Supplemental Environmental Assessment

for the

North General Aviation Area Development

October 2022

PREPARED FOR

Central West Virginia Regional Airport Authority

PREPARED BY

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APPENDICES

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A.1 Introduction

The purpose of this Air Quality Technical Report is to provide supporting documentation for the Supplemental Environmental Assessment (EA) being prepared for the proposed North General Aviation (GA) Area Development Project at the West Virginia International Yeager Airport (CRW).

A.2 Regulatory Setting

This air quality assessment of the Proposed Action and its alternatives was conducted in accordance with the guidelines provide in the most recent version of the FAA's *Aviation Emissions and Air Quality Handbook*.[1]

A.2.1 National Ambient Air Quality Standards

The U.S. Environmental Protection Agency (USEPA) is the primary Federal agency responsible for regulating air quality. The USEPA implements the provisions of the Federal Clean Air Act (CAA). The CAA, including the 1990 Amendments, provides the establishment of standards and programs to evaluate, achieve, and maintain acceptable air quality in the U.S. Under the CAA, the USEPA established a set of standards, or criteria, for six pollutants determined to be potentially harmful to human health and welfare.[2]

The USEPA considers the presence of the following six criteria pollutants to be indicators of air quality:

- Carbon monoxide (CO)
- Ozone (O_3)
- Nitrogen dioxide (NO_2)
- Sulfur dioxide (SO_2)
- Particulate matter (PM_{10} and $PM_{2.5}$)
- Lead (Pb)

For each of the criteria pollutants, the USEPA established primary standards intended to protect public health, and secondary standards for the protection of public welfare, which captures factors such as preventing materials damage, preventing crop and vegetation damage, and assuring good visibility. The National Ambient Air Quality Standards for the criteria pollutants, known as the National Ambient Air Quality Standards (NAAQS), are summarized in **Table A-1**. Areas of the country where air pollution levels consistently exceed these standards may be designated nonattainment by the USEPA.

A nonattainment area is a homogeneous geographical area (usually referred to as an air quality control region or airshed) that is in violation of one or more NAAQS and has been designated as nonattainment

[1] Federal Aviation Administration, Aviation Emissions and Air Quality Handbook, Version 3 Update 1, January 2015.
[2] USEPA, C.F.R. Title 40, Part 50 (40 C.F.R. Part 50) National Primary and Secondary Ambient Air Quality Standards (NAAQS), July 2011.

by the USEPA as provided for under the CAA. Each nonattainment area is required to have a State Implementation Plan (SIP), developed by the state that quantifies current conditions, projects future conditions through the date of prescribed attainment, and identifies mitigation measures that are to be used to bring the area back into attainment.

A maintenance area describes the air quality designation of an area previously designated nonattainment by the USEPA and subsequently re-designated attainment after emissions are reduced. Such an area remains designated as maintenance for a period up to 20 years at which time the state can apply for redesignation to attainment, provided that the NAAQS were sufficiently maintained throughout the maintenance period.

The CAA conformity regulations (40 C.F.R. Part 93) apply only to areas designated as nonattainment or maintenance. Under these rules, a Federal agency shall not support, permit, or approve any action, which does not conform to an approved SIP.

Table A-1 National Ambient Air Quality Standards

Pollutant		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	Rolling 3-month average	0.15 µg/m^3 (1)	Not to be exceeded
Nitrogen Dioxide (NO_2)		primary	1 hour	100 ppb	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	8 hour	0.070 ppm (3)	Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years
Particulate Matter	$PM_{2.5}$	primary	1 year	12.0 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	1 hour	75 ppb (4)	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		secondary	3 hours	0.5 ppm	Not to be exceeded more than once per year

(1) In areas designated nonattainment for the Pb standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 µg/m^3 as a calendar quarter average) also remain in effect.

(2) The level of the annual NO_2 standard is 0.053 ppm. It is shown here in terms of ppb for the purposes of clearer comparison to the 1-hour standard level.

(3) Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) O_3 standards additionally remain in effect in some areas. Revocation of the previous (2008) O_3 standards and transitioning to the current (2015) standards will be addressed in the implementation rule for the current standards.

(4) The previous SO_2 standards (0.14 ppm 24-hour and 0.03 ppm annual) will additionally remain in effect in certain areas: (1) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (2)any area for which an implementation plan providing for attainment of the current (2010) standard has not been submitted and approved and which is designated nonattainment under the previous SO_2 standards or is not meeting the requirements of a SIP call under the previous SO_2 standards (40 CFR 50.4(3)). A SIP call is an EPA action requiring a state to resubmit all or part of its State Implementation Plan to demonstrate attainment of the required NAAQS.

Notes: ppm is parts per million; ppb is parts per billion, and µg/m^3 is micrograms per cubic meter.
Source: EPA, https://www.epa.gov/criteria-air-pollutants/naaqs-table Accessed November 2, 2020.

A.2.2 General Conformity

The General Conformity Rule (the Rule) under the CAA is conducted in three phases: (1) applicability, (2) evaluation, and (3) determination. The Rule establishes minimum values, referred to as the de minimis thresholds, for the criteria and precursor pollutants[3] for the purpose of:

- Identifying federal actions with project-related emissions that are clearly negligible (*de minimis*);
- Avoiding unreasonable administrative burdens on the sponsoring agency; and
- Focusing efforts on key actions that would have potential for significant air quality impacts.

The *de minimis* rates vary depending on the severity of the nonattainment area and further depend on whether the general federal action is located inside an ozone transport region.[4] An evaluation relative to the Rule, published under 40 CFR Part 93,[5] is applicable to general Federal actions that would cause emissions of the criteria or precursor pollutants, and are:

- Federally-funded or federally-approved;
- Not a highway or transit project;[6]
- Not identified as an exempt project under the CAA;[7]
- Not a project identified on the approving federal agency's Presumed to Conform list;[8] and
- Located within a nonattainment or maintenance area.

The Proposed Action meets the remaining criteria for requiring an evaluation under the Rule. When the action requires evaluation under the General Conformity regulations, the net total direct and indirect emissions due to the Federal action may not equal or exceed the relevant *de minimis* thresholds unless:

- An analytical demonstration is provided that shows the emissions would not exceed the NAAQS; or
- Net emissions are accounted for in the SIP planning emissions budget; or
- Net emissions are otherwise accounted for by applying a solution prescribed under 40 CFR Part 93.158.

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[3] Precursor pollutants are pollutants that are involved in the chemical reactions that form the resultant pollutant. Ozone precursor pollutants are NOx and VOC, whereas $PM_{2.5}$ precursor pollutants include NOx, VOC, SOx, and ammonia (NH_3).

[4] The ozone transport region is a single transport region for ozone (within the meaning of Section 176A(a) of the CAA), comprised of the States of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and the Consolidated Metropolitan Statistical Area that includes the District of Columbia, as given at Section 184 of the CAA.

[5] USEPA, 40 CFR Part 93, Subpart B, Determining Conformity of General Federal Actions to State or Federal Implementation Plans, July 1, 2006.

