, typically extends about 100 feet into mature forested habitat, and can meet life history and resource needs for the RPBB, including nesting, spring-to-fall foraging, and overwintering.
- The USFWS will be given on-site access (based on pre-approval by each property owner) during the proposed tree cutting and trimming activities to allow for monitoring of the proposed action, and to provide an opportunity to gather data on potential RPBB habitat.
- As a component of the Proposed Action, best management practices developed by the West Virginia Division of Forestry and the West Virginia Department of Environmental Protection will be adhered to, including seeding all obstruction removal areas to establish adequate vegetation cover to help stabilize the surface soils. In all areas permitted by property owners, areas will be seeded with a wildflower mix and mulched to provide nectar sources for the RPBB.
- The coordination for off-site Project mitigation is ongoing with the Elkins Parks and Recreation Commission (see Appendix B) and would consist of planting or enhancing an existing pollinator garden, within Glendale Park or another local park within the City of Elkins (approximately 2 miles north of the Airport) . It is anticipated that the Airport and FAA will enter into an agreement with the Elkins Parks and Recreation Commission providing monetary assistance to achieve this objective if scope and price is approved by FAA.
- The use of herbicides and pesticides will be prohibited on the project.

Small Whorled Pogonia

The small whorled pogonia is listed as a Threatened species on the USFWS Threatened and Endangered species list. Direct and indirect take to the small whorled pogonia is not anticipated as this species was not identified within the Project area during the 2019 or 2024 plant surveys conducted. Somewhat to moderately high probability habitat within the areas denoted as Oak and Floodplain sites does exist in the action area, and there remains a possibility that indirect harm may occur through habitat loss. Total acreage of area for tree removal from these habitat types is

5.39 acres (approximately 200 trees) and total acreage of area for tree trimming is 4.58 acres (approximately 170 trees).

It has been determined that the proposed action warrants a **May Affect, Not Likely to Adversely Affect** for the Small Whorled Pogonia.

A determination of **May Affect** is warranted for the proposed action based on the following rationale:

- The presence of somewhat to moderately high probability areas within the Oak (9.20 acres) and Floodplain Sites (0.74 acres) of the obstruction removal areas.
- A known population of small whorled pogonia within 2.5 miles of the project area.

A determination of **Not Likely to Adversely Affect** is based on the following rationale:

- The plant species was not observed during the 2019 or 2024 botanical survey of the study area.
- The Proposed Action will remove obstructions to Runway 5-23 approaches in nine (9) separate areas totaling 30.69 acres. These nine (9) obstruction removal areas are on differing private properties, and the obstruction removal in these areas will consist of the removal of selected trees within 16.75 acres and the trimming of selected trees within 13.94 acres (calculated from the areas identified within the nine (9) individual areas noted for this project. The identification of selected trees for removal or trimming was done to minimize impacts as opposed to complete clear cut or trimming of identified acreages (573 trees to be removed and 519 trees to be trimmed), and there would be minimal impacts anticipated to flowering herbaceous plants.
- Per the *USFWS Small Whorled Pogonia (Isotria medeolodies) Fact Sheet*, this orchid is almost always found in proximity to features that create long-persisting breaks in the forest canopy. The limited disturbance associated with the obstruction removal project will provide additional canopy breaks in the area and therefore, may improve the overall habitat for this species.

Conservation measures to off-set the minimal impact would include:

- The select removal and trimming of trees within the nine (9) denoted areas will provide breaks in the existing canopy cover of these areas, allowing more sun to reach the forest floor and encouraging the growth of herbaceous vegetation.
- Stumps remaining after tree cutting in non-maintained areas will be left in place to reduce ground disturbance.
- Stumps remaining after tree cutting in areas to be maintained as lawn will be ground to a point minimum of 4” below the existing ground surface. Upon completion of the grinding process, the stumps shall be covered with a minimum of 4” of suitable topsoil material. The Contractor will not be permitted to remove the stumps through grading with dozers or graders.
- The use of a feller buncher to control the direction of the tree fall allowing the operator to precisely guide where the tree lands, minimizing uncontrolled falling and damage to the surrounding trees and area.
- The use of herbicides and pesticides will be prohibited on the project.

INTRODUCTION

This Biological Assessment (BA) addresses the presence for the federally endangered Indiana bat (*Myotis sodalis*), the federally endangered northern long-eared bat (NLEB) (*Myotis septentrionalis*), the federally proposed endangered tricolored bat (TCB) (*Perimyotis sublavus*), the federally endangered Virginia big-eared bat (VBEB) (Corynorhinus (=Plecotus) townsendii virginianus), the federally proposed threatened monarch butterfly (*Danaus plexippus*), the federally endangered rusty patched bumble bee (RPBB) (*Bombus affinis*), and the federally threatened small whorled pogonia (*Isotria medeoloides*) in areas adjacent to the Elkins-Randolph County Regional Airport (Airport) where obstruction removal for the Runway 5-23 approaches is proposed (Randolph County, West Virginia). These seven (7) federally listed species were identified by U.S. Fish and Wildlife Service (USFWS) as species that may occur within the boundary of the proposed project and/or may be affected by the proposed project.

The Elkins-Randolph County Regional Airport is a county owned and operated facility that is part of the National Plan of Integrated Airport Systems (NPIAS). As part of the NPIAS, the Airport is required to meet 39 Federal Aviation Administration (FAA) grant assurances any time they accept federal funding for projects under the Airport Improvement Program (AIP). Failure to address the removal of obstructions to air navigation would result in the Airport violating three of these grant assurances.

Grant Assurance 19 (Operations and Maintenance): The airport and all facilities which are necessary to serve the aeronautical users of the airport, other than facilities owned or controlled by the United States, shall be operated at all times in a safe and serviceable condition and in accordance with the minimum standards as may be required or prescribed by applicable Federal, state and local agencies for maintenance and operation.

Grant Assurance 20 (Hazard Removal and Mitigation): Take appropriate action to assure that such terminal airspace as is required to protect instrument and visual operations to the airport (including established minimum flight altitudes) will be adequately cleared and protected by removing, lowering, relocating, marking, or lighting or otherwise mitigating existing airport hazards and by preventing the establishment or creation of future airport hazards.

Grant Assurance 21 (Compatible Land Use): Take appropriate action, to the extent reasonable, including the adoption of zoning laws, to restrict the use of land adjacent to, or in the immediate vicinity of, the airport to activities and purposes compatible with normal airport operations, including land and takeoff of aircraft.

It is critical for the airport to meet these assurances/obligations to ensure safe and efficient airport operations at all times and to protect the airport's terminal airspace. A clear departure surface allows for standard takeoff minima and climb gradient from rotation through climb out. The airport must mitigate existing airport hazards and prevent new hazards to the maximum extent. Not doing so may affect the usable length of the runway.

The Obstruction Removal (Runway 5-23 Approaches) Project (Project) will remove obstructions to Runway 5-23 approaches in nine (9) separate areas totaling 30.69 acres. These areas include five (5) separate areas (Area 1 through Area 5) to the northeast of the Airport (Runway 23 end), and four (4) separate areas (Area 6 through Area 9) to the southwest of the Airport (Runway 5

end) that can be seen on **Figures 1 and 2 within Appendix A – Mapping,** and as detailed in the Table below. These nine (9) obstruction removal areas are on differing private properties, and the obstruction removal in these areas will consist of the removal of selected trees within 16.75 acres and the trimming of selected trees within 13.94 acres (calculated from the areas identified within the nine (9) individual areas noted for this project). The identification of selected trees for removal or trimming was done to minimize impacts as opposed to complete clear cut or trimming of identified acreages. The trees identified for removal or trimming can be seen as "X's" on the Preliminary Construction Plans in **Appendix C**. These include 573 trees to be removed and 519 trees to be trimmed in total.

Table B.1: Obstruction Removal Area Locations

Area No.	Acreage	Select Removal/ Select Trimming	Estimated Ground Disturbance*	Runway Approach	Latitude	Longitude
1	0.84	0.84 Acres Removal	0.67 acres	Runway 23	38° 54' 02"	79° 50' 55"
2	11.63	5.76 Acres Removal 5.87 Acres Trimming	9.89 acres	Runway 23	38° 54' 04"	79° 50' 48"
3	5.07	1.39 Acres Removal 3.68 Acres Trimming	4.06 acres	Runway 23	38° 54' 11"	79° 50' 45"
4	9.45	5.98 Acres Removal 3.47 Acres Trimming	7.56 acres	Runway 23	38° 54' 15"	79° 50' 32"
5	0.10	0.10 Acres Trimming	0.05 acres	Runway 23	38° 54' 25"	79° 50' 29"
6	0.82	0.82 Acres Removal	0.62 acres	Runway 5	38° 53' 05"	79° 51' 53"
7	0.74	0.05 Acres Removal 0.69 Acres Trimming	0.56 acres	Runway 5	38° 53' 01"	79° 51' 45"
8	1.91	1.91 Acres Removal	0.57 acres	Runway 5	38° 52' 56"	79° 51' 49"
9	0.13	0.13 Acres Trimming	0.07 acres	Runway 5	38° 52' 51"	79° 51' 54"

*A feller buncher will be used for tree removal and trimming, resulting in ground disturbance. Therefore, the area of ground disturbance was visually estimated based on where trees needing to be trimmed or removed were spaced within each of the nine (9) study areas.

There will also be four (4) structures (one light structure and three silos) removed to the southwest of the Runway 5 end. One additional light structure, also located to the southwest of Runway 5, will be relocated by the power company so as not to be a future obstruction to airport operations. As noted, all nine (9) of these areas, the silos and light structures are located on private property outside of Airport owned property, but within the approach surfaces of Runway 5-23.

The proposed project is necessary to bring the airport into compliance with current design standards by removing obstacles which obstruct the airport's airspace while maintaining the existing length of usable runway. The Proposed Action will remove obstructions which are located within the 20:1 approach surfaces of Runway 5-23 at the Elkins-Randolph County Regional

Airport in order to improve the level of operational safety afforded to aircraft utilizing the facility. The Project also involves easement acquisition to facilitate the removal of the obstructions as well as to increase the Airport Authority's future control over the approaches to Runways 5 and 23.

A Short Environmental Assessment Form was completed in 2020 for the Project, which included an analysis of three (3) alternatives and the proposed action. The alternatives included Alternative No. 1 – Trim Tree Obstructions and Remove two obstruction light towers, and lower the top elevation of three silos from the Runway 23 and Runway 5 Approach Surfaces, Alternative No. 2 – Displace Runway 5-23 Thresholds to Maintain an Obstruction Free 20:1 Approach Surface, the No Action Alternative, and the Proposed Action. It was determined that Alternative 1 was a viable alternative but discounted due to the need for a significant length of tree trimming (approximately half of the tree height). This amount of trimming reduces the likelihood of survival, leaving the burden of removal on the property owner should the tree die. If the trees survive there remains an aesthetic impact of having a tree trunk with minimal branching occurring. Alternative 2 was determined not to be the preferred alternative, because while it is a viable alternative to provide a clear approach surface in accordance with FAA Advisory Circular 150/5300-13A, it would decrease the landing distance available to below the minimum distance needed to accommodate the design aircraft for the airport and should only be used if there are no other viable alternatives. The design aircraft for the Airport has been designated as the Beech King Air 200 per the Airport's Master Plan, as it is the classification that most appropriately defines the aircraft fleet that utilizes the Airport. The No Action Alternative was determined to not meet the Project's stated purpose and need to improve operational safety, comply with FAA design standards, maintain the existing length of usable runway for the Airport's design aircraft and maintain surrounding land use compatible with air traffic. The Proposed Action consists of removing obstructions which are currently penetrating the approach surfaces of Runway 5-23 including removing trees, trimming trees, removing one light structure, relocating one light structure, and removing silos. Given the time that has elapsed since the development of the Short Environmental Assessment Form, initiated in 2016, parcel circumstances have changed. The trees have continued to grow and further protrude into the approach surfaces during the time that has elapsed. The farming operations that had previously occurred on the parcel with the silos have diminished, resulting in the ability to completely remove the three (3) silos. This BA has been prepared with the most recent information available for the Project. A supplemental EA is also being prepared to document the project design changes that have occurred since 2020.

Coordination with the USFWS began in 2016 for the Project. At that time, USFWS determined that five (5) federally listed species could occur in the Project area including the endangered Indiana bat, the endangered Virginia big-eared bat, and endangered running buffalo clover, along with the threatened NLEB and threatened small whorled pogonia. Subsequently, a Rare, Threatened, and Endangered (RTE) Species Habitat Assessment was conducted in 2017 and submitted to USFWS. The Habitat Assessment indicated potential habitat was present for the Indiana bat and the NLEB, but indicated no small whorled pogonia, running buffalo clover, or Virginia big-eared bat habitat was identified. The USFWS responded by e-mail in May 2017 stating to complete an Indiana Bat Conservation Plan, conduct mist net surveys, or minimize tree clearing to below 17 acres. The e-mail also suggested to conduct a RTE plant species survey for the small whorled pogonia.

Mist net surveys were conducted for the Indiana bat and NLEB and a report was submitted in August of 2018. The survey covered 26 acres of potential bat habitat and was conducted at 5 net

sites from July 30, 2018 to August 9, 2018 following protocol outlined in the Range-wide Indiana Bat Summer Survey Guidelines. There were 11 bats captured during the mist net surveys. Captured bat species were limited to Big Brown Bats and Eastern Red Bats. No Indiana bats or NLEB were captured during this survey. The area was also surveyed for caves and abandoned mine portals and none were found in the Project area.

An Effects Determination was submitted to the USFWS by the FAA in December of 2018 stating May Affect, Not Likely to Adversely Affect for the five (5) indicated species. In March of 2019 the USFWS responded with an e-mail stating that the USFWS could not concur with an effect determination without having a qualified botanist survey the area to determine whether RTE plants are present and may be affected by project activities, as a known population of small whorled pogonia had been documented in proximity to the Airport. Subsequently, a survey for both small whorled pogonia and running buffalo clover and other rare, threatened, or endangered plants was conducted on July 16-17 and September 9, 2019. Some potential suitable habitat for the small whorled pogonia was found within the Project area, but no small whorled pogonia or running buffalo clover plants were found during the survey.

An Effects Determination was then submitted to the USFWS by the FAA on October 28, 2019 stating May Affect, Not Likely to Adversely Affect for the noted federally listed species. In November 22, 2019 the USFWS responded in a letter stating that four (4) federally listed species could occur in the Project area (The Virginia big-eared bat was not listed in the 2019 letter), but based on the surveys conducted, no federally listed species are expected to be adversely affected by the project and that any take of NLEB associated with this project is exempt under the 4(d) rule.

Based on the time lapsed between USFWS concurrence and obstruction removal scheduling, a new request on the presence of RTE species present in the action area was sent to the USFWS on February 22, 2024. A letter from the USFWS on February 22, 2024 indicated the following threatened, endangered or candidate species potentially present in the Project action area. These species included the following:

- Indiana Bat *(Myotis sodalist)* - Endangered
- Northern Long-eared Bat *(Myotis septentrionalis)* - Endangered
- Tricolored Bat *(Perimyotis subflavus)* – Proposed Endangered
- Monarch Butterfly *(Danaus Plexippus)* – originally Candidate (now Proposed Threatened)
- Rusty Patched Bumble Bee *(Bombus affinis)* - Endangered
- Small Whorled Pogonia *(Isotria medeoloides)* – Threatened

Per a July 9, 2024 e-mail with USFWS, presence/probably absence surveys for listed bats were recommended for the Project. A work plan was submitted on July 3, 2024, for the bat survey and approved by the USFWS (**See Appendix D**). Mist netting was conducted during the period of July 28th through August 3rd 2024 for the purpose of determining presence/probable absence for Indiana, NLEB and TCB in the area. A total of 39 bats were captured during mist net surveys. Captured bat species were limited to Big Brown Bats and Eastern Red Bats. No Indiana bats, NLEB, or TCB were captured during the summer mist netting surveys conducted in the study area.

Consultation with USFWS also resulted in a request for a botanical survey for small whorled pogonia be conducted in accordance with Procedures for Conducting Surveys for Federally

Threatened or Endangered Plants in West Virginia located at https://www.fws.gov/media/west-virginia-plant-survey-guidelines. A work plan was prepared and approved by the USFWS via email dated August 5, 2024 (**See Appendix E**). The botanical survey for small whorled pogonia was conducted on August 19, 20 and 21, 2024 for the Project study area surrounding the Airport. The federally listed small whorled pogonia plant species was not observed in the Study Area in the course of the botanical survey.

A specific survey for the rusty patched bumble bee was not conducted based on guidance from the USFWS stating their presence had already been identified, and due to the Airport and surrounding area being within a High Potential Zone (HPZ) for the RPBB, as mapped by the USFWS (**Figure 4**). A specific survey for the monarch butterfly was not conducted based on guidance from the USFWS, and assumed presence of the species in the area.

An updated species list was generated on December 11, 2025, for the Project, due to the length of time from the 2024 list. The list generated included the same species from 2024, with the addition of the Virginia Big-eared Bat VBEB (*Corynorhinuse (=Plecotus) townsendii viginianus*) - federally endangered.

Based on the 2025 updated species list, the complete list of threatened, endangered or candidate species potentially present in the Project action area includes the following seven (7) species:

- Indiana Bat *(Myotis sodalist)* - Endangered
- Northern Long-eared Bat *(Myotis septentrionalis)* - Endangered
- Tricolored Bat *(Perimyotis subflavus)* – Proposed Endangered
- Virginia Big-eared Bat (*Corynorhinuse (=Plecotus) townsendii viginianus)* - Endangered
- Monarch Butterfly *(Danaus Plexippus)* – Proposed Threatened (originally Candidate)
- Rusty Patched Bumble Bee *(Bombus affinis)* - Endangered
- Small Whorled Pogonia *(Isotria medeoloides)* – Threatened

All agency correspondence can be found in **Appendix B**, the most recent Bat Survey Report can be found in **Appendix D**, and the Small Whorled Pogonia Report can be found in **Appendix E**.

SECTION A. PROJECT DESCRIPTION

The Elkins-Randolph County Regional Airport Authority (400 Airport Road, Elkins WV 26241) is undertaking the Project to remove the following obstructions within their approach surfaces in an effort to achieve the following outcomes: 1) maintaining the current length of available runway and 2) increasing the level of operational safety afforded to aircraft utilizing the airport.

Runway 5 Approach Surface

- Removing approximately 55 trees within 2.82 acres;
- Trimming approximately 38 trees within 0.82 acres;
- Removal of one obstruction light structure;
- Relocation of one obstruction light structure; and
- Removal of three silos

Runway 23 Approach Surface

- Removing approximately 518 trees within 13.93 acres; and
- Trimming of approximately 481 trees 13.12 acres.

The Project has been revised from 2020 when the Environmental Assessment was completed. The identification of selected trees for removal or trimming was done to minimize impacts as opposed to complete clear cut or trimming of identified acreages. Previously the Project included the following:

Runway 5 Approach Surface

- Clearing 2.56 acres of trees;
- Trimming 1.76 acres of trees;
- Removal of two obstruction light structures; and
- Lowering the top elevation of three silos

Runway 23 Approach Surface

- Clearing 13.58 acres of trees; and
- Trimming 10.61 acres of trees

The revisions were due to changes in the circumstances of the parcels included in the Project Study Area. The trees on these parcels continued to grow and further protrude into the approach surfaces during the time that elapsed from the completion of the original Short Form EA. The tree obstruction removal areas originally defined in the 2020 EA were determined by a Light Detection and Ranging (LIDAR) survey that was performed in 2017. LIDAR is a remote sensing system that can be used to measure vegetation height. Given the time that elapsed since that survey, a new LIDAR survey was conducted in 2023 to determine how much the trees had grown as well as to determine the extent of private tree removal that had occurred while obtaining all the necessary avigation easements to remove the tree obstructions. The areas were refined to only include those properties upon which avigation easements were previously obtained and included in the 2020 EA. Additionally, at the time the EA was developed, the parcel upon which the silos were located was in active operation. Since then, the farming operations that previously occurred on that parcel have diminished and the parcel owner agreed to the complete removal for all three silos.

Tree Removal
The trees which are designated to be removed in the project areas (**see Appendix C – Preliminary Construction Plans**) will be cut at or near the existing ground surface utilizing a feller buncher. Dozers and graders will not be permitted. The tree trimming and removal operations will be performed on a per tree basis. All trees will be felled on each of the individual parcels and will remain the property of the parcel owner. The felled trees may be left in place at the discretion of the individual parcel owner. Should the felled tree be marketable, and if the landowner does not want the felled tree to remain, the marketable timber may be further processed by the Contractor. Any remaining trees which are not deemed to be marketable, and which the parcel owner does not want to remain, will be removed from the site and disposed of at an off-site location. The Contractor will also remove all downed limbs. All limbs and smaller slash/waste will be disposed of by chipping. All chips generated will be placed directly into a receiving truck, removed from the site and properly disposed.

Prior to the start of the construction, the Contractor will be required to provide the Airport Authority with documentation which formally designates all disposal area locations and methods of disposal (burning, chipping, etc.). In consideration of the significant forestry industry present in the area, an off-site waste location for the debris should be readily available.

In non-maintained areas, the Contractor will leave the remaining stumps in place to reduce ground disturbance. In select areas to be maintained as lawn, the Contractor will remove the remaining stumps through a grinding process. All stumps shall be ground to a point a minimum of 4" below the existing ground surface. Upon completion of the grinding process, the stumps shall be covered with a minimum of 4" of suitable topsoil material. In order to minimize ground disturbance, the Contractor will not be permitted to remove the stumps through grading with dozers or graders.

Tree Trimming
Trees which are located in areas designated to be trimmed will be trimmed down to the elevations indicated on the construction plans. The trimming area limits were developed based on an assumed removal height of approximately 10 feet. All limbs and slash/waste will be disposed of by chipping. All chips generated will be placed directly into a receiving truck, removed from the site and properly disposed.

Obstruction Light Structure Removal and Relocation
One (1) light structure (an aluminum frangible air mast) identified as an obstruction will be removed. This light structure is southwest of Runway 5 and was adjacent to a house which was demolished in 2011. It will be disassembled and the individual components recycled or properly disposed of in the local waste collection system. One (1) additional light structure, also located to the southwest of Runway 5, will be relocated by the power company so as not to be a future obstruction to airport operations. The area where the light structures are located is a previously disturbed area that was cleared in 2011.

Silo Removal
The two (2) Harvestore silos (metal construction), and one (1) concrete silo will be removed. The removed silos will become property of the Contractor and will be required to be properly disposed of off-site or re-used at the Contractor's discretion.

Site Restoration
Upon completion of obstruction removal activities, all disturbed areas will be restored through the following procedures:

- All ruts and depressions created by construction activity will be filled with suitable topsoil material or otherwise smoothed;
- All slash generated from the tree removal effort will be collected, removed from the site and properly disposed of at the pre-approved off-site disposal location; and
- All disturbed areas will be seeded and mulched in order to establish adequate vegetative cover.

Avigation Easements
The Project also consists of acquiring permanent avigation easements to aid in the obstruction removal effort and allow the Airport Authority to exercise a greater level of control over their current and planned airspace.

SECTION B. ACTION AREA

The Action Area is defined as all areas that would be directly or indirectly affected by the Proposed Action.