[6] Highway and transit projects are defined under Title 23 U.S. Code and the Federal Transit Act.

[7] The Proposed Action is not listed as an action exempt from a conformity determination pursuant to 40 CFR Part 93.153(c). An exempt project is one that the USEPA has determined would clearly have no impact on air quality at the facility, and any net increase in emissions would be so small as to be considered negligible.

[8] The provisions of the CAA allow a Federal agency to submit a list of actions demonstrated to have low emissions that would have no potential to cause an exceedance of the NAAQS and are presumed to conform to the CAA conformity regulations. This list would be referred to as the "Presumed to Conform" list. The FAA Presumed to Conform list was published in the Federal Register on February 12, 2007 (72 FR 6641-6656) and includes airport projects that would not require evaluation under the General Conformity regulations.

CRW is in the Charleston, West Virginia area which has previously been classified by the USEPA as non-attainment for the 1997 standards for the 1-hour concentrations of ozone and the 1997 and 2006 standards for fine particulate matter ($PM_{2.5}$). The Charleston area was redesignated as attainment for the 1997 standards for ozone in 2006 and was redesignated as attainment for the both the 1997 and 2006 standards for $PM_{2.5}$ in 2014.[9] The 1997 standards for ozone and $PM_{2.5}$ have been revoked.[10] The Charleston area operates under a maintenance plan for the 2006 standards for $PM_{2.5}$. Therefore, the pollutants of concern are $PM_{2.5}$ and the precursors sulfur dioxide (SO_2), oxides of nitrogen (NO_X), and volatile organic compounds (VOC).

The federal *de minimis* thresholds established under the CAA are given in **Table A-2**. Conformity to the *de minimis* thresholds is relevant only with regard to those pollutants and the precursor pollutants for which the area is nonattainment or maintenance. Notably, there are no *de minimis* thresholds to which a federal agency would compare ozone emissions. This is because ozone is not directly emitted from a source. Rather, ozone is formed through photochemical reactions involving emissions of the precursor pollutants NO_x and VOCs, in the presence of abundant sunlight and heat. Therefore, emissions of ozone on a project level are evaluated based on the rate of emissions of the ozone precursor pollutants, NO_x and VOC. PM can be emitted directly or formed in the atmosphere by precursor pollutants. These precursors include NO_x, SO_2, and VOCs. Because conformity to the *de minimis* threshold is relevant for $PM_{2.5}$, the precursor pollutants NO_x and VOCs are presented and evaluated in this report.

If the General Conformity evaluation for this air quality assessment were to show that any of the applicable thresholds were equaled or exceeded due to the Proposed Action, further, more detailed analysis to demonstrate conformity would be required, which is referred to as a General Conformity Determination. Conversely, if the General Conformity evaluation were to show that none of the relevant thresholds were equaled or exceeded, the Proposed Action would be presumed to conform to the applicable SIP and no further analysis would be required under the CAA.

[9] USEPA Nonattainment Status for Each county by Year for West Virginia, (Current as of April 30, 2022). Accessed on May 18, 2022 via https://www3.epa.gov/airquality/greenbook/anayo_wv.html.
[10] PM-2.5 NAAQS SIP Requirements Final Rule, effective October 24, 2016. (81 FR 58009)

Table A-2 *De Minimis* Thresholds

Criteria and Precursor Pollutants	Type and Severity of Nonattainment Area	Tons Per Year Threshold
Ozone (VOC or NO_x)[1]	Serious nonattainment	50
	Severe nonattainment	25
	Extreme nonattainment	10
	Other areas outside an ozone transport region (OTR)	100
Ozone (NO_x)[1]	Marginal and moderate nonattainment inside an OTR[2]	100
	Maintenance	100
Ozone (VOC)[1]	Marginal and moderate nonattainment inside an OTR[2]	50
	Maintenance within an OTR[2]	50
	Maintenance outside an OTR[2]	100
Carbon monoxide (CO)	All nonattainment & maintenance	100
Sulfur dioxide (SO_2)	All nonattainment & maintenance	100
Nitrogen dioxide (NO_2)	All nonattainment & maintenance	100
Coarse particulate matter (PM_{10})	Serious nonattainment	70
	Moderate nonattainment and maintenance	100
Fine particulate matter ($PM_{2.5}$) (VOC, NO_x, NH_3, and SO_x)[3]	All nonattainment & maintenance	100
Lead (Pb)	All nonattainment & maintenance	25

(1) The rate of increase of ozone emissions is not evaluated for a project-level environmental review because the formation of ozone occurs on a regional level and is the result of the photochemical reaction of NOx and VOC in the presence of abundant sunlight and heat. Therefore, USEPA considers the increasing rates of NOx and VOC emissions to reflect the likelihood of ozone formation on a project level.

(2) An OTR is a single transport region for ozone, comprised of the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and the Consolidated Metropolitan Statistical Area that includes the District of Columbia.

(3) For the purposes of General Conformity applicability, VOCs and NH_3 emissions are only considered $PM_{2.5}$ precursors in nonattainment areas where either a State or USEPA has made a finding that the pollutants significantly contribute to the $PM_{2.5}$ problem in the area. In addition, NO_X emissions are always considered a $PM_{2.5}$ precursor unless the State and USEPA make a finding that NO_X emissions from sources in the State do not significantly contribute to $PM_{2.5}$ in the area. Refer to 74 FR 17003, April 5, 2006.

Notes:
Code of Federal Regulations (CFR), Title 40, *Protection of the Environment*.
USEPA defines *de minimis* as emissions that are so low as to be considered insignificant and negligible.
Volatile organic compounds (VOC); Nitrogen oxides (NO_x); Ammonia (NH_3); Sulfur oxides (SO_x).

Sources: USEPA, 40 CFR Part 93.153(b)(1) & (2).

A.2.3 Transportation Conformity Rule Applicability

Although airport improvement projects are usually considered under the General Conformity regulations, there can be elements of a federal action or its alternatives that may require an analysis to demonstrate Transportation Conformity, such as actions relating to transportation plans, programs, projects developed, funded, or approved under Title 23 United States Code (U.S.C.) or the Federal Transit Act (FTA),[11] or that involve federal highways. In such cases, the sponsoring federal agency would be required to coordinate with the Federal Highway Administration (FHWA), the state Department of Transportation (DOT), and the local metropolitan planning organization (MPO) to assist in completing a Transportation Conformity evaluation.

As with General Conformity, Transportation Conformity regulations apply only to federal actions located within a nonattainment or maintenance area. The Proposed Action would not be developed, funded, or approved by the FHWA or FTA. Therefore, the Transportation Conformity regulations would not apply.

A.3 Modeling Methodology

The primary sources of air emissions accounted for in the inventory data presented in this report are derived from construction and operational activities. The following software were used to develop the construction and operations emissions inventory attributed to the Proposed Action.