B.1 ACTION AREA DESCRIPTION

As noted, the Proposed Action will occur in the Runway 5 and Runway 23 Approach Surfaces of the Elkins-Randolph County Regional Airport. The Airport itself is located approximately 2 miles south of the City of Elkins, West Virginia. The airport is accessed via Elkins-Randolph County Airport Road (County Route 219/27) which connects to Beverly Pike (US-219) via Country Club Road (County Route 219/11) to the east of the airport. The airport is approximately located at 38° 53' 11.67" latitude and 79° 51' 25.20" longitude. The Project Action Area can be seen in **Figure B.1** below and in **Appendix A – Mapping**.

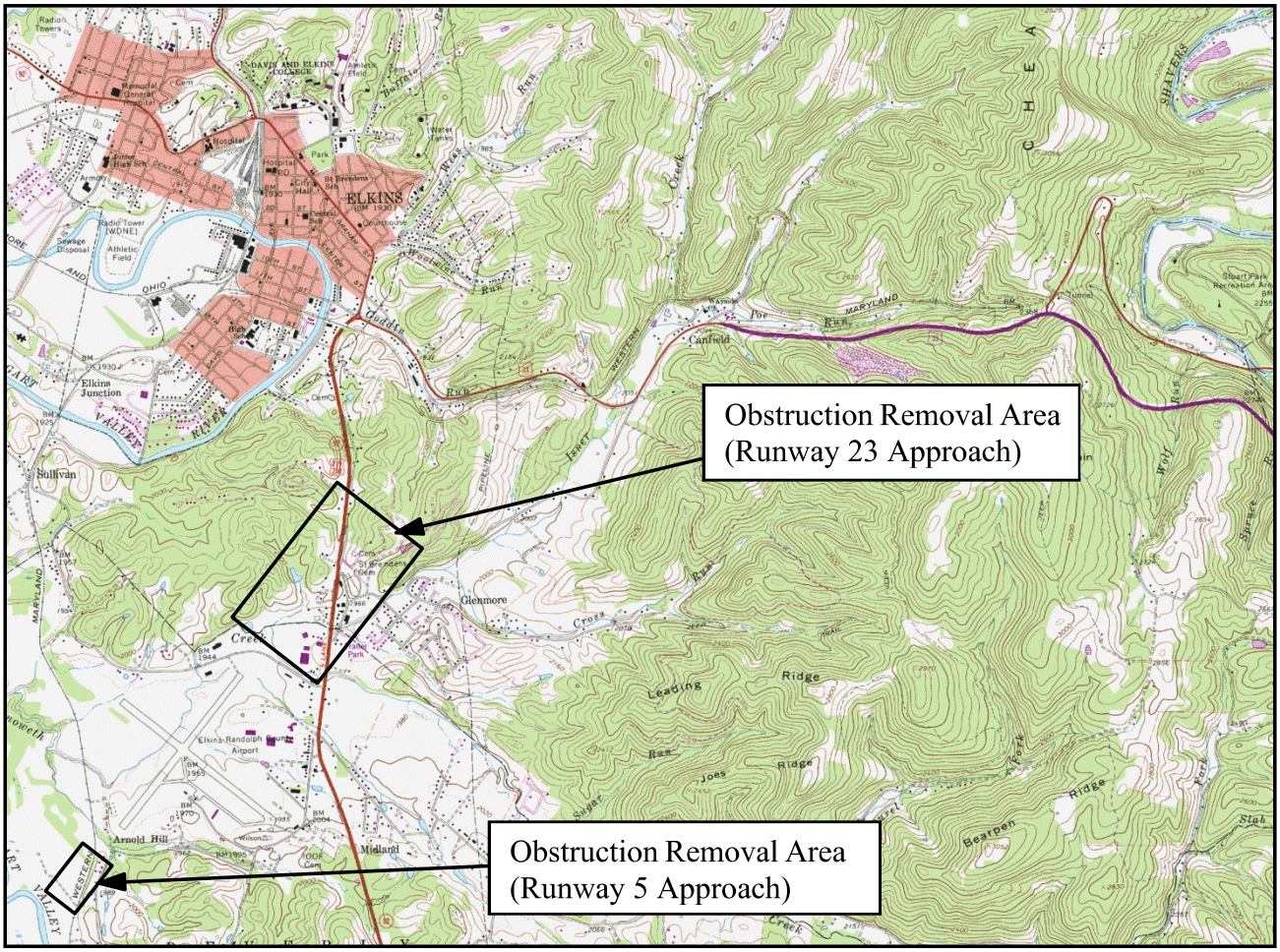


Figure B.1. Project Action Area (Obstruction Removal Areas)

The proposed action has nine (9) tree removal and trimming areas which are generally defined in **Table B.1** below. The areas are depicted in the preliminary construction plans contained in **Appendix C- Preliminary Construction Plans.**

Table B.1: Obstruction Removal Area Locations

Area No.	Acreage	Select Removal/ Select Trimming	Estimated Ground Disturbance*	Runway Approach	Latitude	Longitude
1	0.84	0.84 Acres Removal	0.67 acres	Runway 23	38° 54’ 02”	79° 50’ 55”
2	11.63	5.76 Acres Removal 5.87 Acres Trimming	9.89 acres	Runway 23	38° 54’ 04”	79° 50’ 48”
3	5.07	1.39 Acres Removal 3.68 Acres Trimming	4.06 acres	Runway 23	38° 54’ 11”	79° 50’ 45”
4	9.45	5.98 Acres Removal 3.47 Acres Trimming	7.56 acres	Runway 23	38° 54’ 15”	79° 50’ 32”
5	0.10	0.10 Acres Trimming	0.05 acres	Runway 23	38° 54’ 25”	79° 50’ 29”
6	0.82	0.82 Acres Removal	0.62 acres	Runway 5	38° 53’ 05”	79° 51’ 53”
7	0.74	0.05 Acres Removal 0.69 Acres Trimming	0.56 acres	Runway 5	38° 53’ 01”	79° 51’ 45”
8	1.91	1.91 Acres Removal	0.57 acres	Runway 5	38° 52’ 56”	79° 51’ 49”
9	0.13	0.13 Acres Trimming	0.07 acres	Runway 5	38° 52’ 51”	79° 51’ 54”

*A feller buncher will be used for tree removal and trimming, resulting in ground disturbance. Therefore, the area of ground disturbance was visually estimated based on where trees needing to be trimmed or removed were spaced within each of the nine (9) study areas.

B.2 ANTICIPATED WORK SCHEDULE

Construction is anticipated to occur in 2026-2027, with the proposed selective tree cutting and trimming to occur between May 1 and September 31.

SECTION C. SPECIES SUITABLE HABITAT

All seven (7) identified species evaluated in this Biological Assessment, including Indiana bats, NLEB, TCB, VBEB, monarch butterfly, RPBB, and the small whorled pogonia have the potential to be present within surrounding habitats. No critical habitat as defined by the USFWS is present.

C.1 HABITAT DESCRIPTION

The Elkins-Randolph County Regional Airport is located in the Potomac Highlands region of West Virginia. The airport is situated in the Tygart River valley with the surrounding terrain rising dramatically to form mountains which constitute a portion of the Allegheny Mountain Range. The topography within the vicinity of the proposed action is rolling hills with the primary obstruction removal areas being located on the hilltops. Elevations in the Action Area range from approximately 1930 feet (588 m) to 2,150 feet (655 m). The action/project area is primarily privately owned forest land. The forest is classified as Northern Hardwood cover type.

Obstruction Area 1 has a northeast facing slope. A portion of Area 1 (0.84 acre) was graded and filled about 30 to 40 years ago and has regenerated in young forest with dense understory of shrubs and trees. Part of this area consists of planted spruce with many downed trees. The most recent plant survey in 2024 identified this area as Mesic Forest (Mesic).

Obstruction Area 2 is a hilltop and forest area (11.63 acres). It is disturbed from previous logging and old building sites (open areas) are present, with deer browse apparent. The 2024 plant survey identified this area as a mix of Ruderal Forest and Oak Forest. Ruderal Forest consists of areas once subjected to heavy human disturbance to the soils, likely by cattle grazings, and have succeeded spontaneously with a mix of weedy and generalist native and exotic tree species The Oak Forest portion consists of a habitat type with minimal impact from agricultural, industrial or residential development.

Obstruction Area 3 consists of a hilltop and upper slopes adjacent to homes (5.07 acres). Trails (manmade and wildlife) are present throughout the area. Invasive shrubs (common privet and shrub honeysuckle) are abundant. The 2024 plant survey identified this area as a mix of Ruderal Forest, Oak Forest, and Oak Forest-Cut. The Oak Forest – Cut habitat consists of areas of the dry-mesic oak forest habitat that have recently been clear-cut or heavily timbered.

Obstruction Area 4 consists of a hilltop and upper slopes adjacent to homes and businesses (9.45 acres). An old county road bisects the area and is utilized by hunters and ATV's. Heavy deer browse is evident in the understory. The 2024 plant survey identified this area as a mix of Ruderal, Oak Forest, Oak Forest-Cut, and Oak Forest – Res. The Oak Forest – Res habitat consists of areas of the dry-mesic oak forest habitat within fragmented woodlots and adjacent to large lot home sites.

Obstruction Area 5 is a small knob/hilltop adjacent to Area 4 (0.10). The understory in this area is almost non-existent due to the high number of deer present. There is some disturbance from ATV's in this area. The 2024 plant survey identified this area as Oak Forest – Cut.

Obstruction Area 6 is a small, 0.82 acre area in a lowland forest with an intermittent stream. The 2024 plant survey identified this area as Ruderal Forest.

Obstruction Area 7 is a small, 0.74 acre area in a lowland forest with an intermittent stream. The 2024 plant survey identified this area as Floodplain Forest. This habitat consists of maturing mixed hardwoods with a diverse understory associated with a first order perennial stream.

Obstruction Area 8 is a northeast-facing slope that has been disturbed from logging activity in recent years. The midstory and ground cover is dense in much of the area (1.91 acres). There is a small drainage channel/stream in the area. The 2024 plant survey identified this area as Oak Forest – Cut.

Obstruction Area 9 is a small, 0.13 acre residential front yard with a few large trees. The ground layer is regularly mowed. The 2024 plant survey identified this area as Ruderal Forest.

The three (3) Silos and the two (2) light structures are all located to the southwest of the Runway 5 end. These occur in previously disturbed areas. These areas were described in the 2024 plant survey as "Other Habitat" within highly disturbed soils that do not support native herbaceous vegetation.

C.2 SPECIES DESCRIPTIONS

C.2.1 Indiana Bat (*Myotis sodalis*)

Overview – The USFWS listed the Indiana bat as endangered in 1967. The USFWS designated critical habitat for the Indiana bat in 1976 to include 11 caves and 2 mines in six states. USFWS correspondence from February 22, 2024 indicates there is final critical habitat for this species. The project does not overlap the critical habitat. Per correspondence with USFWS, presence/probably absence surveys for listed bats were recommended for the Project. A Mist Net Survey Plan was submitted to the USFWS on July 3, 2024, and concurrence for the Myotid Bat Study Plan – Mist Netting was issued by the USFWS on July 9, 2024 based on the submitted plan (see Appendix D). Mist netting was conducted during the period of July 28th through August 3rd 2024 for the purpose of determining presence/probable absence for Indiana, NLEB and TCB in the area. A total of 39 bats were captured during mist net surveys. Captured bat species were limited to Big Brown Bats and Eastern Red Bats. No Indiana bats were captured during the summer mist netting surveys conducted in the study area. Prior to the 2024 surveys; mist net surveys were conducted for the Indiana bat and NLEB and a report was submitted in August of 2018. The survey covered 26 acres of potential bat habitat and was conducted at 5 net sites from July 30, 2018 to August 9, 2018 following protocol outlined in the Range-wide Indiana Bat Summer Survey Guidelines. A total of 11 bats were captured during mist net surveys. Captured bat species were limited to Big Brown Bats and Eastern Red Bats. No Indiana bats were captured during this survey.