A.3.1 Airport Construction Emissions Inventory Tool

The Airport Construction Emissions Inventory Tool (ACEIT) Version 1.0 was developed by the Transportation Research Board (TRB) to assist airports and other stakeholders in developing airport construction emissions inventories. The ACEIT was used to find the type of equipment and the hours of usage for each type of equipment based on the proposed construction activities.[12]

A.3.2 Motor Vehicle Emissions Simulator

The USEPA's Motor Vehicle Emissions Simulator (MOVES) Version 3.03 is an emission modeling system that estimates emissions for mobile sources at the national, county, and project level for criteria air pollutants, greenhouse gases, and air toxics. The type and usage of construction equipment found in the ACEIT was inputted into MOVES, which was used to estimate construction activity emissions resulting from on-road and non-road construction equipment.

A.4 Construction Activities

Temporary impacts would result from construction activities associated with the Proposed Action, primarily from air pollutants emitted by construction equipment. Construction of the Proposed Action is anticipated to be completed in phases, starting in 2023 and finished by 2024.

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[11] USEPA, 40 CFR Part 93.153, *Applicability*, July 1, 2006.

[12] ACEIT uses emission factors from the USEPA's Motor Vehicle Emissions Simulator (MOVES) and NONROAD modeling programs to estimate emissions resulting from construction activities. While ACEIT is not mentioned in Section 6.1.4 of the Aviation Emissions and Air Quality Handbook, Version 3, the Handbook recommends the use of MOVES and NONROAD emission factors to estimate emissions from construction activities. Furthermore, FAA Order 1050.1F, Paragraph 4-2.b allows the use of supplemental models for analysis of non-aviation sources "with prior approval from [the Office of Environment and Energy (AEE)]."

A.4.1 Construction Phasing

The Proposed Action construction phases and estimated construction years are detailed in **Table A-3**. The Proposed Action with building site boundaries is shown on **Exhibit A-1, *Proposed Action***.

Table A-3 Estimated Project Construction

Project Element	Estimated Construction Years
GA Apron	2023-2023
AEDC Building	2023-2024
Box Hangars	2023-2024
Corporate Hangars	2023-2024
Marshall Flight School Expansion	2023-2024

A.4.2 Construction Emissions

A construction emissions inventory was prepared to reflect the use of construction equipment and vehicles attributed to the Proposed Action. ACEIT defaults were used for construction equipment and construction worker trip generation data. Project cost inputs for ACEIT were based on costs of similar development costs. The construction equipment defaults from ACEIT were used as inputs into MOVES, along with the construction phasing, to get the annual construction emissions inventory provided in **Table A-4.** The proposed project includes several construction phases that include demolition and reconstruction of the concours, apron expansion, and taxiway relocation. For the purpose of estimating the emissions inventory, it was assumed these construction phases are constructed at various intervals during each phase.

Table A-4 Construction Emissions Inventory

Construction Year	Criteria and Precursor Pollutants					
	CO	VOC	NOx	SOx	PM_{10}	$PM_{2.5}$
	Applicable *de minimis levels* (tons per year)					
	n/a	100	100	n/a	n/a	100
	Project Construction Emissions (tons per year)					
2023	5.33	0.48	6.59	0.02	0.37	0.36
2024	6.81	0.78	8.83	0.02	0.58	0.56

Notes: NOx, VOC and $PM_{2.5}$ emissions from the project are compared with the 100 tons per year de-minimis threshold. Emissions of CO, SO2, and PM10 are provided for disclosure purposes. Total may not sum correctly due to rounding.
Source: Landrum & Brown analysis, 2022.

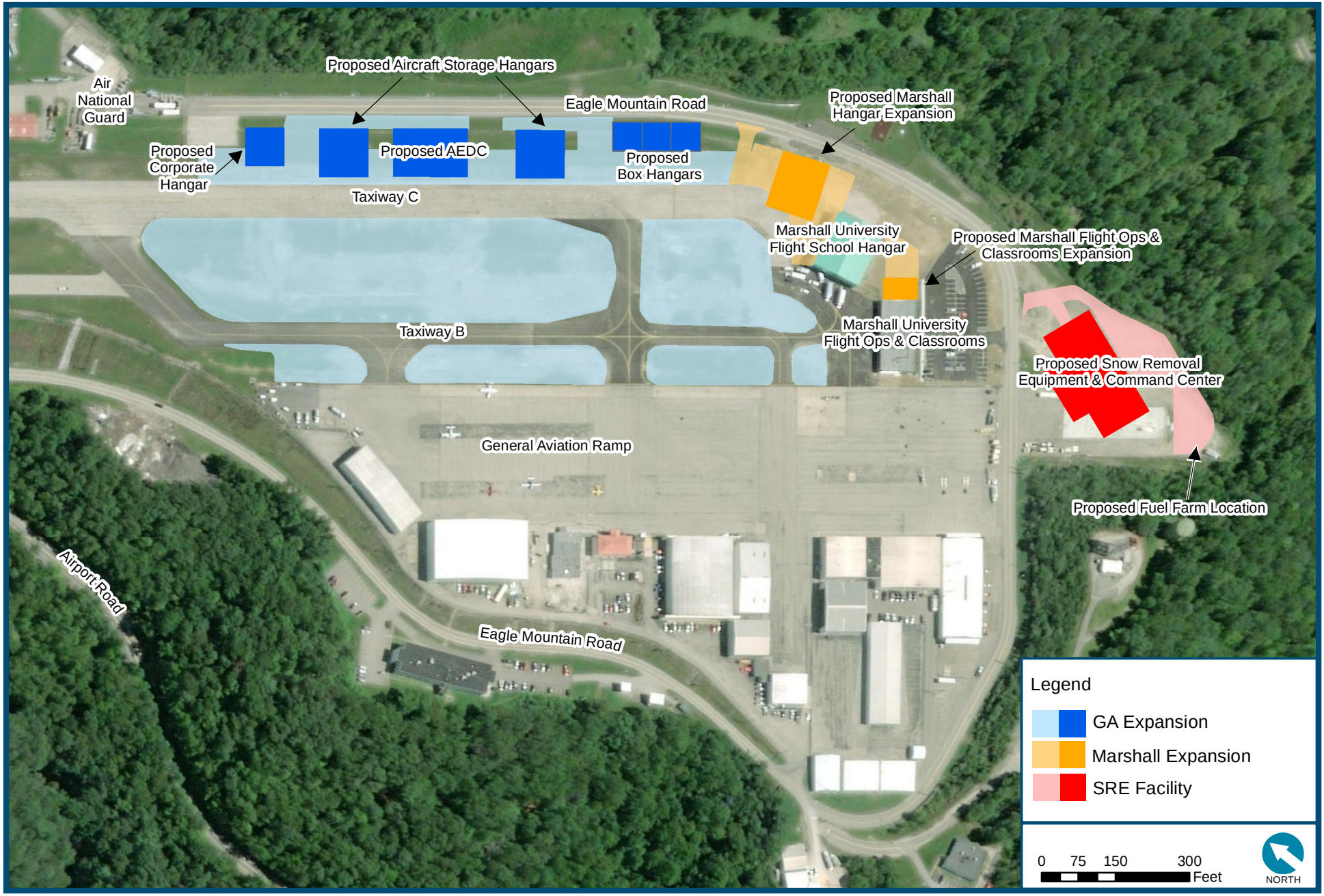

Exhibit A-1
Proposed Action

Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community
Prepared by: Landrum & Brown
Date: 10/21/2022
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Appendix B - Biological Resources

This appendix contains copies of the IPaC resource list obtained for this Proposed Action and previous coordination letters from the U.S. Fish and Wildlife Service.