This section reviews the status of the Indiana bat and information about its biology, ecology, distribution, and current threats, as summarized from the USFWS's Indiana Bat (*Myotis sodalis*) Draft Recovery Plan: First Revision (USFWS 2007).

Description and Taxonomy – The USFWS recognizes the Indiana bat to be a monotypic species. Alternative common name includes Indiana myotis. The Indiana bat is a medium-sized bat that closely resembles the northern long-eared bat (*Myotis septentrionalis*) and little brown bat (*Myotis lucifugus*) and is distinguished from the two by its ear size (northern long- eared bat) and distinctly keeled calcar (i.e., spur of cartilage arising from the inner side of the ankle) and lighter nose color (little brown bat). Adults weigh 0.2 to 0.4 ounces (5 to 11 grams (g)), are generally 1.6 to 1.9 inches (4.1 to 4.9 centimeters (cm)) in length, grayish brown in color, and have ears and wing membranes that are flat in coloration and do not contrast with the fur.



Figure C.2.1 – A Picture of an Indiana Bat
(from Range-wide Indian Bat Protection and Enhancement Plan Guidelines for Surface Coal-Mining Operations – July 2009 and revised December 2009 and February 2013)

Distribution and Relative Abundance – The Indiana bat may occur in 20 States in the eastern United States from New England to the Midwest, mainly within the central areas of this region from Vermont to southern Wisconsin, eastern Oklahoma, and Alabama. In summer, Indiana bat maternity colonies and individuals may occur throughout this range. In winter, populations are distributed among approximately 281 extant hibernacula in 19 States.

Life History and Ecology

Fall Swarming and Mating – Indiana bats arrive at hibernacula as early as late July, and the number of bats increase throughout August and into September and early October. During this period, Indiana bats fly in and out of cave entrances from dusk to dawn with relatively low numbers of individuals roosting during the day. Mating occurs during the later period of the fall swarming months. Individuals also gain weight during this time to prepare for hibernation.

Hibernation – Hibernation typically lasts from October through April, although it may extend from September through May in northern areas, including New York, Vermont, and Michigan. Indiana bats tend to hibernate in the same hibernaculum at which they swarm, and individuals (especially females) return to the same hibernaculum each year. Indiana bats usually hibernate in large, dense clusters ranging from 300 to 484 bats per square foot, although both smaller clusters and large groups of up to 500 bats per square foot have been observed. Indiana bats often inhabit hibernacula with other species of bats, including gray bats (*Myotis grisescens*), VBEB (*Corynorhinus townsendii virginianus*), little brown bats (*Myotis lucifugus*), and NLEB.

Spring Emergence and Migration – Individual bats begin to emerge from hibernacula in April, and emergence continues through May with peak emergence occurring in mid-April. Exact timing varies throughout the species' range depending on latitude and weather, although females tend to emerge prior to males in most regions. Following emergence, individual bats migrate to summer habitat. Indiana bats may migrate hundreds of kilometers from their hibernacula to summer habitat. Reproductive females may migrate up to 357 mi. (575 km) to form maternity colonies. Little information is available to determine habitat needs for Indiana bats during migration.

Summer Life History and Behavior – Reproductive females arrive at summer habitats as early as mid-April and continue to arrive through May. Males and non-reproductive females disperse throughout their range and roost individually or in small numbers in the same areas as reproductive females.

Maternity Colony Formation – Maternity colonies typically use 10 to 20 trees each year, although only 1 to 3 of these trees are primary roosts that are used by the majority of females for some or all of the summer. Maternity colonies exhibit fission-fusion characteristics with females switching roosts every two to three days depending on reproductive condition, roost type, and time of the year. Once established, females usually return to the same colony each year, and fidelity to roost trees and foraging areas has also been observed.

Reproduction – Indiana bats mate during fall swarming, and hibernating females store sperm until spring, at which time ovulation takes place upon emergence. Females give birth to a single pup in June or early July. Females raise young in maternity colonies, as described above. Maximum lifespan for Indiana bats is unknown. One study estimated a survival rate of only 4 percent beyond 10 years, while another captured a single individual 20 years after initial banding.

Foraging Behavior – Indiana bats are nocturnal foragers that use hawking and gleaning in conjunction with passive acoustic cues to collect prey. The species' diet includes insects of the orders Coleoptera, Diptera, Lepidoptera, and Trichoptera. Indiana bats have been described as selective opportunists because they consistently eat moths, flies, beetles, and caddisflies, but will eat non-preferred prey, such as ants, when available. Individuals forage 6 to 100 ft. (2 to 30 m) above ground level near streams, riparian areas, forest edges, and other linear landscape features.

Home Range – Studies on the home ranges of Indiana bats have varied widely in their results, and direct comparisons between studies are difficult due to differences in seasons, sexes, and reproductive status of the females studied, all of which appear to affect home range. In Illinois, mean summer range for 11 male and female Indiana bats was calculated to be 357 ac. (145 ha), while in Vermont, mean summer range was calculated to be 205 ac. (83 ha) for 14 female Indiana bats.

Habitat

Winter Habitat – Indiana bats prefer hibernacula in areas with karst (limestone, dolomite, and gypsum), although it may also use other cave-like locations, such as mines. Suitable hibernacula have low temperatures (below 50.0 degrees Fahrenheit (°F); (10 degrees Celsius (°C)) with infrequent drops below freezing, high humidity, and little to no air currents.

Spring and Fall Roosts – During fall and spring, Indiana bats use roosting sites similar to those selected in the summer with the exception of pines (*Pinus spp.),* which are more commonly occupied in spring and fall. Indiana bats tend to roost individually more often than in the summer and switch trees every two to three days, although individuals tend to show fidelity to individual trees and roosting areas within and among years.

Summer Habitat – High quality summer habitat includes mature forest stands containing open subcanopies, multiple moderate to high quality snags, and trees with exfoliating bark (Farmer et al. 2002). At least 33 species of trees have been documented to serve as roosts for reproductive females and their young; these include various ash (*Faxinus spp.*), elm (*Ulmus spp.*), hickory (*Carya spp.*), maple (*Acer spp.*), poplar (*Populus spp.*), and oak (*Quercus spp.*). Most trees occupied by females are dead or dying, and individuals can also be found under the bark of dead sections of living trees. Primary roosts usually receive direct sunlight for more than half the day; are unimpeded by vines or small branches; are typically within canopy gaps in a forest, in a fence line, or along a wooded edge; and are found within 50 ft. (15 m) of a forest edge.

Threats – The USFWS identifies white-nose syndrome (WNS), a disease that affects hibernating bats and is caused by the fungus *Pseudogymnoascus destructans*, to be the predominant threat to this species' continued existence.

The USFWS 2007 Recovery Plan identifies several other factors affecting Indiana bats and their habitats including quarrying and mining operations (summer and winter habitat), loss/degradation of summer/migration/swarming habitat, loss of forest habitat connectivity, some silvicultural practices and firewood collection, disease and parasites, predation, competition with other bat species, environmental contaminants (not just "pesticides"), climate change, and collisions with man-made objects (e.g., wind turbines, communication towers, airstrikes with airplanes, and roadway strikes).

With few exceptions, these identified threats are still affecting the species to varying degrees. The most significant range wide threats to the Indiana bat have traditionally been habitat loss/degradation, forest fragmentation, winter disturbance, and environmental contaminants. However, climate change and WNS are increasingly being identified as significant threats to the future recovery of the Indiana bat and other similar bat species.

C.2.2 Northern Long-eared Bat (*Myotis septentrionalis*)

Overview – The USFWS listed the NLEB as Threatened throughout its range on April 2, 2015 (USFWS 2015), and it was re-classified as Endangered on March 31, 2023 (USFWS 2023). A letter from the USFWS on February 22, 2024, indicated the Endangered species, NLEB should be considered in an effects analysis for the Project. This correspondence also indicated no critical habitat has been designated for this species.

Per correspondence with USFWS, presence/probably absence surveys for listed bats were recommended for the Project. A Mist Net Survey Plan was submitted to the USFWS on July 3, 2024, and concurrence for the Myotid Bat Study Plan – Mist Netting was issued by the USFWS on July 9, 2024 based on the submitted plan (see Appendix D). Mist netting was conducted during the period of July 28th through August 3rd 2024 for the purpose of determining presence/probable

absence for Indiana, NLEB and TCB in the area. A total of 39 bats were captured during mist net surveys. Captured bat species were limited to Big Brown Bats and Eastern Red Bats. No NLEB were captured during the summer mist netting surveys conducted in the study area. Prior to the 2024 surveys; mist net surveys were conducted for the Indiana bat and NLEB and a report was submitted in August of 2018. The survey covered 26 acres of potential bat habitat and was conducted at 5 net sites from July 30, 2018 to August 9, 2018 following protocol outlined in the Range-wide Indiana Bat Summer Survey Guidelines. A total of 11 bats were captured during mist net surveys. Captured bat species were limited to Big Brown Bats and Eastern Red Bats. No NLEB were captured during this survey.

This section reviews the status of the NLEB and information about its biology, ecology, distribution, and current threats, as summarized from the USFWS's final rule (USFWS 2016) and the Species Status Assessment Report for the NLEB (*Myotis septentrionalis*) Version 1.2 (USFWS 2022).

Description and Taxonomy – The USFWS describes the NLEB as a monotypic species (i.e., having no subspecies), although there have been few genetic studies on this species. The NLEB has been recognized by different common names, including Keen's bat, northern myotis, and the northern bat. The NLEB is a medium-sized bat that is distinguished from other myotis species by its long ears, which average 0.7 in. (17 millimeters (mm)) in length. Adults weigh 0.2 to 0.3 oz. (5 to 8 g), and females tend to be slightly larger than males. Individuals are medium to dark brown on the back; dark brown on ears and wing membranes, and tawny to pale-brown on the ventral side. Within its range, the NLEB can be confused with the little brown bat or the western long-eared myotis (*Myotis evotis*).



Figure C.2.2. A Picture of a NLEB
[*from USFWS Species Profile for NLEB* (*Myotis septentrionalis*)]

Distribution and Relative Abundance – The NLEB inhabits 37 states in the eastern and north central United States and all Canadian provinces west to the southern Yukon Territory and eastern British Columbia. Populations tend to be distributed in patches across its range and are typically composed of small numbers. More than 1,100 winter hibernacula have been identified in the

United States (90 in New York), most of which contain only a few (1 to 3) individuals. The USFWS recognize four United States populations. NLEB inhabiting New York are considered part of the Eastern population, which has historically been the most abundant population and consists of individuals inhabiting Maine south to Virginia and west to West Virginia (WV). However, this population has experienced drastic declines since WNS was first documented in New York in the winter of 2006-2007.

Life History and Ecology

Hibernation – NLEB hibernate either solitarily or in multispecies hibernacula during winter months. Individuals arrive at hibernacula in August or September, enter hibernation in October and November, and emerge from hibernacula in March or April. The species has shown a high degree of repeated hibernaculum use, although individuals may not return to the same hibernacula in successive seasons. NLEB often inhabit hibernacula in small numbers with other bat species, including little brown bats, big brown bats (*Eptesicus fuscus*), eastern small-footed bats (*Myotis leibii*), tri-colored bats (*Perimyotis subflavus*), and Indiana bats. NLEB have been observed moving among hibernacula during the winter hibernation period, but individuals do not feed during this time, and the function of this behavior is not well understood.

Migration and Homing – NLEB are not long-distance migratory species with distances between summer roosts and winter hibernacula ranging from 5 mi. (8 km) to 168 mi. (270 km) but distances between 35 mi (56 km) and 55 mi. (89 km) are more typical. Spring migration period typically occurs from mid-March to mid-May, and fall migration typically occurs between mid-August and mid-October.