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IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Kanawha County, West Virginia

Local office

West Virginia Ecological Services Field Office

(304) 866-3858

(304) 866-3852

6263 Appalachian Highway
Davis, WV 26260-9475

https://www.fws.gov/office/west-virginia-ecological-services

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act requires Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are not shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an

office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Gray Bat Myotis grisescens Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6329	Endangered
Indiana Bat Myotis sodalis Wherever found This species only needs to be considered if the following condition applies: • 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. Please contact the WVFO for additional consultation. There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat Myotis septentrionalis Wherever found This species only needs to be considered if the following condition applies: • No known hibernacula or maternity roost trees occur within the action area. Any 'take' that may occur incidental to this project is not prohibited under the final 4(d) rule. Please submit a Streamlined 4(d) Rule Consultation form to the WVFO. No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045	Threatened

Fishes

NAME	STATUS

Diamond Darter Crystallaria cincotta — Endangered

Wherever found

There is final critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/6921

Clams

NAME	STATUS

Clubshell Pleurobema clava — Endangered

This species only needs to be considered if the following condition applies:

- This project occurs within a watershed known to support this species. Review the project design guidelines for more information about next steps and contacting the WVFO.

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/3789

Fanshell Cyprogenia stegaria — Endangered

Wherever found

This species only needs to be considered if the following condition applies:

- This project occurs within a watershed known to support this species. Review the project design guidelines for more information about next steps and contacting the WVFO.

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4822

Northern Riffleshell Epioblasma rangiana — Endangered

Wherever found

This species only needs to be considered if the following condition applies:

- This project occurs within a watershed known to support this species. Review the project design guidelines for more information about next steps and contacting the WVFO.

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/527

Pink Mucket (pearlymussel) Lampsilis abrupta — Endangered

Wherever found

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/7829

Sheepnose Mussel Plethobasus cyphyus — Endangered

Wherever found

This species only needs to be considered if the following condition applies:

- This project occurs within a watershed known to support this species. Review the project design guidelines for more information about next steps and contacting the WVFO.

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/6903

Snuffbox Mussel Epioblasma triquetra — Endangered

Wherever found

This species only needs to be considered if the following condition applies:

- This project occurs within a watershed known to support this species. Review the project design guidelines for more information about next steps and contacting the WVFO.

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4135

Spectaclecase (mussel) Cumberlandia monodonta — Endangered

Wherever found

This species only needs to be considered if the following condition applies:

- This project occurs within a watershed known to support this species. Review the project design guidelines for more information about next steps and contacting the WVFO.

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/7867

NAME	STATUS
Tubercled Blossom (pearlymussel) Epioblasma torulosa torulosa	Endangered

This species only needs to be considered if the following condition applies:

- This project occurs within a watershed known to support this species. Review the project design guidelines for more information about next steps and contacting the WVFO.

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4126

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found	Candidate

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/9743

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Aug 31
Cerulean Warbler Dendroica cerulea This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/2974	Breeds Apr 27 to Jul 20
Eastern Whip-poor-will Antrostomus vociferus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20
Kentucky Warbler Oporornis formosus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 20
Prairie Warbler Dendroica discolor This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Red-headed Woodpecker Melanerpes erythrocephalus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Rusty Blackbird Euphagus carolinus This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Wood Thrush Hylocichla mustelina This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure

you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence ( )

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season ( )
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

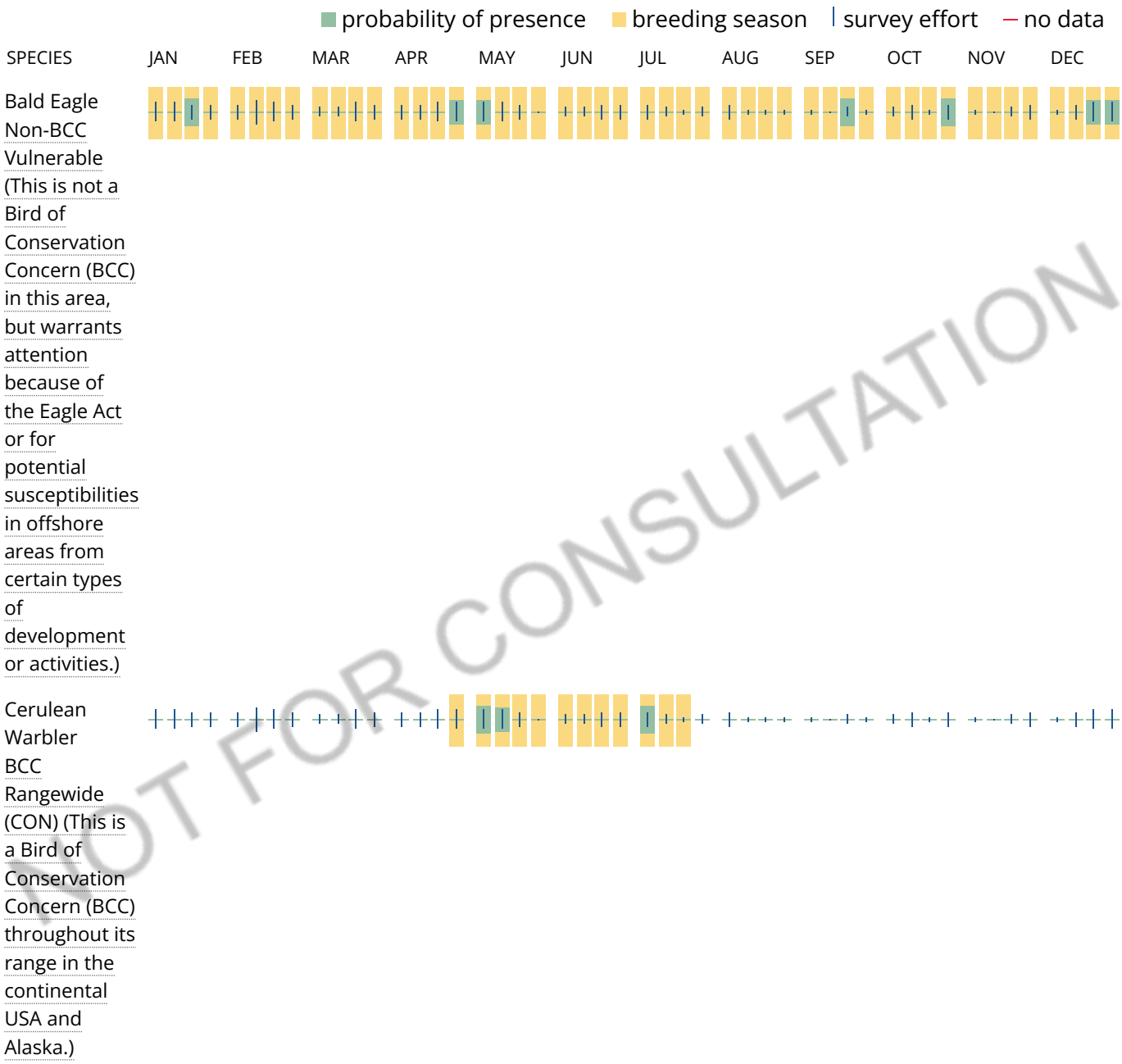
Survey Effort ( )
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

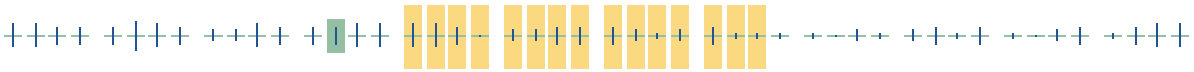
No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

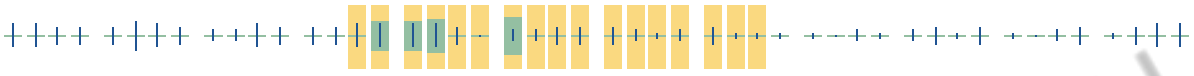
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



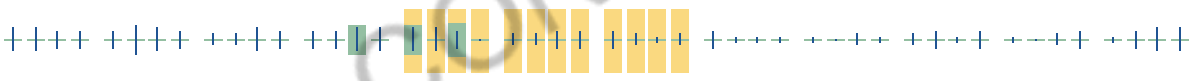
Eastern Whip-poor-will BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



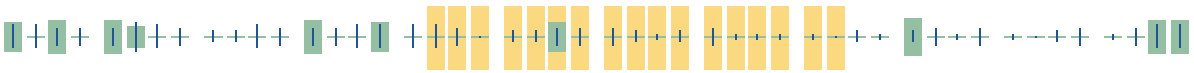
Kentucky Warbler BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Prairie Warbler BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Red-headed Woodpecker BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Rusty Blackbird BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Wood Thrush BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project

area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be

helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Coastal Barrier Resources System

Projects within the John H. Chafee Coastal Barrier Resources System (CBRS) may be subject to the restrictions on federal expenditures and financial assistance and the consultation requirements of the Coastal Barrier Resources Act (CBRA) (16 U.S.C. 3501 et seq.). For more information, please contact the local Ecological Services Field Office or visit the CBRA Consultations website. The CBRA website provides tools such as a flow chart to help determine whether consultation is required and a template to facilitate the consultation process.

THERE ARE NO KNOWN COASTAL BARRIERS AT THIS LOCATION.

Data limitations

The CBRS boundaries used in IPaC are representations of the controlling boundaries, which are depicted on the official CBRS maps. The boundaries depicted in this layer are not to be considered authoritative for in/out determinations close to a CBRS boundary (i.e., within the "CBRS Buffer Zone" that appears as a hatched area on either side of the boundary). For projects that are very close to a CBRS boundary but do not clearly intersect a unit, you may contact the Service for an official determination by following the instructions here: https://www.fws.gov/service/coastal-barrier-resources-system-property-documentation

Data exclusions

CBRS units extend seaward out to either the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward extent of the units is not shown in the CBRS data, therefore projects in the offshore areas of units (e.g., dredging, breakwaters, offshore wind energy or oil and gas projects) may be subject to CBRA even if they do not intersect the CBRS data. For additional information, please contact CBRA@fws.gov.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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United States Department of the Interior

FISH AND WILDLIFE SERVICE

West Virginia Field Office
694 Beverly Pike
Elkins, West Virginia 26241

Contact Name: Brittany Parks

Email Address or Fax Number: bparks@thethrashergroup.com

FWS File # 2018-i-0541 **All future correspondence should clearly reference this FWS File #.**

Project: General Aviation Area at Yeager Airport, Kanawha County, WV

Date of Letter Request: March 7, 2018

This is in response to your letter requesting threatened and endangered species information in regard to the proposed project listed above. These comments are provided pursuant to the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U. S. C. 1531 *et seq.*).

Two federally listed species could occur in the project area: the endangered Indiana bat (*Myotis sodalis*) and the threatened northern long-eared bat (*Myotis septentrionalis*) (NLEB).

The Indiana bat and NLEB may use the project area for foraging and roosting between April 1 and November 15. Indiana bat summer foraging habitats are generally defined as riparian, bottomland, upland forest, and old fields or pastures with scattered trees. Roosting/maternity habitat consists primarily of live or dead hardwood tree species which have exfoliating bark that provides space for bats to roost between the bark and the bole of the tree. Tree cavities, crevices, splits, or hollow portions of tree boles and limbs also provide roost sites. In West Virginia, the U.S. Fish and Wildlife Service (Service) considers all forested habitat containing trees greater than or equal to 5 inches in diameter at breast height to be potentially suitable as summer roosting and foraging habitat for the Indiana bat.

Indiana bats feed on emerged aquatic and terrestrial flying insects. Moths, caddisflies, flies, mosquitoes, and midges are major prey items. Aquatic insects that have concentrated emergences or that form large mating aggregations above or near water appear to be preferred prey items. As a result, streams, wetlands, and associated riparian forests are often preferred foraging habitats for pregnant and lactating Indiana bats. Indiana bats also forage within the canopy of upland forests, over clearings with early successional vegetation (e.g., old fields), along the borders of croplands, along wooded fencerows, and over farm ponds in pastures. Increased erosion and sedimentation of streams reduces diversity and biomass of benthic invertebrates, i.e. insects. Some projects propose impacts to aquatic features such as streams or wetlands, which could result in a decrease in insects available to both bat species for foraging.

Similar to the Indiana bat, NLEB foraging habitat includes forested hillsides and ridges, and small ponds or streams. NLEB are typically associated with large tracts of mature, upland forests with more canopy cover than is preferred by Indiana bats. NLEB seem to be flexible in selecting roosts. They choose roost trees based on suitability to retain bark or provide cavities or crevices, and this species is known to use a wider variety of roost types than the Indiana bat. Males and non-reproductive females may also roost in cooler places like caves and mines. Although rare, this bat has also been found roosting in structures like barns and sheds.

Indiana bats and NLEB use caves or mine portals for winter hibernation between November 15 and March 31. These species also use the hibernacula and the areas around them for fall-swarming and spring-staging activity (August 15 to November 14 and April 1 to May 14, respectively). Some males have been known to stay close to the hibernacula during the summer and may use the hibernacula as summer roosts. There may be other landscape features being used as hibernacula by NLEB during the winter that have yet to be documented.