Reproduction – NLEB mate from late July in northern regions to early October in southern regions. Hibernating females store sperm until spring, and ovulation takes place when females emerge from hibernacula. Gestation is estimated to be 60 days, after which time females give birth to a single pup in late May or early June. Females raise their young in maternity colonies, which generally consist of 30 to 60 individuals (females and young). Roost tree selection changes depending on reproductive stage with lactating females roosting higher in tall trees with less canopy cover. Maximum lifespan for northern long-eared bats is estimated to be up to 18.5 years, and the highest rate of mortality occurs during the juvenile stage.

Foraging Behavior – NLEB are nocturnal foragers that use hawking and gleaning in conjunction with passive acoustic cues to collect prey. The species' diet includes moths, flies, leafhoppers, caddisflies, beetles, and arachnids. Individuals forage 3 to 10 ft. (1 to 3 m) above the ground between the understory and canopy of forested hillsides and ridges with peak foraging activity occurring within five hours after sunset.

Home Range – NLEB exhibit site fidelity to their summer home range, during which time individuals roost and forage in forests. Studies indicate a variety of home range sizes—from as little as 21.3 ac. (8.6 ha) to as large as 425 ac. (172 ha). Some studies indicate differences in ranges between sexes, while others find no significant differences.

Habitat

Winter Habitat – NLEB predominantly overwinter in hibernacula of various sizes that include caves and abandoned mines. Hibernacula have relatively constant, cool temperatures with very high humidity and no air currents. Individuals most often roost in small crevices or cracks in cave or mine walls or ceilings but are also infrequently observed hanging in the open. Less commonly, northern long-eared bats have been observed overwintering in abandoned railroad tunnels, storm sewers, aqueducts, attics, and other non-cave or mine hibernacula with temperature, humidity, and air flow conditions resembling suitable caves and mines.

Summer Habitat – In summer, NLEB typically roost individually or in colonies underneath bark or in cavities or crevices of both live trees and snags. Males and nonreproductive females may also roost in cooler locations, including caves and mines. Individuals have also been observed roosting in colonies in buildings, barns, on utility poles, and in other man-made structures. The species has been documented to roost in many species of trees, including black oak (*Quercus velutina*), northern red oak (*Quercus rubra*), silver maple (*Acer saccharinum*), black locust (*Robinia pseudoacacia*), American beech (*Fagus grandifolia*), sugar maple (*Acer saccharum*), sourwood (*Oxydendrum arboreum*), and shortleaf pine (*Pinus echinata*).

NLEB actively form colonies in the summer, but such colonies are frequently in flux because members will frequently depart to be solitary or to form smaller groups and later return to the main unit. This behavior is described as "fission-fusion," and it also results in individuals often switching tree roosts (typically every two to three days). Roost trees are often close to one another within the species' summer range with various studies documenting distances between trees ranging from 20 ft. (6.1 m) to 2.4 mi. (3.9 km).

Spring Staging – Spring staging is the time period between winter hibernation and spring migration to summer habitat when bats begin to gradually emerge from hibernation. Individuals will exit the hibernacula to feed but re-enter the same or alternative hibernacula to resume periods of physical inactivity. The staging period is believed to be short for the NLEB and may last from mid-March through early May with variations in timing and duration based on latitude and weather.

Fall Swarming – Fall swarming is the time period between the summer and winter seasons and includes behaviors such as copulation, introduction of juveniles to hibernacula, and stop-overs at sites between summer and winter regions. Both males and females are present together at swarming sites, and other bat species are often present as well. For NLEB, the swarming period may occur between July and early October, depending on latitude within the species' range. NLEB may use caves and mines during swarming. Little is known about roost tree selection during this period, but some studies suggest that a wider variation in tree selection may occur during swarming than during the summer.

Threats - The USFWS identifies WNS caused by the fungus *Pseudogymnoascus destructans (Pd)*, to be the predominant threat to this species' continued existence. Since the disease was first observed in New York in 2006, WNS has spread rapidly in bat populations from the Northeast to the Midwest and Southeast. Population numbers of NLEB have declined by 99 percent in the Northeast, which along with Canada has been considered the core of the species' range. For this reason, USFWS believes that WNS has significantly reduced the redundancy and resiliency of both the NLEB and Indiana bat. Although significant population declines of NLEB have been

documented due to the spread of WNS, other factors could further diminish the species' ability to persist and recover. These factors include wind turbine strikes, disturbance and loss of hibernacula habitat, conversion of summer forest habitat, and loss of maternity roosts through development.

C.2.3 Tricolored Bat (*Perimyotis subflavus*)

Overview – The USFWS proposed to list the TCB as endangered throughout its range on September 14, 2022 (USFWS 2022). A letter from the USFWS on February 22, 2024, indicated the proposed Endangered species, TCB should be considered in an effects analysis for the Project. This correspondence also indicated no critical habitat has been designated for this species.

Per correspondence with USFWS, presence/probably absence surveys for listed bats were recommended for the Project. A Mist Net Survey Plan was submitted to the USFWS on July 3, 2024, and concurrence for the Myotid Bat Study Plan – Mist Netting was issued by the USFWS on July 9, 2024 based on the submitted plan (see Appendix D). Mist netting was conducted during the period of July 28th through August 3rd 2024 for the purpose of determining presence/probable absence for Indiana, NLEB and TCB in the area. A total of 39 bats were captured during mist net surveys. Captured bat species were limited to Big Brown Bats and Eastern Red Bats. No TCB were captured during the summer mist netting surveys conducted in the study area. Prior to the 2024 surveys; mist net surveys were conducted for the Indiana bat and NLEB and a report was submitted in August of 2018. The survey covered 26 acres of potential bat habitat and was conducted at 5 net sites from July 30, 2018 to August 9, 2018 following protocol outlined in the Range-wide Indiana Bat Summer Survey Guidelines. A total of 11 bats were captured during mist net surveys. Captured bat species were limited to Big Brown Bats and Eastern Red Bats. Although the survey was not conducted specifically for the TCB, no TCB's were captured during this survey.

This section reviews the status of the TCB and information about its biology, ecology, distribution, and current threats, as summarized primarily from the USFWS's Species Status Assessment (SSA) Report (USFWS 2021).

Description and Taxonomy – Various common names have been applied to TCB, including Georgian bat, pigmy bat, southern pipistrel, and most commonly: eastern pipistrelle. TCB is a widely distributed small insectivorous bat of eastern North America. Readily identifiable by its tricolored fur, TCB primarily roost in foliage of live and dead trees in the spring, summer, and fall, and hibernate in caves and other subterranean habitats during the winter.

TCB is one of the smallest bats in eastern North America and is distinguished by its unique tricolored fur that appears dark at the base, lighter in the middle, and dark at the tip. TCB often appear yellowish (varying from pale yellow to nearly orange), but may also appear silvery-gray, chocolate brown, or black. Males and females are colored alike, but females are consistently heavier than males. Newly volant young are much darker and grayer than adults. Other distinguishing characteristics include 34 teeth (compared with 38 teeth in eastern North American *Myotis* spp. for which it is sometimes confused), a calcar (i.e., spur of cartilage arising from the inner side of the ankle) with no keel, and only the anterior third of the uropatagium (i.e., the membrane that stretches between the legs) is furred.



Figure C.2.3. A Picture of TCB
[from Species Status Assessment (SSA) Report for the Tricolored Bat (Perimyotis subflavus)]

Distribution and Relative Abundance – TCB's range encompasses 39 states, 4 Canadian provinces, and Guatemala, Honduras, Belize, Nicaragua, and Mexico.

Prior to 2006 (i.e., before WNS was first documented), TCB was highly abundant and widespread, with over 140,000 bats observed hibernating in 1,951 known hibernacula spread across >1 billion acres in 34 states and 1 Canadian province. TCB numbers vary temporally and spatially, but abundance and occurrence on the landscape were generally stable.

Available evidence indicates TCB abundance has and will continue to decline substantially over the next 10 years under current conditions. Evidence of the past decline is demonstrated in available data in both winter and summer. Future projections, assuming no further WNS spread nor increases in wind farms and capacity (current stressor conditions), show continued declines in range wide abundance, number of hibernacula, and spatial extent in the future.

Life History and Ecology

Migration and Homing – TCB disperse from winter hibernacula to summer roosting habitat in the spring. It has been determined at least some TCB engage in latitudinal migration that is more typically associated with hoary bats (*Lasiurus cinereus*), eastern red bats, and silver-haired bats, and this behavior is more common for males than for females. The maximum migration distance on record is a female TCB who migrated a straight-line distance of 151 miles (243 km) from her winter hibernaculum in southern Tennessee to a summer roost in Georgia. Other migration records between winter hibernacula and summer habitat include less than 50 miles (80 km), 27 miles (44 km), and 85 miles (137 km).

Reproduction – Male and female TCB converge at cave and mine entrances between mid-August and mid-October to swarm and mate. Adult females store sperm in their uterus during the winter and fertilization occurs soon after spring emergence from hibernation. Females typically give birth to two young, rarely one or three between May and July. Young grow rapidly and begin to fly at 3 weeks of age and achieve adult-like flight and foraging ability at 4 weeks. Adults often abandon

maternity roosts soon after weaning, but young remain longer. TCB are considered juveniles (i.e., subadults) when entering their first hibernation and most probably do not mate their first fall.

Foraging Behavior – TCB emerge early in the evening and forage at treetop level or above but may forage closer to ground later in the evening. TCB exhibit slow, erratic, fluttery flight while foraging and commonly forage with eastern red bats (*Lasiurus borealis*) and silver-haired bats (*Lasionycteris noctivagans*). TCB forage most commonly over waterways and forest edge. TCB are opportunistic feeders and consume small insects including caddisflies (Trichoptera), flying moths (Lepidoptera), small beetles (Coleoptera), small wasps and flying ants (Hymenoptera), true bugs (Homoptera), and flies (Diptera).

Habitat

Winter Habitat – During the winter, TCB hibernate (i.e., reduce their metabolic rates, body temperatures, and heart rate) in caves and mines, although in the southern U.S., where caves are sparse, TCB often hibernate in road-associated culverts and sometimes tree cavities and abandoned water wells. TCB exhibit high site fidelity with many individuals returning year after year to the same hibernaculum.

TCB are one of the first cave-hibernating species to enter hibernation in the fall and one of the last to leave in the spring in Missouri and Pennsylvania. In the southern U.S., hibernation length is shorter compared to northern portions of the range and some TCB exhibit shorter torpor bouts and remain active and feed during the winter.

TCB are often found hibernating at warmer locations within caves and mines compared to other cave-hibernating bat species within these locations. TCB was observed hibernating at a mean temperature of 51.6 degrees F; 10.9 degrees C) (range 50.5 – 52.5 degrees F; 10.3–11.4 degrees C) at caves and mines in Pennsylvania, Maryland, and West Virginia. TCB are also found in areas of caves and mines with high humidity (e.g., 99%) and were not observed in caves where relative humidity was below 80%.

Hibernating TCB do not typically form large clusters; most commonly roost singly, but sometimes in pairs, or in small clusters of both sexes away from other bats. TCB roost on cave walls (more often) and ceilings and are rarely found in cave crevices. TCB will shift roosts from one to another during the winter but arouse less frequently than other cave-hibernating bat species; consequently, sometimes water beads will collect on their fur making them appear almost white. In road associated culverts in the southern U.S., however, TCB exhibit shorter torpor bouts and move within and between culverts throughout the winter.

TCB hibernate in more caves and mines than any other cave-hibernating bat species in eastern North America. TCB may use small caves and mines that are unsuitable to other cave-hibernating bat species; however, hibernating TCB have been observed in greater numbers in hibernacula with stable temperatures. TCB were found to be hibernating in 80% of the 50 locations surveyed in Pennsylvania versus little brown bats (*Myotis lucifugus*), Indiana bats (*M. sodalis*), northern long-eared bats (*M. septentrionalis*), and big brown bats (*Eptesicus fuscus*) which were found in 56%, 16%, 16%, and 34% of potential hibernacula, respectively. Almost every cave in Indiana has contained at least one TCB; and small numbers of TCB have likely occupied most of Missouri's 6,400 caves.