The Service has reviewed the number of acres of potentially suitable foraging and roosting habitat on the West Virginia landscape available to each Indiana bat, versus the total acreage of forest. On that basis, we have determined that small projects, more than 10 miles from a known priority 1 or 2 Indiana bat hibernaculum, more than 5 miles from a known priority 3 or 4 Indiana bat hibernaculum, or more than 2.5 miles from any known maternity roost, or more than 5 miles from summer detection sites where no roosts were identified, that affect less than 17 acres of forested habitat, and will not affect any potential hibernacula, will have a very small chance of resulting in direct or indirect effects to the Indiana bat, and therefore these effects are considered discountable. **Please note that the Service may review and update this assessment at any time as new information becomes available.**

The Service does not anticipate that this project is likely to adversely affect the Indiana bat because your project: 1) will affect less than 17 acres of potential Indiana bat foraging or roosting habitat; 2) is not within any of the Indiana bat hibernacula or summer use buffers described above; 3) will not affect any potential caves or mines that could be used as hibernacula for this species; and 4) effects to aquatic features used for foraging habitat will be insignificant.

The NLEB may occur within the range of the proposed project, and may be affected by the proposed construction and operation of this project. Any take of NLEB occurring in conjunction with these activities that complies with the conservation measures (as outlined in the 4(d) rule), as necessary, is exempted from section 9 prohibitions by the 4(d) rule and does not require site specific incidental take authorization. Note that the 4(d) rule does not exempt take that may occur as a result of adverse effects to hibernacula and that no conservation measures are required as part of the 4(d) rule unless the proposed project: 1) involves tree removal within 0.25 miles of known NLEB hibernacula; or 2) cuts or destroys known, occupied maternity roost trees or any other trees within a 150-foot radius around known, occupied maternity tree during the pup season (June 1 to July 31). This proposed project is not located within any of these radii around known hibernacula or roost trees and will not affect any known NLEB hibernacula, therefore any take of NLEB associated with this project is exempted under the 4(d) rule and no conservation measures are required.

This letter provides technical assistance only and does not serve as a completed section 7 consultation document. If there is a Federal nexus for the project (e.g., Federal funding provided, Federal permits required to construct), no tree clearing or any project construction activities on any portion of the parcel should occur until consultation under section 7 of the ESA, between the Service and the Federal action agency, is completed. Section 7 consultation is not complete until the Federal action agency submits a determination of effects to this office, the Service concurs with the Federal action agency's determination, and the Federal action agency agrees to limit tree clearing to under 17 acres as a mandatory condition for any permit decision rendered for this project. All measures must be implemented as proposed. If there is no Federal nexus associated with this project, then no further coordination with this office is required.

Should project plans change or amendments be proposed that we have not considered in your proposed action, or if additional information on listed and proposed species becomes available, or if new species become listed or critical habitat is designated, this assessment may be reconsidered.

If you have any questions regarding these comments, please contact the biologist listed below at (304) 636-6586 or at the letterhead address.

Amanda Selvia Date: 4/11/2018

Biologist

John E. Schmidt Date: 4/18/2018

Field Supervisor

United States Department of the Interior

FISH AND WILDLIFE SERVICE

West Virginia Field Office
90 Vance Drive
Elkins, West Virginia 26241

Contact Name: Gina Panasik

Email Address or Fax Number: gpanasik@thethrashergroup.com

FWS File # 2018-i-0541 **All future correspondence should clearly reference this FWS File #.**

Project: Central West Virginia Airport Authority - General Aviation Area at Yeager Airport, Kanawha County, WV

Date of Letter Request: April 15, 2019

This is in response to your letter requesting threatened and endangered species information concerning the proposed modification to the project listed above. These comments are provided pursuant to the Endangered Species Act (ESA, 87 Stat. 884, as amended; 16 U. S. C. 1531 *et seq.*).

The U.S. Fish and Wildlife Service (Service) has determined that the Indiana bat (Myotis sodalis), and northern long-eared bat (Myotis septentrionalis) may occur within the proposed expansion area, and may be affected by the construction and operation of this project. In previous correspondence dated 04/18/2018, the Service provided technical assistance regarding potential effects to federally listed species. Based on your recent correspondence, the information provided does not change the Service's analysis of effects to federally listed species. Therefore, our previous technical assistance letter is still valid.

Should project plans change or amendments be proposed that we have not considered in your proposed action, or if additional information on listed and proposed species becomes available, or if new species become listed or critical habitat is designated, this determination may be reconsidered.

If you have any questions regarding these comments, please contact the biologist listed below at (304) 636-6586 or at the letterhead address.

Amanda Murnane Date: 05/30/2019
Biologist

John E. Schmidt Date: 5/31/2019
Field Supervisor

Updated June 2018

Appendix C - Cultural Resources

This appendix contains documentation of the previous coordination with the West Virginia State Historic Preservation Office regarding the potential for historic or cultural resources within the Proposed Action site.

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WEST VIRGINIA
Division of Culture and History

The Culture Center
1900 Kanawha Blvd., E.
Charleston, WV 25305-0300
Randall Reid-Smith, Commissioner
Phone 304.558.0220 • www.wvculture.org
Fax 304.558.2779 • TDD 304.558.3562
EEO/AA Employer

April 24, 2018

Ms. E. Paige Gardner
Environmental Scientist
The Thrasher Group
600 White Oaks Blvd.
P.O. Box 940
Bridgeport, WV 26330

RE: Central West Virginia Regional Airport Authority – General Aviation Area at Yeager Airport Project
Thrasher Project #101-080-0108
FR#: 18-554-KA

Dear Ms. Gardner:

We have reviewed the above referenced project to determine potential effects to cultural resources. As required by Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties," we submit our comments.

According to the submitted information, the Central West Virginia Regional Airport Authority proposes to undertake a demolition and road extension project at Yeager Airport in Charleston, West Virginia. The work will involve the construction of a new road for the purpose of an approximately 0.2-mile extension, the interior remodeling of up to three buildings, and the complete demolition of one building (Hangar B). Hanger B was constructed sometime between April 1996 and March 2003 (per historical aerial imagery).

Architectural Resources:
We have reviewed the submitted information and determined that the proposed project will affect no architectural properties eligible for or included in the National Register of Historic Places. Hanger B is less than 50 years of age, lacks exceptional significance, and does not contribute to any historic districts; therefore, its demolition will have no effect to any resources eligible for or listed in the National Register. Based on the photographs provided and the fact that the interior renovations will be confined to secure locations away from public access, we agree that the proposed project will also not affect any resources or districts eligible for or listed in the National Register. No further consultation is necessary regarding architectural resources; however, we ask that you contact our office if your project should change.

Archaeological Resources:
A search of our records located no previously documented archaeological resources within the proposed project area. Submitted information and aerial photographs indicate that a majority of the proposed ground disturbing activities will occur within previously disturbed areas. Therefore, it is unlikely that any intact deposits will be encountered. In our opinion, no archaeological historic properties will be affected by the proposed project. No further consultation is necessary with respect to archaeological resources.