Spring, Summer, Fall Habitat – During the spring, summer, and fall (i.e., non-hibernating seasons), TCB primarily roost among live and dead leaf clusters of live or recently dead deciduous hardwood trees. In the southern and northern portions of the range, TCB will also roost in Spanish moss (*Tillandsia usneoides*) and *Usnea trichodea* lichen, respectively. In addition, TCB have been observed roosting during summer among pine needles, eastern red cedar (*Juniperus virginiana*), within artificial roosts (e.g., barns, beneath porch roofs, bridges, concrete bunkers), and rarely within caves. Female TCB exhibit high site fidelity, returning year after year to the same summer roosting locations. Female TCB form maternity colonies and switch roost trees regularly (e.g., between 1.2 days and 7 days at roost trees in Indiana). Males roost singly.

Threats - For over a decade, WNS has been the foremost stressor on TCB. Since the first detection of WNS in 2006, TCB abundance has declined, leaving many individual colonies with small numbers of individuals. At these low population sizes, colonies are vulnerable to individual extirpations from stochastic events and are vulnerable to the effects of cumulative impacts from multiple stressors. Furthermore, small populations generally cannot rescue one another from such a depressed state owing to the TCB's low reproductive output (two pups per year) and high philopatry (tending to return to or remain near a particular site or area). These inherent life-history traits limit the ability of populations to recover from these low abundances. Consequently, effects of small population sizes exacerbate the effects of current and future declines due to continued exposure to WNS, mortality from wind turbines, and impacts associated with habitat loss and climate change.

C.2.4 Virginia Big-eared Bat (*Corynorhinus (=Plecotus) townsendii virginianus*)

Overview – The USFWS listed the VBEB as endangered throughout its range on December 31, 1979. A letter from the USFWS on December 11, 2025, indicated the Endangered species, VBEB, may occur within the boundary of the Project or be affected by the proposed Project. This correspondence also indicates there is final critical habitat for the species, but the Project location does not overlap the critical habitat.

Per correspondence with USFWS, presence/probably absence surveys for listed bats were recommended for the Project in 2024, prior to the updated species list obtained in 2025, which includes the VBEB. A Mist Net Survey Plan was submitted to the USFWS on July 3, 2024, and concurrence for the Myotid Bat Study Plan – Mist Netting was issued by the USFWS on July 9, 2024 based on the submitted plan (see Appendix D). Mist netting was conducted during the period of July 28th through August 3rd 2024 for the purpose of determining presence/probable absence for Indiana, NLEB and TCB in the area. A total of 39 bats were captured during mist net surveys. Captured bat species were limited to Big Brown Bats and Eastern Red Bats. Although the survey was not conducted specifically for the VBEB, no VBEB's were captured during the summer mist netting surveys conducted in the study area. Prior to the 2024 surveys; mist net surveys were conducted for the Indiana bat and NLEB and a report was submitted in August of 2018. The survey covered 26 acres of potential bat habitat and was conducted at 5 net sites from July 30, 2018 to August 9, 2018 following protocol outlined in the Range-wide Indiana Bat Summer Survey Guidelines. A total of 11 bats were captured during mist net surveys. Captured bat species were limited to Big Brown Bats and Eastern Red Bats. Although the survey was not conducted specifically for the VBEB, no VBEB's were captured during this survey.

This section reviews the status of the VBEB and information about its biology, ecology, distribution, and current threats, as summarized primarily from the USFWS's Recovery Plan Amendment for the Virginia Big-Eared Bat (USFWS 2024), and the Natural Resources Conservation Service (NRCS) Virginia Big-Eared Bat Fact Sheet.

Description and Taxonomy – The VBEB is a moderate-sized bat weighing 3 to 4 ounces (9-12 grams). The fur is brown, and the underparts are buff-colored. The large ears are over 1 inch (2.5 centimeters) in length. There are two prominent lumps on the nose. The hairs on the toes do not extend much beyond the ends of the toes. The only bat it can be confused with is Rafinesque's big-eared bat, but this bat has white belly fur and long toe hairs.



Figure C.2.4. A Picture of VBEB
(from USFWS Species Profile for Virginia big-eared bat)

Distribution and Relative Abundance – The VBEB is a subspecies of Townsend's big-eared bat. Currently, there are five recognized subspecies of Townsend's big-eared bat. Two of these subspecies occur in the western United States, and one subspecies is found in Mexico. Another subspecies is found in the karst region (an area characterized by limestone and associated sinkholes and caves) of the Ozark Mountains. The fifth subspecies, the VBEB, occurs in the southern Appalachian Mountains. Populations of the VBEB exist in Kentucky, North Carolina, Tennessee, Virginia, and West Virginia.

The VBEB is a short-distance migrant that is believed to have a home range of approximately a 20-mile radius. However, they have been recorded moving up to 40 miles between summer and winter roosts.

Life History and Ecology

Reproduction – Mating takes place in the fall and winter, but the sperm is stored and the ova is not fertilized until the next spring. Pregnant females start to appear in the maternity colony as early as mid-March, but most do not arrive until later. The number of bats in maternity colonies in West Virginia ranges from 120 to 1350 bats (based on 1995 data). The gestation period for this species varies from 56 to 100 days depending on the ambient (outside) temperature (the young develop quicker during warm springs). In West Virginia, most young are born in June. Each female has a single young, known as a "pup." The pups are quite large and may weigh as much as 25% of the mother's weight. The young are capable of flight by the time they are three weeks old; by six weeks of age they are weaned.

Foraging Behavior – VBEBs feed exclusively on insects. Small moths make up the largest part of their diet. VBEBs do not leave their cave roost until quite late in the evening. For this reason, they are rarely seen as they forage. They feed over corn fields, pastures, hay fields, small woodlots, and large forested tracts. Individual bats often return to the same feeding area night after night. During the night the bats punctuate feeding bouts with periods of inactivity when they digest their food. During these periods of rest, the bats often roost near their foraging areas. They have been observed night roosting in old sheds, in trees, under bridges, and even in an old chicken coop. These bats do not travel long distances; the largest movement recorded is around 57 kilometers (40 miles). In the autumn, the bats put on fat to get them through the winter when the insects they feed on are not available. Some bats begin to return to the hibernation site in September, but they still continue to feed each warm evening. By December, the bats have entered hibernation.

Habitat - Caves are used by VBEBs in both winter and summer. During the winter, these bats hibernate in caves that provide cold, but above freezing, temperatures. Most of the world's VBEBs hibernate in just three caves. One cave in West Virginia harbors over 6350 hibernating VBEBs, the largest concentration of these bats anywhere. Female VBEBs form maternity colonies in caves where they rear their young. Warm caves are most suitable for maternity colonies, but a few maternity colonies occur in cold caves. In these caves, the colony gathers in small domes in the cave ceiling where their body heat is trapped, creating a pocket of warm air. The location of most males during the summer is not known, but a few "bachelor" colonies have been found.

Threats - VBEBs require a narrow range of microclimatic conditions (e.g., temperatures, humidity). This makes protecting and maintaining suitable sites highly important to the recovery of the species. The species is acutely sensitive to disturbance within sites, and can have increased mortality, have reduced reproductive success, or abandon sites completely as a result of disturbance or alteration of its habitats. This sensitivity and the species' concentration in a limited number of sites make it highly vulnerable to threats. The species is also threatened by the degradation and fragmentation of foraging areas, activities that could damage or degrade surface or subsurface areas of caves, barriers to migration and activities that reduce connectivity between roosting and foraging areas, as well as sources of direct mortality such as predation, roads, wind farms, and oil and brine pits. The effects of small population size and low genetic variability may also be threats.

C.2.5 Monarch Butterfly (*Danaus plexippus*)

Overview – The monarch, *Danaus plexippus*, is a species of butterfly globally distributed throughout 90 countries, islands, and island groups. These butterflies are well known for their phenomenal long-distance migration in the North American populations. They are currently considered a proposed threatened species on the USFWS Threatened and Endangered species list. A letter from the USFWS on February 22, 2024, indicated the then Candidate species, monarch butterfly should be considered in an effects analysis for the Project. This correspondence also indicated no critical habitat has been designated for this species. Subsequently, a vegetative survey within the project study area for small whorled pogonia was conducted on August 19, 20 and 21, 2024. This survey did not identify the presence of milkweed (an important plant for life requisite stages of oviposition and larval feeding of this species) within any of the plant communities.

This section reviews the status of the monarch butterfly and information about its biology, ecology, distribution, and current threats, as summarized from the USFWS's Species Status Assessment Report, version 2.1 (September 2020).

Description and Taxonomy – Adult monarch butterflies are large and conspicuous, with bright orange wings surrounded by a black border and covered with black veins. The black border has a double row of white spots, present on the upper side of the wings. Adult monarchs are sexually dimorphic, with males having narrower wing venation and scent patches. The bright coloring of a monarch serves as a warning to predators that eating them can be toxic. They have two sets of wings that span three to four inches. Monarch caterpillars, or larvae, have black, yellow, and white stripes and reach lengths of two (2) inches before metamorphosis.



Figure C.2.5.a. Picture of a Monarch Butterfly
[from Monarch (Danaus Plexippus) Species Status Assessment Report, version 2.1, 2020]

Distribution and Relative Abundance – Today, there are 30 extant populations and 1 presumed extant worldwide. These 31 populations are distributed among eight adaptive capacity units (ACU's). The current health of these populations, however, is unknown, as there is insufficient information available (with the exception of the eastern and western North American populations). Within the United States there are three recognized ACU's, including the Eastern North America ACU, the Western North America ACU, and the Southern Florida ACU.

The two major North American populations, the migratory populations located east and west of the Rocky Mountains, have been monitored at their respective overwintering sites in Mexico and California since the mid-1990s. While these populations fluctuate year-to-year with environmental conditions, these census data indicate long-term declines in the population abundance at the overwintering sites in both populations. These declining trends led to the petition of the U.S. Fish and Wildlife Service to list the monarch butterfly for protection under the Endangered Species Act of 1973, as amended.

Eastern North American monarchs undergo long-distance migration every fall, a behavior that differentiates this population from other non-migratory populations or from migratory populations that fly shorter distances and to different locations. Migratory monarchs in North America are the ancestral population for all other monarch populations around the world. The eastern North American monarch population has been censused annually since 1994. Although varying year-to-year, monarchs consistently numbered in the hundreds of millions throughout the 1990s and early 2000s (assuming a 21.1 million monarch/hectare density). There are additional survey data suggesting that monarch populations were as high or higher in the two decades prior to standardized monarch monitoring at the Mexican overwintering sites.

Like the monarchs in the eastern North American ACU, monarchs in the western North American ACU possess the unique migratory phenotype that is absent in the other six ACUs. Western North American monarchs also migrate long distances, although their migration is shorter than monarchs in the eastern North American ACU. Whereas eastern monarchs may fly well over 3,000 km to reach the Mexican overwintering sites, western monarchs reach the California coast by flying ~500 km to 1,600 km. Western monarchs occupy warmer climates throughout the summer to include the farther reaches of their range while they continue to breed in the hotter regions. The western North American population has been censused annually since 1997, providing an estimate of annual population size. Recent work, using past survey data, gives estimates of millions of butterflies in the mid-1980s. Based on the average of the past five years of overwintering counts (2020) the western North America ACU population was approximately 168,365.

Monarchs in southern Florida live in areas where the climate permits year-round breeding, and thus are able to reside continually without migrating. These non-migratory monarchs are genetically distinct from the migratory North American monarchs, although the southern Florida population gets an annual influx of individuals from the eastern monarch population

Life History and Ecology - During the breeding season, monarchs lay their eggs on their obligate milkweed host plant (primarily Asclepias spp.), and larvae emerge after two to five days. Larvae develop through five larval instars (intervals between molts) over a period of 9 to 18 days, feeding on milkweed and sequestering toxic chemicals (cardenolides) as a defense against predators. The larva then pupates into a chrysalis before emerging 6 to 14 days later as an adult butterfly. There are multiple generations of monarchs produced during the breeding season, with most adult butterflies living approximately two to five weeks; overwintering adults enter into reproductive diapause (suspended reproduction) and live six to nine months.

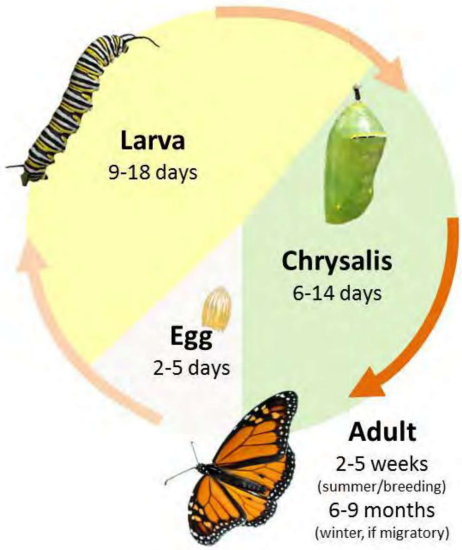


Figure C.2.5.b. Monarch life cycle.
[from Monarch (Danaus Plexippus) Species Status Assessment Report, version 2.1, 2020]

In many regions where monarchs are present, monarchs breed year-round. Individual monarchs in temperate climates, such as eastern and western North America, undergo long-distance migration, and live for an extended period of time. In the fall, in both eastern and western North America, monarchs begin migrating to their respective overwintering sites. This migration can take monarchs distances of over 3,000 km and last for over two months. In early spring (February-March), surviving monarchs break diapause and mate at the overwintering sites before dispersing. The same individuals that undertook the initial southward migration begin flying back through the breeding grounds and their offspring start the cycle of generational migration over again.

Habitat - Adult monarch butterflies during breeding and migration require a diversity of blooming nectar resources, which they feed on throughout their migration routes and breeding grounds (spring through fall). Monarchs also need milkweed (for both egg laying and larval feeding) embedded within this diverse nectaring habitat. The correct phenology, or timing, of both monarchs and nectar plants and milkweed is important for monarch survival. The position of these resources on the landscape is important as well. Individuals need nectar and milkweed resources year-round in non-migratory populations. Additionally, many monarchs use a variety of roosting trees along the fall migration route.

Migratory individuals of eastern and western North America require a very specific microclimate at overwintering sites. The eastern population of monarchs overwinter in Mexico, where this microclimate is provided by forests primarily composed of oyamel fir trees (*Abies religiosa*), on which the monarchs form dense clusters. The sites used for overwintering occur in mountainous areas west of Mexico City located between elevations of 2,900 and 3,300 m. The temperature must remain cool enough to prevent excessive lipid depletion, while at the same time staying warm enough to prevent freezing. Exposure to these cooler temperatures also helps orient the monarchs northward in the spring. The oyamel fir forest provides essential protection from the elements, including rain, snow, wind, hail, and excessive solar radiation. Many sites also provide a source of hydration via nectar plants or a water source. Most of the observed overwintering sites are located within the Monarch Butterfly Biosphere Reserve, which covers over 56,000 ha.

Threats - The primary drivers affecting the health of the two North American migratory populations are: loss and degradation of habitat (from conversion of grasslands to agriculture, widespread use of herbicides, logging/thinning at overwintering sites in Mexico, and incompatible management of overwintering sites in California, urban development, and drought), continued exposure to insecticides, and effects of climate change. Relative to the recent past, both the eastern and western North American populations have lower abundances and declining population growth rates.

The availability of milkweed is essential to monarch reproduction and survival. Reductions in milkweed is cited as a key driver in monarch declines. A majority of milkweed loss has occurred in agricultural lands, where intensive herbicide usage for weed control has resulted in widespread milkweed eradication. Milkweed is also lost on the landscape through development and conversion of grasslands.

C.2.6 Rusty Patched Bumble Bee (*Bombus affinis*)

Overview – The USFWS listed the RPBB as endangered throughout its range on March 21, 2017 (USFWS 2017). A letter from the USFWS on February 22, 2024, indicated the endangered, RPBB should be considered in an effects analysis for the Project. This correspondence also indicated no critical habitat has been designated for this species. The Airport and surrounding area are within a High Potential Zone (HPZ) for the RPBB, as mapped by the USFWS (**Figure 4**).

This section reviews the status of the RPBB and information about its biology, ecology, distribution, and current threats, as summarized primarily from the USFWS's Recovery Plan for Rusty Patched Bumble Bee *(Bombus affinis*) (USFWS July 2021).

Description and Taxonomy - Bumble bees, including the RPBB, belong to the genus *Bombus* (within the family Apidae), which includes approximately 250 species found primarily in temperate regions. There are 23 *Bombus* species in the eastern U.S. RPBB belongs to the subgenus, *B. sensu stricta,* which includes three other species in the U.S. that have also experienced recent declines. RPBBs have entirely black heads; workers and males have a rusty reddish patch centrally located on the dorsum of the abdomen (**Figure C.2.6**). Queens are entirely yellow on the first two abdominal segments and the rest of the abdominal segments are black. RPBB's are commonly confused with brown-belted bumble bees, because the second abdominal segment of the brown belted bumble bee has brown hairs towards the front and black hairs on the sides and back.

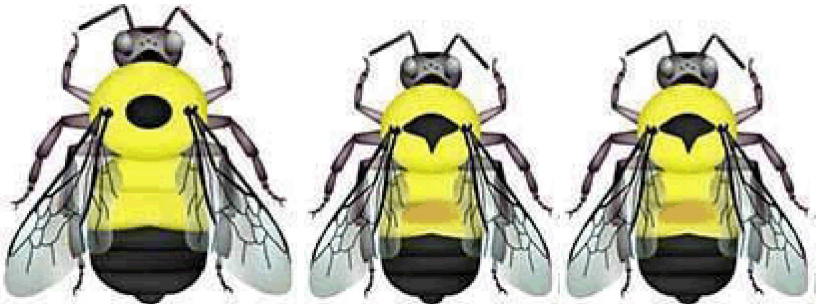


Figure C.2.6. RPBB queen (Left), worker (Center), and male (Right). Not to scale.
[from Programmatic Biological Opinion for Identified Restoration and Recovery Management Actions of the Monongahela, George Washington, and Jefferson National Forests on the Rusty Patched Bumble Bee (Bombus affinis), 2023]

Life History and Ecology

Life Cycle - Bumble bees, including RPBB's live in colonies; cooperative groups that include the offspring of one female and one male. Healthy RPBB colonies are large and may include more than one thousand workers, or non-reproductive females. The workers protect the colony, forage for nectar and pollen and care for the young. Healthy colonies with many workers can produce dozens to hundreds of new queens.

RPBBs have an annual life cycle. Workers can be seen in the field several weeks after nest establishment throughout the summer and into early fall, late June through September. Males are typically in flight during late summer and fall, August through September. The timing for observing queens depends on their geographical location.

Colonies produce reproductive males and queens in the late summer. The reproductive individuals leave the nest and mate. The workers and males die and only the queens enter diapause and overwinter. Little is known about RPBB mating behavior. The female emerges from diapause in the spring and then searches for a suitable nesting site. After establishing the nest, the queen lays eggs which hatch after approximately four days. The larvae feed on pollen and nectar and go through four instars before pupating, further developing and eventually hatching as full-size adults. Development time can take approximately five weeks, but can vary with temperature and food. RPBB larvae live in cells are fed individually by adults.

Food – Bumble bees are generalist foragers, meaning they gather pollen and nectar from a wide variety of flowering plants. The RPBB is a short-tongued species, so they are not able to easily access the nectar in flowers with deep corollas. The species is one of the first to emerge early in the spring and the last to go into hibernations. That said, RPBB requires a constant and diverse supply of flowers that bloom throughout the colony's long-life cycle to meet its nutritional needs. The nectar from flowers provides carbohydrates and the pollen provides RPBB's with protein. The number of queens that a colony can produce is directly related to the amount of pollen that is available. RPBB may also be dependent on woodland spring ephemeral flowers, because they emerge early from their winter habitat in the spring, and they are often associated near woodland habitats. The availability of floral resources is dependent on the proper soil and precipitation conditions to sustain them. For example, extended periods of drought may lessen the availability

and diversity of flowering plants in a given area because plant phenology is primarily driven by temperature, precipitation and the timing of snowmelt in the spring.

Behavior – Based on available observation records, seasonally - the RPBB may only be active above ground between about March 15 through October 10 and April 10 through October 10, south and north of 42 degrees latitude, respectively. Although air temperatures may be conducive to activity later in the fall, cessation of flight appears to be timed with the passing of native fall flowers.

On a daily basis, the RPBB is active under a broad range of conditions, but remains inactive when conditions are too cold or rainy. Bumble bees do not typically fly when conditions are foggy, rainy or drizzling. Sunny days with low wind speeds (of less than 8 mph) may be optimal, but they will fly during sub-optimal conditions.

Habitat

RPBB's have been observed in a variety of habitats, including prairies, woodlands, marshes, agricultural landscapes and residential parks and gardens. The RPBB requires areas that support sufficient food, including nectar and pollen from diverse and abundant flowers, as well as undisturbed nesting sites that area in proximity to those floral resources. They also require overwintering sites for hibernating queens.

Nests – It is assumed that the RPBB nests in upland grasslands and shrublands that contain forage during the summer and fall and as far as 30 meters into the edges or forest and woodland. RPBB nests are typically 1 to 4 feet underground in abandoned rodent nests or other mammal burrows and occasionally at the soil surface or aboveground. Queens may locate abandoned rodent burrows by using olfactory or chemical cues.

Overwintering – Little is known about the overwintering habitats of RPBB queens, but based on observations of other species it is assumed that the queens overwinter in upland forest and woodlands. Other species of Bombus typically form a chamber in loose, soft soil, a few centimeters deep in bare earth, moss, under tree litter or in bare-patches within short grass and may avoid areas with dense vegetation. The only known documented overwintering RPBB queen was discovered in a maple oak-woodland, which was about 0.5 kilometers into the woodlands, under a few centimeters of leaf litter and loose soil.

Threats – Prior to its listing as endangered in 2017, the species experienced a widespread and steep decline. The exact cause of the decline is unknown, but evidence suggests a synergistic interaction between an introduced pathogen and exposure to pesticides. The remaining populations are exposed to a number of interacting stressors, including pathogens, pesticides, habitat loss and degradation, non-native and managed bees, the effects of climate change, and small population biology. These stressors likely operate independently and synergistically. For example, dietary stress due to insufficient floral resources may reduce an individual's resiliency to pathogens and pesticides, exposure to insecticides can reduce resistance to disease, and exposure to fungicides can increase insecticide toxicity. Although the limiting factors are multi-faceted, solutions may be simpler, as actions to reduce or remove any of these stressors are likely to have great benefits.

C.2.7 Small Whorled Pogonia (*Isotria medeoloides*)

Overview – The USFWS listed the small whorled pogonia as endangered in 1982 (USFWS 1982). At the time of listing, records for the species were known from 48 counties in 16 states and Canada. However, only 17 sites (in ten states and Ontario, Canada) were known to be extant, and these sites contained a total of fewer than 500 plants. Subsequent searches have resulted in the discovery of several new sites: the 1991 census totaled approximately 2,600 stems at 86 sites in 15 states and Canada. The success of finding more populations and protecting them led to the 1994 reclassification of this species to threatened (USFWS 1994). A letter from the USFWS on February 22, 2024, indicated the threatened, small whorled pogonia should be considered in an effects analysis for the Project. This correspondence also indicated no critical habitat has been designated for this species.