We appreciate the opportunity to be of service. *If you have questions regarding our comments or the Section 106 process, please contact Benjamin M. Riggle, Structural Historian, or Carolyn M. Kender, Archaeologist, at (304) 558-0240.*

Sincerely,

Susan M. Pierce
Deputy State Historic Preservation Officer

SMP/CMK/BMR

WEST VIRGINIA
Division of Culture and History

The Culture Center
1900 Kanawha Blvd., E.
Charleston, WV 25305-0300
Randall Reid-Smith, Commissioner
Phone 304.558.0220 • www.wvculture.org
Fax 304.558.2779 • TDD 304.558.3562
EEO/AA Employer

October 10, 2018

Ms. Gina M. Panasik, MS
Environmental Project Manager I
The Thrasher Group, Inc.
4000 Town Center Blvd., Suite 140
Canonsburg, PA 15317

RE: Central West Virginia Regional Airport Authority – General Aviation Area at Yeager Airport Project; Thrasher Project #101-080-0108
FR#: 18-554-KA-1

Dear Ms. Panasik:

We have reviewed the above referenced project to determine potential effects to cultural resources. As required by Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties," we submit our comments.

According to the submitted information, the proposed project has undergone a design change since our last review in April 2018. The proposed 0.2-mile road extension has been eliminated from the project. The project will now involve the interior remodeling of up to three buildings and the demolition of Hanger B. Hanger B was constructed sometime between April 1996 and March 2003 (per historical aerial imagery).

Architectural Resources:
We have reviewed the submitted information and determined that the proposed project will affect no architectural properties eligible for or included in the National Register of Historic Places. Hanger B is less than 50 years of age, lacks exceptional significance, and does not contribute to any historic districts; therefore, its demolition will have no effect to any resources eligible for or listed in the National Register. Based on the photographs provided and the fact that the interior renovations will be confined to secure locations away from public access, we agree that the proposed project will also not affect any resources or districts eligible for or listed in the National Register. No further consultation is necessary regarding architectural resources; however, we ask that you contact our office if your project should change.

Archaeological Resources:
In our April 24, 2018 correspondence, we noted that there are no previously documented archaeological sites within the proposed project area. According to the submitted information, a majority of the proposed construction activities will occur within previously disturbed areas. Therefore, it is unlikely that any intact deposits will be encountered during the proposed construction activities. In our opinion, no archaeological historic properties will be affected by the proposed project. No further consultation is necessary with respect to archaeological resources.

We appreciate the opportunity to be of service. *If you have questions regarding our comments or the Section 106 process, please contact Benjamin M. Riggle, Structural Historian, or Carolyn M. Kender, Archaeologist, at (304) 558-0240.*

Sincerely,

Susan M. Pierce
Deputy State Historic Preservation Officer

SMP/CMK/BMR

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WEST VIRGINIA
Division of Culture and History

The Culture Center
1900 Kanawha Blvd., E.
Charleston, WV 25305-0300
Randall Reid-Smith, Commissioner
Phone 304.558.0220 • www.wvculture.org
Fax 304.558.2779 • TDD 304.558.3562
EEO/AA Employer

February 14, 2019

Ms. Gina M. Panasik, MS
Environmental Project Manager I
The Thrasher Group, Inc.
4000 Town Center Blvd., Suite 140
Canonsburg, PA 15317

RE: Central West Virginia Regional Airport Authority – General Aviation Area at Yeager Airport Project; Thrasher Project #101-080-0108
FR#: 18-554-KA-2

Dear Ms. Panasik:

We have reviewed the additional information submitted for the above-mentioned project to determine its effects to cultural resources. As required by Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties," we submit our comments.

According to submitted information, the proposed project has undergone a design change since our reviews completed in April and October 2018. The proposed 0.2-mile road extension has been eliminated from the project. The project will now involve the demolition of two structures, Hanger 1 and Matheson. It is our understanding that additional ramp space to expand the existing Taxiways B and C and a cargo facility of approximately 27,000 square feet is planned for the site. Also, a feasibility and sustainability study for the development of future hangars and the establishment of an aviation school in the project area is being completed, but no curricula have been established and not all components would occur at Yeager Airport.

Architectural Resources:
We have reviewed the submitted information and determined that the proposed project will affect no architectural properties eligible for or included in the National Register of Historic Places. Based on the provided photographs, Hanger 1 and Matheson appear to be less than 50 years of age, lack exceptional significance, and do not contribute to any historic districts; therefore, their demolition will have no effect to any resources eligible for or listed in the National Register. We agree that the proposed project will also not affect any resources or districts eligible for or listed in the National Register. No further consultation is necessary regarding architectural resources; however, we ask that you contact our office if your project should change.

Archaeological Resources:
In our April 24 and October 10, 2018 correspondences, we noted that there are no previously documented archaeological sites within the proposed project area. According to the submitted

information, a majority of the proposed construction activities will be confined to previously disturbed areas. Therefore, it is unlikely that any intact deposits will be encountered during the proposed construction activities. In our opinion, no archaeological historic properties will be affected by the proposed project. No further consultation is necessary with respect to archaeological resources.

We appreciate the opportunity to be of service. *If you have questions regarding our comments or the Section 106 process, please contact Benjamin M. Riggle, Structural Historian, or Carolyn M. Kender, Archaeologist, at (304) 558-0240.*

Sincerely,

Susan M. Pierce
Deputy State Historic Preservation Officer

SMP/CMK/BMR

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March 7, 2019

Ms. Gina M. Panasik, MS
Environmental Project Manager I
The Thrasher Group, Inc.
4000 Town Center Blvd., Suite 140
Canonsburg, PA 15317

RE: Central West Virginia Regional Airport Authority – General Aviation Area at Yeager Airport Project; Thrasher Project #101-080-0108
FR#: 18-554-KA-3

Dear Ms. Panasik:

We have reviewed the additional information submitted for the above-mentioned project to determine its effects to cultural resources. As required by Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties," we submit our comments.

According to submitted information, the proposed project has undergone another design change. The project will now involve the demolition of two structures, Hanger 1 and Matheson. It is our understanding that additional ramp space to expand the existing Taxiways B and C will be created by removing existing grass islands and expanding the ramp all the way to the skewed taxiway that connects Taxiways B and C. This will create an additional 178,500 square feet of ramp space. A new cargo facility of approximately 27,000 square feet is proposed for site on which Hanger 1 will be demolished. A feasibility and sustainability study for the development of future hangars and the establishment of an aviation school in the project area is being completed, but no curricula have been established and not all components would occur at Yeager Airport. Finally, a 3,000 square-foot customs facility and a 3,100 square-foot sort building with a shared parking lot is planned along the secured ramp space that will be separated from the public with a fence.

Architectural Resources:
We have reviewed the revised project description, and we remain in concurrence that the proposed project will affect no architectural properties eligible for or included in the National Register of Historic Places. As noted in our earlier reviews, Hanger 1 and Matheson are less than 50 years of age, lack exceptional significance, and do not contribute to any historic districts. Therefore, it is our opinion that their demolition will have no effect to any resources eligible for or listed in the National Register. We also agree that the revised project will not affect any other resources or districts eligible for or listed in the National Register. No further consultation is necessary regarding architectural resources; however, we ask that you contact our office if your project should change.