Small whorled pogonia occurs in a variety of forested habitat types in West Virginia, and it is currently known from mixed-deciduous or mixed-deciduous/coniferous forests that are generally in second- or third-growth successional stages. A survey for the species was previously conducted in the Project Area on July 16, July 17 and September 9, 2019. The species was not observed in the course of that survey; negative surveys, however, are only considered valid for two full survey periods from the year of the survey.

Consultation with the USFWS was then re-initiated in 2024, and resulted in a request for a botanical survey for small whorled pogonia following the Procedures for Conducting Surveys for Federally Threatened or Endangered Plants in West Virginia located at https://www.fws.gov/media/west-virginia-plant-survey-guidelines. A work plan was prepared and approved by the USFWS via email dated August 5, 2024 (see Appendix B). The botanical survey for small whorled pogonia was conducted on August 19, 20 and 21, 2024 within the nine (9) obstruction removal areas composing the Project study area (see Appendix E). The federally listed small whorled pogonia plant species was not observed within the nine (9) obstruction removal areas of the Project.

This section reviews the status of the small whorled pogonia and information about its biology, ecology, distribution, and current threats, as summarized from the USFWS's Small Whorled Pogonia (*Isotria medeoloides*) Recovery Plan: First Revision (USFWS 1992), and the Small Whorled Pogonia Identification brochure (USFWS 1995).

Description and Taxonomy – The small whorled pogonia is perennial member of the orchid family that reappears in the spring from a perennial underground rootstock. The stems usually occur singly (sometimes in groups of two or three), and are usually 3-6" (8-15 cm) tall. The elliptical leaves, usually numbering five, are 1-3" (2.5-8 cm) long and grow in a single whorl at the top of the seem. Flowering individuals have one (occasionally two) greenish-yellow flower, about l" (2.5 cm) long, borne atop the whorl of leaves. The cylindrical fruit capsule which can develop after flowering is up to 1" (2.5 cm) long. It turns from green to brown as it dries. By late fall, it splits and releases thousands of dust-like seeds.

The small whorled pogonia could be confused with similar forest plants such as the large whorled pogonia or the Indian cucumber-root. The large whorled pogonia (*Isotria verticillata*), found occasionally from southern New England southward can grow in the same habitat as small whorled pogonia. The large whorled pogonia differs from the small whorled pogonia in several

characteristics: its sepals are brownish, not green; and the flower is separated from the leaves by a longer stalk (more than 2 cm or 3/4" long).

Indian cucumber-root (*Medeola virginiana*) is a very common woodland plant with a strong resemblance to small whorled pogonia. Indian cucumber-root's leaves are deeper green than those of small whorled pogonia; the stem is thin and wiry, and has fine hairs, compared to that of small whorled pogonia which is thicker, pale green, and hairless. Small individuals of Indian cucumber-root have just one set of leaves, like small whorled pogonia, but reproducing individuals are easily distinguished by having two whorls of leaves.



Figure C.2.7 Picture of Small Whorled Pogonia
[From USFWS Small Whorled Pogonia (Isotria medeoloides) Fact Sheet]

Distribution and Relative Abundance – Although widely distributed, the small whorled pogonia is rare. It is found in 18 eastern states, including West Virginia; as well as Ontario, Canada. Populations are typically small with less than 20 plants. It has been extirpated from Missouri, Vermont and Maryland.

Life History and Ecology

Reproduction – The small whorled pogonia flowers from mid-May to mid-June, with the flowers lasting only a few days to a week. It may not flower every year but when it does flower, one or two flowers are produced per plant. If pollinated, a capsule forms that contains several thousand minute seeds. The pogonia appears to self-pollinate by mechanical processes. The flower lacks both nectar guides and fragrance and insect pollination has not been observed.

Dormancy – Dormancy of the small whorled pogonia is still being studied, but periods of dormancy up to four years have been documented. It appears dormancy varies by year and site with the majority of plants experiencing dormancy of one year.

Mycorrhizal relationships – Orchid seeds, unlike seeds of other angiosperms, contain either very small quantities of food reserves or none at all. They will not germinate and/or establish seedlings unless they fall on a substrate containing a suitable mycorrhizal fungus (Jackson and Mason 1984). These fungi are often ones that can use cellulose as an energy source (Mallock et al.1980). The strands of the fungus penetrate the cells of the orchid and form a symbiotic root/fungus association known as mycorrhiza. Mycorrhizae serve as conduits through which the young, non-photosynthetic orchid seedling receives water and nutrients (Mallock et al. 1980). In return the orchid provides the fungus with carbohydrates at a later stage of its life cycle (Sanders et al. 1975).

Habitat - The small whorled pogonia grows in a variety of wooded habitats. Most sites are mid-successional mixed woods with trees 40 to 75 years old and 8-18" in diameter. Maple and oak, beech, and white pine are common tree species. The shrub and herb layers where small whorled pogonia grow are usually sparse. Herbaceous plants often associated with small whorled pogonia in the northern part of its range include Indian cucumber-root (*Medeola virginiana*), New York fern (*Thelypteris novaboracensis*), partridge berry (*Mitchella repens*), and rattlesnake plantain (*Goodyera pubescens*). Witch-hazel (*Hamamelis virginiana*) is a common shrub.

Most small whorled pogonia populations grow on gently sloping ground, often with thick leaf litter. Many sites are underlain by soils with a hardpan layer that impedes the downward flow of water and leads to the formation of shallow braided channels on the ground surface. Soils in which the shallow-rooted small whorled pogonia grows are generally dry during most of the growing season. The soils are usually covered with leaf litter (Homoya 1977), but are typically highly-acidic, and nutrient poor. Virtually all known small whorled pogonia sites in New England are on lands with signs of human use in the not-too-distant past. Many are in woods laced with old stone fences, indicating they were once cleared. The forests often contain decaying stumps as well, evidence of timber harvest following regrowth of the forest. Several populations are in woods that have been selectively harvested in the last twenty-five years. Exactly how selective tree harvest affects this plant is still under study.

Most populations of small whorled pogonia contain fewer than twenty plants at any one time, though New Hampshire and Maine are home to several large populations with fifty to five hundred individuals. Virginia and North Carolina also have a few large populations.

Threats - The primary impact to this species continues to be the destruction of habitat by converting the forest to other uses. Digging up the plants is a very real threat as well. Small whorled pogonia plants do not survive long after being transplanted.

C.3 THREATENED AND ENDANGERED SPECIES OCCURRENCE

A letter from the USFWS on December 11, 2025 indicated there are a total of seven (7) threatened, endangered or candidate species potentially present in the Project action area. This letter also indicated if critical habitat is found within the project location.

Indiana Bat *(Myotis sodalis)* - **Endangered**

- There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
- This species only needs to be considered under the following conditions:
  - All activities in this location should consider potential effects to this species. This project is not within a known-use area, but potentially occupied habitat may exist.

Northern Long-eared Bat *(Myotis septentrionalis)* **- Endangered**

- No critical habitat has been designated for this species.

Tricolored Bat *(Perimyotis subflavus)* **– Proposed Endangered**

- No critical habitat has been designated for this species.

Virginia Big-eared Bat (*Corynorhinus (=Plecotus) townsendii virginianus*) **- Endangered**

- There is final critical habitat for this species. Your location does not overlap the critical habitat.

Monarch Butterfly *(Danaus Plexippus)* **– Proposed Threatened (Originally Candidate)**

- No critical habitat has been designated for this species.

Rusty Patched Bumble Bee *(Bombus affinis)* **- Endangered**

- No critical habitat has been designated for this species.

Small Whorled Pogonia *(Isotria medeoloides)* - **Threatened**

- No critical habitat has been designated for this species.

Per a July 9, 2024, e-mail between Skybax Ecological Services and USFWS, presence/probably absence surveys for listed bats were recommended for the Project. A work plan was prepared and approved by USFWS on July 23, 2024 (see Appendix D). Mist netting was conducted during the period of July 28th through August 3rd, 2024, for the purpose of determining presence/probable absence for Indiana, NLEB and TCB in the area. No Indiana bats, NLEB, TCB, or VBEB were captured during the summer mist netting surveys conducted in the study area.

Consultation with the USFWS also resulted in a request for a botanical survey for small whorled pogonia following the Procedures for Conducting Surveys for Federally Threatened or Endangered Plants in West Virginia located at https://www.fws.gov/media/west-virginia-plant-survey-guidelines. A work plan was prepared by TranSystems and approved by the USFWS via email dated August 5, 2024 (see Appendix E). The botanical survey for small whorled pogonia was conducted on August 19, 20 and 21, 2024 within the nine (9) obstruction removal areas composing the Project study area. The federally listed small whorled pogonia plant species was not observed within the nine (9) obstruction removal areas of the Project.

Specific surveys for the RPBB or the monarch butterfly were not requested by the USFWS. The Airport and surrounding area are within a HPZ for the RPBB, as mapped by the USFWS (**Figure 4**). Documented occurrences of the RPBB are within the vicinity of the Airport.

A bee was captured adjacent to airport property within nesting/foraging habitat. A specific survey for the monarch butterfly was not conducted based on guidance from the USFWS, and the assumed presence of the species in the area.

SECTION D. EFFECTS ANALYSIS

D.1 INDIANA, NORTHERN LONG-EARED, TRI-COLORED, AND VIRGINIA BIG-EARED BAT

The Indiana, NLEB, TCB, and VBEB are listed as Endangered or Proposed Endangered species on the USFWS Threatened and Endangered species list. Direct and indirect take to the Indiana, NLEB, TCB, and VBEB are not likely as these species were not identified within the Project area during the 2018 and 2024 bat surveys conducted. The intent of the Project is to remove obstructions to Runway 5-23 approaches in nine (9) separate areas totaling 30.69 acres. These nine (9) obstruction removal areas are on differing private properties, and the obstruction removal in these areas will consist of the removal of selected trees within 16.75 acres and the trimming of selected trees within 13.94 acres (calculated from the areas identified within the nine (9) individual areas noted for this project. The identification of selected trees for removal or trimming was done to minimize impacts as opposed to complete clear cut or trimming of identified acreages (573 trees to be removed and 519 trees to be trimmed). The nine (9) areas can be seen on **Figures 1 and 2 within Appendix A – Mapping** and are detailed in Table B.1.

There remains a minimal possibility direct take of the bat species could occur through removal of active roost trees. Indirect take could occur through disturbance of roosting bats in nearby trees. Potential bat habitat loss as a result of the Project includes summer roosting habitat, travelling cover, and foraging habitat. The project site is located within a large, forested area, with the Appalachian Mountains and Monongahela National Forest located immediately east of the general Project area. Within a one-mile radius of the action area, there is more than 1,000 acres of forest. Based on the amount of forested area remaining after the implementation of the Proposed Action, the loss, reduction, degradation, disturbance or fragmentation of habitat associated with the removal or trimming of select trees over less than 31 total acres is considered minimal. Additionally, the areas of tree removal and trimming are spread across nine (9) separate obstruction removal areas located both north and south of the Airport, with forested areas remaining adjacent to or near the nine (9) obstruction removal areas.

D.1.1 Cumulative Effects

This section discusses the potential circumstances cumulative impacts could occur in addition to the proposed action.

Bat White-nose Syndrome (WNS)

White-nose syndrome is a disease affecting hibernating bats. Named for the white fungus that appears on the muzzle and other parts of hibernating bats, WNS is associated with extensive mortality of bats in eastern North America. First documented in New York in the winter of 2006-2007, WNS has spread rapidly across the eastern United States and Canada, and the fungus that causes WNS has been detected as far south as Mississippi and as far west as the state of Washington. Bats with WNS act strangely during cold winter months, including flying outside in the day and clustering near the entrances of hibernacula. In some hibernacula, 90 to 100 percent of bats have died. WNS is considered by many to be the most devastating wildlife disease known to affect North America.