Archaeological Resources:
In our April 24, October 10, 2018, and February 14, 2019 correspondences, we noted that there are no previously documented archaeological sites within the proposed project area. According to the submitted information, a majority of the proposed construction activities will be confined to previously disturbed areas. Therefore, it is unlikely that any intact deposits will be encountered during the proposed construction activities. In our opinion, no archaeological historic properties will be affected by the proposed project. No further consultation is necessary with respect to archaeological resources.

We appreciate the opportunity to be of service. *If you have questions regarding our comments or the Section 106 process, please contact Benjamin M. Riggle, Structural Historian, or Carolyn M. Kender, Archaeologist, at (304) 558-0240.*

Sincerely,

Susan M. Pierce
Deputy State Historic Preservation Officer

SMP/CMK/BMR

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July 8, 2019

Ms. Gina M. Panasik, MS
Environmental Project Manager I
The Thrasher Group, Inc.
4000 Town Center Blvd., Suite 140
Canonsburg, PA 15317

RE: Central West Virginia Regional Airport Authority – General Aviation Area at Yeager Airport Project; Thrasher Project #101-080-0108
FR#: 18-554-KA-4

Dear Ms. Panasik:

We have reviewed the additional information submitted for the above-mentioned project to determine its effects to cultural resources. As required by Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties," we submit our comments.

According to submitted information, the proposed project has undergone another design change. The project will now involve the demolition of three buildings, Hanger 1, Hanger 2, and Matheson. A ground distribution facility of approximately 27,000 square feet will be constructed with facility parking on the location of the current Hanger 1. A feasibility and sustainability study for the development of future hangars and the establishment of an aviation school in the project area will continue, and as noted in our earlier review, no curricula have been established and not all components would occur at Yeager Airport. A 3,000 square foot customs facility will be constructed in place of Hanger 2, north of the GA tower, which will require the re-design of the parking lot to accommodate traffic from both the customs facility and GA tower. The existing de-icing pad located on the GA ramp will be expanded to allow larger aircraft, and Taxiway B will be rehabilitated to meet the standards of Group IV aircraft. Finally, a new perimeter fence will be constructed to separate the secure areas from the general public.

Architectural Resources:
We have reviewed the revised project description, and we remain in concurrence that the proposed project will affect no architectural properties eligible for or included in the National Register of Historic Places. Hanger 1, Hanger 2, and Matheson are less than 50 years of age, lack exceptional significance, and do not contribute to any historic districts. Therefore, it is our opinion that their demolition will have no effect to any resources eligible for or listed in the National Register. We also agree that the revised project will not affect any other resources or districts eligible for or listed in the National Register. No further consultation is necessary regarding architectural resources; however, we ask that you contact our office if your project should change.

Archaeological Resources:
As we noted in our prior March 7, 2019, February 14, 2019, April 24, 2018, and October 10, 2018 correspondences, there are no previously documented archaeological sites located within the proposed project area. According to the submitted information, a majority of the proposed construction activities will be confined to previously disturbed areas. Therefore, it is unlikely that any intact deposits will be encountered during the proposed construction activities. As a result, we remain in concurrence with our prior recommendation that the proposed project will have no effect on archaeological historic properties. No further consultation is necessary with respect to archaeological resources.

We appreciate the opportunity to be of service. *If you have questions regarding our comments or the Section 106 process, please contact Benjamin M. Riggle, Structural Historian, or Carolyn M. Kender, Archaeologist, at (304) 558-0240.*

Sincerely,

Susan M. Pierce
Deputy State Historic Preservation Officer

SMP/CMK/BMR

WEST VIRGINIA
Department of Arts, Culture and History

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EEO/AA Employer

June 24, 2020

Mr. Tyler Nesbella, E.I.T.
Aviation Services
L.R. Kimball
615 West Highland Avenue
Ebensburg, PA 15931
(via email: tyler.nesbella@lrkimball.com)

RE: Yeager Airport Rehabilitat/Redesign Taxiway B, Phase I
Central West Virginia Regional Airport Authority, Kanawha County, WV
FR#: 20-936-KA

Dear Mr. Nesbella:

We have reviewed the above referenced project to determine potential effects on cultural resources. As required by Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties," we submit our comments.

According to the submitted information, the Central West Virginia Regional Airport Authority (CWVRAA) and Yeager Airport proposes to undertake an improvements project at Yeager Airport in Kanawha County, West Virginia. The work will rehabilitate and widen the existing Taxiway B; create multiple new Taxiways between Taxiway B, Taxiway C and the General Aviation Apron; rehabilitate Taxiways B, B1, and B4; remove a piece of Taxiway B; install an underground stormwater detention system as well as replace any drainage affected by the new taxiways construction in the infield between Taxiway B and Taxiway C; replace the existing taxiway lighting with new cable and fixtures along the widened areas of the taxiways; and replace signs in order to incorporate the newly constructed taxiways into the Airport's signage plan.

Architectural Resources:
We have reviewed the submitted information, and as our office noted in a review letter dated June 6, 2017 (FR#: 17-600-KA-1) for an earlier airport renovation project, Yeager Airport and terminal has experienced numerous additions and alterations. Based on the included photographs, we remain in concurrence that the Yeager Airport lacks the integrity necessary to be eligible for the National Register of Historic Places. Therefore, we have determined that the proposed project will not affect any architectural resources eligible for or listed in the National Register. No further consultation is necessary regarding architectural resources; however, we ask that you contact our office if your project should change.

Archaeological Resources:
According to our records, there are no previously documented archaeological resources located within the proposed project area. Available information suggests that the proposed ground disturbing activities will be confined to previously disturbed areas, which makes it unlikely that significant intact deposits will be encountered. As a result, it is our opinion that no archaeological historic properties will be affected by the proposed project. No further consultation is necessary regarding archaeological resources.

We appreciate the opportunity to be of service. *If you have questions regarding our comments or the Section 106 process, please contact Benjamin M. Riggle, Structural Historian, or Carolyn M. Kender, Archaeologist, at (304) 558-0240*.

Sincerely,

Benjamin M. Riggle signed electronically for Susan M. Pierce 10:00am 6/24/2020

Susan M. Pierce
Deputy State Historic Preservation Officer

SMP/CMK/BMR

CC: Ms. Susan Stafford, FAA Beckley Airports Field Office (Susan.Stafford@faa.gov)

Appendix D - Public Involvement

This appendix contains copies of the coordination materials for this Supplemental EA. Copies of the following documentation are included:

- Copy of the Public Notice of Availability of the Draft Supplemental EA (to be included in the Final Supplemental EA)
- Public Comments on the Draft Supplemental EA (to be included in the Final Supplemental EA)
- Responses to Public Comments on the Draft Supplemental EA (to be included in the Final Supplemental EA)

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